AVAYA

CONVERSANT® System

Version 8.0
UCS 1000 Maintenance

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Every effort has been made to make sure that this document is complete and accurate at the time of release, but information is subject to change.

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This product complies with and conforms to the following interna-tional Product Safety standards as applicable:

- Safety of Information Technology Equipment, IEC 60950, 3rd Edition, including all relevant national deviations as listed in Compliance with IEC for Electrical Equipment (IECEE) CB-96A.

- Safety of Information Technology Equipment, CAN/CSA-C22.2 No. 60950-00 / UL 60950, 3rd Edition

- Safety Requirements for Customer Equipment, ACA Technical Standard (TS) 001 - 1997

- One or more of the following Mexican national standards, as.applicable: NOM 001 SCFI 1993, NOM SCFI 016 1993, NOM019 SCFI 1998

United States FCC Compliance Information

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

Electromagnetic Compatibility (EMC) Standards

This product complies with and conforms to the following international EMC standards and all relevant national deviations:

- Limits and Methods of Measurement of Radio Interference of Information Technology Equipment, CISPR 22:1997 and EN55022:1998.

- Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement, CISPR 24:1997 and EN55024:1998, including:

  ~ Electrostatic Discharge (ESD) IEC 61000-4-2
  ~ Radiated Immunity IEC 61000-4-3
  ~ Electrical Fast Transient IEC 61000-4-4
  ~ Lightning Effects IEC 61000-4-5
  ~ Conducted Immunity IEC 61000-4-6
  ~ Mains Frequency Magnetic Field IEC 61000-4-8
  ~ Voltage Dips and Variations IEC 61000-4-11
  ~ Powerline Harmonics IEC 61000-3-2
  ~ Voltage Fluctuations and Flicker IEC 61000-3-3

Canadian Interference Information

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Union Declaration of Conformity

Avaya Inc. declares that the equipment specified in this document bearing the "CE" (Conformité Europeénne) mark conforms to the European Union Radio and Telecommunications Terminal Equipment Directive (1999/5/EC), including the Electromagnetic Compatibility Directive (89/336/EEC) and Low Voltage Directive (73/23/EEC). This equipment has been certified to meet and CTR4 Primary Rate Interface (PRI) and subsets thereof in CTR12 and CTR13, as applicable.

Copies of the Declaration of Conformity (DoC) can be obtained by contacting your local sales representative and are available on the following Web site:

http://support.avaya.com/elmodocs2/DoC/IDoC/index.jhtml/

Telecom New Zealand Ltd Warning Notices

GENERAL WARNING: The grant of a Telepermit for any item of terminal equipment indicates that only Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with other items of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

IMPORTANT NOTICE: Under power failure conditions, this device may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use.

AUTOMATIC RE-ATTEMPTS TO THE SAME NUMBER: Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom specifications:

- There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and,

- The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempts and the beginning of the next attempt.

AUTOMATIC CALLS TO DIFFERENT NUMBERS: Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operate within the limits for compliance with Telecom specifications, the associated equipment shall be set to ensure that automatic calls to different numbers are spaced such that there is not less than 5 seconds between the end of one call attempt and the beginning of the next attempt.

USER INSTRUCTIONS (AUTOMATIC CALL SETUP): This equipment shall not be set up to make automatic calls to the Telecom "111" emergency service.

CALL ANSWERING (AUTOMATIC ANSWERING EQUIPMENT): Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operate within the limits for compliance with Telecom specifications, the associated equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing.

Japan

This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

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妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ず
るよう要求されることがあります。

Preventing Toll Fraud

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

Avaya Fraud Intervention:

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, call the Technical Service Center's Toll Fraud Intervention Hotline at 1-800-643-2353.

Providing Telecommunications Security

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

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

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

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

- Utilization (of capabilities special to the accessed equipment)

- Theft (such as, of intellectual property, financial assets, or toll-facility access)

- Eavesdropping (privacy invasions to humans)

- Mischief (troubling, but apparently innocuous, tampering)

- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

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

Your Responsibility for Your Company's Telecommunications Security

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

- Installation documents

- System administration documents

- Security documents

- Hardware-/software-based security tools

- Shared information between you and your peers

- Telecommunications security experts

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

- Avaya-provided telecommunications systems and their interfaces

- Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces

- Any other equipment networked to your Avaya products

Avaya does not warrant that this product or any of its networked equipment is either immune from or will prevent either unauthorized or malicious intrusions. Avaya will not be responsible for any charges, losses, or damages that result from such intrusions.

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http://support.avaya.com/elmodocs2/conversant/index.jhtml

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You can be placed on a standing order list for this and other documents you may need. Standing order will enable you to automatically receive updated versions of individual documents or document sets, billed to account information that you provide. For more information on standing orders, or to be put on a list to receive future issues of this document, contact the Avaya Publications Center (see the contact information above).

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About This Book

Overview

This book, *CONVERSANT System Version 8.0 UCS 1000 Maintenance*, 585-313-150, contains information for component replacement procedures, base system software installation procedures, and installing optional feature software associated with the UCS 1000 and its hardware. Appendices contain a system configuration description, a list of component ordering numbers, a checklist for building a system, and checklists for disaster recovery.

Intended Audiences

This book is intended primarily for the:

- On-site service technicians

- System administrators

A secondary audience includes field support personnel.

We assume that the primary users of this book have completed the CONVERSANT hardware installation and maintenance training course, see Training (page xx).

How This Book is Organized

This book contains the following sections:

- Chapter 1, Getting Inside the System — Provides the correct procedures for accessing the internal components of the server.

- Chapter 2, Installing or Replacing Circuit Cards — Provides general steps and procedures necessary to ensure that circuit cards are installed correctly and their resource options are set correctly.

- Chapter 3, Replacing the Hard Disk Drive Assembly — Provides information to identify a failed hard disk drive and to ensure that hard disk drives are installed in the proper manner.

- Chapter 4, Replacing Other Components — Provides information to ensure that correct procedures are used to replace internal components of the server.

- Chapter 5, Installing Base System Software — Provides the information necessary to reload the operating system on a server that has experienced a disk failure.

- Chapter 6, Installing the CONVERSANT System Software — Provides details of the installation procedures for the system software.

- Chapter 7, Installing the Optional Feature Software — Provides the information necessary to reload the optional feature software on a system which has experienced a disk failure.

- Chapter 8, Installing ORACLE Packages — Describes the procedures to install each optional ORACLE package.

- Appendix A, Component Ordering Numbers (page 173) — Provides ordering numbers for replaceable components.

- Appendix B, How to Build a System (page 177) — Starting with a system shell, which has only the power supply and the backplanes, this appendix provides a checklist for having to build a system from scratch.

- Appendix C, Disaster Recovery Checklists (page 179) — Provides a checklist to follow for disaster recovery in the unlikely event a disaster occurs.

- Appendix D, Dress Kit Installation (page 183) — Describes how to install a dress kit.

- Glossary — Defines the terms, abbreviations, and acronyms used in system documentation.

- Index — Alphabetically lists the principal subjects covered in the book.

Conventions Used in This Book

Note: Any screens shown in this book are examples only. The screens you see on your machine will be similar, but not exactly the same.

Terminology
- The word "type" means to press the key or sequence of keys specified. For example, an instruction to type the letter "y" is shown as

  Type **y** to continue.

- The word "type" means to type a value and then press the **ENTER** key on the keyboard. For example, an instruction to type the letter "y" and press **ENTER** is shown as

  Type **y** to continue.

- The word "select" means to move the cursor to the desired menu item and then press **ENTER**. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press **ENTER** is shown as

  Select **Start Test.**

- The I<SmallCaps>ntuity system displays *windows, screens, and menus* (Figure 1 on page xv through Figure 4 on page xvi). Windows and screens both show and request system information. Menus (Figure 5 on page xvi) present options from which you can choose to view another menu, or a screen or window

**Example of a Window
Showing Information**

Figure 1.   Window Showing Information

```
 3                      Shut Down the Machine

Users currently logged on:

root        console      Jul  8 06:39
root        pts000       Jul  8 08:48
```
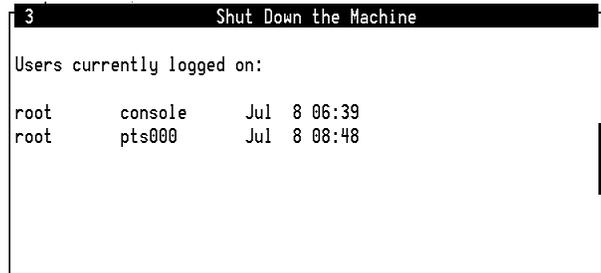
**Example of a Window
Showing Information**

Figure 2.   Window Showing Information

```
UnixWare Installation         Primary Hard Disk Partitioning

In order to install CONVERSANT, you should reserve a UNIX
system partition (a portion of your hard disk's space)
containing 100% of the space on your primary hard disk. After
you press 'ENTER' you will be shown a screen that will allow
you to create new partitions, delete existing partitions or
change the active partition of your primary hard disk (the
partition that your computer will boot from).

WARNING: All files in any partition(s) you delete will be
destroyed. If you wish to attempt to preserve any files from
an existing UNIX system, do not delete its partitions(s).

The UNIX system partition that you intend to use on the
primary hard disk must be at lease 4200 MBs and labeled
"ACTIVE."

Press 'ENTER' to continue
```

**Example of a Window
Requesting Information**

Figure 3.   Window Requesting Information

```
    Wait Time

   Seconds: ▮
```

Example of a Screen Requesting Information

Figure 4.   Screen Requesting Information

```
UNIX System Installation                           Set Slice
Sizes

Please select whether you would like the recommended slice
sizes or would like to customize the slice sizes.

Your choices are:
1. Recommended Slice Sizes
2. Customize Slice Sizes

Press '1' or '2' followed by 'ENTER': 1
```

Example of a Menu Showing Information

Figure 5.   Example of CONVERSANT Menu


```
       Voice System Administration
Application Package Administration
Backup/Restore
Configuration Management
Feature Packages
Reports
Script Builder Applications
Switch Interfaces
System Monitor
Unix Management
Exit
```

Example of Terminal Keys

- Keys that you press on your terminal or PC are represented as small, capitalized **BOLD** text. For example, an instruction to press the enter key is shown as

   Press **ENTER**.

- Two or three keys that you press at the same time on your terminal or PC (that is, you hold down the first key while pressing the second and/or third key) are represented as a series of small **capitalized** text separated by the + sign. For example, an instruction to press and hold **ALT** while typing the letter "d" is shown as

   Press **ALT**+ **D**.

- Function keys on your terminal, PC, or system screens, also known as soft keys, are represented as small **capitalized** text followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

   Press **F3** (Choices).

- Keys that you press on your telephone keypad are represented as **bold proportional** text. For example, an instruction to press the first key on your telephone keypad is shown as

   Press **1** to record a message.

Screen Displays

- System messages, field names, and prompts that appear on the screen are shown in `type-writer text`, as shown in the following examples:

  ~ Enter the number of ports to be dedicated to outbound traffic in the `Maximum Simultaneous Ports` field.

  ~ Enter **y** in the `Message Transfer?` field.

  ~ The system displays the following message:

    `Installation in progress.`

- The sequence of menu options that you must select to display a specific screen or submenu appears in a series of boxes.

- The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:

  Start at the Voice System Administration menu and select:

```
> Reports

      > Message Log Report
```

In this example, you would access the Voice System Administration menu and select the Reports menu. From the Reports menu, you would then select the Message Log Report window.

Some Screen Simulations   Text in a simulated screen display appears in `type-writer text`.

Example:

```
             QuickStart - Data Recovery Rescue
Copyright(c) 1997-1999 by Enhanced Software Technologies, In
     Serial# 8200-999                          Version: 1.3

    Backup     Verify     Recover    Configure    Exit
    System     System     System     QuickStart   and Reboot
```
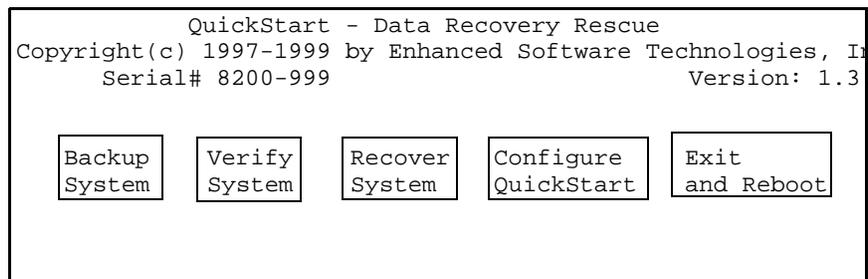
Items That May or May Not Appear   **Grayed-out** type represents optional items that may or may not appear in a given display.

Example:

Once the backup is complete, the system displays a message similar to the following:

`The Differential UNIX backup is now complete. Please remove the tape and label it as "Differential UNIX Backup, created` **April 30, 1999**`."`

Cross References and Hypertext   Blue type indicates a cross reference or hypertext link that will take you to another location in the document when you click on it.

Other Typography

Command Text   • Literal values, commands and text you type in or enter, appear in **bold type**, as in the following examples:

Example 1: Enter **pkgadd -d cdrom1 Oracleset** at the `Enter command:` prompt.

Example 2: Type **high** or **low** in the `Speed:` field.

• Command variables are shown in ***bold proportional italic*** type when they are part of what you must type in, and in italics when they are not part of the command line, for example:

Enter **restore card *card_number***, where *card_number* is the name of number of the circuit card you want to restore to service.

• Command options are shown inside square brackets, for example:

Enter **connect *switchname* [-c] [-b | -w]**

Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

⚠ **CAUTION:**
Indicates the presence of a hazard that if not avoided *can* or *will* cause minor personal injury or property damage, including loss of data.

⚠ **WARNING:**
Indicates the presence of a hazard that if not avoided *can* cause death or severe personal injury.

⚠ **DANGER:**
Indicates the presence of a hazard that if not avoided *will* cause death or severe personal injury.

⚠ **SECURITY ALERT:**
Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.

Related Resources

Documentation

System Description A detailed description of all books included in the system documentation set is available in *CONVERSANT System Version 8.0 System Description*, 585-313-219. Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining a system.

Troubleshooting Information Basic troubleshooting information is available in "Troubleshooting" in *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Diagnostic Information Instructions for conducting diagnostics are available in "Diagnostics" in *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Common System Procedures Instructions for conducting common system procedures are available in "Common System Procedures" in *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Alarm and Log Messages Instructions for interpreting alarm and log messages are available in "Alarms and Log Messages" in *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Hardware Information Instructions for replacing or installing hardware components of the system are available in "Getting Inside the System," "Installing or Replacing Circuit Cards," "Replacing the Hard Disk Drive Assembly," and Replacing Other Components," in this book.

Software Information Instructions for replacing or installing software components of the system are available in "Installing Base System Software," Installing the System Software," and "Installing the Optional Feature Software" in this book.

Required for the System Maintenance To repair or alter the configuration of your system, you must have a copy of:

- this book.

- *CONVERSANT System Version 8.0 Administration*, 585-313-510.

- *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Additional Suggested Documentation It is suggested that you also obtain and use the following:

- *CONVERSANT System Version 8.0 New System Installation*, 585-313-149.

Additional Reference Documentation The following documentation will be useful when working with applications:

- *CONVERSANT System Version 8.0 Communication Development*, 585-313-220.

- *CONVERSANT System Version 8.0 Speech Development, Processing, and Recognition*, 585-313-218.

- *CONVERSANT System Version 8.0 Application Development with Advanced Methods*, 585-313-216.

Training

Additional training material and documentation and training material is available for you to learn more about the CONVERSANT product.

To obtain training on the CONVERSANT product, contact the BCS Education and Training Center at one of the following numbers:

- Organizations within Avaya (904) 636-3261

- Avaya customers and all others (800) 255-8988

You can also view information on CONVERSANT training at the Global Learning Solutions (GLS) web site at the following web link:

  http://learning2.avaya.com/

The courses listed below are recommended. Other courses are available.

- For technicians doing repairs on CONVERSANT systems
  - ~ BTE501W, CONVERSANT Administration for Technicians
  - ~ BTE502H, CONVERSANT Installation and Maintenance Voice
- For technicians and administrators
  - ~ BTC344M, CONVERSANT Administration Overview (CD-ROM)
- For application developers

Note: Courses listed below are instructor-led unless otherwise specified.
  - ~ BTC128H, Introduction to Script Builder
  - ~ BTC166H, Introduction to Voice@Work
  - ~ BTC204H, Intermediate Voice@Work
  - ~ BTC204W, Intermediate Voice@Work, interactive distance learning, using Bit-Room technology
  - ~ BTC301H, Advanced CONVERSANT Programming

Documentation   This document is designed to supplement all other documents in the V8.0 system set. Appendix A, "Documentation Guide," of *CONVERANT System Version 8.0 System Description* describes in detail all books included in the CONVERSANT documentation library.

Note: Always refer to the appropriate document for specific information on planning, installing, operating, administering, or maintaining the system.

Additional Suggested Documentation

It is suggested that you also obtain and use the following book for information on security and toll fraud issues:

- *BCS Products Security Handbook*, 555-025-600

It is recommended that you access the following sites for additional information.

- UnixWare 7.1 documentation: http://www.sco.com/documentation/

- Updates to CONVERSANT documentation: http://support.avaya.com/elmodocs2/conversant/index.jhtml

Using the CD–ROM Documentation

Avaya ships the documentation in electronic form. Using the Adobe® Acrobat® Reader application, you can read these documents on a Windows PC, on a Sun Solaris workstation, or on an HP-UX workstation. Acrobat Reader displays high-quality, print-like graphics on both UNIX and Windows platforms. It provides scrolling, zoom, and extensive search capabilities, along with online help. A copy of Acrobat Reader is included with the documents.

Note: If viewing documents online, it is recommended that you use a separate platform and not the system.

Setting the Default Magnification

You can set your default magnification by selecting **File | Preferences | General**. We recommend the **Fit Page** option.

Adjusting the Window Size

On HP and Sun workstations, you can control the size of the reader window by using the **-geometry** argument. For example, the command string **acroread -geometry 900x900 mainmenu.pdf** opens the main menu with a window size of 900 pixels square.

Hiding and Displaying Bookmarks

By default, the document appears with bookmarks displayed on the left side of the screen. The bookmarks serve as a hypertext table of contents for the chapter you are viewing. You can control the appearance of bookmarks by selecting **View | Page Only** or **View | Bookmarks and Page.**

Using the Button Bar

The button bar can take you to the book's Index, table of contents, main menu, and glossary. It also lets you update your documents. Click the corresponding button to jump to the section you want to read.

Using Hypertext Links

Hypertext-linked text appears in blue. These links are shortcuts to other sections or books.

Navigating with Double Arrow Keys

The double right and double left arrows (◀◀ and ▶▶) at the top of the Acrobat Reader window are the go-back and go-forward functions. The go-back button takes you to the last page you visited prior to the current page. Typically, you use ◀◀ to jump back to the main text from a cross reference or illustration.

Searching for Topics

Acrobat has a sophisticated search capability. From the main menu, select **Tools | Search.** Then choose the **Master Index.**

Displaying Figures

If lines in figures appear broken or absent, increase the magnification. You might also want to print a paper copy of the figure for better resolution.

**Printing the
Documentation**

If you would like to read the documentation in paper form rather than on a computer monitor, you can print all or portions of the online screens.

Printing an Entire Document

To print an entire document, do the following:

1 From the documentation main menu screen, select one of the print-optimized documents. Print-optimized documents print two-screens to a side, both sides of the sheet on 8.5x11-in or A4 paper.

2 Select **File | Print**.

3 Enter the page range you want to print, or select **All**. Note that the print page range is different from the page numbers on the documents (they print two to a page).

   The document prints.

4 Close the file. Do not leave this file open while viewing the electronic documents.

Printing Part of a Document

To print a single page or a short section, you can print directly from the online version of the document.

1 Select **File | Print**.

2 Enter the page range you want to print, or select **Current**.

   The document prints, one screen per side, two sides per sheet.

1 Getting Inside the System

Overview

The purpose of this chapter is to provide the correct procedures for accessing the internal components of the UCS 1000. This chapter describes:

- Proper electrostatic discharge (ESD) protection procedures

- Power removal and restoration procedures

- Computer chassis access procedures

Protecting Against Damage from Electrostatic Discharge

⚠ **CAUTION:**

Read this section before unpacking the system. You *must* observe proper grounding techniques to prevent the discharge of static electricity from your body into ESD-sensitive components.

Circuit cards and packaging materials that contain ESD-sensitive components are usually marked with a yellow-and-black warning symbol (Figure 6).

Note: Procedures in this book should be performed by personnel identified in Intended Audiences (page xiii) in About This Book.

Figure 6. ESD Warning Symbol

To avoid damaging ESD-sensitive components, follow these rules:

- Handle ESD-sensitive circuit cards only after attaching a wrist strap to your bare wrist. Attach the other end of the wrist strap to a ground that terminates at the system ground, such as the ESD jacks located on the far right front circuit card area.

- Handle a circuit card by the faceplate or side edges only as shown in Figure 7 on page 2.

- Keep circuit cards away from plastics and other synthetic materials such as polyester clothing.

- Do not hand circuit cards to another person unless that person is grounded at the same potential level.

- Hold devices such as a hard disk or streaming tape in the same manner as a circuit card.

⚠ CAUTION:
Ensure that your palm is not in contact with the noncomponent side of the board.

Figure 7.   How to Hold a Circuit Card

cdpccwb1 EWS 031699
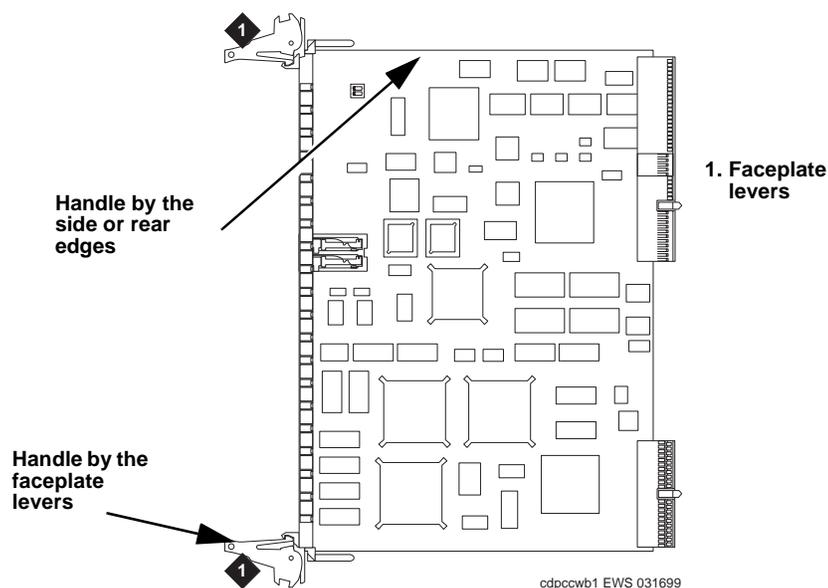
UCS 1000

The system (Figure 8 on page 3) is a 16-slot system that accommodates 13 available CompactPCI slots. One slot is dedicated to the remote maintenance circuit card (Slot 7) and 2 slots are dedicated to the CPU Complex.

Note that Figure 8 on page 3 is an example configuration. T1/E1 circuit cards are shown in slots1 and 2 and SSPs are shown in slots 14 and 15.

Figure 8.   .Front View of the System (Example Configuration)

1. Hard disk drive media bay
2. CD-ROM drive media bay
3. Cartridge tape drive media bay
4. Circuit card area
5. CPU complex
   (includes diskette drive)
6. Upper fan tray
7. Lower fan tray with filter panel

scpcfrn2 LJK 033100
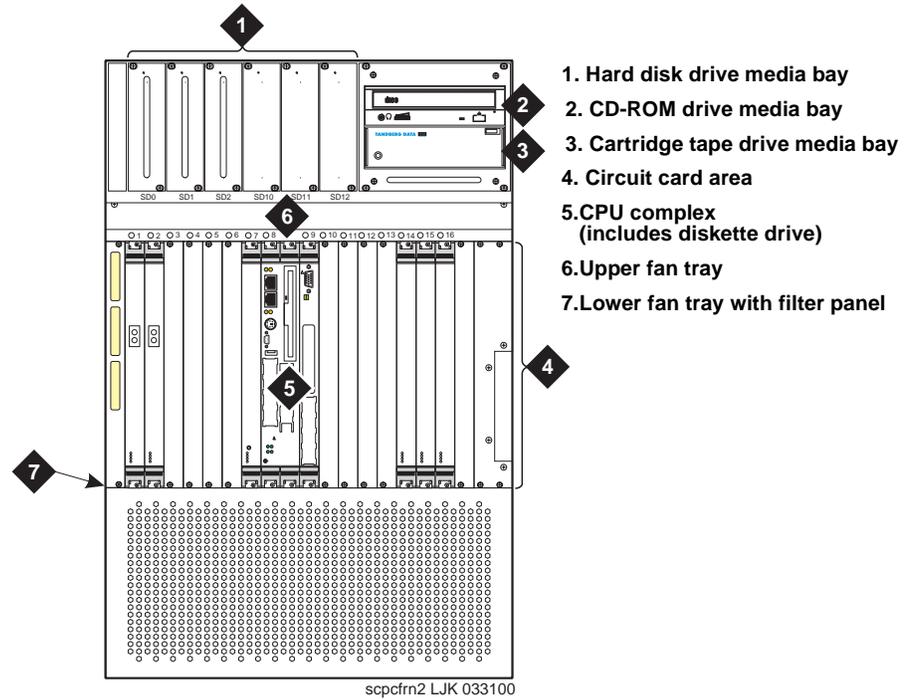
The System

The system requires a dedicated power line. The power cord connects to the rear of the system at the point labeled *INPUT 15A* (Figure 9). The power supplies, fan trays, and several circuit cards are hot swappable.

Figure 9.   Back View of the System (Example Configuration)

1. External SCSI terminator
2. 8-port asynchronous connection
3. IOB companion rear I/O transition card
4. SBC rear I/O transition card
5. CYD21 (formerly CYD2) E1/T1 rear I/O transition card
6. Power source connection and switch

scpcnubk LJK 033100
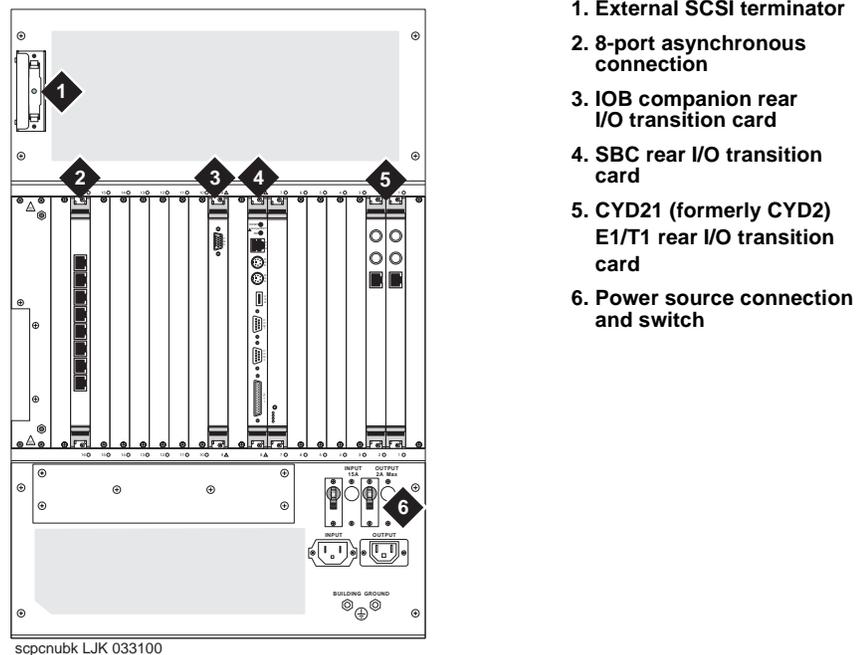
Removing Power from the System

To remove power from the system:

Begin

1 Stop the voice system. See "Administer the Voice System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference,* 585-313-215, for the procedure.

2 Shut down the voice system. See "Administer the Voice System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference,* 585-313-215, for the procedure.

3 Shut down the system. See "Shut Down the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference,* 585-313-215, for the procedure.

4 Turn off the monitor's power switch if a monitor is plugged into the system.

5 Place the two power switches in the off (down) position, as shown in Figure 9 on page 3.

Note: The switches are located on the rear of the system and labeled "*INPUT 15A"* and "*OUTPUT 2A Max".*

6 Unplug the system from the power outlet.

Note: The power cord is attached to the system with a strain relief to prevent accidental unplugging.

End

Restoring Power to the System

To restore power to the system:

Begin

1 Plug the power cord into the designated power outlet.

2 Place both power switches in the on (up) position, as shown in Figure 9 on page 3.

Note: The switches are located on the rear of the system and labeled "*INPUT 15A"* and "*OUTPUT 2A Max".*

3 Turn on the monitor's power switch.

The green or amber lamp on the front of the monitor, near the bottom, should be lit.

End

Removing the Upper Rear Exhaust Panel

Removing the upper rear exhaust panel provides access to items such as:

- The SCA backplane

- The SCSI cables for the CD-ROM and cartridge tape drives

- Power cables for the CD-ROM and cartridge tape drives

To remove the rear exhaust panel:

1 Remove the power. See Removing Power from the System (page 4) for the procedure.

2 Remove the external SCSI terminator (Figure 10) by performing Step a through Step c.

Note: If necessary, you can remove the terminator guard first by removing the two screws that secure it to the panel.

    a Squeeze the release levers at the top and bottom of the terminator.
    b Pull the SCSI terminator from the rear panel.
    c Once free, allow the terminator to drop into your hand.

3 Loosen the screws on each of the four corners of the panel.

4 Pull the panel out and away from the system.

Figure 10.   SCSI Terminator

1. Release lever

plpcterm EWS 031599
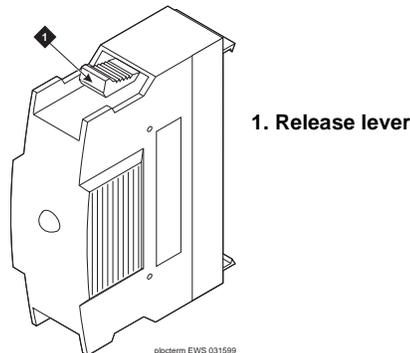
Installing the Upper Rear Exhaust Panel

To install the upper rear exhaust panel:

1 Push the upper part of the panel in place on the rear of the system.

2 Retighten the four screws on each corner of the upper rear panel.

3 Reattach the external SCSI terminator.

Note: Reattach the terminator guard if it was removed.

4 Restore power. See Restoring Power to the System (page 4) for the procedure.

Removing the Lower Rear Power Panel

⚠ **CAUTION:**
You must disconnect the incoming power at the source. Please verify that your system is unplugged from the power outlet before proceeding.

⚠ **DANGER:**
Do not perform any maintenance on this equipment until you have turned off the power using the specified procedure. Failure to observe proper precautions could cause serious injury or death from electric shock.

The power switches are part of the lower rear power panel assembly. To access the lower rear power panel area:

1 Remove the power. See Removing Power from the System (page 4) for the procedure.

2 Loosen input power cord strain relief.

3 Remove input power cord.

4 Remove monitor power cord (if connected).

Note: The following step is only necessary if the leads are connected to the terminal strips.

5 Remove the terminal guard from the 6-position terminal strip by removing the six mounting screws.

6 Remove the four captive screws from each corner of the lower rear panel.

7 Rotate the top of the panel away from the system.

8 Pull the bottom of the panel up and away from the system.

9 Disconnect the P2 power connector from the power backplane. Grasp the connector, push up on the tab on the bottom of the connector, and pull out.

10 Disconnect the P1 power connector from the power backplane. Grasp the connector, push up on the tab on the bottom of the connector, and pull out.

Note: Removing the rear I/O circuit cards or cover panels at slots 15, 16, and 17 will make access easier to the P3 power connector, which is located below slot 17.

11 Disconnect the P3 connector from the cPCI backplane. Grasp the connector, push up on the tab on the bottom of the connector, and pull out.

12 Disconnect the green ground wire from the lower left side of the system.

13 Pull the panel out and away from the system.

Installing the Lower Rear Power Panel

⚠ **CAUTION:**

Before you remove or install the lower rear power panel, you must disconnect the incoming power at its source.

To install the lower rear power panel:

1 Slip the bottom part of the panel onto the system chassis.

2 Connect the green ground wire to the lower left side of the system.

3 Insert the P3 connector into the cPCI backplane.

4 Insert the P2 connector into the power backplane.

5 Insert the P1 connector into the power backplane.

6 Push the upper part of the panel in place.

7 Install the four screws onto each corner of the lower rear panel.

8 Reinstall any leads on terminal strips.

9 Reinstall the terminal guard using the six mounting screws.

Note: Restore the rear I/O circuit cards or cover panels at slots 15, 16, and 17 if needed.

10 Restore power. See Restoring Power to the System (page 4) for the procedure.

2 Installing or Replacing Circuit Cards

Overview

The purpose of this chapter is to ensure that circuit cards are installed correctly and their resource options are set correctly. This chapter describes:

- General steps for circuit card installation

- Specific procedures for installation of standard and optional system circuit cards

- The correct settings for resource options

General Procedures for Hot Swap

Note: Procedures in this book should be performed by personnel identified in Intended Audiences (page xiii) in About This Book.

⚠ **WARNING:**
Observe proper electrostatic discharge (ESD) precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See Protecting Against Damage from Electrostatic Discharge, in Chapter 1, Getting Inside the System for detailed electrostatic discharge precautions.

Hot Swap Description   The system supports a manual like-for-like hot replacement (generally called "hot swap") for the E1/T1 (CWB21, formerly CWB2), SSP (CWB20, formerly CWB1), and the 8-port asynchronous circuit cards. This means that the circuit cards can be removed and replaced without affecting system operation provided the administrative commands to **remove card** and **detach card** (when removing) and **attach card** and **restore card** (when installing) are executed in conjunctions with the actual "hot swap" of the card Note that "like-for-like" means that a card being replaced must be replaced with the same type of card in the same slot (for example, a CWB21 for a CWB21). New cards may be inserted "live" into empty slots, but they will not be recognized by the system until it is rebooted.

Note: The Blue LED must be ON to remove a card with power on.

Figure 11 shows an example of the LED locations on a circuit card faceplate.

Figure 11. Sample of a Circuit Card Faceplate LEDs
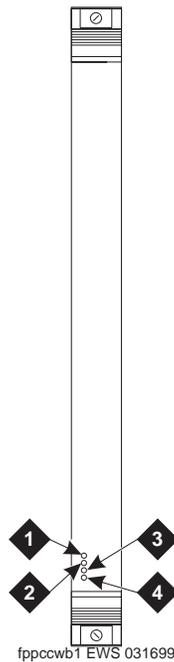
1. Red LED lights when broken
2. Yellow LED lights when out of service
3. Green LED lights when active and in service
4. Blue LED lights when ready for hot swap

fppccwb1 EWS 031699

Table 1 shows how to determine the maintenance state of a circuit card by viewing the LEDs on the faceplate

Table 1.   .Circuit Card LED Maintenance State

Circuit Card	LED Lit	Red
SSP (CWB20, formerly CWB1)	Red	Broken
	Yellow	MANOOS, Diagnostics
	Green	INSERV
	Blue	Ready for hot swap
	None (All LEDS are dark)[1]	Broken
E1/T1 (CWB21, formerly CWB2)	Red	Broken
	Yellow	FOOS, MANOOS, Diagnostics[2]
	Green	INSERV
	Blue	Ready for hot swap
	None (All LEDS are dark)[1]	Broken
		1 of 2

Circuit Card	LED Lit	Red
Equinox (8-port asynchronous)	Red	n/a
	Yellow	n/a
	Green	n/a
	Blue	Ready for hot swap
	None (All LEDs are dark)[1]	Broken
RMB	Red	Active during power up; goes off after firmware self-test passes. If it stays on, the red LED indicates a major hardware failure.
	Yellow	Active during power up and indicates a test of the board is in progress
	Green	Active when active modem call
	Blue	Hot swap operations; when lit, the circuit card may be removed
		2 of 2

[1] The voice system may also be down causing the LEDs to remain dark.
[2] NETOOS, when combined with green.

Removing a Circuit Card

To remove an SSP, E1/T1, remote maintenance circuit card, or 8-port asynchronous circuit card, or the respective I/O rear transition card:

1 Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.

Note: If the circuit card being replaced is defective, note all symptoms of failure and include this information with the circuit card when it is returned.

Note: For complete information about the **remove**, **detach**, **eqn_detach**, and **eqn_attach** commands, see Appendix A, "Summary of Commands" in the *CONVERSANT System Version 8.0 Administration*, 585-313-510.

2 Enter **remove card *x w***here *x* is the SSP or E1/T1 circuit card to be placed in MANOOS. This command is not required for the 8-port asynchronous circuit card.

3 Do one of the following:

   ~ If you are replacing an SSP or E1/T1 circuit card, enter **detach card x,** where *x* is the SSP or E1/T1 circuit card to be placed into the nonexistent (NONEX) state.

   ~ If you are replacing an 8-port asynchronous card enter **eqn_detach**.

Note: When the blue LED lights on the faceplate, the circuit card is ready for hot swap and can be removed from the system.

4 Locate the card to be replaced in the system. See Figure 12 for front panel circuit card locations or Figure 13 on page 13 for rear I/O transition card locations.

5 Disconnect any attached cables, such as those that may be attached to the faceplate. Note the connectivity of each cable so that you can replace it correctly.

6 Loosen the screws that secure the circuit card to the system. The screws are located at the top and bottom of the faceplate.

7 Unlatch the circuit card from the backplane by gently pushing the faceplate levers outward until the circuit card is released.

8 Remove the circuit card from the backplane slot by gently pulling at the top and bottom corners of the circuit card.

9 Remove the circuit card from the system.

Figure 12.   Front View of the System (Example Configuration)

1. Hard disk drive positions
2. CD-ROM drive position
3. Tape drive position
4. Circuit card cage area
5. CPU complex
6. Upper fan tray
7. Filter panel with lower fan tray
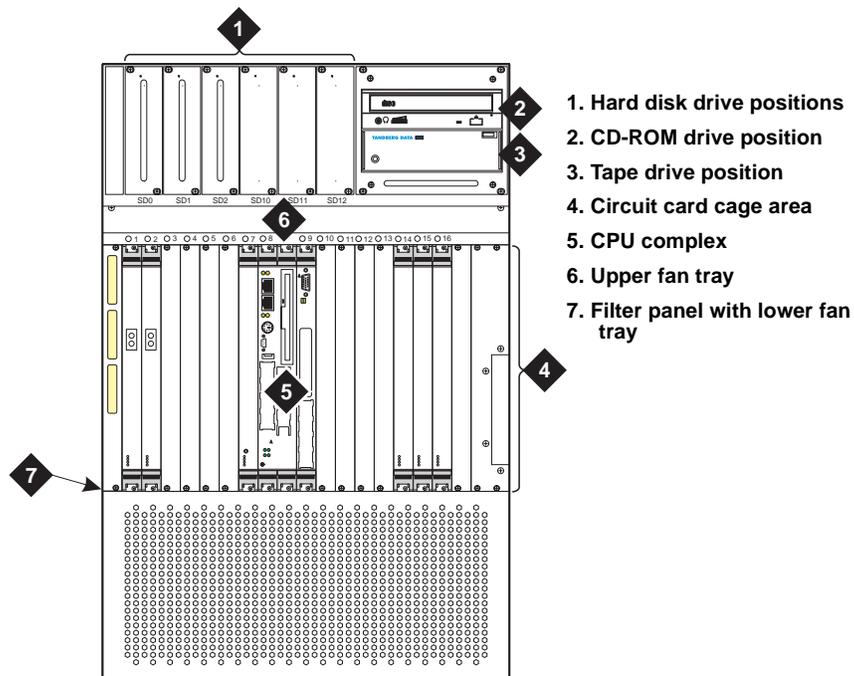
Figure 13.   Rear View of the System (Example Configuration)
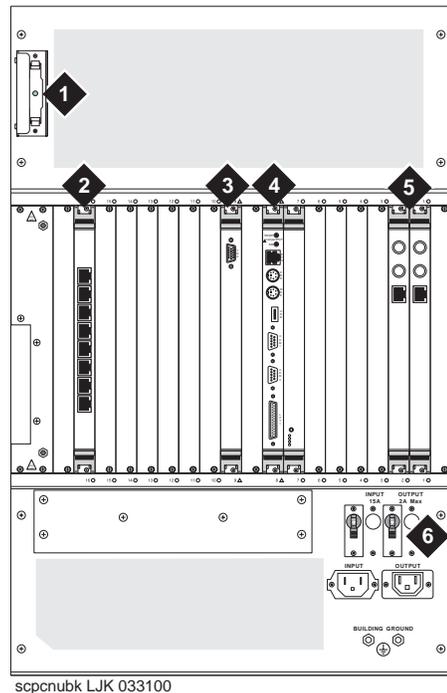
1. **External SCSI terminator**
2. **8-port asynchronous rear I/O transition card**
3. **IOB companion rear I/O transition card**
4. **SBC rear I/O transition card**
5. **CYD21 (formerly CYD2) rear I/O transition card**
6. **AC Power connection and switches**

scpcnubk LJK 033100

Installing a Circuit Card

Installing a Rear I/O Transition Card

⚠ CAUTION:

Misalignment of a rear I/O transition card can cause connector pins to bend. One cause of misalignment is to allow the bottom part of the card to lead the top part of the card while inserting. To install a rear I/O transition card correctly, insert the rear I/O transition card evenly into the slot. Keep the faceplate vertical and guide the card by applying greater pressure to the top of the faceplate until the card fully engages the backplane connector. For example, a right-handed person would apply pressure to the top of the faceplate with the right hand and guide the bottom of the faceplate with the left hand.

ITo install an SSP, E1/T1, or 8-port asynchronous circuit card, or the respective I/O rear transition card:

Note: The optional E1/T1 and 8-port asynchronous circuit cards require a rear I/O transition card.

Note: Rear I/O transition cards must never be installed "live" if their corresponding front I/O is plugged in. Rear I/O transition cards must be installed first-in-last out (FILO) with respect to their associated front card.

1 Remove the new circuit card from its ESD-protective wrapping.

⚠️ **CAUTION:**
Hold the circuit card carefully by the edges and place it on a grounded mat. See Protecting Against Damage from Electrostatic Discharge (page 1) in Chapter 1, Getting Inside the System," for detailed ESD precautions.

Note: Keep the package and all ESD-protective wrapping. If you must return a card for repair, reusing the replacement unit packaging is necessary to meet the manufacturer's warranty. Be sure to include a description of the failure.

Verify circuit card switch and jumper settings to ensure they are set correctly. See the specific instructions, listed later in this chapter, for each type of circuit card being installed.

If you are replacing an existing circuit card, the settings must match the old card.

⚠️ **CAUTION:**
Do not force a circuit card into a slot. Forcing a circuit card into a slot will damage the circuit card and/or the backplane.

Note: For new circuit card installations that include an associated rear I/O trasition card, the rear I/O transition card must be installed and cabled first.

2 Install the rear I/O transition card.

a Apply even pressure to the top and bottom of the rear I/O transition card until it engages the backplane.
b Secure the rear I/O transition card to the system by tightening the screws located at the top and bottom of the faceplate.
c Make any applicable cable connections to the rear I/O transition card.

Note: See the TNV-1 Keying for the E1/T1 Circuit Card (page 20) if you are installing a CYD21 (formerly CYD2) rear I/O transition card and an E1/T1 (CWB21, formerly CWB2) circuit card.

3 Verify the front panel slot keying on the system. The front panel circuit card slot number corresponds to the slot number of its associated rear I/O transition card (if applicable).

Ensure the slot being keyed matches the type of circuit card being installed. See the specific instructions, listed later in this chapter, for each type of circuit card being installed then continue with Step 4.

⚠️ **WARNING:**
Do not remove the front panel keying mechanism or attempt to defeat its purpose. Doing so may damage the equipment and cause injury to service personnel.

4 Holding the circuit card by its faceplate and the diagonal corner, slide the card into the backplane connector.

5   Apply even pressure to the top and bottom of the circuit card until it engages the backplane.

⚠ CAUTION:

If the circuit card does not engage the backplane with gentle pressure, verify that the circuit card and the front panel are properly keyed for the type of circuit card you are installing. See TNV-1 Keying for the E1/T1 Circuit Card (page 20) and SELV Keying for the 8-Port Asynchronous Circuit Card (page 25) for more information.

6   Secure the circuit card into position by gently pushing the faceplate levers into their locked position and tightening the screws located at the top and bottom of the faceplate.

7   Attach all cables to the new card. Make sure these cables are attached to their proper terminations.

Note: For complete information about the **attach**, **restore**, and **eqn_attach** commands, see Appendix A, "Summary of Commands" in the *CONVERSANT System Version 8.0 Administration*, 585-313-510.

8   Do one of the following:

~   If you are replacing an SSP or E1/T1 card, enter **attach card *x*** where *x* is the SSP or E1/T1 circuit card number just inserted into the system.

~   If you are replacing an 8-port asynchronous card, enter **eqn_attach**.

9   Enter **restore card *x*** where *x* is the SSP or E1/T1 circuit card to be placed in service (INSERV). This command is not required for the 8-port asynchronous circuit card.

Note: The green LED lights on the front of the circuit card and the blue LED goes dark.

Applying the CLEI Label

You must apply a CLEI label to the system when replacing or installing any of the following components:

•   On the front of the system, apply the CLEI labels for the CPU complex.

•   On the rear of the system, apply CLEI labels for the CPU rear I/O transition card

Figure 14 on page 16 shows the positions of the CLEI label that is to be applied to the front of the system. Figure 15 on page 16 shows the positions of the CLEI label that is to be applied to the rear of the system.

Figure 14.   CLEI Labels—Front of System

lbpcfrn2 LJK 033100
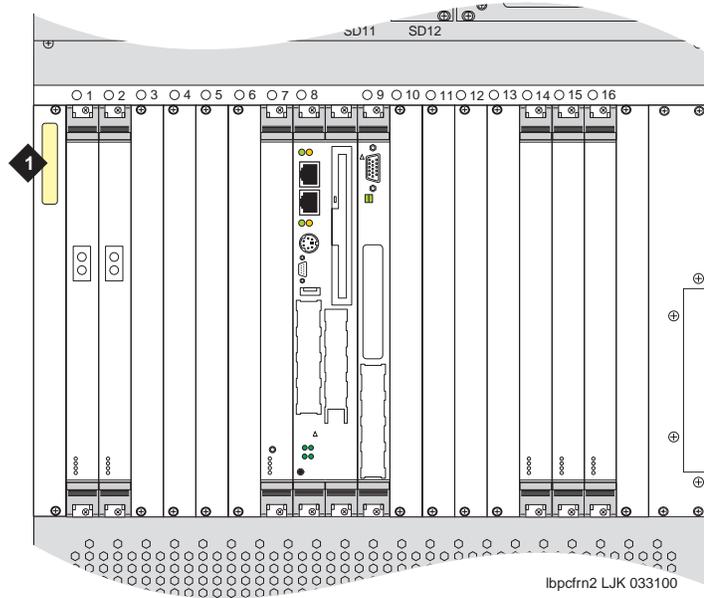
1. CLEI label for the CPU complex

Figure 15.   CLEI Labels—Rear of System
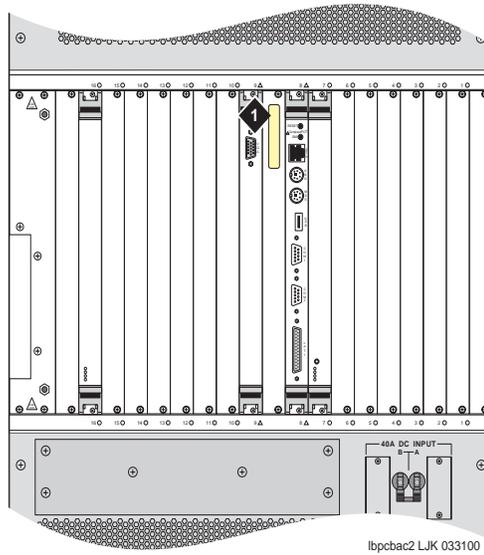
1. CLEI label for the CPU rear I/O transition card

lbpcbac2 LJK 033100

Optional Circuit Cards

The optional circuit cards are the:

- E1/T1 (CWB21, formerly CWB2)

- SSP (CWB20, formerly CWB1)

- 8-port asynchronous

This section provides the following information on the optional feature circuit cards:

- Switch and jumper settings

- Circuit card slot keying on the front panel

- Other installation requirements that are specific to the particular circuit card you are installing

Note: In general, circuit cards are preset at the factory. However, you should verify the switches and jumpers (resource options) *before* you install the circuit cards. When you set the switches according to the instructions in this chapter, remember that OFF is equivalent to open and ON is equivalent to closed.

E1/T1 Circuit Card Settings

The E1/T1 (CWB21, formerly CWB2) circuit card (Figure 16 on page 18) contains switches, jumpers, and faceplate key positions that you must verify before you install the circuit card in the system.

If installing a new E1/T1 circuit card, you must change the front panel key positions on the system and verify the faceplate key positions on the E1/T1 circuit card before inserting it in the system.

Switch and Jumper Settings

Verifying E1/T1 Switch Settings   Verify that the switches for the new E1/T1 circuit card are set properly for your specific operation. Figure 16 on page 18 shows the correct switch setting for T1 operation. Figure 17 on page 18 shows the correct switch setting for E1 operation.

Figure 16.   E1/T1 (CWB21, Formerly CWB2) Circuit Card Set for T1 Operation

cdpccwb2 EWS 031699
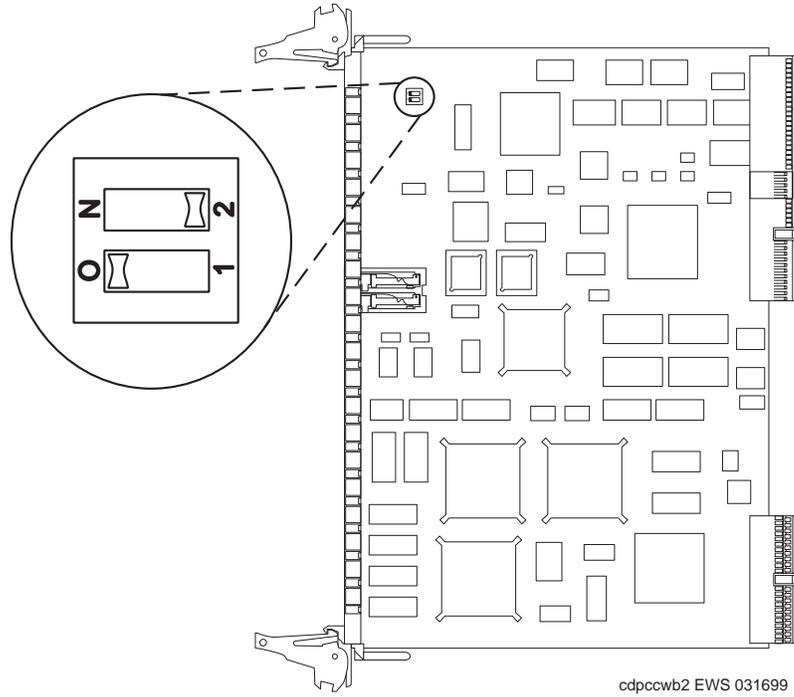
Figure 17.   E1/T1 (CWB21, Formerly CWB2) Circuit Card Set for E1 (120-ohm) Operation

cdpccwb3 EWS 071299
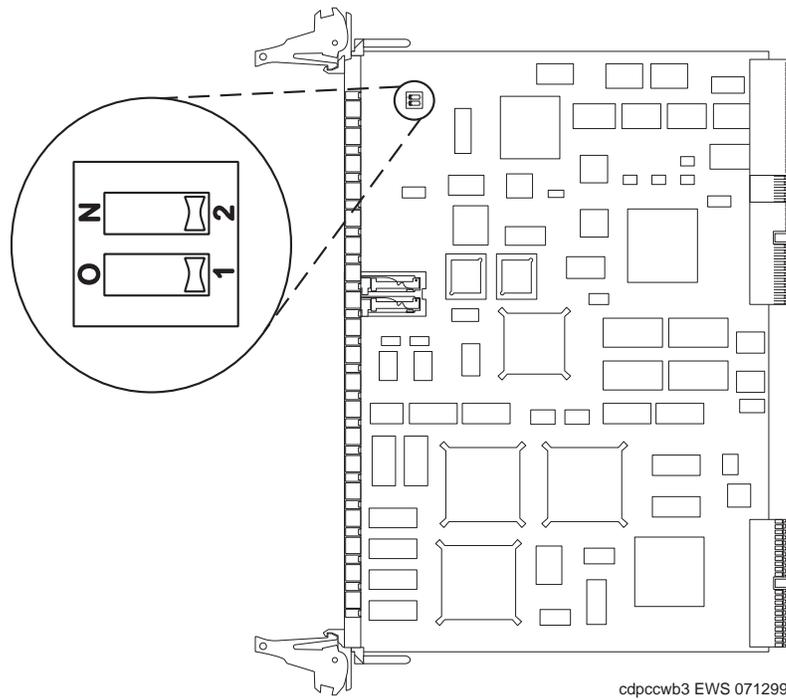
If your system uses 75 ohms, the switch settings should be set to those shown in Figure 18.

Figure 18. Front View of E1/T1 (CWB21, Formerly CWB2) Circuit Card Set for E1 (75-ohm) Operation

CEPT/E1
75 ohm, BNC jack
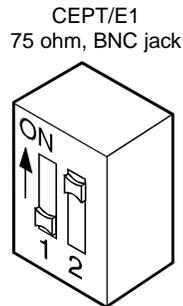
Figure 19 shows the jumper settings. The jumpers are located on the CYD21 (formerly CYD2) rear I/O transition card, as shown in Figure 20 on page 20.

Figure 19. E1 Coax Jumper Settings (Rear View)
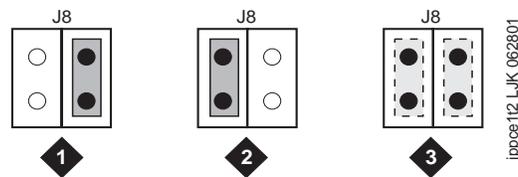
1. **E1, 75 OHM BNC Jack, Ground TX (transmit) outer conductor**
2. **E1, 75 OHM BNC Jack, Ground RX (Receive) outer condcutor**
3. **T1 or E1, 120 OHM modular jack**

Verifying E1/T1 Jumper Settings

Each E1/T1 circuit card has a corresponding rear I/O transition card (CYD21, formerly CYD2) as shown in Figure 20 on page 20. This card supports rear entry trunk connections. See Appendix C, "Pinouts" in *CONVERSANT System Version 8.0 New System Installation*, 585-313-149, for the 8-pin modular jack pinout information.

For T1 mode, there are no applicable jumpers or switches on the CYD21 rear I/O transition card.

Figure 20. CYD21 (Formerly CYD2) Rear I/O Transition Card for the E1/T1 Circuit Card
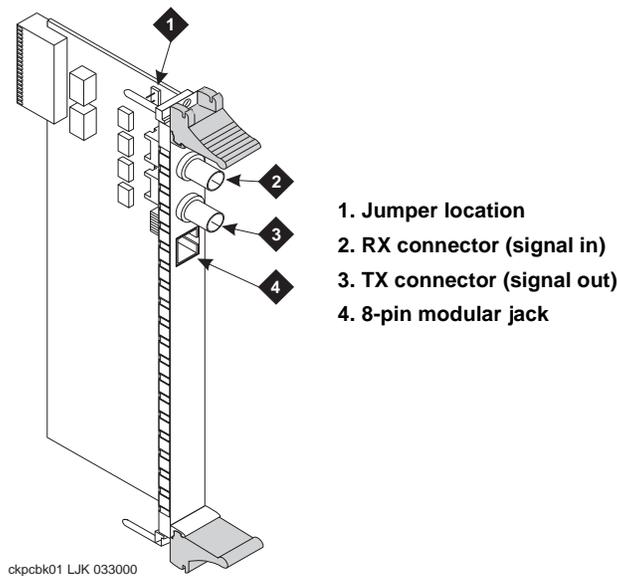
1. Jumper location
2. RX connector (signal in)
3. TX connector (signal out)
4. 8-pin modular jack

ckpcbk01 LJK 033000

TNV-1 Keying for the E1/T1 Circuit Card

⚠ **WARNING:**
The E1/T1 circuit card is qualified to terminate TNV-1 level voltages only. When installing a new E1/T1 circuit card, do not connect wet (powered) or unprotected (outside premises wiring) T1 or E1 lines to the CYD21 (formerly CYD2) rear I/O transition card. Doing so could damage the circuit card or cause harm to service personnel.

Front Panel Key Positions for E1/T1

The front panel for each circuit card slot on the system is keyed to a default setting at the factory. The factory default setting will not accept an E1/T1 circuit card.

Therefore, before installing a new E1/T1 circuit card, you must rekey the front panel key positions on the system and verify the circuit card faceplate key positions.

Note: If you are replacing an E1/T1 circuit card into an existing E1/T1 slot, you only need to verify the circuit card faceplate key positions. See Figure 21 on page 21 for general faceplate key locations.

Verifying the Front Panel Key Positions for the E1/T1 Slot

The E1/T1 circuit card slot position in the system must be keyed at the front panel for TNV-1. This means that chambers A through F should look like those shown in Figure 22 on page 21. The front panel key chambers are located on the front of the circuit card cage area, at the top and bottom for each circuit card position on the system.

Figure 21.   Sample of Key Locations for a Circuit Card Faceplate

1. Upper faceplate key locations

2.Upper faceplate key lettering

Keys D, E, and F are located behind the <u>lower</u> faceplate lever.

ckpckey2 LJK 040100
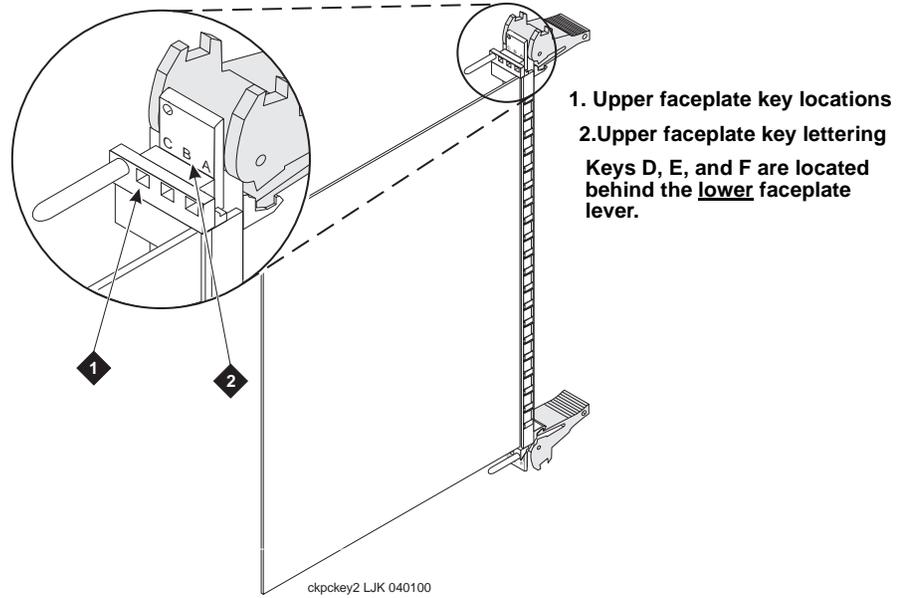
Figure 22.   Front Panel TNV-1 Keying on the System

evpctnv1 KLC 083099

1. Key positions for chambers A, B, and C

2. Key positions for chambers D, E, and F
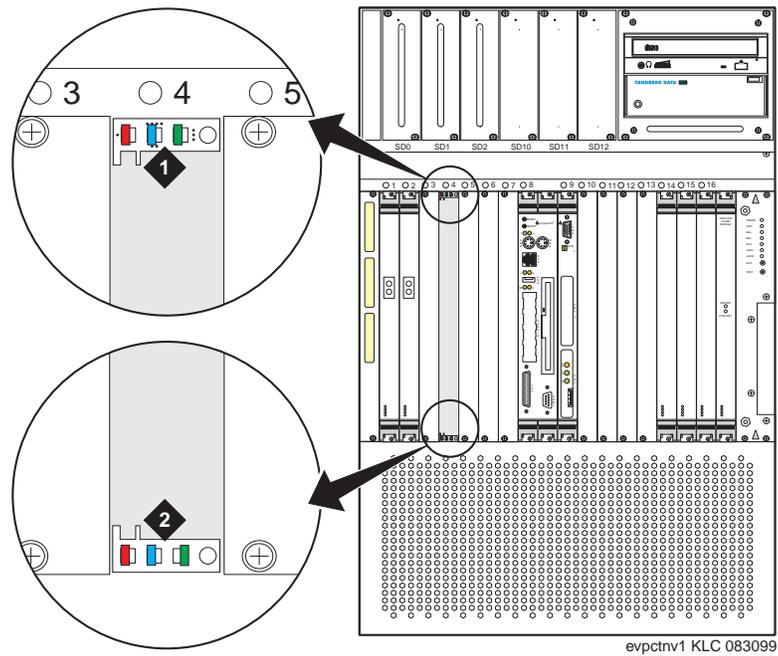
To rekey or to verify that the front panel on the system is properly keyed for the E1/T1 circuit card:

1 If you are replacing an existing circuit card:

    a Remove the old E1/T1 circuit card from the system if you have not done so already. See Removing a Circuit Card (page 11) for the procedure.

    b Check the front panel keys on the system to verify that they are set as shown in Figure 22 on page 21. Ensure that the front panel slot is the one for which an associated CYD21 (formerly CYD2) rear I/O transition card has been installed.

    ⚠ **WARNING:**
Do not remove the front panel keying mechanism or attempt to defeat its purpose. Doing so may damage the equipment and cause injury to service personnel.

2 For a new circuit card installation:

    a Make sure the rear I/O transition card (CYD21, formerly CYD2) is installed at the rear slot location.

    b Use a small needle-nosed pliers to change the default slot key to a TNV-1 slot as shown in Figure 22 on page 21.

    c Verify the key positions on the E1/T1 circuit card.

Note: When keyed correctly, the circuit card keys, which are located just behind the faceplate, should complement the front panel key chambers, as shown in Figure 22 on page 21. The T1/E1 circuit card keys are set properly at the factory and should not normally need to be changed. Be certain that the keying on the platform is correct before changing the keying on the card. Typically, E1/T1 cards will be inserted beginning in slot 1, followed (in higher-numbered slots) by SSP cards.

3 When you have verified that the front panel keys are keyed correctly, insert the E1/T1 circuit card. See Installing a Circuit Card (page 13) and resume at Step 4.

Installing the E1/T1 Circuit Card Driver

The E1/T1 circuit card driver is part of the base software set. For more information, see Installing the CONVERSANT Base Software Set (page 113).

SSP Circuit Card Settings

Description   The Speech and Signal Processor (SSP) circuit card (CWB20, formerly CWB1)
(Figure 23) is equipped with 32 MB of memory. It requires no switch or jumper
settings.

Front Panel Keying   Since the SSP circuit card does not have external connections on its rear I/O transition
card, it requires no specific front panel keys. The SSP circuit card can be plugged into
any available front panel slot on the system.

Figure 23.   SSP (CWB20, Formerly CWB1) Circuit Card

1. Faceplate levers

ckpccwb1 KLC 042099
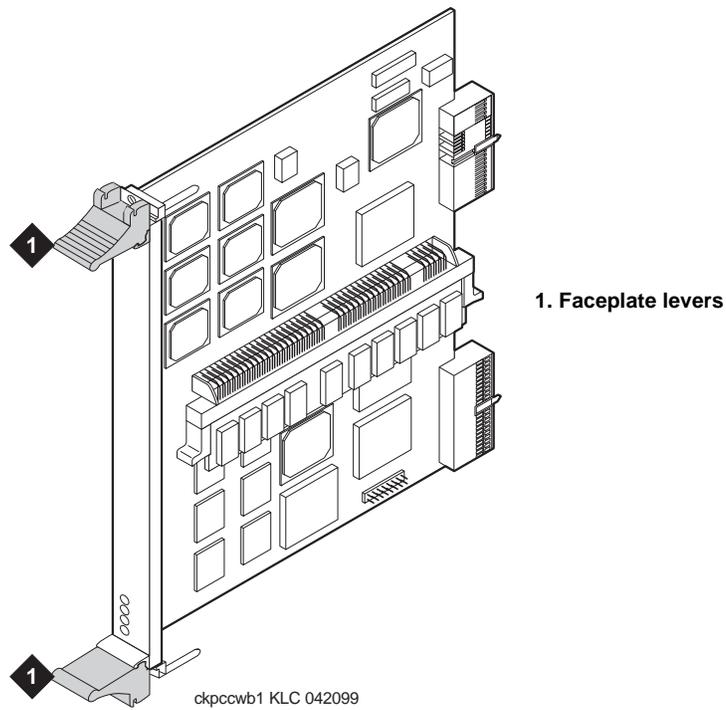
8-Port Asynchronous Circuit Card

Description   The system uses the an 8-port asynchronous circuit card for its multiport
asynchronous connections (Figure 24).

Figure 24.   8-Port Asynchronous Circuit Card

cdpccwb4 EWS 071299
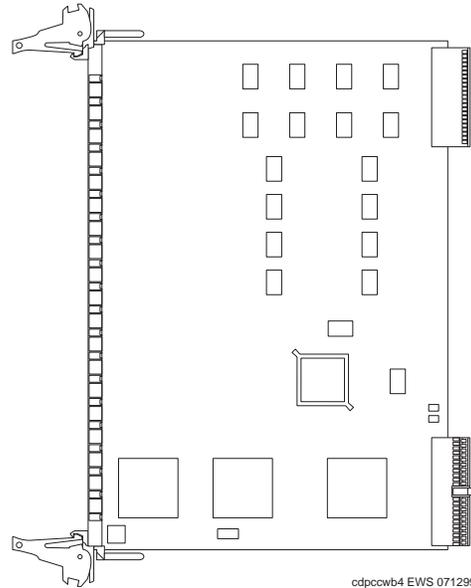
There are two ways to connect the system to a terminal, modem, or other DTE or
DCE devices via an asynchronous link:

• Using COM2, an asynchronous port on the rear of the system

• Using the additional asynchronous ports on the optional 8-port circuit card

Note: The system provides two asynchronous ports, COM1 and COM2.
However, COM1 is reserved for the RMB for alarm monitoring and
reporting.

The optional 8-port circuit card provides eight additional asynchronous ports for
connecting to modems, terminals, or switch integration devices. Each serial port
supports data rates up to 920 kilobits per second.

External connections are made on the rear I/O transition card (Figure 25 on page 25).

Follow the instructions provided with the devices you are installing for connection
and setup. See Appendix D, "Cable Connectivity," in the *CONVERSANT System
Version 8.0 New System Installation*, 585-313-149, to determine how to cable these
devices between the system and the switches or other peripherals. See Appendix C,
"Pinouts," in the *CONVERSANT System Version 8.0 New System Installation*, 585-
313-149, if you need pinout information.

Figure 25.   8-Port Asynchronous Rear I/O Transition Card

1. RJ-45 connection point 1
2. RJ-45 connection point 2
3. RJ-45 connection point 3
4. RJ-45 connection point 4
5. RJ-45 connection point 5
6. RJ-45 connection point 6
7. RJ-45 connection point 7
8. RJ-45 connection point 8

ckpcbk02 EWS 041599
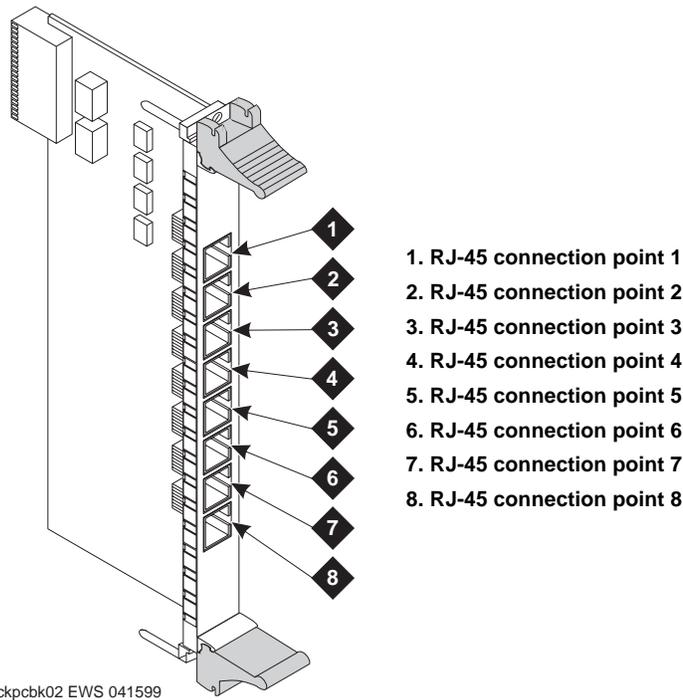
SELV Keying for the 8-Port Asynchronous Circuit Card

⚠ **WARNING:**
The 8-port asynchronous circuit card is qualified to terminate SELV level voltages only. When installing a new 8-port asynchronous circuit card, do not connect anything but standard DTE or DEC RS-232 equipment to the rear I/O transition card. Doing so could damage the circuit card or cause harm to service personnel.

Front Panel Keying   The front panel for each circuit card slot on the system is keyed to a default setting at the factory. The factory default setting will not accept an 8-port asynchronous circuit card.

Therefore, before installing a new 8-port asynchronous circuit card, you must rekey the front panel key positions on the system and verify the circuit card faceplate key positions.

Note: If you are replacing an 8-port asynchronous circuit card into an existing slot, you only need to verify the circuit card faceplate key positions. See Figure 21 on page 21 for general faceplate key locations.

Verifying the Front Panel Key Positions   The 8-port asynchronous circuit card slot position in the system must be keyed at the front panel for SELV. This means that chambers A through F should look like those shown in Figure 26 on page 26.

Figure 26.   Front Panel SELV Keying on the System
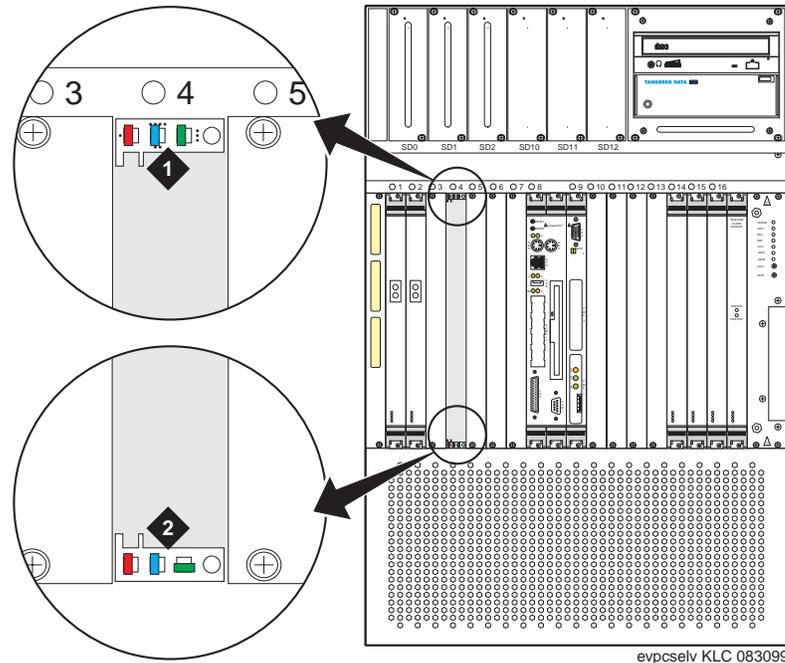
evpcselv KLC 083099

1. Key positions for chambers A, B, and C

2. Key positions for chambers D, E, and F

To rekey or to verify that the front panel on the system is properly keyed for the 8-port asynchronous circuit card:

1 If you are replacing an existing circuit card:

    a Remove the old 8-port asynchronous circuit card from the system if you have not done so already. See Removing a Circuit Card (page 11) for the procedure.

    b Check the front panel keys on the system to verify that they are set as shown in Figure 26. Ensure that the front panel slot is the one for which an associated rear I/O transition card has been installed.

⚠ WARNING:
Do not remove the front panel keying mechanism or attempt to defeat its purpose. Doing so may damage the equipment and cause injury to service personnel.

2 For a new circuit card installation:

    a Make sure the rear I/O transition card is installed at the rear slot location.

    b Use a small needle-nosed pliers to change the default slot key to a SELV slot as shown in Figure 26.

    c Verify the key positions on the 8-port asynchronous circuit card.

Note: When keyed correctly, the circuit card keys, which are located just behind the faceplate, should complement the front panel key chambers as shown in Figure 26. The 8-port asychronous circuit card keys are set properly at the factory and should not noramlly need to be changed. Be certain that

the keying on the platform is correct before changing the keying on the card.

3 When you have verified that the front panel keys are keyed correctly, insert the 8-port asynchronous circuit card. See Installing a Circuit Card (page 13) and resume at Step 4.

Standard Circuit Card

Remote Maintenance Circuit Card

The remote maintenance circuit card (CWB3 with CYD3 or CYD4) enables remote diagnostics of basic system components. The combination of CWB3 with CYD3 is used for domestic configurations, and the combination of CWB3 with CYD4 is used for international configurations. The CWB3+CYD3 set has an internal modem, while the CWB3+CYD4 set can be connected to an external modem. There are no jumper requirements for the remote maintenance circuit card. Figure 27 and Figure 28 on page 28 shows the CWB3 remote maintenance circuit card and CYD3/4 rear I/O transition card of the remote maintenance circuit card.

Figure 27.   CWB3 Remote Maintenance Circuit Card

1. Reset button
2. Red LED – FAIL
3. Yellow LED – MAINTENANCE BUSY
4. Green LED – IN SERVICE
5. Blue LED – HOT SWAP

cdpcrmb LJK 030700
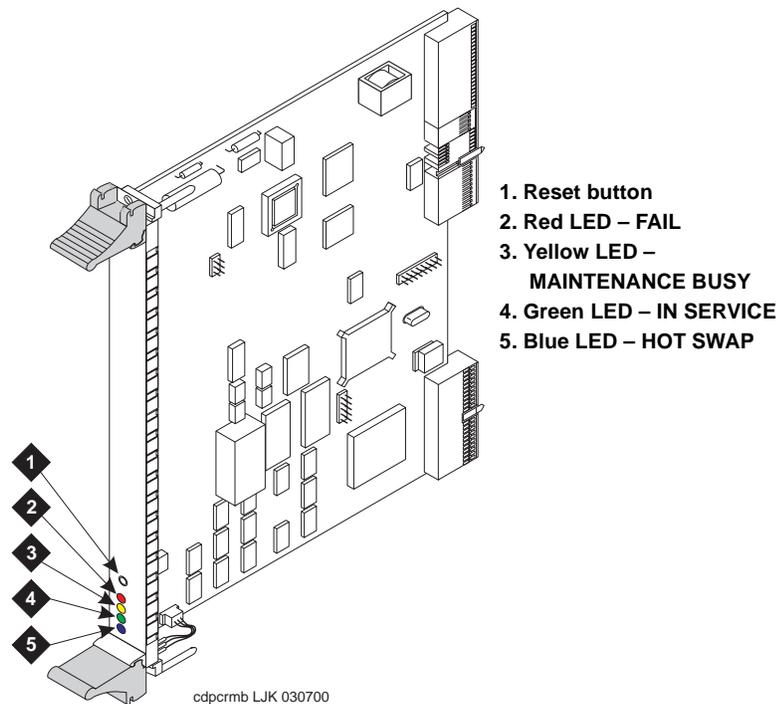
Figure 28. CYD3/4 Rear I/O Transition Card for the Remote Maintenance Circuit Card
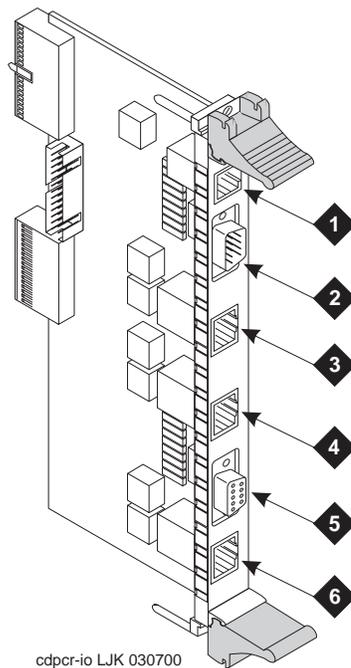
1. PBX/CO LINE: 6-pin modular jack for on-board modem connection (only CYD3)

2. MODEM: DB-9 connector for external modem (only CYD4)

3. ALARM IN: 8-pin modular jack for user-define inputs 5-8 (not currently used)

4. UPS ALARM IN: 8-pin modular jack for user-defined inputs 1-4 (not currently used

5. COMPUTER COM PORT: DB-9 connector for COM1 port connection on SBC

6. ALARM OUT: 8-pin moduclar jack for 4 user-definable outputs (not currently used)

cdpcr-io LJK 030700

The figures show the cards in the proper orientation relative to the chassis. The RMB cards always go into slot 7.

Each faceplate lever has a release button which must be pushed prior to either inserting or removing a card from a slot. When the release buttons have been depressed, the faceplate levers can move freely, and are used just as they are for other types of cards.

CPU Complex

Description The system uses a single board computer (SBC) circuit card and an I/O companion circuit card (IOB). These two circuit cards combine to form the CPU complex (Figure 29 on page 29). There is one CPU complex installed in the system at slot locations 8 and 9 (Figure 12 on page 12).

If there is an indication of a problem with either the single board computer (SBC) circuit card or the I/O companion circuit card (IOB), you must replace the entire CPU complex. Do not attempt to repair or replace a component on the SBC or the IOB.

Note: Unlike some other circuit cards in the UCS 1000, the CPU complex is *not* hot swapable. You must power down the sytem before removing the CPU complex.

⚠ CAUTION:

There is a danger of explosion if the battery on the CPU complex is incorrectly replaced. This battery is not a field-replaceable item. If it fails, replace the entire CPU complex and return the old CPU complex to Avaya for repair.

Figure 29.   CPU Complex – Front View

1. **Network connection and activity indicator LEDs**
2. **Ethernet connection 1**
3. **Ethernet connection 2**
4. **Network connection and activity indicator LEDs**
5. **Mouse/Keyboard connection**
6. **COM1 connection**
7. **USB connection**
8. **Hard disk drive access indicator LED for on-board IDE flash only (normally dark) Note: Only one is used by the hard disk LED. The other 3 are used by the BIOS during boot up and should be green when UNIX is up.**
9. **Rest switch push button**
10. **Floppy disk drive**
11. **VGA monitor connection**
12. **SCSI access indicator LEDs**
13. **RAID controller PMC**
14. **PMC1 position (vacant)**

fppcsb50 LJK 031700

SBC Connections

The SBC is located in slot 8. It consists of a 500 MHz-CPU. The following connections are available on the SBC at both the front and rear unless otherwise indicated:

- Keyboard/mouse
- Dual integrated ethernet (1 on front, 1 on rear)
- Diskette drive (front only)
- COM1 (reserved for the RMB)
- Parallel port for line printer LPT (rear only)
- COM2 (rear only)

⚠ CAUTION:

Do not connect to COM1. It is dedicated to the RMB. Any external connection will interrupt the watchdog timer communication to the CPU and cause a system reboot.

IOB Connections   The IOB companion is located in slot 9. The following are available on the IOB:

- VGA controller/monitor connection

- RAID PMC module

Setting the Resource Options   The configuration options for the CPU complex are set by switches. The SBC has two 4-position switches and one 2-position switch and the IOB has one 4-position switch. The SW1, SW2, and SW3 switches are located on the inside surface (between the 2 board "sandwich" at the top edge) of the SBC circuit card (Figure 30). Figure 31 through Figure 33 on page 31 show the SW1, SW2 and SW3 switch settings.

The SW0900 switch is located on the outside surface of the IOB circuit card, (Figure 34 on page 31). Figure 35 on page 32 shows the settings for the SW0900 switch.

The settings of these switches should be verified before you install a new complex.

Figure 30.   SW1, SW2 and SW3 Switch Locations on the SBC

1. **SW3 location**

2. **SW2 location**

3. **SW1 location**

cdpcsb50 LJK 031700
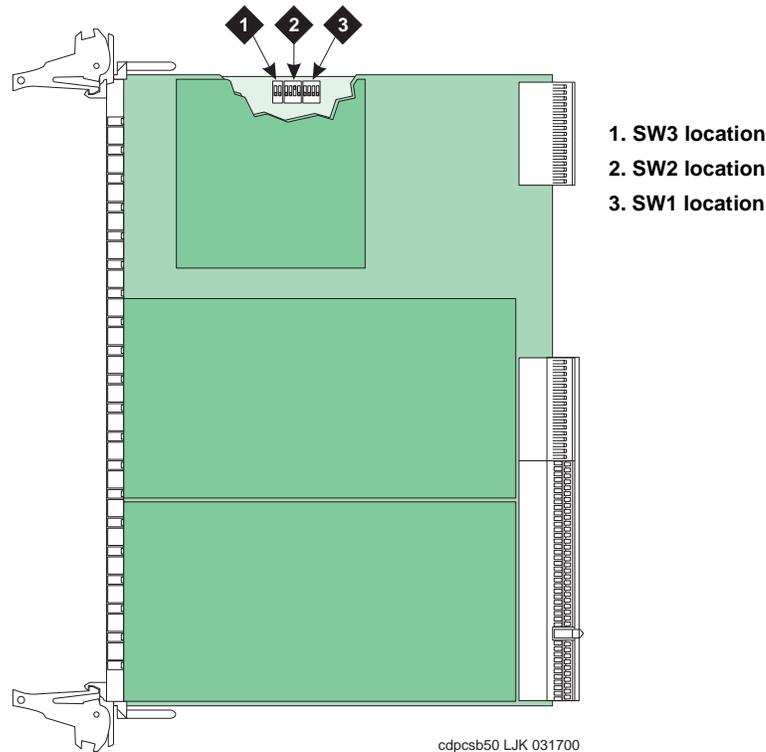
Figure 31.   SW1 Switch Setting for the SBC
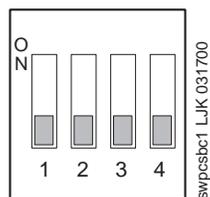
1. **The user flash is master of the primary IDE device.**

2. **Keyboard enabled.**

3. **Reset key enabled.**

4. **Abort key enabled.**

Figure 32.   SW2 Switch Setting for the SBC
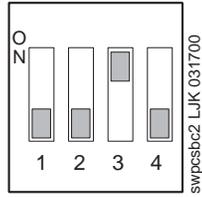
1. **BIOS writing enabled**
2. **Reserved for future use**
3. **Ethernet 1 connector via CompactPCI connection (rear I/O) (Note: Ethernet 2 connector is on the front panel only)**
4. **BIOS bootblock write protected**

Figure 33.   SW3 Switch Setting for the SBC
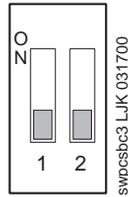
1. **12V monitoring disabled**
2. **FPGA download via on-board flash**

Figure 34.   SW0900 Switch Location on the IOB

cdpcsbc7 KLC 081999
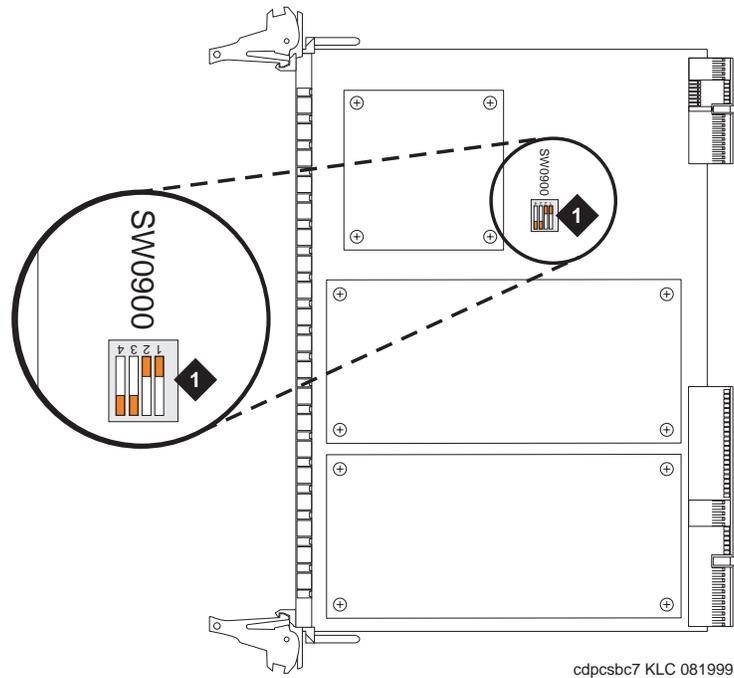
1. **SW0100 and SW0300 location**

Figure 35. SW0900 Switch Settings for the IOB
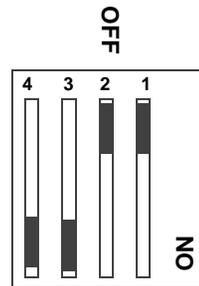
1. Reserved for future use
2. Reserved for future use
3. SCSI termination enable lower 8-bit termination
4. SCSI termination enable upper 8-bit termination

Removing the CPU Complex

To remove the CPU complex:

1 Verify that the replacement complex is on site and appears to be in usable condition, with no obvious shipping damage.

Note: If the complex being replaced is defective, note all symptoms of failure and include this information with the complex when it is returned.

2 Remove power from the system. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

3 Locate the complex to be replaced within the circuit card area. Disconnect any attached cables that may be externally connected to the complex. Note the connectivity of each cable so that you can replace it correctly.

4 Loosen the screws that secure the complex to the system. The screws are located at the top and bottom of the faceplate.

5 Unlatch the complex from the backplane by gently pushing the faceplate levers outward (away from the center of the circuit card) until the circuit card is released.

6 Remove the complex from the slot by gently pulling at the top and bottom corners of the complex.

Note: The CPU complex connects to slots 8 and 9. You must install the replacement complex in the same location.

7 Remove the complex from the system.

Installing the CPU Complex

To install or replace the CPU complex:

⚠ **CAUTION:**
Hold the replacement complex carefully by the edges and place it on a grounded mat. See Protecting Against Damage from Electrostatic Discharge (page 1) in Chapter 1, Getting Inside the System for ESD precautions.

1 Do one of the following:

~ If you are replacing the CPU complex, perform Removing the CPU Complex (page 32) and then continue with Step 2 of this procedure.

~ If you are installing a new CPU complex, continue with Step 3 of this procedure.

2 If equipped,remove the existing RAID PMC from the IOB. See Removing the RAID Controller PMC (page 34) for the procedure.

3 Install the RAID PMC (if a RAID system). See Installing the RAID Controller PMC (page 33) for the procedure, if required.

4 Gently slide the CPU complex into slots 8 (SBC) and 9 (IOB).

5 Apply even pressure to the top and bottom of the CPU complex until it is locked into the backplane.

6 Secure the complex into position by gently pushing the faceplate levers into their locked position and tightening the screws.

7 Attach all cables that you removed from other cards. Make sure that these cables are attached to their proper terminations.

8 Power up the system. See Restoring Power to the System in Chapter 1, Getting Inside the System for the procedure.

The system automatically reboots and displays the `Console login:` prompt.

9 Apply any necessary CLEI labels. See Applying the CLEI Label (page 15) for more information.

RAID PMC Module

The RAID controller PMC is located on the IOB at the PMC2 position (Figure 36 on page 34).

Installing the RAID Controller PMC

To install the RAID controller PMC:

1 Remove the CPU complex. See Removing the CPU Complex (page 32) for the procedure.

2 Insert the RAID controller PMC onto the IOB faceplate at the PMC2 location.

3 Connect the RAID controller PMC onto the IOB connectors.

4 Attach the RAID controller PMC onto the IOB standoffs using the two screws that accompanied the RAID controller PMC.

Note: Extra screws and standoffs are provided with the RAID controller PMC that are not used.

5 Insert the CPU complex. See Installing the CPU Complex (page 33) for the procedure.

Removing the RAID Controller PMC

To remove an existing RAID controller PMC:

1 Remove the CPU complex. See Removing the CPU Complex (page 32) for the procedure.

2 Remove the two screws from the standoffs that secure the RAID controller PMC to the IOB.

3 Disconnect the RAID controller PMC from the IOB connectors.

4 Remove the RAID controller PMC from the IOB faceplate at the PMC2 location.

Figure 36.   PMC Positions

1. Video controller module

2. RAID controller PMC (optional

3. Vacant PMC position

ckpcsb50 LJK 040100
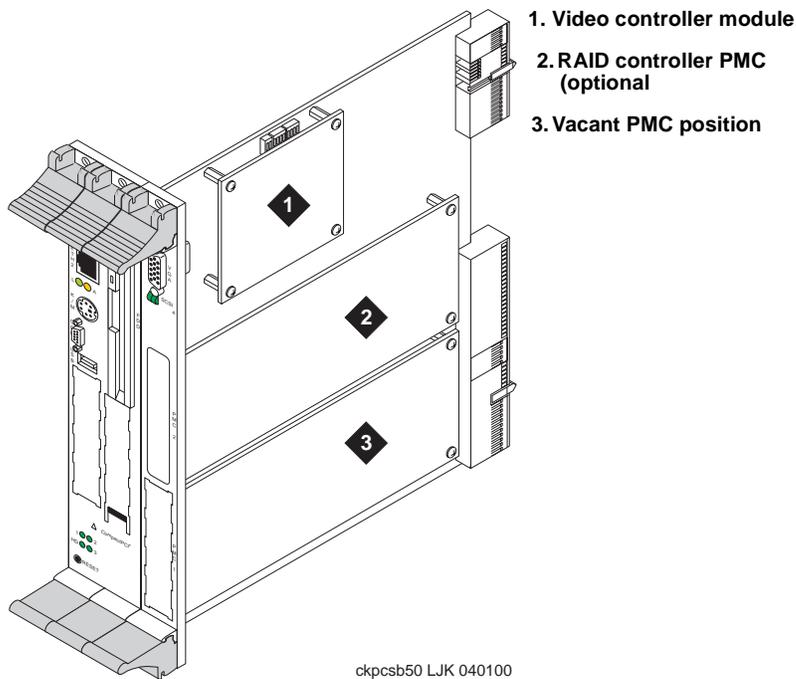
Verifying CMOS Parameter Settings

To verify the CMOS parameter settings:

⚠ CAUTION:
Do not change the settings if there is a mismatch. Contact your local technical support representative for assistance.

1 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

2 During the power-on self test (POST), press **F2**.

The system displays the following message:

`Entering SETUP...`

After the POST is complete, the system displays the BIOS Setup Utility main menu.

3 Compare the 500-MHz CPU circuit card settings in the setup utility with the default parameters. These parameters are listed in Table 2 through Table 22 on page 44.

Table 2. BIOS Setup Utility Option Settings

Option	Setting
System Time	*(current time)*
System Date	*(current date)*
Legacy Diskette A	1.44 MB 3 1/2"
Legacy Diskette B	Disabled
Primary Master	*IDE Removable*
Primary Slave	None
Secondary Master	None
Secondary Slave	None
System Memory[1]	*(displayed in KB)*
Extended Memory	*(displayed in KB)*

[1] The Power On Self Test fails if the system memory or extended memory is incorrect.

4 Press the ▲ or ▼ key to select `Primary Master` and press **ENTER**.

The system displays the Primary Master submenu. Compare the settings with those listed in Table 3 on page 36.

Table 3.   Primary Master Option Settings

Option	Setting
Type	Auto
Cylinders	490
Heads:	2
Sectors:	32
Maximum Capacity	16MB
Multi–Sector Transfers	Disabled
LBA Mode Control	Disabled
32 Bit I/O	Disabled
Transfer Mode	Fast PIO 1
Ultra DMA Mode	Disabled

5 Press **ESC**.

The system displays the BIOS Setup Utility main menu.

6 Press the ▶ key to select Advanced.

The system displays the Advanced main menu. Compare the settings with those listed in Table 4.

Table 4.   Advanced Option Settings

Options	Setting
Installed O/S	Other
Reset Configuration Data	No
PCI Configuration	
I/O Device Configuration	
Advanced Chipset Control	
Cache Memory	
POST Options	
Console Redirection	
Keyboard Features	

7 Press the ▲ or ▼ key to select PCI Configuration and press **ENTER**.

The system displays the PCI Configuration submenu.

8 Press the ▲ or ▼ key to select `PCI/PNP ISA UMB Region Exclusion` and press **ENTER**.

The system displays the PCI/PNP ISA UMB Region Exclusion screen. Compare the settings with those listed in Table 5.

Table 5.   PCI/PNP ISA UMB Region Exclusion Option Settings

Option	Setting
C800 - CBFF	Available
CC00 - CFFF	Available
D000 - D3FF	Available
D400 - D7FF	Available
D800 - DBFF	Available
DC00 - DFFF	Available

9 Press **ESC**.

The system displays the PCI Configuration submenu.

10 Press the ▲ or ▼ key to select `PCI/PNP ISA IRQ Resource Exclusion` and press **ENTER**.

The system displays the PCI/PNP ISA IRQ Resource Exclusion screen. Compare the settings with those listed in Table 6.

Table 6.   PCI/PNP ISA IRQ Resource Exclusion Option Settings

Option	Setting
IRQ 3	Available
IRQ 4	Available
IRQ 5	Available
IRQ 7	Available
IRQ 9	Available
IRQ 10	Available
IRQ 11	Available
IRQ 15	Available

11 Press **ESC**.

The system displays the PCI Configuration submenu.

12 Press the ▲ or ▼ key to select `PCI IRQ Routing Control` and press
ENTER.

The system displays the PCI IRQ Routing Control screen. Compare the settings
with those listed in Table 7.

Table 7.   PCI IRQ Routing Control Option Settings

Option	Setting
PCI IRQ line 1	Auto Select
PCI IRQ line 2	Auto Select
PCI IRQ line 3	Auto Select
PCI IRQ line 4	Auto Select

13 Press **ESC** to return to Advanced main menu.

14 Press the ▲ or ▼ key to select `Special IRQ Routing` and press **ENTER**.

The system displays the Special IRQ Routine submenu. Compare the settings
with those listed in Table 8

Table 8.   Special IRQ Routing

Option	Setting
Special IRQ Routing	All Standard
CPCI EnumA/EnumB IRQ	Disabled
Special CPCI IRQ Routing	Disabled
PCI RST# on Warm Boot	Enabled

15 Press **ESC** twice to return to the Advanced main menu.

16 Press the ▲ or ▼ key to select `I/O Device Configuration` and press
ENTER.

The system displays the I/O Device Configuration submenu. Compare the
settings with those listed in Table 9.

Table 9.   I/O Device Configuration Option Settings

Option	Setting
Local Bus IDE Adapter	Primary
Large Disk Access Mode	Other
Floppy Disk Controller	Enabled
PS/2 Mouse	Auto Detect
	1 of 2

Table 9.   I/O Device Configuration Option Settings

Option	Setting

Serial Port A
    Base IO Address
    Interrupt
	Enabled
	3F8
	IRQ4

Serial Port B	Auto
Parallel Port Mode	Auto ECP

2 of 2

17 Press **ESC** to return to Advanced main menu.

18 Press the ▲ or ▼ key to select Advanced Chipset Control and press **ENTER**.

The system displays the Advanced Chipset Control submenu. Compare the settings with those listed in Table 10.

Table 10.   Advanced Chipset Control Option Settings

Option	Setting
ECC Configuration	ECC Scrub
SERR Signal Condition	Multiple Bit

19 Press **ESC** to return to Advanced main menu.

20 Press the ▲ or ▼ key to select Cache Memory and press **ENTER**.

The system displays the Cache Memory submenu. Compare the settings with those listed in Table 11.

Table 11.   Cache Memory Option Settings

Option	Setting
Memory Cache	Enabled
Cache System BIOS Area	Write Protect
Cache Video BIOS Area	Write Protect
Cache 0-512K	Write Back
Cache 512K - 640K	Write Back
Cache Extended Memory Area	Write Back

21 Press **ESC** to return to Advanced main menu.

22 Press the ▲ or ▼ key to select POST Options and press **ENTER**.

The system displays the POST Options submenu. Compare the settings with those listed in Table 12.

Table 12.   POST Options Settings

Option	Setting
Boot without VGA & Keyboard	Enabled
Summary Screen	Enabled
Quick Boot Mode	Disabled
POST Delay	3 seconds
POST Errors	Disabled
Setup Prompt	Enabled
Execute SCSI Option ROM **OR**	Enabled (for SCSI systems)
Execute SCSI Option ROM	Disabled (for RAID systems)

23 Press **ESC** to return to Advanced main menu.

24 Press the ▲ or ▼ key to select Console Redirection and press **ENTER**.

The system displays the Console Redirection submenu. Compare the settings with those listed in Table 13.

Table 13.   Console Redirection Options Settings

Option	Setting
COM Port Address	3F8/IRQ 4
Console connection	Via modem
Console Type	PC ANSI
Baud Rate	38.4K
Flow Control	CTS/RTS
Disable Before Boot	No
Tell the Modem to Ignore DTR[1]	No
Initialize modem string[1]	S0=1&K3&D2
Commands to Ignore DTR[1]	&Q5&D0

[1] These options appear in BIOS version r1.0.7 or later.

25 Press **ESC** to return to Advanced main menu.

26 Press the ▲ or ▼ key to select `Keyboard Features` and press **ENTER**.

The system displays the Keyboard Features submenu. Compare the settings with those listed in Table 14.

Table 14.   Keyboard Features Option Settings

Option	Setting
Numlock	Auto
Key Click	Disabled
Keyboard auto–repeat rate	30/sec
Keyboard auto–repeat delay	1/2 sec

27 Press **ESC** to return to Advanced main menu.

28 Press the ▶ key to select `Security`.

The system displays the Security main menu. Compare the settings with those listed in Table 15.

Table 15.   Security Option Settings

Option	Setting
Supervisor Password Is	Clear
User Password Is	Clear
Set Supervisor Password	Enter
Set User Password	Enter
Password on boot	Disabled
Fixed disk boot sector	Normal
Diskette access	Supervisor

29 Press the ▶ key to select `Power`.

The system displays the Power main menu. Compare the settings with those listed in Table 16.

Table 16.   Power Option Settings

Option	Setting
Power Savings	Disabled
Standby Timeout	Off
	1 of 2

Table 16. Power Option Settings

Option	Setting
Auto Suspend Timeout	Off
Hard Disk Timeout	Disabled
Advanced Options	
	2 of 2

30 Press the ▲ or ▼ key to select `Advanced Options` and press **ENTER**.

The system displays the Power Advanced Options submenu. Compare the settings with those listed in Table 17.

Table 17. Power Advanced Options Settings

Option	Setting
IDE Drive 0 Monitoring	Disabled
IDE Drive 1 Monitoring	Disabled
IDE Drive 2 Monitoring	Disabled
IDE Drive 3 Monitoring	Disabled
PCI Bus Monitoring	Disabled

31 Press **ESC**.

32 Press the ▶ key to select `Boot`.

The system displays the Boot main menu. Compare the settings with those listed in Table 18.

Table 18. Boot Menu Settings

Option	Settings
1.	Diskette Drive
2.	Hard Drive
3.	Removable Devices
4.	ATAPI CD-ROM Drive
Hard Drive	
Removable Devices	
Removable Format	

33 Press the ▲ or ▼ key to select `Hard Drive` (under option) and press **ENTER**.

The system displays the Hard Drive boot options submenu. Compare the settings with those listed in Table 19 and Table 20.

Note: The optionally equipped settings will vary depending on your configuration.

Table 19.   RAID Hard Drive Boot Options Settings

Option	Setting
1.	Bootable Add-In Card
2.	SunDisk SDTB - 128-(PM)[1]

[1] This is the flash IDE disk. This name may not match that displayed on your system.

Table 20.   SCSI Hard Drive Boot Options Settings

Option	Setting[1]
1. Optionally equipped	AIC-7880:00 IBM DNES-318350 AIC-7880:01 IBM DNES-318350 AIC-7880:02 IBM DNES-318350 AIC-7880:0A IBM DNES-318350 AIC-7880:0B IBM DNES-318350 AIC-7880:0C IBM DNES-318350
2.	SunDisk SDTB-128-(PM)[2]

[1] "Bootable Add-In Card" entry may appear in this list. This can be ignored.
[2] This is the flash IDE disk. This name may not match that displayed on your system.

34 Press **ESC**.

The system displays the Boot main menu.

35 Press the ▲ or ▼ key to select `Removable Devices` and press **ENTER**.

The system displays the Removable Devices options submenu. Compare the settings with those listed in Table 21.

Table 21.   Removable Devices Options Settings

Option	Setting
1.	Legacy Floppy Drives

36 Press **ESC**.

The system displays the Boot main menu.

37 Press the ▲ or ▼ key to select `Removable Format` and press **ENTER**.

The system displays the Removable Format options submenu. Compare the settings with those listed in Table 22.

Table 22.   Removable Format Options Settings

Option	Setting
SunDisk SDTB-128-(PM)	Fixed Disk

38 Press **ESC**.

The system displays the Boot main menu.

39 Press the ▶ key to select `Exit`.

The system displays the Exit menu (Figure 37).

Figure 37.   Exit Menu Options

```
                  Exit Menu Options

Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Discard Changes
Save Changes
```

40 Press the ▲ or ▼ key to select `Exit Discarding Changes` and press **ENTER**.

Note: If you made changes to any setting, select `Exit Saving Changes` before pressing **ENTER**.

The system automatically reboots and displays the `Console Login:` prompt.

Verifying SCSI Controller Parameters

PIII 500 MHz CPU circuit card parameter settings are pre-loaded into each card. To verify these settings:

⚠ CAUTION:
Do not change the settings if there is a mismatch. Contact your remote maintenance center for assistance.

1 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

2 After the power on self test (POST) but before the system boots, press **CONTROL** + **A** when prompted.

   The system displays the Host Adapter Configuration screen (Figure 38).

Figure 38.   Host Adapter Configuration Screen

```
Would you like to configure the host adapter, or run the
SCSI disk utilities? Select the option and press <Enter>.
Press <F5> to switch between color and monochrome modes.



                      Options
           Configure/View Host Adapter Settings
                 SCSI Disk Utilities
```
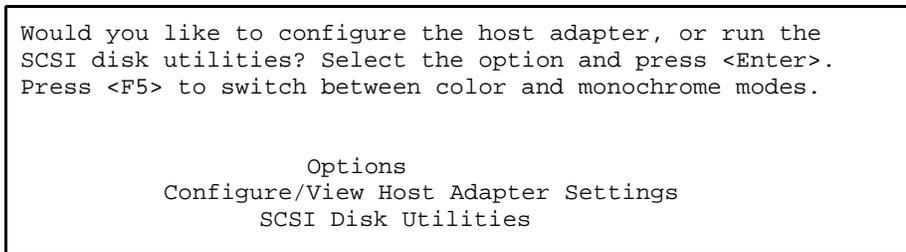
3 Place the cursor on **Configure/View Host Adapter Settings**. Use the ▲ and ▼ keys to move the cursor.

4 Press **ENTER**.

5 Compare the settings shown on the screen with the parameters listed in Table 23.

Table 23.   SCSI Configuration

Option	Setting
SCSI Bus Interface Definitions	
Host Adapter SCSI ID	7
SCSI Parity Checking	Enabled
Host Adapter SCSI Termination	Enabled
Additional Options	
Boot Device Options	Press Enter
SCSI Device Configuration	Press Enter
Advanced Configuration	Press Enter

6 Place the cursor on **Boot Device Options**. Use the ▲ and ▼ keys to move the cursor.

7 Press **ENTER**.

Compare the settings shown on the screen with the correct parameters listed in Table 24.

Table 24.   Boot Device Options

Option	Setting
Boot SCSI ID	0
Boot Lun Number	0

8 Press **ESC twice**.

The system displays the SCSI Configuration screen.

9 Place the cursor on **SCSI Device Configuration**. Use the ▲ and ▼ keys to move the cursor.

10 Press **ENTER**.

Compare the settings shown on the screen with the correct parameters listed in Table 25.

Note: These settings must be applied to all SCSI Device IDs (0 – 15) shown.

Table 25.   SCSI Device Configuration

Option	Setting
Sync Transfer Rate (MB/Sec)	20
Initiate Wide Negotiation	Yes
Enable Disconnection	Yes
Send Start Unit Command	Yes
Enable Write Back Cache	N/C
Options listed below have no effect if the BIOS is Disabled.	
BIOS Multiple LUN Support	No
Include in BIOS Scan	Yes

11 Press **ESC**.

The system displays the SCSI Configuration screen.

12 Place the cursor on **Advanced Configuration Options**. Use the ▲ and ▼ keys to move the cursor.

13 Press **ENTER**.

Compare the settings shown on the screen with the correct parameters listed in Table 26.

Table 26.   Advanced Configuration Options

Option	Setting
Plug and Play SCAM Support	Disabled
Reset SCSI Bus at IC Initialization	Enabled
Display <Ctrl> <A> Message During BIOS Initialization	Enabled
Extended BIOS Translation for DOS Drives> 1 GByte	Disabled
Verbose/Silent Mode	Verbose
Options listed below have no effect if the BIOS is Disabled.	
Host Adapter BIOS	Enabled
Support Removable Disks Under BIOS as Fixed Disks	Boot Only
BIOS Support for Bootable CD-ROM	Enabled
BIOS Support for Int 13 Extensions	Enabled

14 Press **ESC**.

The system displays the SCSI Configuration screen.

15 Press **ESC**.

16 The system returns to the Host Adapter Configuration Screen (Figure 38 on page 45).

17 Press **ESC**.

The system displays the following message:

```
Exit Utility
    Yes
    No
```

18 Place the cursor on **Yes**. Use the ▲ and ▼ keys to move the cursor.

19 Press **ENTER**.

The system displays the following message:

```
Please press any key to reboot.
```

20 Press **ENTER**.

The system reboots and responds with Console Login:.

Verifying RAID Controller BIOS and Configuration Options

To verify the RAID controller BIOS and configuration options:

1 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

2 Wait for the Mylex DAC960 BIOS messages to appear.

3 Press **CTRL**+**M** when prompted.

The system displays the DAC960 BIOS options submenu. Compare the settings with those listed in Table 27.

Table 27. DAC960 BIOS Options Settings

Option
BIOS enabled
CD-ROM boot disabled
2-GB drive geometry

4 Press **ESC** to exit and reboot the system.

5 Wait for the Mylex DAC960 BIOS messages to appear.

6 Press **CTRL**+**R** when prompted.

The system displays the Mylex Disk Array Controller Configuration Utility.

7 Choose option 09 Advanced Functions and press **ENTER.**

8 Verify that the parameters are set as shown in Table 28.

Table 28. RAID Controller BIOS and Configuration Option Settings

Parameters	Option	Setting
Hardware	Automatic Rebuild Management	Enabled
	StorageWorks Fault Management (TM)	Disabled
Physical	Rebuild/Add Capacity Rate	10
	Segment Size (KB)	8
	Stripe Size (KB)	64
		1 of 2

Table 28.   RAID Controller BIOS and Configuration Option Settings

Parameters	Option	Setting
SCSI Xfr (Channel 0)	Data Transfer Rate	10 Mhz
		Note: Do not set faster than 10 MHz.
	Command Tagging	Enabled
	SCSI Data Bus Width	16 bit
Startup	Spin Up Option	Automatic
	Number of Devices Per Spin	1
	Delay (seconds)	6
		2 of 2

9 Press **ESC** to return to the main menu.

10 Press **ESC** to exit the Mylex Configuration Utility.

11 System displays message reminding you to save configuration and asks if you want to exit the Configuration Utility. Press **NO** if you want to go back and save your configuration or press **YES** to exit.

3 Replacing the Hard Disk Drive Assembly

Overview

The UCS 1000 system can be either a RAID or a non-RAID system. The purpose of this chapter is to ensure that hard disk drives for each type of system are installed in the proper manner. It includes procedures for:

- Identifying a failed hard disk drive in a RAID or a non-RAID system

- Performing replacement procedures of a hard disk drive in a RAID or a non-RAID system.

- Preparing the system software for a new hard disk drive in a RAID or a non-RAID system.

- Initializing a hard disk drive in a RAID or a non-RAID system

Identifying a Failed Hard Disk Drive in a Non-Raid System

Before a hard disk drive in a non-RAID system can be replaced, you must identify which drive has failed. This section details how to identify a failed hard disk drive in a non-RAID system.

Hard Disk Drive Contents

To determine which hard disk drive has failed, you must know what type of information is stored on each drive. Table 29 shows the information contained on each hard disk drive in a nonmirrored system.

Table 29.   Hard Disk Drive Contents of a Non-RAID System

Disk	Physical Location	Contents
Hard Disk Drive SD 00	Position 01	UNIX operating system, all software, system data, and speech/voice storage
Hard Disk Drive SD 01	Position 02	If used, speech/voice storage, UNIX file systems, and so on.
Hard Disk Drive SD 02	Position 03	If used, speech/voice storage, UNIX file systems, and so on.
Hard Disk Drive SD 10	Position 10	If used, speech/voice storage, UNIX file systems, and so on.
Hard Disk Drive SD 11	Position 11	If used, speech/voice storage, UNIX file systems, and so on.
Hard Disk Drive SD 12	Position 12	If used, speech/voice storage, UNIX file systems, and so on.

Identifying a Speech Storage Hard Disk Drive Failure

Because Hard Disk Drive 00 contains the only copy of the operating software, a failure of this drive results in a complete failure of the system. If this occurs you cannot reboot the system.

All hard disk drives contain speech and voice storage. If a hard disk drive used to store speech fails, that speech is lost. In the event of such a failure, the system displays a check condition message.

If a message similar to the following appears on the screen, contact your field support personnel.

```
WARNING:Disk Driver: HA0 TCx LU0 - Check Condition
```

Note: The number after x is the SCSI identification number of the failed hard disk drive.

Replacing a Hard Disk Drive in a Non-RAID System

The following procedures detail removing and installing a hard disk drive in a non-RAID system. Figure 8 on page 3 shows the positions of the hard disk drives for the system.

Note: Procedures in this book should be performed by personnel identified in Intended Audiences (page xiii) in About This Book.

⚠ WARNING:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See Protecting Against Damage from Electrostatic Discharge in Chapter 1, Getting Inside the System for the procedure.

⚠ CAUTION:
With no RAID controller module equipped, the hard disk drives on the non-RAID system can not be hot swapped. The system must therefore be removed from service prior to removing a hard disk drive.

Removing a Hard Disk Drive in a Non-RAID system

To remove a hard disk drive in a non-RAID system:

1 Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.

2 Remove power from the system. See "Removing Power from the System" in Chapter 1, Getting Inside the System for the procedure.

3 Remove the appropriate hard disk drive by doing the following. See Figure 39 on page 53 for the location of the hard disk drives.

   a Loosen the two screws located at the top and bottom of the hard drive faceplate.
   b Grab carrier assembly handle and gently pull out.

4 Place the defective hard disk drive assembly on an ESD-protected surface.

Figure 39.   Hard Disk Drive

drochddr EWS 041 699
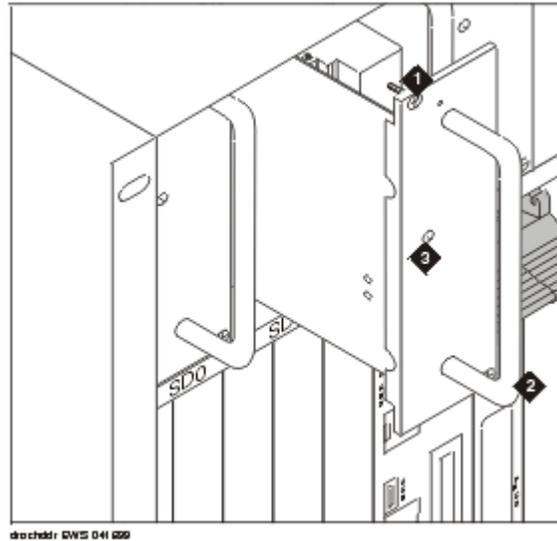
1. Retaining screw
2. Pull handle
3. Activity indicator LED

Installing a Hard Disk Drive in a Non-RAID System

To install a hard disk drive in a non-RAID system:

1 Align the hard disk drive carrier assembly with the top and bottom guides in the appropriate slot in the system.

Note: Be careful because the guides for the drive can be easily missed.

2 Gently slide the hard disk drive assembly in the system.

3 Tighten the two retaining screws to secure the drive to the system.

4 Apply power to the unit. See Restoring Power to the System in Chapter 1, Getting Inside the System for the procedure.

Adding a Hard Disk Drive to the Non-RAID System for Speech

You can increase system capacity and performance by adding a hard disk drive for speech. Placing speech files on a second disk spreads disk access across the two drives and avoids possibilities of speech breaks.

Note: Be sure to create a filesystem large enough to accommodate your speech/voice needs. Once the size of a file system size has been created, it can not be changed.

Adding a Hard Disk Drive to the Non-RAID System for Speech

To add a hard disk drive for speech:

1 Install the new hard disk drive in the system. See **Installing a Hard Disk Drive in a Non-RAID System (page 53) for the procedure.**

2 Log in as root.

3 Enter **/mtce/bin/diskadd** *scsi id/system id*

Where *scsi id/system id* is the scsi id number (1, 2, 10, 11, 12) of the new hard disk drive.

If you are using a new disk, the system displays the following message, then continue with Step 4:

```
Install Disk operation In Progress..

Performing sufrace analysis. This operation will require
approxiimately 10 minutes per gigabyte to complete.

0% complete

Creating device nodes, please wait.
Disk Installation was successful
Hit Enter to continue.
```

If you are reusing a disk that contains old data, the system displays the following messages where **1** is the number of the scsi id/system id previously entered:

```
Using device name c0b0t1d0
The disk at disk ID1 has been installed previously
It is recommended that only new disk from the factory be
installed on this sytem.
Any existing data on this disk will be lost if you continue.

Do you wish to continue hit [y/n], and then hit Enter
```

4 Enter **y**

5 Press **ENTER**.

The system displays the UNIX prompt.

6 Determine the number of disk blocks to allocate for the speech filesystem.

Note: Be sure to create enough space to accommodate present and future needs.

7 Enter **mtce/bin/createfs -D** *scsi id/system id blocks* **/home3 8192**

Where *scsi id/system id* is the scsi id number entered in Step 3 and
blocks is the number of 512-byte blocks of information you need.

The system displays the following message, where **1** is the number of the scsi
id/system id previously entered:

```
Using disk id 1
DEVICE c0b0t1d0s10
Created /home3 filesystem with type vxfs
Mounted /home3 filesystem
```

When the system prompt returns, an entry is automatically added to **/etc/vfstab** for
the home3 volume, and the file system is mounted.

You have completed this procedure.

**Moving the Speech to
the Speech Disk**

Note: Direct calls away from the system during this procedure.

To add a speech disk to an existing system:

1 Log in as root.

2 Enter **cd /home2/vfs/talkfiles**

3 Enter **find . -name -pring | cpio -pdmuv /home3/vfs/talkfiles**

4 Enter **vi /vs/data/irAPI.rc**

5 Change the line *SPEECHDIR=/home2/vfs/talkfiles* to
SPEECHDIR=/home3/vfs/talkfiles

6 Enter **stop_vs**

7 Enter **start_vs**

8 Enter **cd /home2/vfs/talkfiles**

9 Enter **rm -rf - ***

The /home2 directory is now available for customer files.

Identifying a Failed Hard Disk Drive on a RAID System

Description

A RAID system has three or more physical hard disk drives that are logically tied to each other to form a RAID array (also referred to as a *pack)*. Typically, the RAID array is logically partitioned into a single logical system drive.

The logical system drive uses part of all the equipped physical drives. The operational system software is abstracted from the physical drives and is only aware of the logical system drive. The system software sees the RAID array's system drive 0 as the first hard disk drive. The system remains fully functional in case of a single physical hard disk drive failure.

Note: In the unlikely event that a second physical hard disk drive fails before the first physical drive is replaced, the system drive will go offline, causing the system to crash.

The RAID system also supports the ability to "hot swap" a physical drive. This means that a failed physical hard disk drive can be removed and replaced without shutting down the system.

A RAID system drive can be in one of the three states defined in Table 30.

Table 30.   States of the RAID System Drives

State	Definition	Comment
OnLine (	In the normal operating state	Any single physical drive can fail and the system continues to operate normally
Critical	One of the physical drives has failed	If a second drive fails, the system will crash. However, the system drive is still operating normally from the operating system's perspective. This is sometimes called a *degraded mode*.
Offline	Two or more physical drives have failed	The system drive can no longer provide service to the operating system. **Note:** At this state, the system will not boot.

A system configured with the RAID optional feature is initially configured with at least three 18-GB disk drives. Before a hard disk drive can be replaced, you must identify which drive failed. This section details how to identify a failed hard disk drive in a RAID system.

To identify a failed hard disk drive, verify the following:

1 The system displays the following message:

The SCSI device at address [chn#0:tgt#x] is DEAD where x is the SCSI device ID number. An alarm is generated and an event is logged in the event log. If you can not view the console message, you can view the file **/etc/log/gamevlog.log** to identify the failed drive. See Chapter 4, "Alarms and Log Messages," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215 for more information.

2 Each disk activity LED intermittently lights green when that disk is accessed and active. Typically, the LED for the failed hard disk drive remains off.

Performing a Hard Disk Drive Hot Swap on a RAID System

The following procedures describe how to hot swap (that is remove and install) a hard disk drive in the system. Figure 8 on page 3 shows the positions of the hard disk drives for the system.

Note: Procedures in this book should be performed by personnel identified in Intended Audiences (page xiii) in About This Book.

⚠️ **WARNING:**
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See Protecting Against Damage from Electrostatic Discharge in Chapter 1, Getting Inside the System for detailed ESD precautions.

Removing a Hard Disk Drive in a RAID System

To remove a hard disk drive in a RAID system:

1 Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.

2 Use a grounded ESD wrist strap to protect the equipment from damage.

3 Remove the appropriate hard disk drive by doing the following:

Note: Figure 40 on page 58 shows the location of the hard disk drives and associated hardware.

a Loosen the two screws located at the top and bottom of the hard drive faceplate.
b Grab the carrier assembly handle and gently pull the drive out of the system about 1 inch, or just enough to break electrical contact with the SCA backplane.
c Wait about 30 seconds for the drive to spin down.
d Remove the drive completely from the system.

4 Place the defective hard disk drive on an ESD-protected surface.

Figure 40.   RAID System Hard Disk Drive
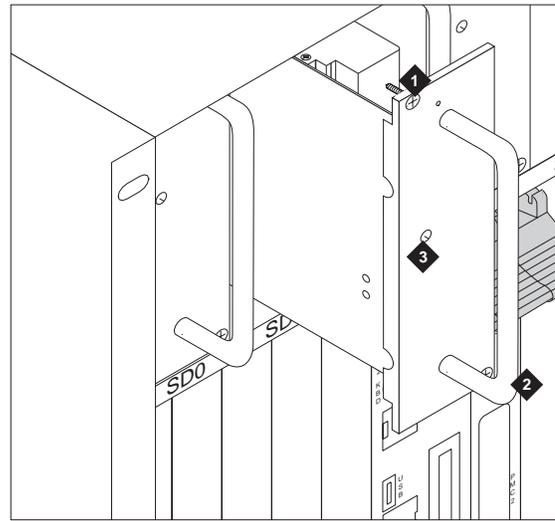
1. **Retaining screw**
2. **Pull handle**
3. **Activity indicator LED**

drpchddr EWS 041699

Installing a Hard Disk Drive in a RAID System

To install a hard disk drive in a RAID system:

1 Align the hard disk drive carrier assembly with the top and bottom guides in the appropriate slot in the system.

Note: Be careful because the guides for the drive can be easily missed.

Note: You must wait at least 60 seconds between the time the failed drive is disconnected from the SCA backplane and the new drive is inserted. This guarantees sufficient time for the RAID software to detect the removal of the failed drive.

2 Gently slide the hard disk drive assembly in the system.

Note: Insert the drive gradually to allow time for the drive connector to align with the mating backplane connector.

3 Tighten the two retaining screws to secure the drive to the system.

The system displays the following message:

```
Rebuild in progress. Please wait.
```

Note: If the system does not initiate an automatic rebuild of the array within 5 minutes, remove the drive according to the instructions in Removing a Hard Disk Drive in a RAID System (page 57) and repeat this procedure.

If the system does not automatically rebuild the array after you have re-inserted the drive, you must perform a manual rebuild.

Performing a Manual Rebuild of a RAID Array

To perform a manual rebuild:

1 Enter **rbldsh**

The system displays the Manual Rebuild screen (Figure 41).

Figure 41.   Sample Manual Rebuild Screen for a Three-Disk System

```
                  Manual Rebuild


        0      1      2      3      4      5
        ONL    ONL    DED
```
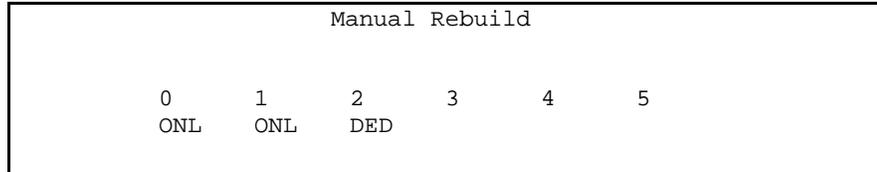
2 Press the ◄ or ► key to move to the drive marked DED.

The system displays the following message:

```
Do you want to format?
    Yes
    No
```

3 Select no and press **ENTER**.

The system displays the following message:

```
Do you want to rebuild?
    Yes
    No
```

4 Select yes and press **ENTER**.

The system displays several progress messages. After two or more hours, the system displays the following message:

```
Rebuild complete. Press ENTER to exit rebuild screen.
```

5 Press **ENTER**.

Adding a New Hard Disk Drive to a RAID System

This section details the procedures for adding a physical hard disk drive to provide additional storage for your system. If you are replacing an existing drive, see Performing a Hard Disk Drive Hot Swap on a RAID System (page 57) for the procedure.

Note: The hard disk drive must be at least 18 GB.

Note: This procedure takes approximately 2-3 hours to complete.

Adding a New Hard Drive to a RAID System

To add a physical hard disk drive to a system with the RAID optional feature:

1 Perform a system backup. See "Back Up the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

2 Shut down the system. See "Shutting Down the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

3 Install the new or additional hard disk drive. See Installing a Hard Disk Drive in a RAID System (page 58) for the procedure.

   Continue with Step 4 in this procedure once the new drive is secured in the system.

4 Reboot the system. See "Rebooting the System" in "Common System Procedures" in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

5 Continue immediately with Updating the Disk Array Configuration.

Updating the Disk Array Configuration

To update the disk configuration:

1 During the reboot, press **CTRL**+ **R** when prompted. The system displays the RAID Controller Main Menu (Figure 42).

Figure 42.   RAID Controller Main Menu

```
Disk Array Controller                   Configuration Utility


                      Main Menu

        01  Automatic Configuration
        02  New Configuration
        03  View/Update Configuration
        04  Rebuild
        05  Initialize System Drive
        06  Consistency Check
        07  Tools
        08  Select DAC960
        09  Advanced Functions
```

2 Press the ▼ key to select `View/Update Configuration` and press **ENTER**.

The system displays the View/Update Configuration screen (Figure 43).

Figure 43.   View/Update Configuration Screen

```
                      View/Update Configuration

   1.  Define Pack
   2.  Define System Drive
   3.  Add Drive to Last Pack
```
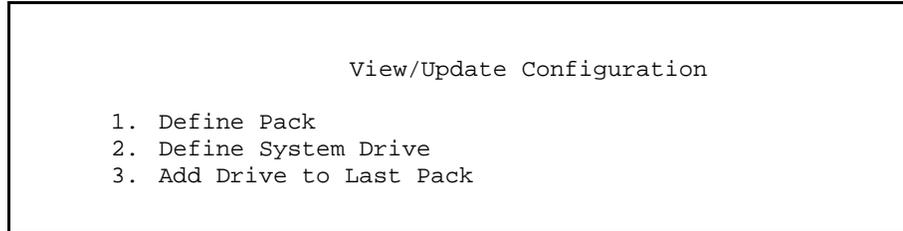
3 Select `Add Drive to Last Pack` and press **ENTER**.

The system displays the Add Capacity screen (Figure 44). This figure shows an example for a system that is adding a fourth physical hard disk drive.

Figure 44.   Add Capacity Menu

```
   Tgt        Channel Number
   ID         0
    0        ┌─ ONL ─┐
             └───────┘
    1        ┌─ ONL ─┐
             └───────┘
    2        ┌─ ONL ─┐
             └───────┘
    3        ┌─ TAP ─┐
             └───────┘
    4        ┌─ CDR ─┐
             └───────┘
    5        ┌─   ·  ─┐
             └───────┘
```
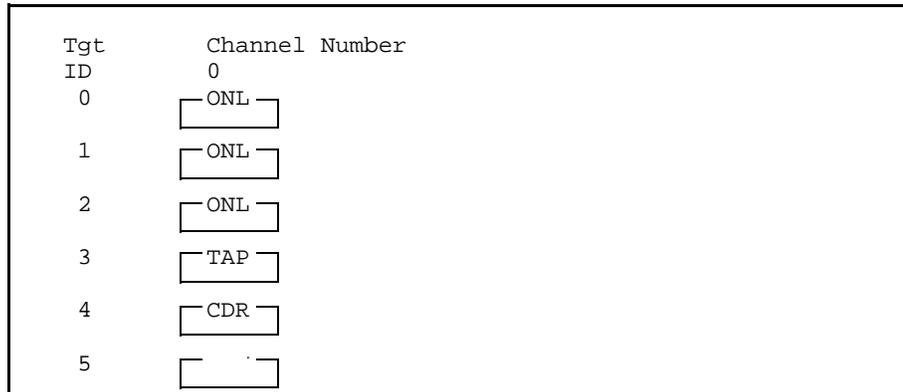
4 Select the drive to be added.

The new drive is marked as either `RDY` or `SBY`.

5 Press **ENTER**.

The system displays the following message:

```
!!WARNING:  This process is irreversible.
   Do you want to proceed?
      No
      Yes
```

6 Select `yes` and press **ENTER**.

The system displays the following message while also displaying a continuous status on each logical system drive:

```
Data migration in progress.

Data migration process completed successfully.
Press any key to continue.
```

This process takes approximately 2-3 hours to complete.

7 Press **ENTER**.

The system displays the View/Update Configuration screen (Figure 43 on page 61).

8 Select:

```
>Define System Drive
```

```
>Create System Drive
```

The system displays the RAID Level screen (Figure 45).

Continue with Defining the Logical System Drive (page 62).

Defining the Logical System Drive

To define the logical system drive:

1 At the RAID Level screen (Figure 45) select RAID 5.

The system displays the RAID Level Screen (Figure 45).

Figure 45.   RAID Level Screen

```
                RAID Level

         RAID 0
         RAID 1
         RAID 3
         RAID 5
         RAID 6
         RAID 7
```

The system displays a pop-up box for entering the size for the new system drive.

2 Press **ENTER** to accept the default.

The system displays a summary for the new system drive in a message similar to the following, where x is the system drive number, 5 is the RAID level number for CONVERSANT V8, and z is the drive capacity:

```
System Drive #x
RAID Level #  5
Capacity      z
```

The system then displays the Create System Drive Screen (Figure 46).

Figure 46.   Create System Drive Screen

```
         Do you want to create this system drive?

             No
             Yes
```

3 Select YES.

The system creates the logical system drive.

Verify that Write Mode for all system drives indicates WRITE THRU.

4 Press **ESC** twice.

The system displays the Save Configuration screen (Figure 47).

Figure 47.   Save Configuration Screen

```
                 Do you want to save this configuration?

                     No
                     Yes
```
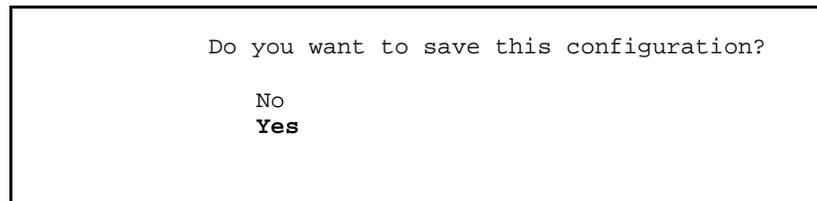
5 Select YES.

The system displays the following message, where x is the logical system drive number or numbers that are now available to your system:

```
System drive x is available for immediate use. Press any key
to continue.
```

6 Press **ENTER**.

The system displays the RAID Controller Main Menu (Figure 42 on page 60).

7 Press **ESC**.

The system displays the following message:

```
Do you really want to exit configuration?
        No
        Yes
```

8 Select Yes and press **ENTER**.

9 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

10 Continue with Creating Additional Storage for Speech on a RAID System.

Creating Additional Storage for Speech on a RAID System

Once you create a new system drive, you must add the disk to the system before you can use the added space for speech storage.

Note: Be sure to create a file system that is large enough to accommodate your speech and voice needs. Once the size of a file system is created, it can not be changed.

Adding a System Drive for Speech

To add a system drive for speech:

1 Complete the procedures in Adding a New Hard Disk Drive to a RAID System (page 60)**.**

2 Log in as root.

3 Enter **/mtce/bin/diskadd *c0b0t0dx w*** here *x* is the logical system drive identification number of the new logical drive created as a result of adding the physical hard disk drive.

The system displays the following message:

```
Using device name c0b0t0d1
Do you wish to continue hit [y/n], and then hit Enter
```

4 Type **y and** press **ENTER**.

The system displays the UNIX prompt.

5 Determine the number of disk blocks to allocate for the speech file system.

Note: Be sure to create enough space to accommodate present and future needs.

6 Enter **mtce/bin/createfs -D *drive number blocks* /home3 8192 w**here *drive number* is the identification number entered in Step 3 and *blocks* is the number of 512-byte blocks of information you need.

The system displays the following message, where **1** is the logical system drive identification number of the new logical drive created as a result of adding the physical hard disk drive and previously entered:

```
Using disk id 1
DEVICE c0b0t0d1s10
Created /home3 filesystem with type vxfs
Mounted /home3 filesystem
```

When the system prompt returns, an entry is automatically added to **/etc/vfstab** for the home3 volume, and the file system is mounted.

You have completed this procedure.

4 Replacing Other Components

Overview

The purpose of this chapter is to ensure that correct procedures are used to replace internal components of the system. This chapter describes the procedures for the following:

- Removing the SCA Backplane (page 65)

- Installing the SCA Backplane (page 67)

- Removing the CD-ROM/CartridgeTape Drive Mounting Unit (page 67)

- Installing the CD-ROM/CartridgeTape Drive Mounting Unit (page 72)

- Replacing Cables (page 72)

- Replacing a Fan Tray (page 76)

- Replacing the Filter (page 77)

- Replacing the Power Supply (page 79)

Removing the SCA Backplane

The Single Connector Architecture (SCA) backplane (Figure 48) is at the upper rear of the system.

Figure 48.   SCA Backplane

1. External SCSI connector
2. CD-ROM drive SCSI connection
3. Tape drive SCSI connection
4. SCA SCSI connection to the CD-ROM
5. SCA SCSI from the cPCI backplane
6. SCA backplane
7. SCA backplane power connection
8. cPCI backplane power connection
9. cPCI backplane SCSI connection
10. Thermal sensor connection
11. Power connections to the CD-ROM and cartridge tape drives

scpcbck2 KLC 040299

To remove the SCA backplane:

⚠️ **WARNING:**

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See Protecting Against Damage from Electrostatic Discharge in Chapter 1, Getting Inside the System for more information.

Note: Procedures in this book should be performed by personnel identified in Intended Audiences (page xiii) in About This Book.

1 Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.

2 Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

3 Remove the hard disk drives. See Chapter 3, Replacing the Hard Disk Drive Assembly and follow the appropriate procedure for your system.

4 Remove the upper rear exhaust panel. See Removing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System.

5 Disconnect the power cable connector (labeled P9) from the SCA backplane (Figure 48 on page 65).

6 Disconnect both the SCSI cables from the SCA backplane (Figure 48 on page 65).

7 Remove the screws at the top and bottom of the disk (Figure 49) area that secure the SCA backplane.

Note: The SCA backplane screws are not captive screws. Be careful that they do not drop into the system.

Figure 49.   SCA Backplane Screw Locations

1. SCA SCSI connection to the CD-ROM
2. SCA SCSI from cPCI backplane
3. cPCI backplane power connection
4. Removable screws
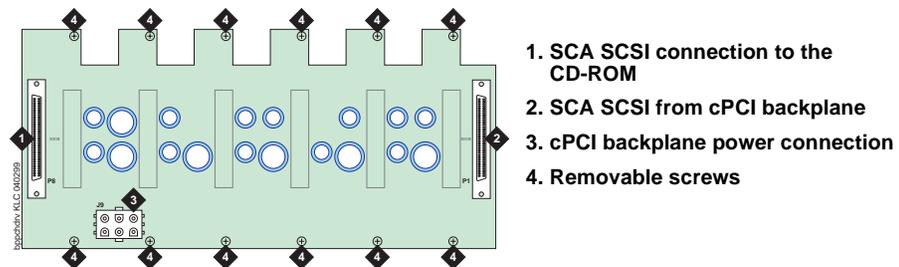
8 Gently pull out the SCA backplane.

Installing the SCA Backplane

To install the SCA backplane:

1 Gently insert the new SCA backplane into the system.

2 Secure the SCA backplane with the screws that you removed earlier (Figure 49 on page 66).

3 Connect the power cable that you disconnected in Step 5 of Removing the SCA Backplane, to the SCA backplane (Figure 48 on page 65).

4 Connect both the SCSI cables that you disconnected in Step 6 of Removing the SCA Backplane, to the SCA backplane (Figure 48 on page 65).

5 Replace the hard disk drives. See Chapter 3, Replacing the Hard Disk Drive Assembly and follow the appropriate procedure for your system.

6 Replace the upper rear exhaust panel. See Installing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure.

7 Apply power to the system. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

Removing the CD-ROM/CartridgeTape Drive Mounting Unit

The CD-ROM and cartridge tape drives (Figure 50 on page 68) are located at the upper right corner on the front of the system. See Figure 8 on page 3 for the location. These drives are contained within a single peripheral mounting unit.

To remove the CD-ROM/cartridge tape drive mounting unit:

1 Verify that the replacement part is on site and appears to be in usable condition with no obvious shipping damage.

2 Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

3 Remove the upper rear exhaust panel. See Removing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure.

4 Unplug the power cables from the rear of the CD-ROM and cartridge tape drives. See Removing the CD-ROM Drive and CartridgeTape Drive Power Supply Cable (page 72), Step 3 and Step 4 for the procedure.

5 Unplug the SCSI cable connections from the rear of the CD-ROM and cartridge tape drives (Figure 55 on page 74).

Note: The SCSI cable has an adapter attached to it that allows it to connect to the cartridge tape drive and the CD-ROM drive. Make sure that the adapter remains attached to the SCSI cable.

6 Loosen the four retaining screws from the faceplate of the
CD-ROM/cartridge tape drive mounting unit (Figure 50).

Note: It is not necessary to remove or loosen the four flathead screws on the
faceplate.

7 Grab the handle on the lower part of the faceplate and pull the
CD-ROM/cartridge tape drive mounting unit out of the system (Figure 50).

Figure 50. CD-ROM/Cartridge Tape Drive Mounting Unit
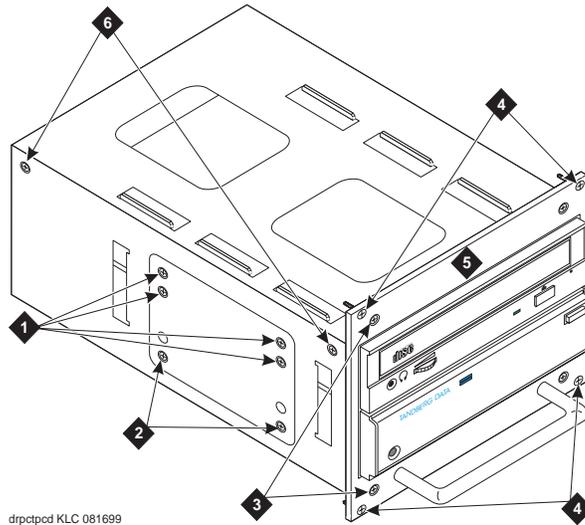
drpctpcd KLC 081699

1. CD-ROM drive mounting screws

2. Cartridge tape drive mounting screws

3. CD-ROM/cartridge tape drive mounting unit faceplate flathead screws

4. CD-ROM/cartridge tape drive mounting unit retaining screws

5. CD-ROM/cartridge tape drive mounting unit faceplate with pull handle on lower part

6. CD-ROM/cartridge tape drive mounting unit housing flathead screws.

Removing the CD-ROM Drive

To remove the CD-ROM drive from the mounting unit:

1 Verify that the replacement part is on site and appears to be in usable condition with no obvious shipping damage.

2 Remove the mounting unit. See Removing the CD-ROM/CartridgeTape Drive Mounting Unit (page 67) for the procedure.

3 Remove the eight screws, four on each side of the mounting unit, that secure the CD-ROM drive to the housing unit.

Note: Keep these screws. Using any of the other screws associated with the system can damage the threads in the drive mounting hardware.

4 Gently slide the CD-ROM drive out of the mounting unit.

Note: The CD-ROM fits snugly in the housing unit. It may be necessary to loosen the faceplate and housing flathead screws on both sides of the mounting unit (Figure 50 on page 68) to remove the CD-ROM drive.

Removing the Cartridge Tape Drive

To remove the tape drive from the mounting unit:

1 Verify that the replacement part is on site and appears to be in usable condition with no obvious shipping damage.

2 Remove the mounting unit. See Removing the CD-ROM/CartridgeTape Drive Mounting Unit (page 67) for the procedure.

3 Remove the four screws, two on each side of the mounting unit, that secure the tape drive to the unit.

Note: Keep these screws. Using any of the other screws associated with the system can damage the threads in the drive mounting hardware.

4 Gently slide the tape drive out of the mounting unit.

Note: The cartridge tape drive fits snugly in the housing unit. It may be necessary to loosen the faceplate and housing flathead screws on one side of the mounting unit (Figure 50 on page 68) to remove the cartridge tape drive.

Installing the Cartridge Tape Drive

To install the cartridge tape drive in the mounting unit:

1 Remove the new cartridge tape drive from its ESD-protective wrapping.

Note: Keep the package and all ESD-protective wrapping to return the defective unit. Re-use of the original replacement unit packaging is necessary to meet the manufacturer's warranty.

2 Verify that the settings shown in Figure 51 are correct for SCSI ID 3.

Figure 51.   Jumper Settings for the Cartridge Tape Drive (comcode: 408097418)

jppcset KLC 081899
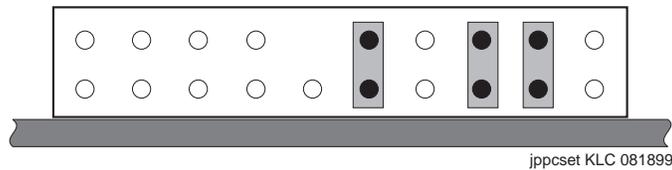
3 Remove the terminating resistors (Figure 52).

Figure 52.   Cartridge Tape Drive

1. Jumpers

2. Terminating resistors

drcvtpe1 KLC 031699
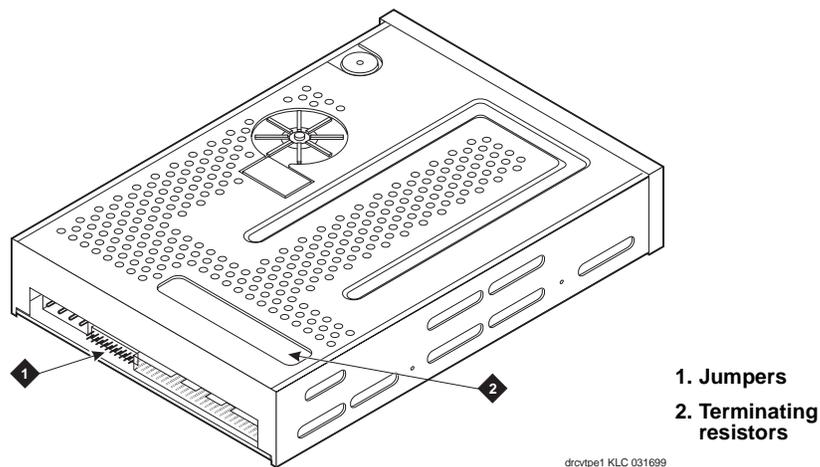
4 Gently slide the new drive into the mounting unit.

5 Secure the new drive to the mounting unit. Use the four screws you removed earlier to secure the drive to the mounting unit.

6 Retighten the housing screws if they were loosened to remove the tape drive.

7 Retighten the faceplate screws if they were loosened to remove the tape drive.

Installing the CD-ROM Drive

To install the CD-ROM drive in the mounting unit:

1 Remove the new CD-ROM drive from its ESD-protective wrapping.

Note: Keep the package and all ESD-protective wrapping to return the defective unit. Re-use of the original replacement unit packaging is necessary to meet the manufacturer's warranty.

2 Verify that the settings shown in Figure 53 are correct for SCSI ID 4.

Figure 53.   Jumper Settings for the CD-ROM Drive (comcode: 408377166)

jppccdrm KLC 081899
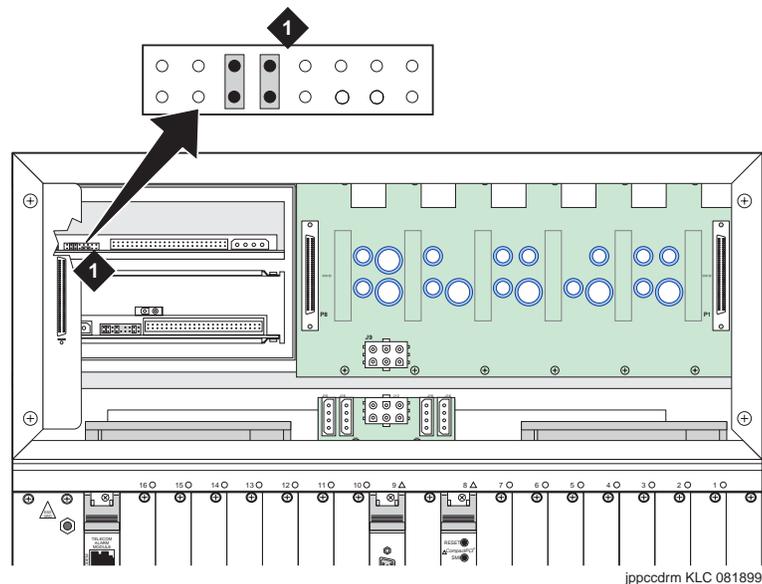
1. Jumper locations for the CD-ROM drive (SCSI ID 4)

3 Gently slide the new drive into the mounting unit.

4 Secure the new drive to the peripheral housing unit. Use the eight screws you removed earlier to secure the drive to the mounting unit.

5 Retighten the housing screws if they were loosened to remove the CD-ROM drive.

6 Retighten the faceplate screws if they were loosened to remove the CD-ROM drive.

Installing the CD-ROM/CartridgeTape Drive Mounting Unit

To install the CD-ROM/cartridge tape drive mounting unit in the system:

1 Align the CD-ROM/cartridge tape drive mounting unit with the top and bottom guides on the front of the system.

2 Gently slide the housing unit into the system.

Note: If the unit does not slide in completely, tilt the front of the unit down slightly and push the unit in completely.

3 Retighten the four retaining screws (Figure 50 on page 68) on the faceplate of the CD-ROM/cartridge tape drive peripheral mounting unit to secure it to the system.

4 Attach the SCSI cables to the rear of the CD-ROM/cartridge tape drive mounting unit (Figure 55 on page 74).

5 Attach the power cables to the rear of the CD-ROM/cartridge tape drive housing unit. See Removing the CD-ROM Drive and CartridgeTape Drive Power Supply Cable, Step 3 and Step 4 for the procedure.

6 Restore the incoming power. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

Replacing Cables

Replacing the Power Cables

The system has cables that supply power to the:

- Cartridge tape drive

- CD-ROM drive

- SCA backplane

- cPCI backplane

Removing the CD-ROM Drive and CartridgeTape Drive Power Supply Cable   The power supply cables for the cartridge tape drive and CD-ROM drive connect to the power supply on the cPCI backplane from both the cartridge tape drive and CD-ROM drive (Figure 54).

Figure 54. CD-ROM and Cartridge Tape Drive Power Connections
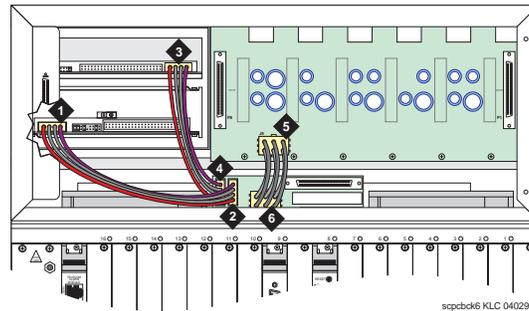
1. **Cartridge tape drive power connection**

2. **cPCI backplane power connection to cartridge tape drive**

3. **CD-ROM power connection**

4. **cPCI backplane power connection to CD-ROM drive**

5. **SCA backplane power connection**

6. **cPCI backplane power connection to the SCA backplane**

scpcbck6 KLC 040299

To remove the cartridge tape and CD-ROM drive power supply cable:

1 Verify that the replacement cable is on site and appears to be in usable condition, with no obvious shipping damage.

2 Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

3 Remove the upper rear exhaust panel. See Removing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure.

4 Remove the power supply cable from the back of the cartridge tape drive or the CD-ROM drive (Figure 54).

5 Remove the other end of the cartridge tape or CD-ROM drive power supply cable from the backplane.

Note: The cartridge tape drive power cable connects to the cPCI backplane at connector location labeled J14. The CD-ROM drive power cable connects to the cPCI backplane at connector location J13.

6 Remove the cartridge tape drive or CD-ROM drive power supply cable from the system.

Installing CD-ROM Drive and Cartridge Tape Drive Power Supply Cable

To install the power cable for the cartridge tape drive and CD-ROM drive:

1 Verify that the replacement cable is on site and appears to be in usable condition, with no obvious shipping damage.

2 Attach the power cable for the cartridge tape drive or CD-ROM drive to the backplane.

3 Attach the power cable to the back of the cartridge tape drive or CD-ROM drive (Figure 54).

Note: The tape drive power cable connects to the cPCI backplane at connector location labeled J14.The CD-ROM drive power cable connects to the cPCI backplane at connector location J13.

4 Reinstall the upper rear exhaust panel. See Installing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure.

5 Apply power to the system. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

Replacing the SCSI Cable

The SCSI cable is a ribbon cable that connects the SCA backplane, the cartridge tape drive, and the CD-ROM drive to the external SCSI connector.

Removing the SCSI Cable

To remove the SCSI cable:

1 Verify that the replacement cable is on site and appears to be in usable condition, with no obvious shipping damage.

2 Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

3 Remove the upper rear exhaust panel. See Removing the Upper Rear Exhaust Panel (page 5) for the procedure.

4 Remove the SCSI cable from the back of the SCA backplane (Figure 55).

Figure 55.   SCA SCSI Backplane Connections

1. cPCI backplane SCSI connection
2. SCA SCSI connection from the cPCI backplane
3. SCA SCSI connection to the CD-ROM
4. CD-ROM drive SCSI connection
5. Cartridge tape drive SCSI connection
6. External SCSI connector

scpcbck5 KLC 041999

5 Remove the SCSI cable from the back of the CD-ROM drive (Figure 55).

6 Remove the SCSI cable from the back of the cartridge tape drive (Figure 55).

Note: Ensure that the 50-68 pin adapters remain attached to the CD-ROM and tape drive.

7 Remove the SCSI cable and external terminator connector from the system by removing the two screws and the top and bottom of the external connector (Figure 55).

Installing the SCSI Cable

To install the SCSI cable:

1 Verify that the replacement cable is on site and appears to be in usable condition, with no obvious shipping damage.

2 Attach the SCSI cable and external terminator connector to the system by installing the two screws in the top and bottom of the external connector (Figure 55).

3 Attach the SCSI cable to the back of the cartridge tape drive (Figure 55).

4 Attach the SCSI cable to the back of the CD-ROM drive (Figure 55).

5 Attach the SCSI cable to the back of the SCA backplane (Figure 55 on page 74).

6 Replace the rear exhaust panel. See Installing the Upper Rear Exhaust Panel (page 5) for the procedures.

7 Apply power to the system. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

Replacing a Fan Tray
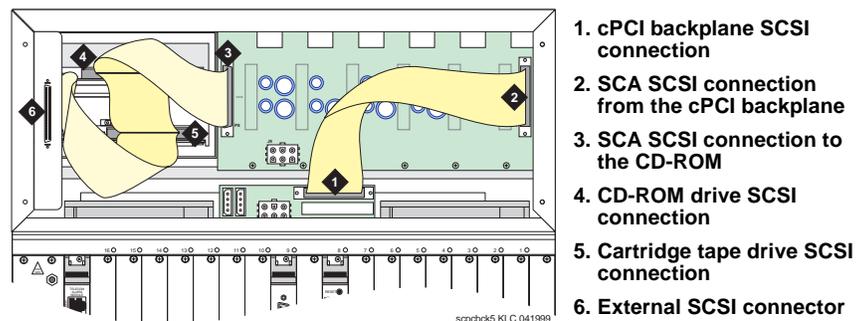
Description   The system contains eight fans that provide forced-air cooling for the unit. The lower fan unit contains three fans that are located just above the power supplies (Figure 56 on page 77). The upper fan unit has five fans that are located just below the hard disk drives. If a fan is defective, the associated fan fault LED will be lit.

Replacing a Fan Tray   The fan trays can be hot-swapped. This means that the tray can be replaced without removing power from or turning down the system.

> ⚠ **CAUTION:**
> Do not leave the system powered up for any length of time without a fan tray installed and fully operational.

To replace a fan tray:

1 Verify that the replacement fan tray is on site and appears to be in usable condition, with no obvious shipping damage.

Note: There are three fans in the lower tray and five fans in the upper tray.

2 If you are replacing the lower fan tray, swing the cable trough up and out of the way to the locked position.

3 Loosen the screws on the fan tray (Figure 56 on page 77).

Note: The screws are located on the front of the upper fan tray and behind the top edge of the lower front panel for the lower fan tray.

4 If you are replacing the lower fan tray, remove the lower filter panel.

5 Slide the fan tray out of the system.

6 Immediately insert a new fan tray into the system.

7 If you are replacing the upper fan tray, tighten the screws on the fan tray to secure it to the system.

8 Replace the lower filter panel.

9 Secure the lower front panel and lower fan tray to the system by tightening the screws.

10 If you are replacing the lower fan tray, return the cable trough to its original position.

11 Verify that the fans are working by observing the CPU complex.

Figure 56. Fan Tray Locations

**Upper and lower
fan trays**

fnpctray EWS 041699

Replacing the Filter

The system is equipped with one filter which is located behind the lower front panel (Figure 57 on page 78). The filter should be checked on at least once a month to determine its condition.

Replacing the Filter

To replace the filter:

1 Verify that the replacement filter is on site and appears to be in usable condition, with no obvious shipping damage.

2 Swing the cable trough up and out of the way to the locked position.

3 Loosen the two screws behind the top edge of the lower front panel.

4 Remove the lower front panel (Figure 57 on page 78).

5 Detach the old filter from the panel.

6 Insert the replacement filter inside the lower front panel.

7 Secure the lower front panel to the system by tightening the screws.

8 Return the cable trough to its original position.

Figure 57.   The Filter Panel
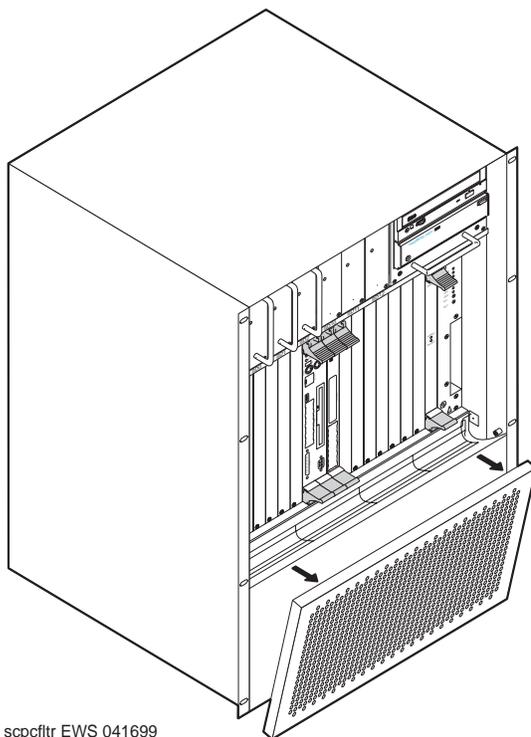
Lower filter is located inside the panel.

scpcfltr EWS 041699

Replacing the Power Supply

The system is equipped with two power supplies. These power supplies are located at the bottom of the system behind the lower front panel. They operate in a load-share mode and can be hot swapped. This means the power supply can be replaced without removing power from or turning down the system.

The power supplies attach to a backplane in the system using a male connector and a backplane receptacle.

There are no manual adjustments necessary to prepare the power supply for the incoming voltage.

Note: Ensure that the connector pins are straight before installing the replacement power supply.

⚠ CAUTION:
Do not operate the system without both power supplies. A power supply alarm fault occurs when a power supply is removed.

To replace a power supply:

 1 Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
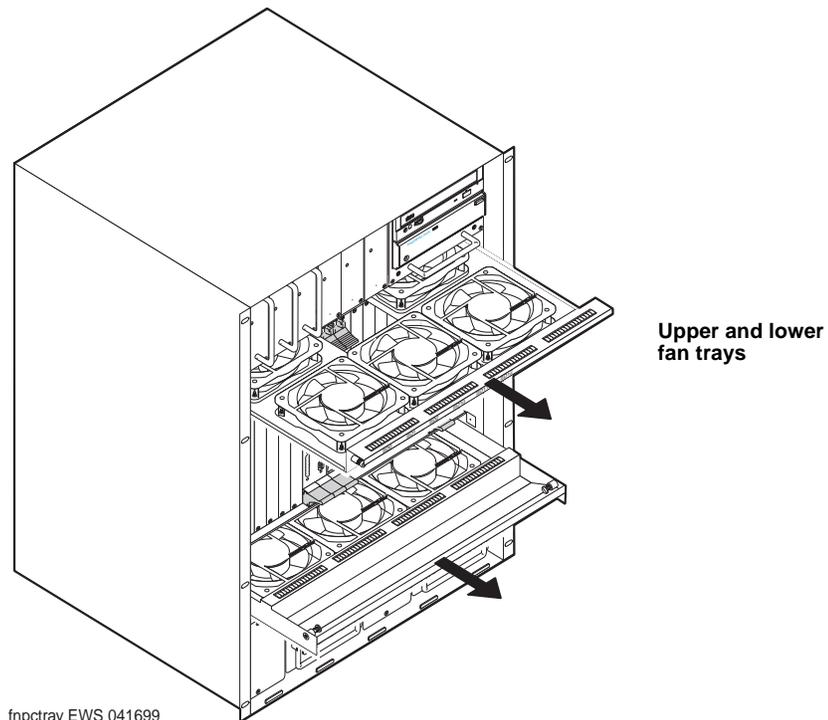
 2 Swing the cable trough up and out of the way to the locked position.

 3 Loosen the two screws behind the top edge of the lower front panel.

 4 Remove the lower front panel.

Note: The indicator LEDs on a defective power supply will be out (dark).

 5 Loosen the two captive thumbscrews that hold the power supply to the system (Figure 58).

 6 Grasp the power supply pull handle and pull the power supply from the system (Figure 58).

⚠ CAUTION:
The power supply is heavy. Hold on to the bottom edge of the power supply while pulling it from the system to avoid equipment damage or personal injury.

Figure 58.   Removing a Power Supply

pspcremv EWS 041699

1. **Captive screws**
2. **Pull handle**
3. **Cable trough**
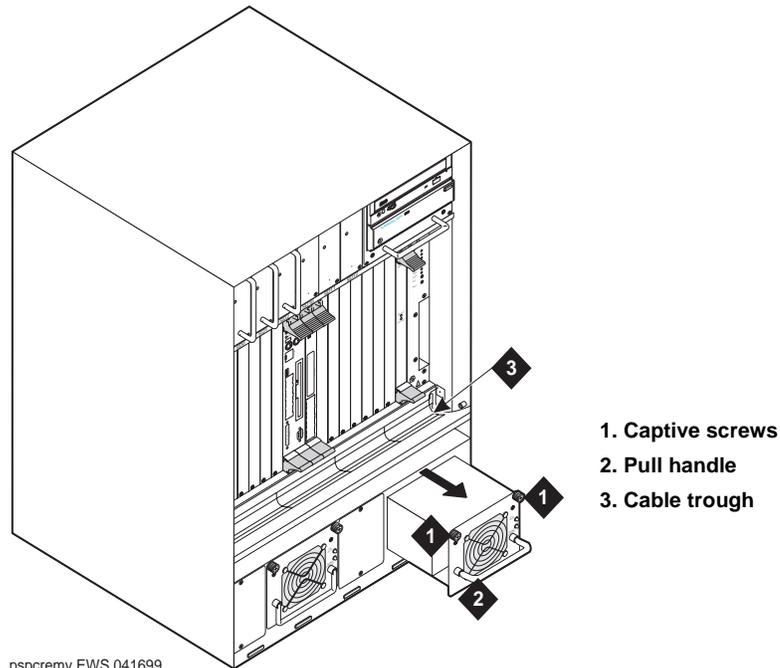
7 Place the power supply to the side.

⚠ CAUTION:
It is important that the defective power supply be returned in the same condition as it was when in the system. If the power supply is damaged during removal, packaging, or shipping, adequate failure analysis can not be conducted.

8 Align the replacement power supply with the slot in the system.

9 Slide the power supply into the system until it locks.

10 Apply pressure to ensure that the power supply is seated properly.

11 Tighten the two captive thumbscrews on the power supply.

Note: Use a screwdriver to ensure that the thumbscrews are tight enough to properly seat the power supply.

12 Make sure the status indicator LEDs on the power supply are on.

13 Secure the lower front panel to the system by tightening the screws.

14 Return the cable trough to its original position.

Replacing the Temperature Sensors

Description   The system comes equipped with two temperature sensors. The air inlet temperature sensor is located behind the lower front filter panel, just under the lower fan tray. The air outlet temperature sensor is located at the rear upper exhaust area on the top panel.

Replacing the Air Inlet Temperature Sensor

To replace the air inlet temperature sensor:

1   Verify that the replacement sensor is on site and appears to be in usable condition, with no obvious shipping damage.

2   Verify that the S2 switch settings match those listed in Table 3 on page 36 of Chapter 2, Installing or Replacing Circuit Cards.

3   Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

4   Remove the lower filter panel (Figure 57 on page 78).

5   Remove the lower fan tray (Figure 56 on page 77).

6   Remove the inlet temperature sensor from its standoffs by holding opposite edges between thumb and forefinger and rocking the sensor.

Note: Do not pry the sensor from its standoffs.

7   Remove the cable from the sensor.

8   Install the cable onto the new inlet temperature sensor.

9   Install the new inlet temperature sensor onto the standoffs.

10   Check that the sensor is locked in place by gently pulling the sensor away from the standoffs. The sensor should not move.

11   Replace the lower fan tray and the lower filter panel.

12   Restore the incoming power. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

Replacing the Air Outlet Temperature Sensor

To replace the air outlet temperature sensor:

1 Verify that the replacement sensor is on site and appears to be in usable condition, with no obvious shipping damage.

2 Verify that the S2 switch settings match those listed in Table 4 on page 36 of Chapter 2, Installing or Replacing Circuit Cards.

3 Remove the incoming power. See Removing Power from the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

4 Remove the upper rear exhaust panel. See Removing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure

5 Remove the outlet temperature sensor from its standoffs by holding opposite edges between thumb and forefinger and rocking the sensor.

Note: Do not pry the sensor from its standoffs.

6 Remove the cable from the sensor.

7 Install the cable onto the new outlet temperature sensor.

8 Install the new outlet temperature sensor onto the standoffs.

9 Check that the sensor is locked in place by gently pulling the sensor away from the standoffs. The sensor should not move.

10 Replace the upper rear exhaust panel. See Installing the Upper Rear Exhaust Panel (page 5) in Chapter 1, Getting Inside the System for the procedure.

11 Restore the incoming power. See Restoring Power to the System (page 4) in Chapter 1, Getting Inside the System for the procedure.

5 Installing Base System Software

Overview

This chapter describes the installation procedures for the UnixWare operating system software.The purpose of this chapter is to provide the information necessary to reload the operating system on a system that has experienced a disk failure. Use this chapter in conjunction with Appendix C, Disaster Recovery Checklists (page 179).

Note: The installer must have the root password to complete the procedures.

Installing Base System Software

Configuring the RAID System

Note: If your system has the RAID optional feature, these procedures must be performed *before* performing the procedures for Installing UnixWare (page 91).

Verifying the BIOS

To verify the BIOS options:

1 Power up the system.

2 After the power-on self test (POST) is complete but before the system boots, press **CTRL**+ **M** when prompted.

The system displays the BIOS Options Menu (Figure 59).

Figure 59.   BIOS Options Menu

```
                    BIOS Options Menu

         BIOS Enabled
         CD-ROM Boot Disabled
         2 GB Drive Geometry
```
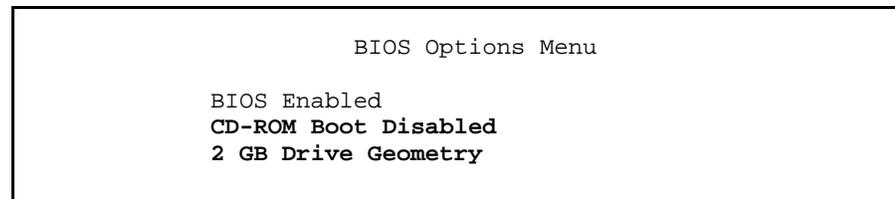
3 Verify that the first three lines appear as follows:

- BIOS Enabled

- CD-ROM boot Disabled

- 2 GB Drive Geometry

4 Press the ▲ key or the ▼ key to highlight the appropriate field and then press **ENTER** to change it.

If you changed any of the fields, complete Step 1 through Step 3 again.

5 Press **ESC** to exit and reboot the system.

6 Continue with Verifying RAID Hardware Parameters.

Verifying RAID Hardware Parameters

MR 33962 (BJ): Made changes in step 1. To verify the RAID system drive:

 1 During the reboot, press **ALT**+ **R** when prompted to verify RAID Hardware Parameters.

    The system displays the RAID Controller Main Menu (Figure 60).

Figure 60.   RAID Controller Main Menu

```
Disk Array Controller                    Configuration Utility



                        Main Menu

        01  Automatic Configuration
        02  New Configuration
        03  View/Update configuration
        04  Rebuild
        05  Initialize System Drive
        06  Consistency Check
        07  Tools
        08  Select DAC960
        09  Advanced Functions
```

 2 Select:

```
>Advanced Functions

    >Hardware Parameters
```

    The system displays the Hardware Parameters screen (Figure 61).

Figure 61.   Hardware Parameters Screen

```
                    Hardware Parameters

    Automatic Rebuild Management            Enabled
    Storage Works Fault Management(TM)      Disabled
```

 3 Verify that the settings displayed on the screen match those in Figure 61.

 4 If a setting differs, press the ▲ key or the ▼ key to highlight the appropriate field and then press **ENTER** to change it.

 5 Press **ESC**.

    The system displays the Edit/View Parameters Menu (Figure 62 on page 85).

 6 Continue with Verifying the Physical Parameters.

Verifying the Physical Parameters

To verify the physical parameters:

1 From the Edit/View Parameters Menu (Figure 62) select `Physical Parameters`.

Figure 62.   Edit/View Parameters Menu

```
                        Edit/View Parameters

        Hardware Parameters
        Physical Parameters
        SCSI Xfr Parameters
        Start-Up Parameters
```

The system displays the Physical Parameters screen (Figure 63).

Figure 63.   Physical Parameters Screen

```
                        Physical Parameters

        Rebuild/Add Capacity Rate            10
        Segment size (K bytes)                8
        Stripe size (K bytes)                64
```
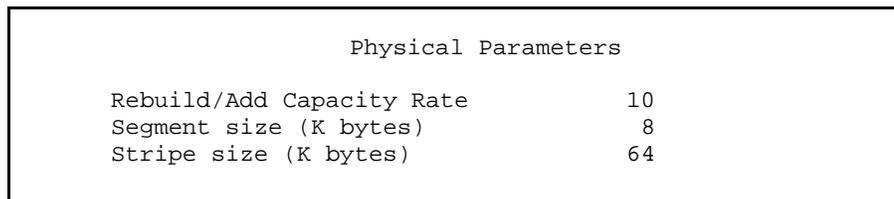
2 Verify that the settings displayed on the screen match those in Figure 63.

3 If a setting differs, press the ▲ key or the ▼ key to highlight the appropriate field and then press **ENTER** to change it.

4 Press **ESC**.

The system displays the Edit/View Parameters Menu (Figure 62).

5 Continue with Verifying the SCSI Transfer Parameters (Channel 0).

Verifying the SCSI Transfer Parameters (Channel 0)

To verify the SCSI transfer parameters:

1 From the Edit/View Parameters Menu, select `SCSI Xfr Parameters`.

The system displays the following message:

`Enter Channel #`

2 Enter **0**

The system displays the SCSI Transfer Parameters screen (Figure 64).

Figure 64.   SCSI Transfer Parameters Screen

```
            SCSI Transfer Parameters of Channel 0

        Data Transfer Rate (MHz)           10 MHz
        Command Tagging                    Enabled
        SCSI Data Bus Width                16 bit
```
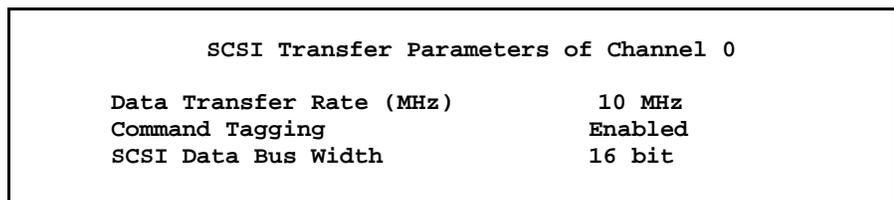
3 Verify that the settings displayed on the screen match those in Figure 64.

4 If a setting differs, press the ▲ key or the ▼ key to highlight the appropriate field and then press **ENTER** to change it.

5 Press **ESC**.

The system displays the Advanced Functions Menu (Figure 62 on page 85).

6 Continue with Verifying the Startup Parameters.

Verifying the Startup Parameters

To verify the startup parameters:

1 From the Edit/View Parameters Menu select Startup Parameters.

The system displays the Startup Parameters screen (Figure 65).

Figure 65.   Startup Parameters Screen

```
                 Startup Parameters

    Spin Up Option                       Automatic
    Number of Devices Per Spin           1
    Delay (seconds)                      6
```

2 Verify that the settings displayed on the screen match those in Figure 65.

3 If a setting differs, press the ▲ key or the ▼ key to highlight the appropriate field and then press **ENTER** to change it.

4 Press **ESC**.

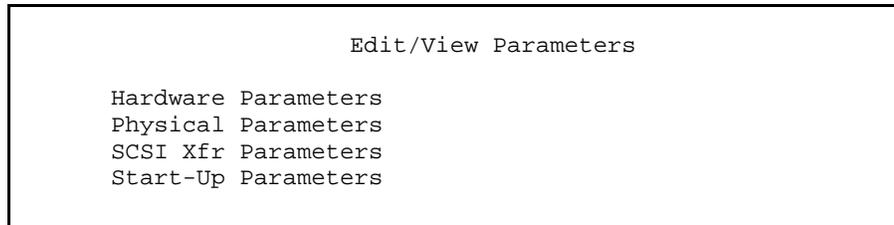The system displays the Edit/View Parameters Menu (Figure 62 on page 85).

5 Press **ESC**.

If you did not make changes, the system displays the RAID Controller Main Menu (Figure 60 on page 84).

If you made changes, the system displays the Save Controller Configuration screen (Figure 66).

Figure 66.   Save Controller Configuration Screen

```
         Save Altered Controller Configuration?

                    No
                    Yes
```

a Select yes.

The system displays the RAID Controller Main Menu (Figure 60 on page 84).

Continue with Configuring the Array (page 87).

Configuring the Array　　To configure the disk array:

1 From the RAID Controller Main Menu (Figure 60 on page 84) select:

```
>New Configuration
```

```
>Define Pack
```

```
>Create Pack
```
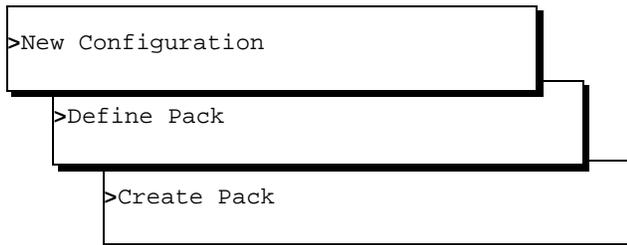
The system displays the Channel Ready screen. The sample screen (Figure 67) shows an example where all six physical hard disk drives are installed.

Figure 67.　Channel Ready Screen

```
    Tgt         Channel Number
    ID          0
     0         ┌─RDY─┐
               │     │
     1         ┌─RDY─┐
               │     │
     2         ┌─RDY─┐
               │     │
     3         ┌─TAP─┐
               │     │
     4         ┌─CDR─┐
               │     │
     5         ┌─  ·─┐
               │     │
     6         ┌─   ─┐
               │     │
```

2 Press **ENTER** for all hard disk drives marked as RDY. This places the drives in the pack.

Note:　The system does not allow the CDR and TAP to be placed in a pack.

The system displays the Channel Ready screen and shows the drives on line with their pack assignment (Figure 68 on page 88).

Figure 68. Channel Ready Screen

```
    Tgt        Channel Number
    ID          0
     0        ┌─ ONL ─┐
              └─ A-0 ─┘
     1        ┌─ ONL ─┐
              └─ A-1 ─┘
     2        ┌─ ONL ─┐
              └─ A-2 ─┘
     3        ┌─ TAP ─┐

     4        ┌─ CDR ─┐

     5        ┌───·───┐

     6        ┌───────┐
```

The system then displays the Pack Definition Menu (Figure 69).

Figure 69. Pack Definition Menu

```
              Pack Definition

        1. Create Pack
        2. Cancel Pack
        3. Arrange Pack
        4. Device Information
```

3 Select Arrange Pack.

4 Press **ENTER**.

The system displays the New Configuration Menu (Figure 70).

Figure 70. New Configuration Menu

```
              New Configuration

        1. Define Pack
        2. Define System Drive
```

5 Continue with Defining the Logical System Drive (page 89).

Defining the Logical System Drive

To define the logical system drive:

1 From the New Configuration Menu (Figure 70 on page 88) select:

```
>Define System Drive

    >Create System Drive
```
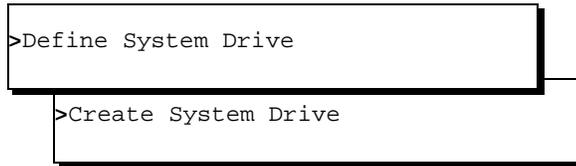
The system displays the RAID Level Screen (Figure 71).

Figure 71.   RAID Level Screen

```
                RAID Level

        RAID 0
        RAID 1
        RAID 3
        RAID 5
        RAID 6
        RAID 7
```
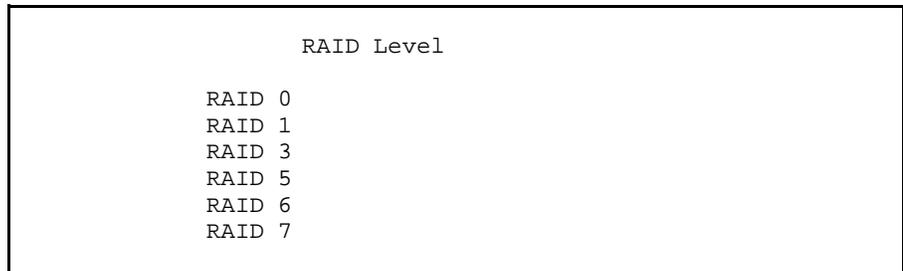
2 Select RAID 5.

The system displays a pop-up box for entering the size for the new system drive.

3 Accept the default size displayed in the pop-up box.

The system displays a summary for the new system drive in a message similar to the following, where *x* is the drive capacity:

```
System Drive #0
RAID Level # 5
Capacity      x
```

The system then displays the Create System Drive screen (Figure 72).

Note: Once the value is accepted, the system subtracts the amount needed for the RAID overhead and displays the actual size of logical system drive 0. This procedure assigns all available space to the system drive 0.

Figure 72.   Create System Drive Screen

```
        Do you want to create this system drive?

            No
            Yes
```
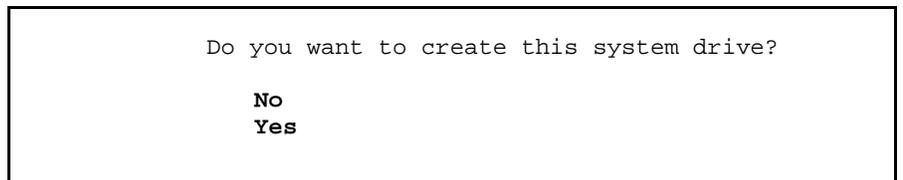
4 Select YES.

The system creates logical system drive 0 and then displays the System Drive Definition Menu (Figure 73).

Figure 73.   System Drive Definition Menu

```
            System Drive Definition

    1.  Create System Drive
    2.  Toggle Write Policy

```
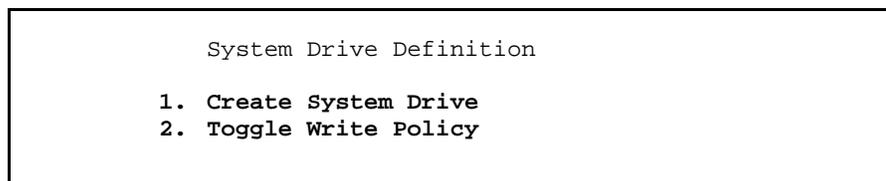
5 Press **ESC**.

6 Press **ESC**.

The system displays the Save Configuration screen (Figure 74).

Figure 74.   Save Configuration Screen

```
        Do you want to save this configuration?

            No
            Yes

```
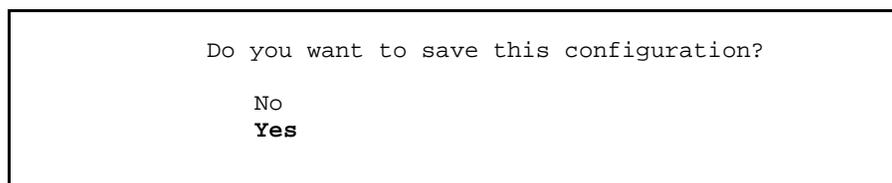
7 Select YES.

The system displays the following message, where *x* is the logical system drive number or numbers that are available to your system:

```
System drive 0 is available for immediate use. Press any key
to continue.
```

8 Press **ENTER**.

The system displays the RAID Controller Main Menu (Figure 60 on page 84) and the following message:

```
Remember to save your configuration to a floppy disk before
exiting. Do you really want to exit Configuration Utility?

    Yes
    No
```

9 Select Yes

The system automatically reboots.

10 Continue with Installing UnixWare.

Installing UnixWare

Note: Installing the UnixWare operating system unmounts file systems. If this software is being loaded onto a system that has clean hard disks that have not been previously loaded, the system will not detect file systems. If this is a recovery installation, the system will detect previously loaded file systems.

Loading UnixWare   To load UnixWare:

1 Insert the diskette labeled "Unixware 7.1 Boot Floppy 1" into the diskette drive.

2 Boot the system by following the appropriate instruction in Table 31.

Table 31.   Initial Boot

If . . .	Then . . .
you are starting from the DOS prompt	enter **CONTROL**+ **ALT** + **DELETE**
the system is off	turn it on by using the power switch on the back of the system
the system is on	reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215

The system displays the SCO trademark screen as it begins to load the base system software. When the first boot floppy is loaded, the system displays the following message:

```
Insert the second floppy and Press ENTER
```

3 Remove the diskette labeled "UnixWare 7.1 Boot Floppy 1" from the diskette drive.

4 Insert the diskette labeled "UnixWare 7.1 Boot Floppy 2" into the diskette drive.

5 Press **ENTER**.

The system displays the following message:

```
Reading the second boot floppy.
```

After several minutes, the system displays the Introduction screen (Figure 75 on page 92).

Figure 75.   Introduction Screen

```
Unixware Installation                              Introduction



SCO UnixWare 7

Load Unixware 7 Image
Access UnixWare Shell
Mount File Systems
Reboot


```

6 Press the ▼ key to select Load UnixWare 7 Image and then press **ENTER**.

The system displays the Insert Diskette 3 screen (Figure 76).

Figure 76.   Insert Diskette 3 Screen

```
UnixWare Installation                          Insert Diskette 3


Please Remove Diskette 2 of 3.
Insert Diskette 3 of 3 and press <Enter>



Your choices are:

1. The diskette has been installed in the drive.
2. Go back to the previous menu.

Press '1' or '2' followed by <Enter>: 1

```

7 Remove the diskette labeled "UnixWare 7.1 Boot Floppy 2" from the diskette drive.

8 Insert the diskette labeled "UnixWare 7.1 Boot Floppy 3" into the diskette drive.

9 Press **ENTER**.

The system displays the Remove Floppy screen (Figure 77).

Figure 77.   Remove Floppy Screen

```
UnixWare Installation                                Remove Floppy



Please Remove the Floppy from the floppy Drive




Press 'Enter' to continue

```

10 Remove the diskette labeled "UnixWare 7.1 Boot Floppy 3" from the diskette drive.

Note: Unixware automatically detects the host bust adapter for the system on which you are installing and loads the appropriate drivers. Unixware cannot be installed on 486 systems.

11 Press **ENTER**.

The system displays the Introduction screen (Figure 78).

Figure 78.   Introduction Screen

```
UnixWare Installation                             Introduction

          Welcome to the UnixWare installation process!

If you have never installed UnixWare before, it is
recommended that you press the 'F1' (or '?') key now to learn
more about the installation process and the hardware
requirements of UnixWare.

  -Pressing the 'F1' (or '?') key at any time during
   installation will display more information or help.

  -Pressing the 'Del' key at any time cancels the
   installation.

Press the 'F1' (or'?') key for more information or 'ENTER' to
continue.
```

⚠ **CAUTION:**

If you use the **DELETE** key to stop the UnixWare installation at any time during this process, you must then restart the software installation process at Step 1.

12 Continue with the next procedure, Setting Up the UnixWare Environment (page 93).

Setting Up the UnixWare Environment

To set up the UnixWare environment:

1 Starting at the Introduction Screen, press **ENTER**.

The system displays the Keyboard Setup screen (Figure 79).

Figure 79.   Keyboard Setup Screen

```
UnixWare Installation                          Keyboard Setup

The UnixWare Installation procedure supports the following
international keyboards. You may select alternate keyboard
types by using the left and right arrow keys and then press
the 'ENTER' or 'RETURN' key.


Keyboard Nationality: U. S. ASCII

                              ┌─────────┐      ┌─────────┐
                              │ Apply   │      │ Reset   │
                              └─────────┘      └─────────┘

When Finished, move the cursor to "Apply" and then press
'Enter' to continue.
```

2 Press the ◀ and ▶ keys on your keyboard to move through the field selections and select U.S. ASCII.

3 Press **TAB** to move to the Apply field and then press **ENTER**.

The system displays the Configure Date and Time screen (Figure 80).

Figure 80. Configure Date and Time Screen

```
UnixWare Installation                  Configure Date and Time

On this screen, you will check the current date and time that
is set on your computer, and change them if necessary. You
also select what timezone configuration you require. Either
select a continent(s) which will lead you onto a further
screen with locations or Manual entry for a custom timezone.

       The current date:
       The current time:
       Enter the current year:
       Enter the month of the year (1-12):
       Enter the day of the month (1-31):
       Enter the hour of the day (0-23):
       Enter the minute of the hour (0-59):
       Timezone configuration:


                              Apply            Reset



Press 'TAB' to move the cursor between fields. When finished,
move the cursor to "Apply" and then press 'Enter' to continue.
```

4 Use the ◀ and ▶ keys on your keyboard to move through the field selections. Use **TAB** to move to the next field.

5 Select the appropriate data for each field.

6 Press **TAB** to move to the Apply field and then press then **ENTER**.

The system displays the Continent Location Choice screen (Figure 81).

Figure 81. Continent Location Choice Screen

```
UnixWare Installation          Continent Location Choice Screen

On this screen, you choose the country/location you are in,
having already selected the continent. To go back to the
continent screen select "Back One Screen". Use the left and
right arrow keys.

       Location: US/Eastern

                         Apply          Reset

Press 'TAB' to move the cursor between fields. When finished,
move the cursor to "Apply" and then press 'Enter' to continue.
```

7 Use the ◄ and ► keys on your keyboard to move through the field selections.

8 Select the appropriate data for each field.

9 Press **TAB** to move to the `Apply` field and then press **ENTER**.

The system displays the Installation Type Selection screen (Figure 82).

Figure 82. Installation Type Selection Screen

```
UnixWare System Installation      Installation Type Selection

You must choose a system type. The system type you choose will
determine the default file system sizes you will specify on
the next screen.

Press the 'F1' or '?' key to see more information about these
different system types.

      Platform Type: 16-Slot CPCI
      Offer Type: Intuity CONVERSANT


                         ┌──────────┐      ┌──────────┐
                         │  Apply   │      │ Reset    │
                         └──────────┘      └──────────┘

Press 'TAB' to move the cursor between fields.
```

10 Use the ◄ and ► keys on your keyboard to move through the field selections. Use **TAB** to move to the next field.

11 Select the appropriate data for each field as specified in Table 32

Table 32. Entries for the Installation Type Selection Screen

Field	Setting
Platform Type:	16-Slot CPCI
Offer Type:	Intuity CONVERSANT

12 Press **TAB** to move to the `Apply` field and then press **ENTER**.

The system displays the Intuity CONVERSANT Installation Type screen (Figure 83 on page 96).

Figure 83.   Intuity CONVERSANT Installation Type Screen

```
Unix System Installation           Intuity CONVERSANT
Installation Type


You must select whether you are performing a new installation
which configures both disk 0 and disk 1 (if installed), or
are restoring a system from a previously created mkimage.


Your choices are:

1. New Installation

2. Restore from a mkimage


Press a number between 1 and 2 followed by 'Enter'.
```

13 Enter 1 and then press **Enter**.

Note: If you are restoring a system from a mkimage tape, use the procedures in
Chapter 3, "Common System Procedures," in *CONVERSANT System
Version 8.0 System Reference*, 585-313-215.

The system displays the Set Disk Partitions menu (Figure 84).

Figure 84.   Set Disk Partition Menu

```
Unix System Installation                 Set Disk Partitions

Please select whether you would like the recommended disk
partitions or would like to customize the disk partitions.

The recommended disk partitions are 100% UNIX partitions for
all the disks on the system.

WARNING:   PROCEEDING PAST THIS SCREEN MAY DESTROY ALL THE
           DATA CURRENTLY ON THE DISKS!

Your choices are:
1. Recommended Disk Partitions (100% UNIX partitions)
2. Customize Disk Partitions

Press '1' or '2' followed by 'ENTER': 1
```

14 Continue with the appropriate instruction from Table 33.

Table 33.   Set Disk Partition Options

If you choose	Enter	Then proceed to
1 Recommended Disk Partition	**1**	Continue with Installing the CONVERSANT Image (page 105) (page 104)
2 Customize Disk Partitions	**2**	Initializing the Hard Disk Drives (page 97)

Initializing the Hard Disk Drives

**Customizing Disk
Partitions**

If you chose 2.Customize Disk Partitions from the Set Disk Partitions menu, the system displays the Primary Hard Disk Partitioning screen (Figure 85).

Figure 85.   Primary Hard Disk Partitioning Screen

```
UnixWare Installation             Primary Hard Disk Partitioning

In order to install Intuity Conversant, you should reserve a
UNIX system partition (a portion of your hard disk's space)
containing 100% of the space on your primary hard disk.
After you press 'ENTER', you will be shown a screen that will
allow you to create new partitions, delete existing
partitions or change the active partition of your primary hard
disk (the partition that your computer will boot from).

WARNING: All files in any partition(s) you delete will be
destroyed. If you wish to attempt to preserve any files from
an existing UNIX system, do not delete its partitions(s).

The UNIX system partition that you intend to use on the
primary hard disk must be at least 60 MBs and labeled
"ACTIVE."

Press 'ENTER' to continue
```

To partition the hard disk drives:

1 Starting at the Primary Hard Disk Partitioning screen, press **ENTER**.

The system displays the Hard Disk Partition - Disk 1 screen (Figure 86).

Figure 86.   Hard Disk Partition - Disk 1 Screen

```
UnixWare Installation              Hard Disk Partition - Disk
1

             Total disk size is 4340 cylinders (4340.0MB)

Partition Status  Type  Start  End    Length  %     Approx MB
   1       Active  Unix  0.00  4339    4340  100     4339.98
                   System


 1. Overwrite system master boot code
 2. Delete a partition
 3. Exit (Update disk configuration and exit)
 4. Cancel (Exit without updating disk configuration)

Enter selection:

```

2 Enter **2**

The system displays the Delete A Partition screen (Figure 87).

Figure 87.   Delete A Partition Screen

```
UnixWare Installation                     Delete A Partition

          Total disk size is 4340 cylinders (4340.0MB)

Partition Status Type   Start End    Length %     Approx MB
   1         Active Unix  0.00  4339   4340   100    4339.98
                   System


 1. Partition 1


Enter the number of partition to delete: 1

```

3 Press **ENTER**.

The system displays the Hard Disk Partitioning-Disk 1 screen (Figure 88).

Figure 88.   Hard Disk Partitioning-Disk 1 Screen

```
UnixWare Installation          Hard Disk Partitioning - Disk 1

          Total disk size is 4340 cylinders (4340.0MB)

Partition Status  Type  Start End     Length %      Approx MB
                        0.00


 1. Overwrite system master boot code
 2. Create a partition
 3. Exit (Update disk configuration and exit)
 4. Cancel (Exit without updating disk configuration)

Enter selection:

```
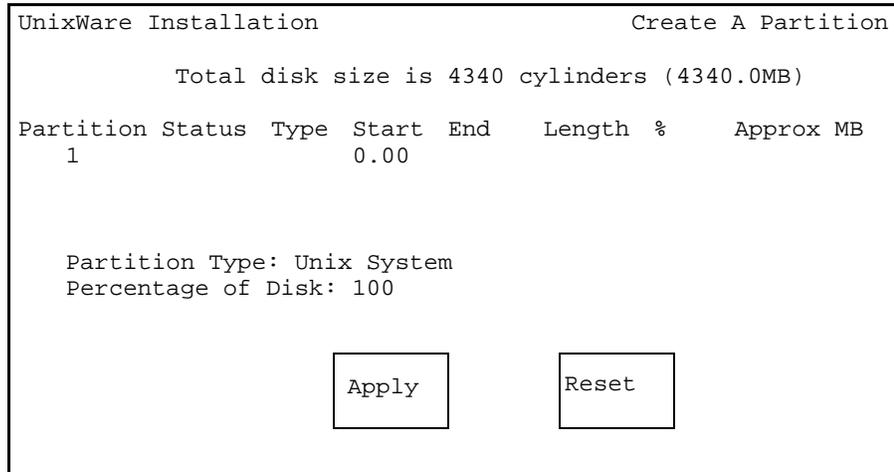
4 Enter 2 and then press **ENTER**.

The system displays the Create a Partition screen (Figure 89).

Figure 89.   Create a Partition Screen

```
UnixWare Installation                        Create A Partition

             Total disk size is 4340 cylinders (4340.0MB)

Partition Status  Type  Start  End    Length  %      Approx MB
   1                    0.00



   Partition Type: Unix System
   Percentage of Disk: 100




                          ┌─────────┐      ┌─────────┐
                          │ Apply   │      │ Reset   │
                          │         │      │         │
                          └─────────┘      └─────────┘

```

5 Use the ◄ and ► keys on your keyboard to move through the field selections. Use **TAB** to move to the next field.

6 Select the appropriate data for each field as specified in Table 34.

Table 34.   Create a Partition Screen Entries

Field	Setting
Partition type	UNIX System
Percentage of Disk	100

7 Press **TAB** to move to the Apply field and then press **ENTER**.

The system displays the Hard Disk Partitioning - Disk 1 screen (Figure 90).

Figure 90.   Hard Disk Partitioning - Disk 1 Screen

```
UnixWare Installation            Hard Disk Partitioning - Disk
1

             Total disk size is 4340 cylinders (4340.0MB)


                              Cylinders
Partition Status  Type  Start End Length    %         Approx MB
   1        Unix  System 4339  4340 100   4339.984375   0.00


 1. Overwrite system master boot code
 2. Change Active (Boot from) partition
 3. Delete a partition
 4. Cancel (Exit without updating disk configuration)

Enter selection:
```
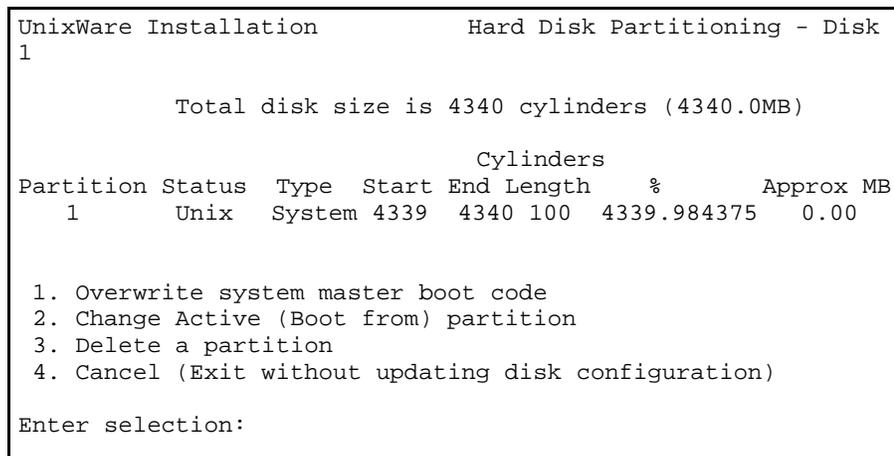
8 Enter **2** and then press **ENTER**.

The system displays the Change Active Partition screen (Figure 91).

Figure 91.   Change Active Partition Screen

```
UnixWare Installation                    Change Active Partition

            Total disk size is 4340 cylinders (4340.0MB)

Partition Status  Type  Start End Length    %        Approx MB
   1        Unix   System 4339 4340 100   4339.984375   0.00



 1. Partition 1

Enter the number of partition you want to boot from:1


```

9 Press **ENTER**.

The system displays the Hard Disk Partitioning - Disk 1 screen (Figure 92).

Figure 92.   Hard Disk Partitioning - Disk 1 Screen

```
UnixWare Installation              Hard Disk Partition - Disk
1

            Total disk size is 4340 cylinders (4340.0MB)

                       Cylinders

Partition Status  Type  Start  End    Length  %      Approx MB
   1      Active  Unix   0.00  4339    4340   100     4339.98
                  System


 1. Overwrite system master boot code
 2. Delete a partition
 3. Exit (Update disk configuration and exit)
 4. Cancel (Exit without updating disk configuration)
```

10 Enter **3** and then press **ENTER**.

The system displays the Set Slice Sizes menu (Figure 93).

Figure 93. Set Slice Sizes Menu

```
UNIX System Installation                         Set Slice Sizes

Please select whether you would like the recommended slice
sizes or would like to customize the slice sizes.

Your choices are:
1. Recommended Slice Sizes
2. Customize Slice Sizes

Press '1' or '2' followed by 'ENTER': 1
```

11 Continue with the appropriate steps in Table 35.

Table 35. Set Slice Size Options

If you choose . . .	Enter . . .	Then continue with . . .
1 Recommended Slice Sizes	**1**	Installing the CONVERSANT Image (page 105)
2 Customize Slice Sizes	**2**	Selecting Customized Slice Sizes (page 102)

Selecting Customized Slice Sizes

If you chose `1.Customize Slice Sizes` from the Set Slice Sizes Menu (Figure 93 on page 101), the system displays page 1 of the Set Up File Systems on Disk(s) screen (Figure 94).

Figure 94.   Set Up File Systems on Disk(s) Screen, Page 1

```
UnixWare Installation              Set up File Systems on Disk(s)

Enter filesystem sizes on first disk.

  Size of / in MB:1024
  Size of /stand in MB:20
  Size of /dev/dump in MB:192
  Size of /dev/swap in MB:512
  Size of /mtce in MB:30
  Size of /vs in MB:150
  Size of /oracle in MB:2500
  Size of /tmp in MB:300
  Size of /voice1 in MB:3000
  Size of /fax in MB:1500
  Size of /support in MB:1000


              ┌──────────┐      ┌──────────┐
              │  Apply   │      │  Reset   │
              └──────────┘      └──────────┘


Consult software installation manual for correct sizes.
Megabytes in Active Partition: Disk 1 - 4339
```

To set the slice sizes:

1 On page 1 of the Set Up File Systems on Disk(s) screen, enter the appropriate number of megabytes of space needed for each slice as specified in Table 36

   Use the ◀ and ▶ keys on your keyboard to move through the field selections. Use **TAB** to move to the next field.

Note: The sizes listed in Table 36 are the recommended default sizes. If you are loading a system using a mkimage tape, use the sizes on the tape label. If there are no sizes, use the recommended size from Table 36.

Table 36. Recommended Default Space Requirements for the UCS 1000 Server

Slice	Space Requirements (MB)
/	1024
/stand	20
/dev/dump	192
/dev/swap	512
/mtce	30
/vs	150

1 of 2

Table 36. Recommended Default Space Requirements for the UCS 1000 Server

Slice	Space Requirements (MB)
/oracle	2500
/tmp	300
/voice1	3000
/fax	1500
/support	1000
/appl	1000
	2 of 2

2 After you complete the last field on the screen,press **TAB** to move to the Apply field and then press **ENTER**.

The system displays a second Set Up File Systems on Disk(s) screen (Figure 95).

Figure 95.   Set Up File Systems on Disk(s) Screen, Page 2

```
UnixWare Installation              Set up File Systems on Disk(s)

Enter filesystem sizes on first disk.

Size of /appl in MB:
Size of /unused1 in MB:
Size of /unused2 in MB:
Size of /unused3 in MB:
Size of /unused4 in MB:


            ┌─────────┐      ┌─────────┐
            │         │      │         │
            │ Apply   │      │ Reset   │
            │         │      │         │
            └─────────┘      └─────────┘

Consult software installation manual for correct sizes.
Megabytes in Active Partition: Disk 1 - 4339
```
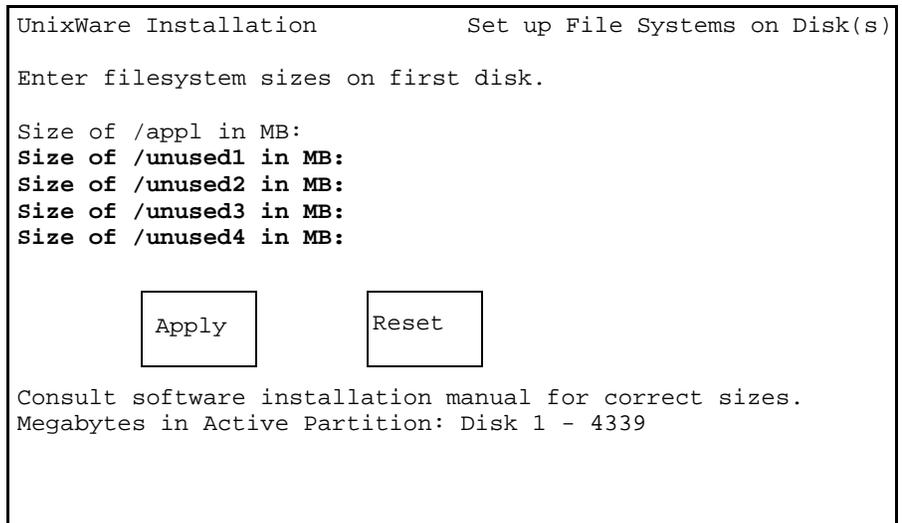
3 Use the ◄ and ► keys on your keyboard to move through the field selections. Use **TAB** to move to the next field.

4 After you complete the last field on the screen, press **TAB** to move to the `Apply` field and then press **ENTER**.

The system displays the Intuity CONVERSANT Device Type menu, Figure 96.

Figure 96. Intuity CONVERSANT Device Type Screen

```
UnixWare Installation             Intuity CONVERSANT Device Type

Please select the device you wish to install from.

Your choices are:
1. CD-ROM
2. Tape

Press a number between 1 and 2 followed by 'ENTER':1
```

5 Continue with Installing the CONVERSANT Image (page 105)

Selecting the Recommended Disk Partitions

Recommended Disk Partitions

If you chose `1. Recommended Disk Partitions` from the Set Slice Sizes Menu (Figure 93 on page 101), the system displays the Set Slice Sizes screen (Figure 97).

Figure 97. Set Slice Sizes Screen

```
UnixWare Installation                            Set Slice Sizes

Please select whether you would like the recommended slice
sizes or would like to customize the slice sizes.

Your choices are:
1. Recommended Slice Sizes
2. Customize Slice Sizes

Press '1' or '2' followed by 'ENTER': 1
```

Continue with the steps in Table 37.

Table 37. Set Slice Size Options

If you choose . . .	Enter . . .	Then continue with . . .
1 Recommended Slice Sizes	**1**	Installing the CONVERSANT Image
2 Customize Slice Sizes	**2**	Selecting Customized Slice Sizes (page 102)

Installing the CONVERSANT Image

To install the CONVERSANT Image:

1 From the Intuity CONVERSANT Device Type screen (Figure 96 on page 104), press **ENTER**.

The system displays the Intuity CONVERSANT CD-ROM screen, (Figure 98).

Figure 98.   Intuity CONVERSANT CD-ROM Screen

```
UnixWare Installation              Intuity CONVERSANT CD-ROM

Please insert the Intuity CONVERSANT CD-ROM into the CD-ROM
drive and press 'ENTER'.

Your choices are:
1. The CD-ROM has been inserted in the CD-ROM drive
2. Go back to previous menu

Press '1' or '2' followed by 'ENTER': 1
```

2 Insert the CD labeled "Intuity CONVERSANT CD-ROM" into the CD-ROM drive and then press **ENTER**.

The system displays the Continue Installation screen (Figure 99).

Figure 99.   Continue Installation Screen

```
UnixWare Installation                    Continue Installation

The Intuity CONVERSANT CD-ROM has been inserted correctly.

Next the hard disk will be checked for defects and the file
systems will be created. Then the Intuity CONVERSANT Image
will be copied to the hard disk and the system will be
rebooted.

Do not remove the CD-ROM until prompted to do so.

This will take at least one hour. Please wait.


Press 'Enter' to continue.
```

3 Press **ENTER**.

The system displays the Verifying Hard Disk(s) screen, Figure 100.

Figure 100.   Verifying Hard Disk(s) Screen

```
UnixWare Installation                    Verifying Hard Disk(s)

Checking the hard disk for defects and creating file systems.
This will take a few minutes. Please wait.


X% complete




```

After approximately 10 minutes, the system displays the Copying Files screen (Figure 101).

Figure 101.   Copying Files Screen

```
UnixWare Installation                          Copying Files

Copying Intuity CONVERSANT Image to the hard disk.

Do Not remove the Intuity CONVERSANT CD-ROM until prompted to
do so.
```

Note: If you are loading the CONVERSANT image from tape, you will see a screen prompting you to remove the tape from the tape drive.

After approximately 20 minutes, the system displays the Rebuilding UNIX screen, Figure 102.

Note: If you have just completed the Configuring the Array (page 87) procedure on a RAID system, the time intervals may be significantly longer. Total UNIX load time may be closer to 2 hours instead of 30 minutes.

Figure 102.   Rebuilding UNIX Screen

```
UnixWare Installation                         Rebuilding UNIX

The system is now being rebuilt to reflect your selections


This will not require any user input.

```

The system automatically reboots and displays the `Console Login:` prompt.

The procedure is now complete and the CONVERSANT base system software is installed. Continue with Setting Up the LAN Connection (page 107) or Initializing the Mouse (page 110).

Setting Up the LAN Connection

To set up the LAN connection:

1 From the network administrator, determine the following:

- **~** The machine IP address
- **~** The machine node name
- **~** The system name

2 If you are not already logged in as root, do so now.

3 Enter **uname -S *name*** where *name* is the machine node name.

The system displays the following message:

```
WARNING: Changing will affect the system's feature license.
The feature provided by these license will be unavailable.
Please refer to System User documentation for more
information.

Do you really want to change the system's node name? [y/n] y
```
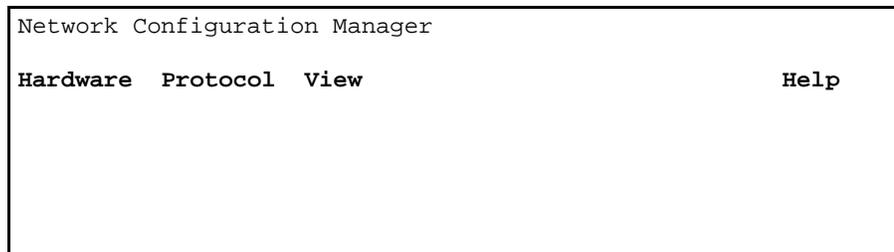
4 Use the vi editor to add the machine node name and IP address to the *etc/hosts* file.

5 Enter **netcfg**.

The system will display the Network Configuration Manager screen (Figure 103).

Figure 103.   Network Configuration Manager Screen

```
Network Configuration Manager

Hardware   Protocol   View                              Help



```

**6** Use arrow keys on your keyboard and **Tab** to navigate around the screen.

7 Press **Tab** to place the cursor on Hardware.

8 Press the ▼ arrow key.

The system displays the Hardware menu.

9 From the Hardware menu, select Add new LAN adapter and then press **ENTER**.

The system displays the Add New LAN Adapter screen (Figure 104 on page 108).

Figure 104.   Add New LAN Adapter Screen

```
Add New LAN Adapter

*Ethernet - Force Computers Intel 21143 Drive (2.00)



Continue   Cancel     Help

```
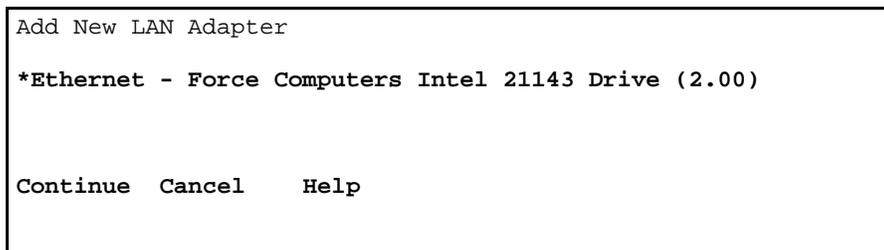
10 Use the ▼ key to select the LAN adapter installed on your system.

Note: You must set up the LAN adapter for Ethernet 1 and Ethernet 2.

11 Press **Tab** to place the cursor on Continue and then press **ENTER**.

The system displays the following message at the bottom of the Add New LAN Adapter screen:
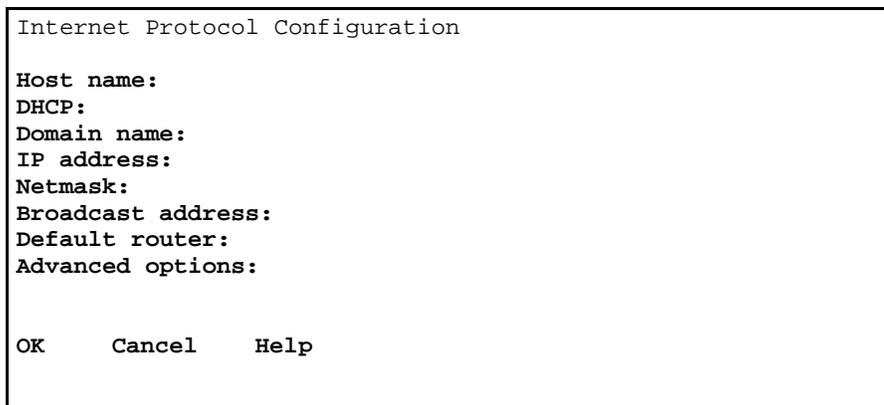
Please wait while Network drivers are added.

When it finishes adding the network drivers, the system displays the Add Protocol screen (Figure 105).

Figure 105.   Add Protocol Screen

```
Add Protocol

TCP/IP


Add     Cancel     Help


```

12 Use the ▼ arrow key to select TCP/IP.

13 Press **Tab** to place the cursor on Add and then press **ENTER**.

The system displays the Internet Protocol Configuration screen (Figure 106). The host name you defined Step 3 appears in the Host name field. Disregard the DHCP client and Domain name fields.

Figure 106.   Internet Protocol Configuration Screen

```
Internet Protocol Configuration

Host name:
DHCP:
Domain name:
IP address:
Netmask:
Broadcast address:
Default router:
Advanced options:



OK      Cancel     Help


```

14 Use the arrow keys to move between fields.

15 Enter the IP address.

   The system enters the appropriate information in the `Netmask` and `Broadcast address` fields.

16 Enter the default router number.

17 Press **Tab** to place the cursor on `OK` and then press **ENTER**.

18 The system displays the Configure Networking Product screen with a confirmation message similar to one appearing in Figure 107.

Figure 107.   Configure Networking Product Screen

```
Configure Networking Product

The following product was successfully configured into the
system:

HW Intel 2114x based 10/100 Mbps Ethernet Controller-PCI Slot 0
  -TCP/IP


OK      Cancel     Help
```

19 Press **Tab** to place the cursor on `OK` and then press **ENTER**.

20 The system displays the Network Configuration Manager screen (Figure 103 on page 107).

   The adapter you configured and TCP/IP will be listed on the screen.

21 Press the ▼ key.

   The system displays the Hardware menu.

22 From the Hardware menu, select `Exit` and then press **ENTER**.

   The system displays the Unix prompt.

Initializing the Mouse

To initialize the mouse:

1 Type **mouseadmin** at the system prompt and then press **ENTER**.

The system displays the Mouse Main Menu (Figure 108).

Figure 108. Mouse Main Menu

```
  There are no mice assigned.

  Select one of the following:

     B) Bus mouse add
     P) PS2 mouse add
     S) Serial mouse add
     T) Test your mouse configuration
     R) Remove a mouse
     U) Update mouse configuration and quit
     E) Exit (no update)

Enter selection:
```

2 Do one of the following:

~ If you are not installing a mouse, enter **e** and then press **ENTER**.

~ If you are installing a mouse, enter **p** and then press **ENTER**.

The system displays the Mouse Main Menu (Figure 109).

Figure 109. Mouse Main Menu

```
The following terminals have mice assigned:

    Display Terminal                        Mouse Device
    Console                                     PS2


    Select one of the following:
       B) Bus mouse add
       P) PS2 mouse add
       S) Serial mouse add
       T) Test your mouse configuration
       R) Remove a mouse
       U) Update mouse configuration and quit
       E) Exit (no update)
```

3 Enter **u** and then press **ENTER**.

4 Continue with Testing the Mouse.

Testing the Mouse   To test the mouse:

  1 Type **mouseadmin** at the system prompt and then press **ENTER**.

      The system displays the Mouse Main Menu (Figure 109 on page 110).

  2 Enter **t** and then press **ENTER**.

      The system displays the following message:

      ```
      Please try using your mouse when the next
      screen appears.

      Strike the ENTER key when ready:
      ```

  3 Press **ENTER**.

      The system displays the following message:

      ```
      Press a mouse button to stop test.
      Test will be cancelled automatically in 15 seconds.
      ```

  4 After a few seconds, click a mouse button.

      The system displays the Mouse Main Menu, Figure 109 on page 110.

  5 Type **e** and then press **ENTER**.

You have now installed all the required software for your UnixWare operating system.

6 **Installing the CONVERSANT System Software**

Overview

This chapter details installation procedures for the CONVERSANT system software and provides the information necessary to reload the CONVERSANT system after a disk failure. Use this chapter in conjunction with Appendix C, Disaster Recovery Checklists (page 179).

Installing the CONVERSANT Base Software Set

The CONVERSANT base software set includes:

- CONVERSANT Utilities Package

- CONVERSANT Runtime Processing Package

- CONVERSANT Maintenance Package

- CONVERSANT Logger/Alerter Package

- Intuity AUDIX Logger Package

- CONVERSANT Base ORACLE RDBMS 8

- CONVERSANT ORACLE 8 Integration Package

- CONVERSANT Administration Screens Package

- CONVERSANT Transaction State Machine Package

- CONVERSANT Switch Utilities Package

- CONVERSANT License Modification Package

- CONVERSANT Platform CONVERSANT Tuning

All of the packages included in the CONVERSANT base software set are required for the operation of the CONVERSANT system. All of the packages are contained on one CD-ROM.

To install the CONVERSANT base software set, do the following:

⚠ CAUTION:
If you are using this procedure in conjunction with an upgrade, skip the first three steps and begin with Step 4.

1 Log in as root.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD ROM drive.

3 Enter **pkgadd -d cdrom1**

The system displays the following message:

```
Insert CD into SCSI CD-ROM Drive1.
Type [go] when ready,
    or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.  Do not remove the CD.

The following sets are available:

 1. CVISset   INTUITY CONVERSANT VIS V8 Set
              (i486)4.3.1-5

Select the package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,quit]:
```

5 Press **ENTER**.

The system displays the following message:

```
PROCESSING:
Set: INTUITY CONVERSANT VIS V8 Set (CVISset) from <cdrom1>

INTUITY CONVERSANT VIS V8 Set
(i486)4.3.1-5
Using </> as the package base directory.

Do you want to run the default set installation? (default: y)
```

6 Answer the questions in Table 38 with a check mark for "yes" or "no."

Table 38.   Questions to Determine if the Default Installation is Appropriate

Number	Question	Yes	No
1	Do you want to turn off daylight savings time?		
2	Does your system have a remote maintenance circuit card? **Note:** If you answer yes to this question, you must answer yes to Question 3.		
3	Do you want to disable COM1?		
4	Do you want to disable COM2?		
5	Do you want to disable the parallel port?		
6	Is Interrupt Level 4 being used by anything other than COM1?		
7	Is Interrupt Level 3 being used by anything other than COM2?		
8	Is Interrupt Level 7 being used by anything other than the parallel port?		
9	Is your ORACLE database larger than 65 MB		

7 If you answered **no** to all of the questions in Table 38 on page 114, you can use the default installation; enter **y**

If you answered **yes** to any of the questions in Table 38 on page 114, you can not use the default installation; complete the following Step a through Step j:

a Enter **n**

The system displays the following message:

```
Do you want the default installation for mtce? [y,n,?]
```

b If you answered **no** to Question 1 in Table 38 on page 114, enter **y** and continue with Step d.

If you answered **yes** to Question 1 in Table 38 on page 114, enter **n**

The system displays the following message:

```
Is Daylight Savings ever used? [y,n,?]
```

c Enter **n**

The system displays the following message:

```
Do you want default installation for vs? [y,n,?]
```

d If you answered **no** to all seven Questions 2, 3, 4, 5, 6, 7, and 8 in Table 38 on page 114, enter **y** and continue with Step g.

If you answered **yes** to Question 2, 3, 4, 5, 6, 7, or 8 in Table 38 on page 114, enter **n**

The system displays the following message:

```
First serial port uses interrupt level 4
Second serial port uses interrupt level 3
Parallel port uses interrupt level 7

If you wish to reclaim some of these interrupts for other
devices, you may DISABLE some of these ports.  However, at
least ONE serial port must be enabled at all times.

For serial ports would you like to:
1. ENABLE both first and second serial port.
2. ENABLE first and DISABLE second serial port.
3. DISABLE first and ENABLE second serial port.

Please enter your selection [1,2,or 3]:
```

e If you answered **no** for Questions 2, 3, 4, 6, and 7 in Table 38 on page 114, enter **1**

If you answered **no** for Questions 2, 3, and 6 and **yes** for Question 4 or 7 in Table 38 on page 114, enter **2**

If you answered **yes** for Question 2, 3, or 6 and **no** for Questions 4 and 7 in Table 38 on page 114, enter **3**

Note: If you would like to disable both serial ports, enter **3**, complete the installation procedure, edit the **/etc/conf/sdevice.d/asyc** file, and reboot the system.

The system displays the following message:

```
For the parallel port (interrupt level 7) would you like
to:
1. ENABLE the parallel port.
2. DISABLE the parallel port.
```

f If you answered **no** for Questions 5 and 8 in Table 38 on page 114, enter **1**

If you answered **yes** for Question 5 or 8 in Table 38 on page 114, enter **2**

The system displays the following message:

```
Do you want the default installation for maint?
```

g Enter **n**

Note: There is no difference between the default installation and a custom installation of the maint system.

The system displays the following message:

```
Do you want the default installation for machlog? [y,n,?]
```

h If you answered **no** to Questions 2, 3, and 4 in Table 38 on page 114, enter **y** and continue with Step i.

If you answered **yes** to Question 2, 3, or 4 in Table 38 on page 114, enter **n**

The system displays the following message:

```
Do you want the default installation for TSM? (default: y)
```

i Enter **y**.

The system displays the following message:

```
Do you want the default installation for cdh? (default: y)
```

j Enter **y**.

The system displays the following message:

```
Avaya Inc.
## Processing package information.
## Processing system information.
## Verifying disk space requirements.

Installing INTUITY CONVERSANT VIS V8.0 Set <CVISset>

## Executing preinstall script.
Executing the preinstall personality script for CVIStune.
```

The system displays a series of messages. After approximately one half hour the system displays the following message:

```
Processing of packages for set <CVISset> is completed.

Insert CD into SCSI CD-ROM Drive1.

Type [go] when ready,
or [q] to quit: (default: go)
```

8 Enter **q**

The system displays the following message:

```
***IMPORTANT NOTICE***
    If installation of all desired packages is
    complete, the machine should be rebooted in order
    to ensure sane operation.  Execute the shutdown
    command with the appropriate options to reboot.
```

Enter **shutdown -i6 -g0 -y**

7 Installing the Optional Feature Software

Overview

This purpose of this chapter is to provide the information necessary to reload the optional feature software on a system that has experienced a disk failure.

This chapter describes the procedures to install all the software that was not included as part of the CONVERSANT system software. This software is called *optional* software since it is not required for the basic system to function.

Optional software is contained on the various CD-ROMs. Please see *CONVERSANT System Version 8.0 System Description*, 585-313-219, for a complete list of software.

Note: You will not necessarily install all of the packages for which procedures are provided in this chapter, nor will you necessarily install them in the order documented. Packages that are order-specific are identified as such.

This chapter also describes the general procedure for removing software packages.

Note: All of the procedures in this chapter must be performed with root permission.
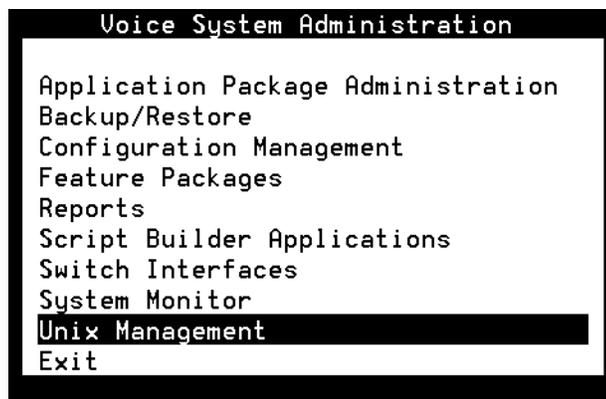
Installing Software Packages Using the Unix Management Screens

If your system has been equipped with the Unix Management Screens Package, software can be loaded using the CONVERSANT system screens.

To load software a software package using the CONVERSANT system screens do the following:

1 Access the Voice System Administration menu (Figure 110) by entering **cvis_menu**.

Figure 110. Voice System Administration Menu

```
        Voice System Administration

  Application Package Administration
  Backup/Restore
  Configuration Management
  Feature Packages
  Reports
  Script Builder Applications
  Switch Interfaces
  System Monitor
  Unix Management
  Exit
```

2 Select:

```
> UNIX Management

    >Software Install
```

The system displays the Software Install menu (Figure 111).

Figure 111.   Software Install Menu

```
            Software Install

CD ROM drive
Floppy drive
Tape drive
```

3 Select the appropriate media.

4 Continue with the following procedures for the optional feature packages.

Note: When installing optional feature packages from media other than the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages," you do not need to enter the **pkgadd** command as described in the following procedures. The system will list the packages available on the media and display the following message:

```
Select the package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q].
```

From the list of available packages, select the package you want to install and then press **ENTER**. After you press **ENTER**, the installation procedure for the package is identical to the procedure described in this chapter.

When installing optional feature packages from the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages," you must enter the **pkgadd** command as described in the following procedures.

Installing the ASP Driver

To install the ASP circuit card driver:

1 Stop the voice system. See "Administering the Voice System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

2 Insert the CD-ROM labeled, "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 asp**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY ASP Driver Package (asp) from <cdrom1>

INTUITY ASP Driver Package
(i486) 4.3.1-5
Using </> as the package base directory.
```

If you did not stop the voice system, the system displays the following message:

```
The voice system is currently running and must be stopped in
order to install this package.

Is it ok to STOP the voice system? [y/n] y
```

a Enter **y** and then press **ENTER**.

The system displays the following message:

```
After installation is completed, would you like to restart
the voice system? [y/n] n
```

b Enter **y** or **n** as appropriate.

If you stopped the voice system, the system continues and displays the following message:

```
Installation of INTUITY ASP Driver Package (asp) was
successful.

***Important Notice***

If installation of all desired packages is complete, the
machine should be rebooted in order to ensure sane operation.
Execute the shutdown command with the appropriate options to
reboot.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210 for the procedure.

Installing the Access Security Gateway Package

To install the Access Security Gateway optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 asg**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Access Security Gateway Package (asg) from
<cdrom1>

INTUITY Access Security Gateway Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY Access Security Gateway Package(asg)
was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Adjunct/Switch Application Interface Packages

The ASAI packages must be installed in the following order:

Installing the Avaya CALLVISOR PC CVLAN CLIENT Package

To install the CALLVISOR PC CVLAN CLIENT package:

1   If you are not already logged in as **root**, do so now.

2   Insert the CD-ROM labeled, "ASAI Feature Software Packages" into the CD-ROM drive.

3   At the UNIX prompt, enter **pkgadd -d cdrom1 cvlanxcl**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4   Press **ENTER**.

The system displays the following message:

```
Installation in progress -- do not remove the cdrom.

PROCESSING:
Package: AVAYA INC. CALLVISOR PC CVLAN CLIENT (UNIX SV x86)
(cvlanxcl) from <cdrom1>
```

AVAYA INC. CALLVISOR PC CVLAN CLIENT (UNIX SV x86)
```
(cvlanxcl)(i386) 6.1.4
Using </> as the package base directory.
Avaya Inc.
```

Installation of AVAYA INC. CALLVISOR PC CVLAN CLIENT (UNIX SV x86) (cvlanxcl) was successful.

The system then displays the UNIX prompt.

5   Continue with the next procedure, Installing the Adjunct/Switch Application Interface Package (page 124).

Installing the Adjunct/Switch Application Interface Package

To install the Adjunct/Switch Application Interface optional feature package:

1 If you are not already logged in as **root**, do so now.

2 Insert the CD-ROM labeled, "ASAI Feature Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 asai**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the cdrom.

PROCESSING:
Package: INTUITY Adjunct/Switch Application Interface
Package (asai) from <cdrom1>

INTUITY Adjunct/Switch Application Interface Package
(i486)4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Enter LAN destination (IP or hostname) for link [definity]:
```

5 Enter the IP address for the machine or the name of the DEFINITY from the /etc/hosts file. Note that default name is "definity", but this should be changed to match the name of DEFINITY.

If the system displays the following message:

```
No entry for destination <name found in /etc/hosts file.
Re-enter destination? y/n
```

Press **y** to reenter.

The system displays several status messages and then the following message:

```
Installation of INTUITY Adjunct/Switch Application Interface
Package (asai) was successful.
```

Important Notice
If installation of all desired packages is complete, the machine should be rebooted to ensure sane operation. Execute the shutdown command with the appropriate options to reboot

The system then displays the UNIX prompt.

6 Remove the CD labeled "ASAI Feature Software Packages" from the CD drive.

7 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

For more information on this feature package, see *CONVERSANT System Version 8.0 Communication Development*, 585-313-220.

Installing the HTML Server and Browser Package

To install the html server and browser optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 html**

The system displays the following message

```
Insert CD into SCSI CD-ROM Drive 1.
Type [go] when ready,
or [q] to quit: (default: go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in Progress.  Do not remove the CD.

PROCESSING:
Package: Intuity html server and browser (html) from
<cdrom1>.

Intuity html server and browser
(INTUITY) 8.0-0
Using </> as the package base directory.
/* Copyright (c) 1998 Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Intuity html server and browser (html) was
successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Call Bridge Application Package

To install the Call Bridge Application optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 xferdip**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Call Bridge Application Package (xferdip)
from <CD-ROM>

INTUITY Call Bridge Application Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.

Installation of INTUITY Call Bridge Application Package
(xferdip) was successful.
```

The system displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Call Classification Analysis Package

Note: If you are installing the package and feature_tst is already installed on your system (as in assisted upgrades), once you have finished installing all other packages desired, you must remove feature_tst and reinstall it in order to select the CCA test.

To install this optional feature package, do the following:

1 Ensure that the ASP Driver package has been installed by entering **pkginfo asp**

   If the ASP Driver package has been installed, the system displays the following message:

   ```
   intuity   asp     INTUITY ASP Driver Package
   ```

   If the system displays this message, continue with Step 3.

   If the ASP Driver package has *not* been installed, the system displays the following message:

   ```
   UX:pkginfo:ERROR: information for "asp" was not found
   ```

   If the system displays this message, see Installing the ASP Driver (page 121) for the procedure to load the driver.

2 Insert the diskette labeled "Call Classification Analysis Package 1 of 1" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 cca**

   The system displays the following message:

   ```
   Insert diskette into Floppy Drive 1.
   Type [go] when ready,
       or [q] to quit: (default: go)
   ```

4 Press **ENTER**.

   The system displays the following message:

   ```
   Installation in progress.   Do not remove the diskette.

   PROCESSING:
   Package: INTUITY Call Classification Analysis Package (cca)
   from <diskette1>

   INTUITY Call Classification Analysis Package
   (i486)
   Using </> as the package base directory.
   Avaya Inc.
   ```

   The system displays several status messages and then the following message:

   ```
   Installation of INTUITY Call Classification Analysis Package
   (cca) was successful.

   Insert diskette into Floppy Drive 1.
   Type [go] when ready,
       or [q] to quit: (default: go)
   ```

5 Enter **q**

The system displays the UNIX prompt.

6 If you are finished installing the optional feature software, remove the diskette labeled "Call Classification Analysis Package 1 of 1" from the diskette drive.

7 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for the procedure.

For more information on this feature package, see *CONVERSANT Version 8.0 Application Development with Script Builder*, 585-313-217, and *CONVERSANT Version 8.0 Communication Development*, 585-313-220.

Installing the Data Collection Toolkit

To install the Data Collection Toolkit optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 dctoolkit**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Data Collection Toolkit (dctoolkit) from
<cdrom1>

INTUITY Data Collection Toolkit
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY Data Collection Toolkit (dctoolkit)
was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Dial Pulse Recognition Package

To install the Dial Pulse Recognition optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 dpr**

   The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

   The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Dial-Pulse Recognition Package (dpr) from
<cdrom1>

INTUITY Dial-Pulse Recognition Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

   The system displays several status messages and then the following message:

```
Installation of INTUITY Dial-Pulse Recognition Package (dpr)
was successful.
```

   The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the E1 CAS Interface Package

To install the E1 CAS Interface optional feature package:

1 Insert the diskette labeled "E1 CAS R2 MFC Interface Package - *<country>*" in the diskette drive.

2 At the UNIX prompt, enter **pkgadd -d diskette1** *<package>*

Enter the appropriate package for your country:

~ **r2arg** for Argentina

~ **r2bra** for Brazil

~ **p2aus** for Australia

~ **r2mex** for Mexico

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

3 Press **ENTER**.

The system displays a message similar to the following:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: INTUITY E1 CAS R2 MFC Interface Package - Mexico
(r2mex) from <diskette1>

INTUITY E1 CAS R2 MFC Interface Package - Mexico
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The package name displayed in the message will match the package name on the diskette.

The system displays several status messages and then a message similar to the following:

```
Installation of INTUITY E1 CAS R2 MFC Interface Package -
Mexico (r2mex) was successful.
```

The package name displayed in the message will match the package name on the diskette.

The system then displays the UNIX prompt.

4 If you are finished installing the optional feature software, remove the diskette labeled "E1 CAS R2 MFC Interface Package - *<country>*" from the diskette drive.

5 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

For more information on this feature package, see "Backing Up the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the E1/T1 Circuit Card Driver

Note: If the E1/T1 circuit cards are not recognized when the voice system is started or if other problems are noticed with the E1/T1 circuit card driver, it may be necessary to remove and reinstall the E1/T1 circuit card driver.

Occasionally dynamically loadable drivers fail to load into the UnixWare kernel properly.

To install the E1/T1 circuit card driver, do the following:

1   If you are not already logged in as root, do so now.

2   Stop the voice system. See "Administer the Voice System," in "Common System Procedures," in the *Intuity CONVERSANT System Reference*, 585-313-205.

3   Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

4   At the UNIX prompt, enter **pkgadd -d cdrom1 t1driver**

The system displays the following message:

```
Insert CD into SCSI CD-ROM Drive 1.
Type [go] when ready,
    or [q] to quit: (default: go)
```

5   Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the CD.

PROCESSING:
Set: INTUITY T1/E1 Board Driver (t1driver) from <cdrom1>

Intuity T1/E1 Board Driver
(i486)4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of T1/E1 Board Driver (t1driver) was successful.
```

6   If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

7   Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Asynchronous SuperSerial Circuit Card Driver

To install the asynchronous SuperSerial card driver, do the following:

1 If you are not already logged in as root, do so now.

2 Insert the diskette labeled "Equinox SST Loadable STREAMS Device Driver (EISA/ISA/MCA/PCI) 1 of 1" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 eqn**

The system displays the following message:

```
Insert diskette into Floppy Drive 1.
Type [go] when ready,
    or [q] to quit: (default: go)
```

4 Press **ENTER**.

The system displays the following message:

```
PROCESSING:
Package: Equinox SST Loadable STREAMS Device Driver
(EISA/ISA/MCA/PCI) (eqn) from <diskette1>

Equinox SST Loadable STREAMS Device Driver
(EISA/ISA/MCA/PCI) (i386)
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
This seems to be an ISA system. Is this correct [Y/n]?
```

5 Enter **y**

The system displays the following message:

```
Installing for ISA bus system.

The following i/o ports appear to be free for use by Equinox
ISA boards:
220 240 260 280 2a0 2c0 2e0 320 360 3a0 3c0
Should the driver autoconfigure all Equinox ISA boards [Y/n]?
```

6 Enter **n**

The system displays the following message:

```
One 16k block of memory addresses will be used by all Equinox
ISA boards. This address must meet the following criteria:

1. In the range of 640 kilobyte to 1 Megabyte or
   above 2 Gigabytes
2. No other physical memory (RAM/ROM) present
3. Must NOT be cached
4. Must begin on a 16k boundary

An example hexadecimal address is 0xb0000

Enter your address selection in hexadecimal: 0x
```

7   Enter the appropriate address as determined by the Hardware Resource Allocator.

The system displays the following message:

```
You may enable a selection of baud rates above 38400 for all
ports by answering "Yes" to the following question.

If you enable baud rates above 38400, speeds below 300 baud
will be unavailable. Speeds 300 to 38400 are unaffected.

The high baud rates are selected according to the following
table:

        57600      B50
        76800      B75
        115200     B110
        238400     B134    (depending on board/module
                            (type

Enable high baud rate selection [y/N]?
```

8   Enter **n**

The system displays the following message:

```
The unix kernel will be rebuilt to include your configuration
changes during the next system reboot.

A system rebuild has been requested when the system is
shutdown. System tunables have been modified.

Please request a reboot using the "init 6" command to use the
driver.

If you desire the default set of port monitors and port
services to be installed, execute "/etc/equportsetup" after
the system has rebooted.

Installation of Equinox SST Loadable STREAMS Device Driver
(EISA/ISA/MCA/PCI) (eqn) was successful.

Insert diskette into Floppy Drive 1.
Type [go] when ready,
    or [q] to quit: (default: go)
```

9   Enter **q**

10   Remove the diskette labeled "Equinox SST Loadable STREAMS Device Driver (EISA/ISA/MCA/PCI) 1 of 1" from the diskette drive.

11   Reboot the system. See "Reboot the System," in "Common System Procedures," in the *Intuity CONVERSANT System Reference*, 585-313-205.

Installing the FlexWord Speech Recognition Package

Installing the FlexWord™ Speech Recognition Package requires installing the following packages in the order shown:

- ASP Driver package. See Installing the ASP Driver (page 121) for the procedure.

- FlexWord Recognition - Base. See Installing FlexWord Recognition - Base (page 134) for the procedure.

- FlexWord Recognition - U.S. English. See Installing FlexWord Recognition (page 135) for the procedure.

Installing FlexWord Recognition - Base

To install the FlexWord Recognition - Base optional feature package:

1 Stop the voice system. See "Administering the Voice System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

2 Ensure that the ASP Driver package has been installed.

3 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

4 At the UNIX prompt, enter **pkgadd -d cdrom1 flexrecog**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

5 Press **ENTER**.

If you did not stop the voice system, the system displays the following message:

```
The voice system is currently running and must be stopped in
order to install this package.

Is it ok to STOP the voice system? [y/n] y
```

a Enter **y** and then press **ENTER**.

The system displays the following message:

```
After installation is completed, would you like to restart
the voice system? [y/n] n
```

b Enter **y** or **n** as appropriate.

If you stopped the voice system, the system continues and displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY FlexWord Recognition - Base (flexrecog) from
<cdrom1>
```

```
INTUITY FlexWord Recognition - Base
(i486) 4.3.1-5
Using </> as the package base directory.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY FlexWord Recognition - Base
(flexrecog) was successful.
```

The system then displays the UNIX prompt.

6 If you are finished installing the optional feature software, remove the CD labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM from the drive.

7 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210 for the procedure.

Installing FlexWord Recognition

To install the FlexWord Recognition optional feature package:

1 Stop the voice system. See "Administering the Voice System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

2 Ensure that the ASP Driver package is installed.

3 Ensure that the FlexWord Recognition - Base package is installed.

4 Insert the CD-ROM labeled "FlexWord Recognition - *<language>*" into the CD-ROM drive.

5 At the UNIX prompt, enter **pkgadd -d cdrom1** *<package>*

Enter the appropriate package for your language:

~ **bpflex** for Brazilian Portuguese
~ **csflex** for Spanish
~ **frflex** for French
~ **grflex** for German
~ **jnflex** for Japanese
~ **usflex** for U.S. English

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

6 Press **ENTER**.

If you did not stop the voice system, the system displays the following message:

```
The voice system is currently running and must be stopped in
order to install this package.

Is it ok to STOP the voice system? [y/n] y
```

a Enter **y** and then press **ENTER**.

The system displays the following message:

```
After installation is completed, would you like to restart
the voice system? [y/n] n
```

b Enter **y** or **n** as appropriate.

If you stopped the voice system, the system continues and displays a message similar to the following:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY FlexWord Recognition - US English (usflex)
from <cdrom1>

INTUITY FlexWord Recognition - US English
(i486) 4.3.1-5
Using </> as the package base directory.

Installation of INTUITY FlexWord Recognition - US English
(usflex) was successful.
```

The package name displayed in the message will match the package name on the CD-ROM.

The system displays several status messages and then a message similar to the following:

```
Installation of INTUITY FlexWord Recognition - US English
(usflex) was successful.
```

The package name displayed in the message will match the package name on the CD-ROM.

The system then displays the UNIX prompt.

7 If you are finished installing the optional feature software, remove the CD-ROM labeled "FlexWord Recognition - **<language>**" from the CD-ROM drive.

8 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

For more information on this feature package, see *LINCS Server Speech Development, Processing, and Recognition*, 585-313-212.

Installing the Host Interface Packages

See *Interface Systems, Inc. (ISI) TN3270 Quick Start Guide* for information about installing software on the CONVERSANT system. This software will allow you to access an IBM mainframe computer through the following connections:

• TN3270

• SNA 3270 (SDLC, Token Ring, or LLC2)

IInstalling the NGFax Feature Package

Note: This feature requires that you have at least one SSP (CWB20, formerly CWB1) circuit card installed in the system.

To install the NGFax optional feature package:

1 Insert the CD-ROM labeled "CONVERSANT V8.0 FAX Set" into the CD-ROM drive.

2 At the UNIX prompt, enter **pkgadd -d cdrom1 csfax**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

3 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Next Generation FAX Interface Package
(csfax) from <cdrom1>

INTUITY Next Generation FAX Interface Package
(i486)4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY Next Generation FAX Package (csfax)
was successful.
```

The system then displays the UNIX prompt.

4 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 FAX Set" from the CD-ROM drive.

5 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Primary Rate Interface Packages

The primary rate interface packages include:

- ISDN primary rate interface

- Advanced primary rate interface (restricted availability)

The ISDN primary rate interface package must be installed first.

Installing the ISDN Primary Rate Interface Package

To install the ISDN Primary Rate Interface optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 PRI Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 pri**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY ISDN Primary Rate Interface Package (pri)
from <cdrom1>

INTUITY ISDN Primary Rate Interface Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
The UNIX  kernel will be rebuilt now. This will take some
time. Please wait.

The UNIX kernel has been rebuilt.

RM PROFILE_SIZE has been changed.
Reboot before attempting to use this PRI package.
```

The system displays several status messages and then the following message:

```
This concludes the steps required to install the 'ISDN
Primary Rate Interface' feature. However, additional steps
are required to activate the feature. Consult the INTUITY VIS
Operations guide for the steps required. Administration must
also be done at the connecting end (PBX, ACD, or other
switch) to properly configure the T1 or E1 channels.

Installation of INTUITY ISDN Primary Rate Interface Package
(pri) was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 PRI Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

For more information on this feature, see: Chapter 3, "Digital Telephony Interfaces," of *LINCS Server Communication Development*, 585-313-213, and Chapter 6, "Switch Interfaces," of *LINCS Server Administration*, 585-313-507.

Installing the Advanced Primary Rate Interface Package

To install the Advanced Primary Rate Interface optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 PRI Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 npri**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Advanced PRI Package (npri) from <cdrom1>

INTUITY Advanced PRI Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
This concludes the steps required to install the 'Advanced
PRI' feature.

Installation of INTUITY Advanced PRI Package (npri) was
successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 PRI Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing and configuring the TBCT feature software

Before you begin

Before you install and configure the TBCT, make sure that:

- Your Central Office has administered your PRI trunk groups correctly

- The PRI package is installed

- The Service Creation (SC) package is installed

- Your lines are in service

Central Office administration of the PRI trunk group

You must ensure that your Central Office has administered your PRI trunk groups so that:

- All of your PRIs are at the same PRI serving group

- Your PRI trunks are administered for TBCT on the network switch

- Your trunk groups are two-way trunks

You must also determine the hunt direction on the switch. Switches usually deliver incoming calls by hunting the B-channels in order from either low to high or high to low. When you configure the TBCT feature, you can hunt for outgoing channels in the opposite direction, minimizing the number of collisions between incoming and outgoing calls.

PRI package

Check to make sure that the PRI package is installed using the **pkginfo** command:

    pkginfo pri

For a complete explanation of the **pkginfo** command, see "pkginfo" in Appendix A, "Summary of Commands," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

If the PRI package is not on your system, you must purchase it before you can install TBCT.

Lines in service

Check to see if the lines are all in service using the **disp card** command:

    disp card all

For a complete explanation of the **display card** command, see "display card" in Appendix A, "Summary of Commands," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

Service Creation package

Check to make sure that the Service Creation package is installed using the **pkginfo** command:

    pkginfo sc

For a complete explanation of the **pkginfo** command, see "pkginfo" in Appendix A, "Summary of Commands," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

If the SC package is not on your system, it has been removed. Reinstall the package using **pkgadd**. For a complete explanation of the **pkgadd** command, see "pkgadd" in Appendix A, "Summary of Commands," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

Installing the TBCT software

To install the TBCT package, run **pkgadd** using this commandline format.

      pkgadd -d *path* **tbct**

For a complete explanation of the **pkgadd** command, see "pkgadd" in Appendix A, "Summary of Commands," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

Although you are not required to reboot at this time, it is always recommended to reboot after installing new software.

Configuring the TBCT feature for CONVERSANT

To complete the configuration of the TBCT package on the CONVERSANT, you must

- Administer the PRI trunk type for the CONVERSANT system

- Modify two TBCT files:

  - ~ **pri.rc**
  - ~ **tbct.rc**

Administer the PRI type To administer the correct PRI trunk type for your system:

1 Run **cvis_menu**

2 From the main menu, select:

```
> Voice System Administration
    > Switch Interfaces
        > Digital Interfaces
            > ISDN- Primary Rate Interface
                > Assign Card (or Change Card)
```

3 Press **F2** to display a list of available cards on the system.

4 Select the T1/E1 to be configured as PRI.

5 For `Type:` Select the PRI type for your system:

For ...	Select...
TBCT with a Lucent 5ESS switch on a National ISDN protocol	`TBCT`
TBCT with a Nortel DMS100 switch on a National ISDN protocol	`TBCT`
RLT with a Nortel DMS-100 switch on a Nortel proprietary switch	`Nortel`

For more information about assigning the PRI type to your system, see "Assigning the PRI Protocol to Digital Circuit Cards" in Chapter 5, "Voice System Administration," of *CONVERSANT System Version 8.0 Administration*, 585-313-510

Modify the TBCT files   To configure TBCT, modify:

- **pri.rc**

- **tbct.rc**

    Before modifying any file, copy the file to a backup file (for example, ***filename*.bak** or ***filename*.old**) in case you need to revert to the original file.

You can modify these files in either of two ways:

- Run **tbct_config** to modify *either* **tbct.rc** *or* **tbct.rc** and **pri.rc**.

    See Using tbct_config to modify TBCT files (page 142)

        or

- Edit the individual files.

    See Manually editing the TBCT files (page 144).

Using tbct_config to modify TBCT files

tbct_config provides a set of menus from which you select your choices for the TBCT configuration. **tbct_config** then makes the changes to **tbct.rc**. After you have made all of your choices for the **tbct.rc** fields, the tool asks you if you want it to change the **pri.rc** file also.

1 Enter **tbct_config**.

The system begins displaying menus for each of the fields in the **tbct.rc** file:

```
Select TBCT_TYPE:  (default=1)
  1) NT_RLT
  2) NT_NI
  3) LU_NI
==>

Enter BCH_RESERVE: (default=10)

Select PRIORITY: (default=1)
  1) Transfer on answer
  2) Transfer on alert
```

```
==>

Enter MAX_RING: (default=20)
==>

Select EH_METHOD: (default=1)
  1) Stay Bridging
  2) Disconnect
==>

Select CH_METHOD: (default=1)
  1) Ascent
  2) Descent
==>
```

Enter the number for your choice. If you enter a number out of range or tab past a choice, tbct_config enters the default into tbct.rc.

Note: For information about each of the fields, see Field values for tbct.rc file (page 145).

tbct_config then asks whether you want it to modify the **pri.rc** file (based on your input to the first menu):

```
The configuration file for pri may or may not
be changed.  Do you want this program to modify
pri.rc file? [y/n/q]
==>
Y


    ======================================================
                      !!IMPORTANT!!
The FLAG parameter under /vs/data/pri/pri.rc file
has to be modified in order to support TBCT/RLT.
Suggested values are:
Nortel Custom:   0x80949
NISDN w/o BCAS:  0x40988
NISDN w BCAS:    0x409a9
The parameter should be changed by this program.


In order to make the change effective
Voice System has to be restarted.
======================================================
```

2 Enter **y**, **n**, or **q**. The program defaults to **y** (yes).

3 Restart the voice system.

Manually editing the TBCT files

To edit the pri.rc file:

1 Using vi or another UNIX text editor, open the **pri.rc** file:

/vs/data/pri/pri.rc

2 In the **pri.rc** file, modify the FLAGS parameter depending on the switch configuration.

The FLAGS parameter is written in a line in the file. For example:

```
FLAGS=0x409a9
```

For ...	Enter this FLAGS parameter ...
TBCT with a Lucent 5ESS switch on a National ISDN protocol	0x409a9
TBCT with a Nortel DMS100 switch on a National ISDN protocol	0x409a9
RLT with a Nortel DMS-100 switch on a Nortel proprietary switch	0x80949

To edit the tbct.rc file:

1 using vi or another UNIX text editor, open the **tbct.rc** file:

/vs/data/pri/tbct.rc

Following is an example **tbct.rc** file:

```
# /vs/data/tbct.rc
#
# 1-NT_RLT, 2-NT_NI, 3-LU_NI
TBCT_TYPE=3
# Number of reserved B Channels for transferring outgoing
calls.
BCH_RESERVE=10
# Priority.  1-Transfer on answer. 2-Transfer on alert.
# Not available for NT_RLT
PRIORITY=1
# Maximum number of rings before answering
MAX_RING=20
# Error Handling Method.  1-Stay Bridging, 2-Disconnect.
EH_METHOD=1
# Chan Hunting Method.  1-ascent. 2-descent.
CH_METHOD=1
```

2 Modify the field values as necessary in the **tbct.rc** file, following the guidelines in the following table, "Field values for tbct.rc file".

Table 39. Field values for tbct.rc file

Field	Specifies	Options	Default conditions
TBCT_TYPE	The type of TBCT / RLT PRI feature you subscribe to	• **1** (Nortel RLT) • **2** (Nortel NI) • **3** (Lucent 5ESS)	If: • Any number besides 1, 2, or 3 is assigned here or • This parameter is missing in **tbct.rc** TBCT_TYPE is set to 1.
BCH_RESERVE	Number of reserved B-channels for outgoing calls	Any positive number between 1 and half of the number of B-channels on the system	If: • Any number less than one or greater than half of the total B-channels is assigned here or • This parameter is missing in **tbct.rc** BCH_RESERVE is assigned the number of B-channels on the system divided by four.

PRIORITY
 	
 RLT transfers only on CONNECT.
	The priority of sending the TBCT / RLT request to the network:
	
	 • Transfer on CONNECT
	
	   The call is transferred when the outgoing call is answered.
	
	 • Transfer on ALERTING requests the transfer as soon as ring tone is detected.
	
	   This option transfers the call more quickly.
		• **1** (transfer on CONNECT)
		
		 • **2** (transfer on ALERTING)
			If:
			
			 • Any number besides 1 or 2 is assigned here
			
			   or
			
			 • This parameter is missing in **tbct.rc**
			
			 PRIORITY is set to 1 (transfer on CONNECT).
			
			 If you have the RLT service and assign 2, your service will still transfer on CONNECT.

1 of 3

Table 39. Field values for tbct.rc file

Field	Specifies	Options	Default conditions
MAX_RING (used only when PRIORITY = 1)	Maximum number of rings to wait for an answer before abandoning the call	Any number.	If: • Any number less than 0 is assigned here or • This parameter is missing in **tbct.rc** MAX_RING is assigned the default of 20.

EH_METHOD	Error handling method if the transfer fails.	• **1** (Stay Bridged)
		
		  Maintains a voice connection between the incoming and outgoing calls and waits for one of the parties to disconnect.
		
		  This option uses more capacity of the call system.
		
		• **2** (Disconnect)
		
		  Disconnects the outgoing call. It also:
		
		  ~ Returns an error indication to the application
		  ~ Logs a system alarm event
		
		  This option provides for a disconnect message.
			If:
			• Any number besides **1** or **2** is assigned here
			
			  ~ or
			• This parameter is missing in **tbct.rc**
			
			EH_METHOD is set to 1.

2 of 3

Table 39. Field values for tbct.rc file

Field	Specifies	Options	Default conditions
CH_METHOD	Channel hunt method (ascend, or descend) To minimize collisions between incoming and outgoing calls, it is recommended that the system hunt for outgoing channels in the opposite direction from the direction the switch is using for incoming calls.	• **1** (ascending) • **2** (descending)	If: • Any number besides **1** or **2** is assigned here or • This parameter is missing in **tbct.rc** CH_METHOD is set to **1**.

3 of 3

3 Stop and then restart the voice system for the changes to take effect:

stop_vs
start_vs

Installing the Software Management Package

To install the Software Management optional feature package:

1 If you are not already logged in as root, do so now.

2 Ensure that the HTML Server and Browser package has been installed by entering **pkginfo html**

If the HTML Server and Browser package has been installed, the system displays the following message:

```
intuity   html   Intuity html server and browser
```

If the system displays this message, continue with Step 3.

If the HTML Server and Browser package has *not* been installed, the system displays the following message:

```
UX:pkginfo:ERROR: information for "html" was not found
```

If the system displays this message, see Installing the HTML Server and Browser Package (page 125) for the procedure to load this package.

3 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

4 At the UNIX prompt, enter **pkgadd -d cdrom1 swmgmt**

The system displays the following message

```
Insert CD into SCSI CD-ROM Drive 1.
Type [go] when ready,
or [q] to quit: (default: go)
```

5 Press **ENTER**.

The system displays the following message:

```
Installation in Progress.  Do not remove the CD.

PROCESSING:
Package: Software Management (swmgmt) from <cdrom1>.

Software Management
(INTUITY) 8.0-0
Using </> as the package base directory.
/* Copyright (c) 1998 Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Software Management (swmgmt) was successful.
```

The system then displays the UNIX prompt.

6 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

7 Reboot the system. See "Rebooting the System" in "Common System Procedures", in the CONVERSANT System Version 8.0 System Reference, 585-313-215, for the procedure.

Installing the T1 E&M Package

To install the T1 E&M optional feature package:

1 If you are not already logged in as root, do so now.

2 Ensure that the T1 Driver package has been installed by entering **pkginfo t1driver**

If the T1 Driver package has been installed, the system displays the following message:

```
intuity   t1driver       INTUITY T1/E1 Board Driver
```

If the system displays this message, continue with Step 3.

If the T1 Driver package has *not* been installed, the system displays the following message:

```
UX:pkginfo:ERROR: information for "t1driver" was not found
```

If the system displays this message, see Installing the E1/T1 Circuit Card Driver (page 131) for the procedure to load the driver.

3 Insert the diskette labeled "T1 E&M Interface Package" into the diskette drive.

4 At the UNIX prompt, enter **pkgadd -d diskette1 t1em**

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

5 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: INTUITY T1 E&M Interface Package (t1em) from
<diskette1>

INTUITY T1 E&M Interface Package
(i486) 4.0-3
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
This concludes the steps required to install the 'T1 E&M
Interface Package' feature. However, additional steps are
required to activate the feature. Consult the INTUITY VIS
Operations guide for the steps required. Administration must
also be done at the connecting end (PBX, ACD, or other
switch) to properly configure the T1 channels.
```

```
Installation of INTUITY T1 E&M Interface Package (t1em) was
successful.
```

The system then displays the UNIX prompt.

6 If you are finished installing the optional feature software, remove the diskette labeled "T1 E&M Interface Package" from the diskette drive.

7 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Text-To-Speech Package

Note: If you are installing the TTS package and feature_tst is already installed on your system, once you have finished installing all other packages desired, you must remove feature_tst and reinstall it in order to select the TTS test.

To install the TTS optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V.8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 tts**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Text To Speech Package (tts) from <cdrom1>

INTUITY Text To Speech Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY Text To Speech Package (tts) was
successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

For more information on this feature package, see *LINCS Server Speech Development, Processing, and Recognition*, 585-313-212.

Installing the WholeWord Recognition Packages

The WholeWord recognition packages include the *WholeWord Recognition - Base* and the *WholeWord Recognition - Language.*

Installing the WholeWord Recognition Base Package

Note: If you are installing the WholeWord Recognition - Base package and feature_tst is already installed on your system, once you have finished installing all other packages desired, you must remove feature_tst and reinstall it in order to select the ASR test.

To install the WholeWord Recognition - Base optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 asr**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY WholeWord Recognition - Base (asr) from
<cdrom1>

INTUITY WholeWord Recognition - Base
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY WholeWord Recognition - Base (asr)
was successful.
```

The system then displays the UNIX prompt.

5 Continue with Installing the WholeWord Recognition Language Package.

Installing the WholeWord Recognition Language Package

To install the Wholeword Recognition Language optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the diskette labeled "WholeWord Recognition - *<language>*" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 *<package>***

Enter the appropriate package for your language:

~ **usrecog** for U.S. English

~ **cfrecog** for Canadian French

~ **msrecog** for Latin American Spanish

~ **bprecog** for Brazilian Portuguese

~ **ukrecog** for U.K. English

~ **aurecog** for Australian English

~ **grrecog** for German

~ **csrecog** for Castilian Spanish

~ **jnrecog** for Japanese

~ **frrecog** for French

~ **nlrecog** for Dutch

~ **itrecog** for Italian

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays a message similar to the following:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: INTUITY WholeWord Recognition - US English (usrecog)
from <diskette1>

INTUITY WholeWord Recognition - US English
(i486) 4.0-3
Using </> as the package base directory.
Avaya Inc.
```

The package name displayed in the message will match the package name on the diskette.

The system displays several status messages and then a message similar to the following:

```
Installation of INTUITY WholeWord Recognition - US English
(usrecog) was successful.
```

The package name displayed in the message will match the package name on the diskette.

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the diskette labeled "WholeWord Recognition - *<language>*" from the diskette drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

For more information on this feature package, see *LINCS Server Speech Development, Processing, and Recognition*, 585-313-212.

Installing the Feature Test Script Package

Note: Install the Feature Test Script optional feature package *only after* all the other optional feature packages have been installed:

To install the Feature Test Script optional feature package:

1 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

2 At the UNIX prompt, enter **pkgadd -d cdrom1 ftst**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

3 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY Feature Test Script Package (ftst) from
<cdrom1>

INTUITY Feature Test Script Package
(i486) 4.3.1-5

Using </> as the package base directory.
Avaya Inc.
```

The system displays the following message:

```
Do you want to include the Simple CCA test? (y/n)
```

Note: If you answer **y** and that package has not been installed on your system, you are given an opportunity to cancel the installation. The following is an example for Full CCA:

```
Displaypkg shows that Full CCA is not installed.
You will not be able to test Full CCA with this script.
Type q to quit or return to continue.
```

4 Enter **y**

The system displays the following message:

```
Do you want to include the Playback and Coding test? (y/n)
```

5 Enter **y**

The system displays the following message:

```
Do you want to include the Chantst test? (y/n)
```

6 Enter **y**

The system displays the following message:

```
Do you want to include the Transfer Test test? (y/n)
```

7 Enter **y**

The system displays the following message:

```
Do you want to include the Text to Speech test? (y/n)
```

8 Enter **y**

The system displays the following message:

```
Do you want to include the Dial Pulse Recognition test? (y/n)
```

9 Enter **y**

The system displays several status messages and then the following messages:

```
Installing feature_tst application scripts.
```

```
Adding phrases to talkfile2.
```

```
The script feature_test is now installed and is available.
```

```
Installation of INTUITY Feature Test Script Package (ftst)
was successful7.
```

The system then displays the UNIX prompt.

10 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

11 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Universal Call ID Package

To install the Universal Call ID optional feature package:

1 If you are not already logged in as **root**, do so now.

2 Insert the CD-ROM labeled "ASAI Feature Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 ucid**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the CD.

PROCESSING:
Package: INTUITY Universal Call ID Package (ucid) from
<cdrom1>

INTUITY Universal Call ID Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY Universal Call ID (ucid) was
successful
```

The system displays the UNIX Login prompt.

5 Remove the CD-ROM labeled "ASAI Feature Software Packages" from the CD-ROM drive.

In order to activate this feature, you must specify the UCID Network Node ID. See Chapter 4, "Feature Package Administration," of *CONVERSANT System Version 8.0 Administration*, 585-313-508.

Installing the SNMP Emanate Agent Package

To install the SNMP Emanate Agent optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 snmp**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: INTUITY SNMP Emanate Agent (snmp) from <cdrom1>

INTUITY SNMP Emanate Agent Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of INTUITY SNMP Emanate Agent (snmp) was
successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Script Builder Package

To install this optional feature package, do the following:

1 If you are not already logged in as **root**, do so now.

2 Insert the CD-ROM labeled "Script Builder" into the CD-ROM drive

3 At the UNIX prompt, enter **pkgadd -d cdrom1 sb**

The system displays the following message:

```
Insert CD-ROM into SCSI CD-ROM Drive 1.
Type [go] when ready,
    or [q] to quit: (default: go)
```

4 Press **ENTER**.

The system displays the following message:

```
PROCESSING:
Set: INTUITY Script Builder (sb) from <cdrom1>

INTUITY Script Builder
(i486)
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Script Builder (sb) was successful.

Insert CD into SCSI CD-ROM Drive 1.
Type [go] when ready,
    or [q] to quit: (default: go)
```

5 Enter **q**

6 Remove the CD-ROM labeled "Script Builder" from the CD-ROM drive.

For more information on this feature, see *CONVERSANT Version 8.0 Application Development with Script Builder,* 585-313-217.

Installing the GNU File Compression Utilities

To install the GNU File Compression Utilities optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 gzip**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: g-zip GNU File Compression Utilities (gzip) from
<cdrom1>

g-zip GNU File Compression Utilities
(i386) Version 1.2.4
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of g-zip GNU File Compression Utilities (gzip)
was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing Perl

To install the Perl optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 Perl**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: Perl (Perl) from <cdrom1>

Perl
(i386) Version 5.003
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Perl (Perl) was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the SAMBA Connectivity

To install the SAMBA Connectivity optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" into the CD-ROM drive.

3 At the UNIX prompt, enter **pkgadd -d cdrom1 samba**

The system displays the following message:

```
Insert CD into SCSI CD-Rom Drive 1.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the CD.

PROCESSING:
Package: SAMBA Connectivity (samba) from <cdrom1>

SAMBA Connectivity
(i486) Version 2.0.6
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of SAMBA Connectivity (samba) was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the CD-ROM labeled "CONVERSANT V8.0 CVISset and Base Software Packages" from the CD-ROM drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the User Interface Internationalization Module

To install the User Interface Internationalization Module optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the diskette labeled "User Interface Internationalization Package" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 ui2m**

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: UI2M - User Interface Internationalization Module
(ui2m) from <diskette1>

UI2M - User Interface Internationalization Module
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of UI2M - User Interface Internationalization
Module (ui2m) was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the diskette labeled "User Interface Internationalization Package" from the diskette drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Ground Start FXS Package

To install the Ground Start FXS optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the diskette labeled "Ground Start FXS Package" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 Ground**

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: Ground Start FXS Package (Ground) from <diskette1>

Ground Start FXS Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Ground Start FXS Package (Ground) was
successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the diskette labeled "Ground Start FXS Package" from the diskette drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Installing the Loop Start FXS Package

To install the Loop Start FXS optional feature package:

1 If you are not already logged in as root, do so now.

2 Insert the diskette labeled "Loop Start FXS Package" into the diskette drive.

3 At the UNIX prompt, enter **pkgadd -d diskette1 Loop**

The system displays the following message:

```
Insert diskette into diskette drive.
Type [go] when ready,
or [q] to quit:  (default:  go)
```

4 Press **ENTER**.

The system displays the following message:

```
Installation in progress.   Do not remove the diskette.

PROCESSING:
Package: Loop Start FXS Package (Loop) from <diskette1>

Loop Start FXS Package
(i486) 4.3.1-5
Using </> as the package base directory.
Avaya Inc.
```

The system displays several status messages and then the following message:

```
Installation of Loop Start FXS Package (Loop) was successful.
```

The system then displays the UNIX prompt.

5 If you are finished installing the optional feature software, remove the diskette labeled "Loop Start FXS Package" from the diskette drive.

6 Reboot the system. See "Rebooting the System," in "Common System Procedures," in the *LINCS Server System Reference*, 585-313-210, for the procedure.

Removing Software Packages

There are some *important* issues you need to be aware of when removing software from your system:

- If you are finished installing the optional feature software, remove all services, functions, or card assignments before removing any software packages.

- When removing the Application software, you are asked if you want to remove speech file systems. Answer **no** to this prompt.

- During an initial installation of the Base ORACLE RDBMS package, a user called "oracle" is created. This user is not removed when the Base ORACLE RDBMS package is removed. Once all the base and add-on ORACLE packages have been removed, if you want to remove the "oracle" user, do so through **SYSADM**. See Appendix A, "System Administration Features," in *LINCS Server Administration*, 585-313-507, for more information.

Software packages can be removed using the *command line* or by using the *administration screens.*

Using the Command Line

To remove software packages using the command line:

1 Enter **pkgrm**

2 At the prompt, enter the number (as it appears on the screen) beside the package you want to remove.

3 Repeat Step 2 for each package you want to remove.

⚠ CAUTION:

After you have removed packages from a UnixWare system, you *must* reboot the system before reinstalling packages. You can remove more than one package before rebooting, but you must reboot before reinstalling any packages.

Using the Administration Screens

Note: Your system must have the Unix Management Screens Package installed in order to use this procedure.

To remove software using the administration screen:

1 Starting at the Voice System Administration menu, select:

```
> UNIX Management

    >Software Remove
```

The system displays the Software Remove screen (Figure 112 on page 165) which lists the software installed on the system.

Figure 112. Software Remove Screen

```
                    Software Remove Screen

The following packages are available:

    1. CVISset      INTUITY CONVERSANT VIS V8 Set
                    (i486) 4.3.1-5
    2. asp          INTUITY ASP Driver Package
                    (i486) 4.3.1-5
    3. dpr          INTUITY Dial-Pulse Recognition Package
                    (i486) 4.3.1-5

... more menu choices to follow:
<RETURN> for more choices, <CTRL-D> to stop display:
```

2   Locate the package you want to remove.

3   Note the number of the package given in the first column.

4   Press **Control**+**D**

    The system displays the following message:

    ```
    Select package(s) you wish to process (or 'all' to process
    all packages). (default: all) [?,??,q]
    ```

5   Enter the number of the package.

    The system displays the name and version number for the package selected.

6   Enter **y**

    The system removes the package.

Note: If the system displays any messages warning of dependencies, enter **y**
            again to continue with the software removal.

7   Press **ENTER**.

8 Installing ORACLE Packages

Overview

ORACLE provides many packages, referred to as *ORACLE add-on* packages, that are not required to support system operation. This section describes the procedures to install those packages.

Table 40 lists the contents of the ORACLE Enterprise CD-ROM and identifies licensing requirements for each package

Table 40. Contents of the ORACLE 8i Enterprise Edition CD-ROM

Package Name	Licensed for CONVERSANT?
ORACLE 8i Server	
~ ORACLE 8i Enterprise Edition	Yes
ORACLE Utilities	
~ SQL*Plus	Yes
~ ORACLE Jserver Enterprise Edition	No
~ ORACLE interMedia	Yes
~ ORACLE Spatial	No
~ ORACLE Time Series	No
~ ORACLE Visual Information Retrieval	No
~ ORACLE Advanced Security Export Edition	No
~ ORACLE Partitioning	No
~ ORACLE Programmer	Yes
ORACLE 8i Client	
~ ORACLE Advanced Security	No
~ ORACLE Programmer	Yes
~ ORACLE interMedia Client	Yes
~ ORACLE Visual Information Retrieval Client	No

The ORACLE Developer 2000 CD-ROM contains the following packages:

- Developer
- Reports
- Procedure Builder

For detailed installation and removal information, see the *ORACLE documentation*.

Installing the ORACLE Base Software Packages

The ORACLE base software packages include the following:

- Base ORACLE RDBMS 8
- ORACLE 8 Integration Package
- NET8 for ORACLE 8

To install the ORACLE base software set:

1 Log in as root.

2 Insert the floppy disk labeled "Oracle 8i RDBMS Integration Package " into the diskette drive.

3 Start X-Windows by entering **startx** and then pressing **ENTER**.

4 Enter **pkgadd -d diskette1 oraint**

   The system displays the following message:

   ```
   Insert diskette into Floppy Drive 1.
   Type [go] when ready,
   or [q] to quit: (default:  go)
   ```

5 Press **ENTER**.

   The system displays the following messages:

   ```
   Installation in progress.  Do not remove the diskette.

   PROCESSING:
   Set: ORACLE 8i RDBMS Integration Package from diskette1.

   ORACLE 8i RDBMS Integration Package
   (i486) 4.3.1-5
   Using </> as the package base directory.

   The voice system is currently running and must be stopped in
   order to install this package. Is it OK to STOP the Voice
   System?
   ```

6 Enter **y** and then press **ENTER**.

   The system displays the following message:

   ```
   Enter Oracle home directory[/oracle]:
   ```

7 Enter a pathname or press **ENTER**.

   The system displays the following message:

   ```
   You have selected the following as Oracle Home :/oracle
   If this is correct enter (Y/y,n/N): [Y]
   ```

   If you entered a different pathname, the pathname that you entered appears in place of `:/oracle`.

8 Press **ENTER**.

The system displays the following messages:

```
Adding oinstall group
Adding dba group
Adding oracle login
Enter password for oracle:
```

9 Enter the Oracle password and then press **ENTER**.

The system displays the following message:

```
New password:
```

10 Enter a new password for Oracle and then press **ENTER**.

The system displays the following message:

```
Re-enter new password:
```

11 Re-type the new password and then press **ENTER**.

The system displays the following message:

```
Please insert the Oracle 8i CD in cdrom1.
Hit the return key once the light on the CD drive is off
[Enter].
```

12 Insert the CD-ROM labeled Oracle 8i Enterprise Edition into the CD-ROM drive and then press **ENTER**.

The system displays the following message:

```
One moment please.
Oracle 8i Install C was successfully mounted

Oracle8i will be installed now . . . . . .
This will take 60 to 90 minutes depending on the CPU speed
and memory
No progress of the installation will be shown

Oracle Installation in progress . . . . . .
```

The system continues to display several status messages as it installs the base ORACLE. When the installation is complete, the system displays the following message:

```
Installation of Oracle 8i Integration Package (oraint) was
successful.
```

13 Close X-Windows:

a Click the left mouse button on the desktop.
b Select "Quit Pwm" from the menu.

14 Reboot the system by entering **shutdown -i6 -g0 -y**.

For more information on this feature, see Chapter 2, "Digital Telephony Interfaces," of *CONVERSANT System Version 8.0 Communication Development*, 585-313-220, and Chapter 5, "Switch Interface Administration," of *CONVERSANT System Version 8.0 Administration*, 585-313-510.

Installing the ORACLE Development Packages

⚠️ **CAUTION:**
The ORACLE Developer 2000 tools CD-ROM contains more ORACLE
products than those listed. However, customers must NOT install products
that are not listed. Some of the products are already included in the various
system packages, while other products are not authorized to be used by the
customers. A violation of the recommendation may result into the corruption
of the system software configuration and may be illegal usage of the ORACLE
software.

**Installation
Requirements**

Use the procedures in this section to install the ORACLE development packages.

The basic requirements for installing ORACLE add-on packages are as follows:

- Base ORACLE RDBMS 8 package is installed.

- The voice system and ORACLE database are stopped during the installation.
  (You can stop the database by entering **ior s.**)

**Installing the ORACLE
Developer 2000 Toolkit**

To install the ORACLE Developer 2000 toolkit:

Note: To select a response other than the screen default, use the **TAB** key to
highlight the selection, and then press **ENTER**.

 1 Insert the CD labeled "ORACLE Developer 6.0.0.0 for SCO UnixWare" into the
    CD-ROM drive.

 2 Log in as root if you have not already done so.

Note: You must have root privileges to mount or unmount the CD-ROM. Be
sure to unmount the CD-ROM before removing it from the drive.

 3 Enter the following commands in the sequence below:

   mkdir /cdrom

   chmod 777 /cdrom

   The system creates an empty CD-ROM directory (the "mount point directory")
   for mounting the CD-ROM drive and sets the permissions to make it accessible
   by all users.

 4 Enter the following command:

   mount -F cdfs -oro *<device_name>* **/cdrom**

   where *device_name* is the block device name for your CD-ROM drive, for
   example, /dev/dsk/c0t6d0p0.

 5 Exit the root account by entering **exit**.

 6 Log in as oracle user.

 7 Change to the /cdrom/orainst directory by entering the following command:

   cd /cdrom/orainst

8 Start the installer by entering one of the following commands:

  ~ For character mode, enter **./orainst /c**

  ~ For Motif mode, enter **./orainst /m**

9 If you are using the Motif mode, set the display to your current workstation by entering one of the following set of commands:

  ~ For the Bourne or Korn shells, enter:

   DISPLAY=*<machine name>*:0.0

   export DISPLAY

   xhost +

  ~ For the C shell:

   setenv DISPLAY *<machine name>*:0.0

   host +

A Component Ordering Numbers

Component Ordering Numbers

Table 41 contains a description of replaceable components and their associated ordering numbers.

Note: The component descriptions denoted with an asterisk indicate crash kit in MSL.

Table 41. Component Ordering Numbers

Basic Component Description	Order Number
Assembly, AC Power Panel	408146983
Backplane, SCA, 6-Slot (Disk Drives)-Supports Hot Swap	408348928
Board Assy, Mid-Plane, RAID	408228252
Board Assy, Mid-Plane, SCSI	408381515
Board Assy, Temperature Sensor, TAM, modified for speed control	408295418
Cable Assy, E1/T1 M/M Crossover Adapter (Twisted Pair)	407617968
Cable Assy, E1/T1 25 Ft M/F Modular (Twisted Pair)	407613983
Cable Assy, E1/T1 75 Ft M/F Modular (Twisted Pair)	407613975
Cable Assy, Power, CPCI Backplane to CD ROM/Tape Drive	408118263
Cable Assy, Power, CPCI Backplane to SCA Backplane	408118271
Cable Assy, RAID/SCSI, CPCI Backplane to SCA Backplane	408118289
Cable Assy, RMB to CPU, RS-232 Serial, 9-Pin M/F, Double-shielded, 10'	408378388
Cable Assy, SCSI, SCA Backplane to CD ROM/Tape Drive/External SCSI Connector	408118297
Cable Assy, TAM Temperature Sensor, 3 connectors	408154920
CD ROM Drive, SCSI (Plextor 40X)	700202344
*Circuit Pack, Asynchronous Interface	408194868
	1 of 3

Table 41. Component Ordering Numbers

Basic Component Description	Order Number
Circuit Pack, Asynchronous Interface Rear IO	408194876
Circuit Pack, Companion IO Rear IO	700202351
Circuit Pack, CPU Rear IO	408154912
*Circuit Pack, E1/T1 (CWB21, formerly CWB2)	700053101
Circuit Pack, E1/T1 Rear IO (CYD21, formerly CYD2)	700053119
*Circuit Pack, Remote Maintenance w/ Modem (CWB3)	108218793
*Circuit Pack, Remote Maintenance w/ Modem Rear I/O (CYD3)	108272956
*Circuit Pack, Remote Maintenance w/o Modem Rear I/O (CYD4)	108272964
*Circuit Pack, SBC/Companion IO Complex PIII 500 MHz (Includes Video Module)	700203540
*Circuit Pack, SSP w/ 32MB (CWB20, formerly CWB1)	700053093
Cord, Power, US	408118776
Cord, Monitor, AC Power (PC style)	407115591
Cord, Power, Argentina-Style, 8 foot	408148864
Cord, Power, Australia-Style, 8 foot	407051630
Cord, Power, Italy-Style, 8 foot	407515196
Cord, Power, European-Style, 8 foot	407051648
Cord, Power, Old UK-Style, 8 foot	407406735
Cord, Power, Japan-Style, 8 foot	407406727
Cord, Power, Russia-Style, 8 foot	408148831
Cord, Power, UK-Style, 8 foot	406999243
Disk Drive Assembly, SCSI, 18 GB	406999243
*Fan Tray Assembly, Lower w/ Speed Control & Hot-Swap	700203557
Fan Tray Assembly, Upper w/ Speed Control & Hot-Swap	700203573
Filter, Power Supplies Air Intake	408065068
Keyboard, 104-Key, Fujitsu	700189038
*Module, RAID Controller	700203565
Monitor, Color, 14-inch, Acer	407970722
	2 of 3

Table 41.   Component Ordering Numbers

Basic Component Description	Order Number
Mouse, 2-Button, Logitech	408112134
Panel, Blank, CPCI Card Cage w/ Captive Screws	408145811
Panel, Blank, Disk Drive w/ Captive Screws	408145753
*Power Supply, AC	408058279
Tape, Blank, 4GB Imation Magnus	408215903
*Tape Drive, SCSI, 4GB	408097418
Terminator, SCSI, 68-Pin, Clip-On	408119196
	3 of 3

B How to Build a System

Assignment Rules

Table 42 contains assignment rules for installing circuit cards into the system shell.

Checklist for Building a System

The System Building Checklist, Table 43 on page 178, assumes that you are starting with a system shell that has only the power supplies and the backplanes.

Note: Typically, systems are not sold as described above. This appendix would most likely be used when replacing a system in the field (for example, a system with a failed backplane). In that case, the technician would move the existing hard disk drives to the new system and the CPU complex, CPU rear I/O, Companion rear I/O cards, CD-ROM and tape drive would be returned to the factory.

Table 42. Circuit Card Assignments

Circuit Card Type	System Assignment	Comments
8-Port[1] Asynchronous	Slot 16. Rear I/O location contains the transition card for external connections.	Optional circuit card. Install this optional card first. Fixed slot for the 8-port asynchronous circuit card.
RMB	Slot 7.	Standard circuit card. Fixed slot for RMB.
E1/T1 (CWB21, formerly CWB2)	Install first E1/T1 into slot 1. Rear I/O locations contain the transition cards for external connections.	For subsequent installations count forward (that is, 2, 3, and so on).
SSP (CWB20, formerly CWB1)	Install the first SSP card in the slot to the right of the right-most E1/T1 card installed. Rear I/O locations are blank with a cover over each slot.	Add cards from left to right, beginning with the first available slot.

1 of 2

Table 42. Circuit Card Assignments

Circuit Card Type	System Assignment	Comments
CPU Complex	Slot 8 and slot 9. Rear I/O locations contain the transition cards for connections.	Fixed slots for the CPU complex only.
		2 of 2

[1] A CWB20 (formerly CWB1) or a CWB21 (formerly CWB2) can be assigned to slot 16 only if your system does not use an 8-port asynchronous circuit card and slots 15 through 1 are full.

Table 43. System-Building Checklist

Task	Description	Comments	Reference	Done ✓
1	Acquire all of the components necessary to build your system.		Appendix A, Component Ordering Numbers (page 173)	
2	Determine the slot and bay locations for the equipment.			
3	Install the hard disk drives.		Chapter 3, Replacing the Hard Disk Drive Assembly	
4	Install the circuit cards.		Chapter 2, Installing or Replacing Circuit Cards	
5	Apply power to the unit.		Chapter 1, Getting Inside the System	
6	Install the base system software.		Chapter 5, Installing Base System Software	
7	Install the system software.		Chapter 6, Installing the CONVERSANT System Software	
8	Install the optional feature software.		Chapter 7, Installing the Optional Feature Software; Chapter 8, Installing ORACLE Packages;	

C Disaster Recovery Checklists

Disaster Recovery Checklists

Use the checklists in this appendix with the procedures in Chapter 6, Installing the CONVERSANT System Software. The following checklists are included in this section:

- Checklist for Software Reloading with Existing Hard Disk Drives (page 179)

- Checklist for System with All New Hard Disk Drives (page 180)

- Checklist for System with New Hard Disk Drive 0 (page 180)

- Checklist for Systems with a New Hard Disk Drive (page 181)

Checklist for Software Reloading with Existing Hard Disk Drives

Use the procedures in the following checklist (Table 44) when your system experiences a software disaster. This checklist should not be used if hard disk drives are being replaced.

Table 44. Checklist for Reloading Software with Existing Hard Disk Drives

Done (3)	Task	Reference Documentation
	Locate the most recent backup tape.	
	Shut down the system.	"Shutting Down the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215
	Leave all hard disks connected to the SCSI bus.	
	Restore the system using the **mkimage** backup tape.	"Restoring the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215

Checklist for System with All New Hard Disk Drives

Use the procedures in the following checklist (Table 45) when you are replacing both hard disk drives on your system.

Note: No provisions for recovering existing file system are included. This checklist should not be used if either hard disk drive has been previously used.

Table 45.   All New Hard Disk Drive Checklist

Done (3)	Task	Reference
	Locate the most recent **mkimage** backup tape.	
	Replace the hard disks.	Chapter 3, Replacing the Hard Disk Drive Assembly.
	Restore the system using the **mkimage** backup tape.	"Restore the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Checklist for System with New Hard Disk Drive 0

Use the procedures in the following checklist (Table 46) on a two-disk system in which hard disk drive 0 has failed. Do not use this checklist if another hard disk drive has also failed.

Table 46.   New Hard Disk Drive 0 Checklist

Done (✓)	Task	Reference
	Locate the most recent **mkimage** backup tape.	
	Replace the hard disk drive.	Chapter 3, Replacing the Hard Disk Drive Assembly.
	Restore the system using the **mkimage** backup tape.	"Restore the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

Checklist for Systems with a New Hard Disk Drive

Use the procedures in the following checklist (Table 47) on a two-disk system in which a hard disk drive other than hard disk drive 0 has failed.

Table 47.   New Hard Disk Drive Checklist

Done (3)	Task	Reference
	Locate the most recent **mkimage** backup tape.	
	Replace the hard disk drive.	Chapter 3, Replacing the Hard Disk Drive Assembly.
	Remove the old hard disk drive.	Chapter 3, Replacing the Hard Disk Drive Assembly.
	Add the new hard disk drive.	Chapter 3, Replacing the Hard Disk Drive Assembly.
	Initialize the new hard disk drive drive using the **mkimage** backup tape.	"Restoring the System," in "Common System Procedures," in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215.

D Dress Kit Installation

Dress Kit Installation

1 Locate the L- shaped brackets and attach one to the left and one to the right front edge of the system as shown in Figure 113 on page 183.

Figure 113.Installing L-Shaped Brackets

hkpred01 EWS 041600
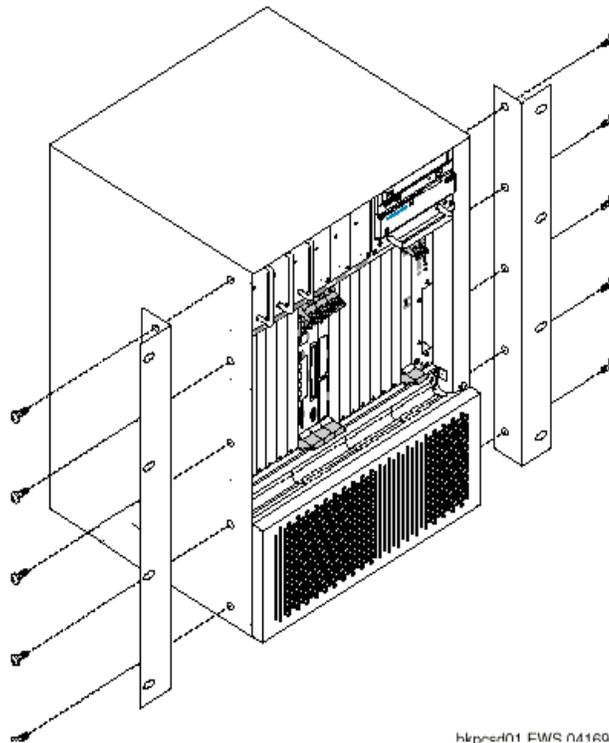
2 Secure the L- shaped mounting brackets with flathead screws.

Glossary

Numerics

23B+D

23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

30B+D

30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

3270 interface

A link between one or more CONVERSANT machines and a host mainframe. In CONVERSANT system documentation, the 3270 interface specifically means the link between one or more system machines and an IBM host mainframe.

47B+D

47 bearer (communication) and 1 data (signaling) channel on two T1 PRI circuit cards.

4ESS®

A large Lucent central office switch used to route calls through the telephone network.

A

AC

alternating current

ACD

automatic call distributor

AD

application dispatch

AD-API

application dispatch application programming interface

adaptive differential pulse code modulation

A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "pulse code modulation."

---

adjunct products

Products (for example, the Adjunct/Switch Application Interface) that the system administers via cut-through access to the inherent management capabilities of the product itself. This is in opposition to the ability of the system to administer the switch directly.

Adjunct/Switch Application Interface

An optional feature package that provides an Integrated Services Digital Network-based interface between Avaya PBXs and adjunct processors.

ADPCM

adaptive differential pulse code modulation

ADU

asynchronous data unit

advanced speech recognition

A speech recognition ability that allows the system to understand WholeWord, FlexWord, and Natural Language Speech Recognition inputs from callers.

affiliate

A business organization that Avaya controls or with which Avaya is in partnership.

AGL

application generation language

ALERT

System alerter process

alerter

A system process that responds to patterns of events logged by the "logdaemon" process.

American Standard Code for Information Interchange

A standard code for data representation that represents alphanumeric characters as binary numbers. The code includes 128 uppercase and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.

analog

An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

ANI

automatic number identification

announcement

A message the system plays to the caller to provide information. The caller is not asked to give a response. Compare to prompt.

API

Application programming interface

application

The automated transaction (interactions) among the caller, the voice response system, and any databases or host computers required for your business. See also application script.

application administration

The component of the system that provides access to the available applications and helps you manage and administer them.

application installation

A two-step process in which the CONVERSANT system invokes the TSM script assembler for the specific application name and moves files to the appropriate directories.

application script

The computer program that controls the application (the transaction between the caller and the system). The CONVERSANT system provides several methods for creating application scripts, including Voice@Work, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

application simulation

A process in which the system simulates the behavior of an application as it is expected to behave on the CONVERSANT system. It is useful as a debugging tool.

application verification

A process in which the system verifies that all the components needed by an application are complete.

ASCII

American Standard Code for Information Interchange

ASI

analog switch integration

ASR

advanced speech recognition

asynchronous communication

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. Compare to synchronous communication.

asynchronous data unit

An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet (15 meters) in length.

asynchronous event

An event detected by the system that disrupts the normal flow of an application that is running. At present, the CONVERSANT system recognizes only one type of asynchronous event—a hang up.

automatic call distributor

That part of a telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The ACD can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.

automatic number identification

A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

B

back up

The preservation of the information in a file in a different location so that the data is not lost in the event of hardware or system failure.

backing up an application

Using a utility that makes an archive copy of a completed application or an interim copy of an application in progress. The backup copy can be restored to the system if the online version is damaged, or if you make revisions and want to go back to the previous version.

barge-in

A capability provided by WholeWord speech recognition, Dial Pulse Recognition (DPR), and Natural Language Speech Recognition (NLSR) that allows callers to speak or enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also echo cancellation.

batch file

A file containing one or more lines, each of which is a command executable by the UNIX shell.

BB

bulletin board

binary synchronous communications

A character-oriented synchronous link protocol.

blind transfer protocol

A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the telephone is busy or if the caller answered.

bps

bits per second

BRDG

call bridging process

bridging

The process of connecting one telephone network connection to another over the system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, and so on, for the transaction.

BSC

binary synchronous communications

bundle

In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

byte

A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), which is the equivalent of one character of text.

C

call classification analysis

A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls. Intelligent CCA is provided with the system. Full CCA is an optional feature package.

call data event

A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

call data handler process

A software process that accumulates generic call statistics and application events.

called party number

The number dialed by the person making a telephone call. Telephone switching equipment can use this number to selectively route an incoming call to a particular department or agent.

caller

The party who calls for a service, gets connected to the system, and interacts with it. Because the system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

call flow

See transaction.

call progress tones

Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

card cage

An area within a hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive

A high-capacity data storage and retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape can be removed from the system and stored as a backup or used on another system.

CAS

channel associated signalling

caution

An admonishment or advisory statement used in the system documentation to alert the user to the possibility of a service interruption or a loss of data.

CCA

call classification analysis

CDH

call data handler process

CELP

code excited linear prediction

central office

A location in which large telecommunication devices such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

central processing unit

See processor.

CGEN

Voice system general message class

channel

See port.

channel associated signaling

A type of signaling that can be used on E1 circuit cards. It occurs on channel 16.

CICS

Customer Information Control System

circuit card upgrade

A new circuit card that replaces an existing card in the platform. Usually the replacement is an updated version of the original circuit card to replace technology made obsolete by industry trends or a new system release.

cluster controller

A bisynchronous interface that provides a means of handling remote communication processing.

CMS

Call Management System

CO

central office

code excited linear prediction

A means of encoding analog voice signals into digital signals that provides excellent quality with use of minimum disk space.

command

An instruction or request the user issues to the system software to make the system perform a particular function. An entire command consists of the command name and options.

configuration

The arrangement of the software and hardware of a computer system or network. The system configuration includes either a standard or custom processor, peripheral equipment (for example, printers and modems), and software applications. Configuration also refers to the way in which the switch network is set up; that is, the types of products that are in the network and how those products communicate.

configuration management

The component of the system that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions, assign functionality to SSP and E1/T1 circuit cards, and perform various maintenance functions.

connect and disconnect (C and D) tones

DTMF tones that inform the system when the attendant has been connected (C) and when the caller has been disconnected (D).

connected digits

A sequence of digits that the system can process as a group, rather than requiring the caller to enter the digits one at a time.

Converse Data Return (conv_data)

A Voice@Work external function or a Script Builder external action that supports the DEFINITY® call vectoring (routing) feature by enabling the switch to retain control of vector processing in the system environment. It supports the DEFINITY "converse" vector command to establish a two-way routing mechanism between the switch and the system to facilitate data passing and return.

controller circuit card

A circuit card used on a computer system that controls its basic functionality and makes the system operational. These circuit cards are used to control magnetic peripherals, video monitors, and basic system communications.

copying an application

A utility in which information from a source application is directed into the destination application.

coresidency

The ability of two products or services to operate and interact with each other on a single hardware platform.

CPE

customer-provided equipment or customer premise equipment

CPN

called party number

CPT

call progress tones

CPU

central processing unit

crash

An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.

CSU

channel service unit

custom grammar

See custom vocabulary.

custom speech

Unique words or phrases to be used in system voice prompts that Avaya records on a per-customer basis.

custom vocabulary

A specialized package of unique words or phrases created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

Customer Information Control System

Part of the operating system that manages resources for running applications (for example, IND$FILE). Note that TSO and CMS provide analogous functionality in other host environments.

CVS

converse vector step

D **danger**

An admonishment or advisory statement used in the system documentation to alert the user to the possibility of personal injury or death.

data interface process

A software process that communicates with interactive voice response (IVR) applications.

database

A structured set of files, records, or tables.

database field

A field used to extract values from a local database and form the structure upon which a database is built.

database record

The information in a database for a person, product, event, and so on. The database record is made up of individual fields for each information item.

database table

A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to "hard-code," or store permanently, in the transaction outline.

dB

decibel

DB

database

DBC

database checking process

DBMS

database management system

DC

direct current

DCE

data communications equipment

DCP

digital communications protocol

debug

The process of locating and correcting errors in computer programs; also referred to as troubleshooting.

default

The way a computer performs a task in the absence of other instructions.

default owner

> The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

diagnose

> The process of performing diagnostics on a bus or on circuit cards.

dial ahead

> The ability to collect and process touchtone inputs in sequence, even when they are received before the prompts.

dial pulse recognition

> A method of recognizing caller pulse inputs from a rotary telephone.

dialed number identification service

> A service that allows incoming calls to contain information about the telephone number for which it is destined.

dial through

> A capability provided by touchtone and dial pulse recognition that allows callers to enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also barge-in and echo cancellation.

DIMM

> dual in-line memory module

DIO

> disk input and output process

DIP

> data interface process

directory

> A type of file used to group and organize other files or directories.

display errdata

> A command that displays system errors sent to the logger.

DMA

> direct memory address

DNIS

> dialed number identification service

DPR

dial pulse recognition

DSP

digital signal processor

DTE

data terminal equipment

DTMF

dual tone multi-frequency

DTR

data terminal ready

dual 3270 links

A feature that provides an additional physical unit (PU) for a cost-effective means of connecting to two host computers. The customer can connect a system to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

dual tone multi-frequency

A touchtone sound that is an audio signal including two different frequencies. *DTMF feedback* is the process of the switch providing this information to the system. *DTMF muting* is the process of ignoring these tones (which might be simulated by human speech) when they are not needed for the application.

dump space

An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system "dumps" an image of core memory when the system shuts down automatically. The dump can be fetched after rebooting to help in analyzing the cause of the shutdown.

E

E&M

Ear and Mouth

E1 / T1

Digital telephony interfaces, commonly called *trunks*. E1 is an international standard at 2.048 Mbps. T1 is a North American standard at 1.544 Mbps.

Ear and Mouth

A common T1 trunking protocol for connection between two switches.

EBCDIC

Extended Binary Coded Decimal Interexchange Code

echo cancellation

The process of making the channel quiet enough so that the system can hear and recognize WholeWord, dial pulse, and Natural Language inputs during the prompt. See also barge-in.

ECS

Enterprise Communications Server

editor system

A system that allows speech phrases to be displayed and edited by a user.

EFT

Enhanced File Transfer

EIA

Electronic Industries Association

EISA

Extended Industry Standard Architecture

EMI

electromagnetic interference

emulator

Software on one operating system that imitates or reproduces the behavior of input and output on a different operating system.

engine

The software used to perform speech recognition or text-to-speech functions. Usually used with reference to proxy software and systems. See also Proxy Text-to-Speech (PTTS) and Natural Language Speech Recognition (NLSR).

enhanced basic speech

Prerecorded speech available from Avaya in several languages. Sometimes called standard speech.

Enhanced File Transfer

A feature that allows the transferring of files automatically between the CONVERSANT system and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface

> A software-controlled and hardware-controlled method used to store data on magnetic peripherals.

Enterprise Communications Server

> The telephony equipment that connects your business to the telephone network. Sometimes called a switch.

error message

> A message on the screen indicating that something is wrong with the system, often with a suggestion of how to correct it.

ESD

> electrostatic discharge

ESDI

> Enhanced Serial Data Interface

ESS

> electronic switching system

EST

> Enhanced Software Technologies, Inc.

ET

> error tracker

Ethernet

> A name for a local area network that follows IEEE Standard 802.3. Supported implementations are 10Baset and 100Baset.

event

> The notification given to an application when some condition occurs that is generally not encountered in normal operation.

EXTA

> external alarms feature message class

external actions

> Specific predefined (or customer-created) system tasks that Script Builder can call or *invoke* to interact with other products or services. When an external action is invoked, the systems displays a form that provides choices in each field for the application developer to select. Examples are Call_Bridge, Make_Call, SP_Allocate, SR_Prompt, and so on. In Voice@Work, external actions are called external functions.

external functions

Specific predefined (or customer-created) system tasks that Voice@Work can call or *invoke* to interact with other products or services. The function allows the application developer to enter the arguments for the function to act on. Examples are concat, getarg, length, substring, and so on. In Script Builder, external functions are called external actions.

F   FAX Actions

An optional feature package that allows the system to send fax messages.

FCC

Federal Communications Commission

FDD

floppy disk drive

feature

A function or capability of a product or an application within the system.

feature package

An optional package that may contain both hardware and software resources to provide additional functionality to a standard system.

feature_tst script package

A standard system software program that allows a user to perform self-tests of critical hardware and software functionality.

FEP

front end processor

field

See database field.

FIFO

first-in-first-out processing order

file

A collection of data treated as a basic unit of storage.

file transfer

An option that allows you to transfer files interactively or directly to and from UNIX using the file transfer system (FTS).

filename

Alphabetic characters used to identify a particular file.

FlexWord™ speech recognition

A type of speech recognition based on subword technology that recognizes phonemes or parts of words in a specific language. See also subword technology.

foos

facility out-of-service state

FTS

file transfer process message class

Full CCA

A feature package that augments the types of call dispositions that Intelligent CCA can provide.

function key

A key, labeled F1 through F8, on your keyboard to which the system software gives special properties for manipulating the user interface.

G

GEN

PRISM logger and alerter general message class

grammar

The inputs that a recognizer can match (identify) from a caller.

GUI

graphical user interface

H

hard disk drive

A high-capacity data storage and retrieval device that is located inside a computer platform. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware

The physical components of a computer system. The central processing unit, disks, tape and diskette drives, and so on, are all hardware.

hardware upgrade

Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), while the existing platform and other existing optional circuit cards remain.

HDD

hard disk drive

High Level Language Applications Programming Interface

An application programming interface that allows a user to write custom applications that can communicate with a host computer via an API.

HLLAPI

High Level Language Applications Programming Interface

HOST

host interface process message class

host computer

A computer linked to a network to provide a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

hwoos

hardware out-of-service state

Hz

Hertz

IBM

International Business Machines

iCk or ICK

The system integrity checking process.

ID

identification

IDE

integrated disk electronics

idle channel

A channel that either has no owner or is owned by its default owner and is onhook.

IE

information element

IEEE

Institute of Electrical and Electronic Engineers

IND$FILE

The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND$FILE is independent of link-level protocols such as BISYNC and SDLC.

independent software vendor

A company that has an agreement with Avaya to develop software to work with the system to provide additional features required by customers.

indexed table

A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

industry standard architecture

A PC bus standard that allows processors and other circuit cards to communicate with each other.

INIT

voice system initialization message class

initialize

To start up the system for the first time.

inserv

in-service state

Integrated Services Digital Network

A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

intelligent CCA

Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. Intelligent CCA also recognizes when the extension is answered or if the extension is not answered after a specified number of rings. The monitoring capabilities are dependent on the network interface circuit card and protocol used

interface

The access point of a system. The interface is designed to provide you with easy access to the software capabilities of the system.

interrupt

The termination of voice and/or telephony functions when some condition occurs.

Intuity Response Application Programming Interface

A library of commands that provide a standard development interface for voice-telephony applications.

IOB

I/O companion card to the SBC. This is part of the CPU Complex.

IPC

interprocess communication

IRAPI

Intuity Response Application Programming Interface

IRQ

interrupt request

ISA

industry standard architecture

ISDN

Integrated Services Digital Network

ISV

independent software vendor

ITAC

International Technical Assistance Center

K **Kbps**

kilobytes per second

KB

kilobyte

keyboard mapping

In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.

keyword spotting

A capability provided by WholeWord speech recognition, FlexWord speech recognition, and Natural Language speech recognition that allows the system to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

L   LAN

local area network

LDB

local database

LED

light-emitting diode

library states

The state information about channel activities maintained by the IRAPI.

LIFO

last-in-first-out processing order

line side E1

A digital method of interfacing a system to a PBX or switch using E1-related hardware and software.

line side T1

A digital method of interfacing a system to a PBX or switch using T1-related hardware and software.

listfile

An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

local area network

A data communications network in a limited geographical area. The LAN provides communications between computers and peripherals.

local database

A database residing on the system.

LOG

System logger process message class

logical unit

A type of SNA Network Addressable Unit.

logdaemon

A UNIX system information and error logging process.

logger

See logdaemon.

logging on/off

Entering or exiting the system software.

LSE1

line side E1

LST1

line side T1

LU

logical unit

M   **magnetic peripherals**

Data storage devices that use magnetic media to store information. Such devices include hard disk drives, diskette drives, and cartridge tape drives.

main screen

The system screen from which you are able to enter either the System Administration or Voice System Administration menu.

maintenance process

A software process that runs temporary diagnostics and maintains the state of circuit cards and channels.

manoos

manually out-of-service state

masked event

An event that an application can ignore (that is, the application can request not to be informed of the event).

master

A circuit card that provides clock information to the TDM bus.

Mbps

megabits per second

MB

megabyte

megabyte

A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

menu

Options presented to a user on a computer screen or with voice prompts.

MF

multifrequency

MHz

megahertz

mirroring

A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive fails or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.

ms

millisecond

msec

millisecond

MS-DOS

A personal computer disk operating system developed by the Microsoft Corporation.

MTC

maintenance process

multifrequency

Dual tone digit signaling (similar to DTMF), used for trunk addressing between network switches or by network operators.

multithreaded application

A single process or application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.

N   **Natural Language Speech Recognition (NLSR)**

An advanced type of speech recognition. Like WholeWord and Flexword speech recognition, NLSR can recognize particular words and phrases, but it can also interpret and assign meaning to those words and phrases. NLSR can also recognize natural numbers and currency amounts. Because of the greater vocabulary and grammar requirements associated with NLSR, it works best with an external speech recognition or "proxy" server.

NCP

Network Control Program

NEBS

Network Equipment Building Standards

NEMA

National Electrical Manufacturers Association

netoos

network out-of-service state

NetView

An optional feature package that transmits high-priority (major or critical) messages to the host as operator-generated alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

NFAS

non-facility associated signaling

NFS

network file sharing

NM-API

Network Management - Application Programming Interface

NMVT

network management vector transport

nonex

nonexistent state

nonindexed table

A table that can be searched only in a sequential manner and not via a field name.

nonmasked event

An event that must be sent to the application. Generally, an event is nonmaskable if the application is likely to encounter state transition errors by trying to ignore it.

NRZ

non return to zero

NRZI

non return to zero inverted

null value

An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

O OEM

original equipment manufacturer

OGA

operator-generated alert

online help

Messages or information that appear on the user's screen when a function key (F1 through F8) is pressed or a "Help" menu item or icon is clicked.

operator-generated alert

A system-monitoring message that is transmitted from the CONVERSANT system or other computer system to an IBM host computer and is classified as critical or major.

option

An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

ORACLE

A company that produces relational database management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.

P

P&C

Prompt and Collect Voice@Work node or Script Builder action step

PBX

private branch exchange

PC

personal computer

PCB

printed circuit board

PCI

peripheral component interconnect

PCI Mezzanine Card

A PCI module, usch as a LAN or RAID controller, that connects to the CPU Complex IOB companion card.

PCM

pulse code modulation

PEC

price element code

peripheral (device)

Equipment such as printers or terminals that is in addition to the basic processor.

peripheral component interconnect

A newer, higher speed PC bus that is gradually displacing ISA for many components.

permanent process

A process that starts and initializes itself before it is needed by a caller.

phoneme

A single basic sound of a particular spoken language. For example, the English language contains 40 phonemes that represent all basic sounds used with the language. The English word "one" can be represented with three phonemes, "w" - "uh" - "n." Phonemes vary between languages because of guttural and nasal inflections and syllable constructs.

phrase

A set of one or more words used within an application. Examples include "Thank you for calling XZY Business," "One," and "At the tone, press—."

phrase filtering (screening)

The rejection of unrecognized speech. The WholeWord, FlexWord, and Natural Language speech recognition packages can be programmed to reprompt the caller if the system does not recognize a spoken response.

phrase number

An identification number associated with a particular phrase in a speech pool.

phrase tag

A string of up to 50 characters that identifies the contents of a speech phrase used by an application script.

platform migration

See platform upgrade.

platform upgrade

The process of replacing the existing platform with a new platform.

pluggable

A term usually used with speech technologies, in particular standard speech, to indicate that a basic algorithmic technique has been implemented to accept one or more sets of parameters that tailors the algorithm to perform in one or more languages.

PMC

PCI Mezzanine Card

poll

A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic.

polling

A network arrangement whereby a central computer asks each remote location whether it wants to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

port

> A connection or link between two devices that allows information to travel to a desired location. See telephone network connection.

PRI

> Primary Rate Interface

Primary Rate Interface

> An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.

private branch exchange

> A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer's premises.

processor

> In system documentation, the computer on which UnixWare and the system software runs. In general, the part of the computer system that processes the data. Also known as the central processing unit.

prompt

> A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. Compare to announcement.

prompt and collect (P and C)

> A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. The response is collected and the script progresses based on the caller's response.

proxy server

> A server external to the CONVERSANT system used in a client/server configuration to perform processor-intensive functions, such as Natural Language Speech Recognition or text-to-speech beyond the capabilities of the CONVERSANT system. See also Natural Language Speech Recognition (NLSR) and Proxy Text-to-Speech (PTTS).

Proxy Text-to-Speech (PTTS)

> The capability to do text-to-speech processing using one or more auxiliary computers that are connected to the CONVERSANT in a client/server configuration. PTTS is an alternative to the standard Text-toSpeech feature for use in applications where the demand is very high or where a language is needed that is not supported on the SSP circuit card. See also Text-to-Speech.

pseudo driver

> A driver that does not control any hardware.

PSTN

public switch telephone network

pulse code modulation

A digital modulation method of encoding voice signals into digital signals. See also adaptive differential pulse code modulation.

R RAID

redundant array of independent disks

RAID array

An assembly of disk drives configured to provide some level of RAID functionality.

RAM

random access memory

RDMBS

ORACLE relational database management system

RECOG

speech recognition feature message class

recognition type

The type of input the recognizer can understand. Available types include touchtone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord, FlexWord, and Natural Language speech recognition.

recognizer

The part of the system that compares caller input to a grammar to correctly match (identify) the caller input.

record

See database record.

recovery

The process of using copies of the system software to reconstruct files that have been lost or damaged. See also restore.

remote database

Information stored on a system other than your current system that can be accessed by the CONVERSANT system.

remote maintenance circuit card

A CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all CONVERSANT system machines. This card is standard equipment on all new purchases.

REN

ringer equivalence number

reports administration

The component of the system that provides access to system reports, including call classification, call data detail, call data summary, message log, and traffic reports.

restore

The process of recovering lost or damaged files by retrieving them from available backup tapes or from another disk device. See also recovery.

restore application

A utility that replaces a damaged application or restores an older version of an application.

reuse

The concept of using a component from a source system in a target system after a software upgrade or platform migration.

RFS

remote file sharing

RM

resource manager

RMB

remote maintenance circuit card

roll back

To cancel changes to a database since the point at which changes were last committed.

rollback segment

A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.

RTS

request to send

S SBC

(1) sub-band coding; (2) a single-board computing circuit card that is part of the CPU Complex

SCA

single connector architecture

screen pop

A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a "form" full of information from the database using an ORACLE database utility package.

script

The set of instructions for the CONVERSANT system to follow during a transaction.

Script Builder

An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the CONVERSANT system (see also Voice@Work).

SCSI

small computer system interface

SDLC

synchronous data link control

SDN

software defined network

shared database table

A database table that is used in more than one application.

shared speech

Speech that is a part of more than one application.

shared speech pools

A parameter that allows the user of a voice application to share speech components with other applications.

SID

station identification

signal processor circuit card

A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card.

single-threaded application

An application that runs on a single voice channel.

slave

A circuit card that depends on the TDM bus for clock information.

SLIP

serial line interface protocol

small computer system interface

A disk drive control technology in which a single SCSI adapter circuit card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, and so on.

SNA

systems network architecture

SNMP

simple network management protocol

software

The set or sets of programs that instruct the computer hardware to perform a task or series of tasks, for example, UnixWare software and the system software.

software upgrade

The installation of a new version of software in which the existing platform and circuit cards are retained.

source system

The system from which you are upgrading (that is, your system as it exists *before* you upgrade).

speech and signal processor circuit card

A high-performance signal processing circuit card capable of simultaneous support for various speech technologies.

speech energy

The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

speech envelope

The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.

speech file

A file containing an encoded speech phrase.

speech filesystem

A collection of several talkfiles. The filesystem is organized into 16-KB blocks for efficient management and retrieval of talkfiles.

speech modeling

The process of creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

speech space

An area that contains all digitized speech used for playback in the applications loaded on the system.

speech phrase

A continuous speech segment encoded into a digital string.

speech recognition

The ability of the system to understand input from callers.

speech recognition engine

See engine.

SPIP

signal processor interface process

SPPLIB

speech processing library

SQL

structured query language

SR

speech recognition

SSP

speech and signal processor circuit card

standard speech

The speech package available in several languages containing simple words and phrases produced by Avaya for use with the system. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in voice prompts and messages to the caller. This feature is also called enhanced basic speech.

standard vocabulary

A standard package of simple word speech models provided by Avaya and used for WholeWord speech recognition. These phrases include the digits "zero" through "nine," "yes," "no," and "oh," or the equivalent words in a specific language.

string

A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

structured query language

A standard data programming language used with data storage and data query applications.

subword technology

A method of speech recognition used in FlexWord recognition that recognizes phonemes or parts of words. Compare to WholeWord speech recognition.

switch

A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a private branch exchange.

switch hook

The device at the top of most telephones that is depressed when the handset is resting in the cradle (in other words, is *on hook*). The device is raised when the handset is picked up (in other words, when the telephone is *off hook*).

switch hook flash

A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch interface administration

The component of the system that enables you to define the interaction between the system and switches by allowing you to establish and modify switch interface parameters and protocol options.

switch network

Two or more interconnected telephone switching systems.

synchronous communication

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. Compare to asynchronous communication.

SYS

UNIX system calls message class

sysgen

system generation

System 75

An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

System 85

An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

system administrator

The person assigned the responsibility of monitoring all system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture

The manner in which the system software is structured.

system message

An event or alarm generated by either the system or an end-user process.

system monitor

A component of the system that tests to verify that each incoming telephone line and its associated circuit card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

T

T1

A digital transmission link with a capacity of 1.544 Mbps.

table

> See database table.

tag image file format

> A format for storing and exchanging digital image data associated with fax modem data transfers and other applications. These files can be identified by the .tif extension.

talkfile

> An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases, and the speech filesystem can contain multiple talkfiles.

talkoff

> The process of a caller interrupting a prompt, so the prompt message stops playing.

target system

> The system to which you are upgrading (that is, your system as you expect it to exist *after* you upgrade).

TAS

> transaction assembler script

TCC

> Technology Control Center

TCP/IP

> transmission control protocol/internet protocol

TDM

> time division multiplexing

TE

> terminal emulator

telephone network connection

> The point at which a telephone network connection terminates on a system. Supported telephone connections are T1 and E1.

terminal emulator

> Software that allows a PC or UNIX process to look like a specific type of terminal. In particular, it allows the system to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the terminal emulator enables you to transfer files to and from UNIX.

Text-to-Speech

An optional feature that allows an application to play US English speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech.

ThickNet

A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

ThinNet

A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

TIFF

tag image file format

time-division multiplex

A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

token ring

A ring type of local area network that allows any station in the network to communicate with any other station.

trace

A command that can be used to monitor the execution of a script.

traffic

The flow of information or messages through a communications network for voice, data, or audio services.

transaction

The interactions (exchanges) between the caller and the voice response system. A transaction can involve one or more telephone network connections and voice responses from the system. It can also involve one or more of the system optional features, such as speech recognition.

transaction assembler script

The computer program code that controls the application operating on the voice response system. The code can be produced from Voice@Work, Script Builder, or by writing directly in TAS code.

transaction state machine process

A multi-channel IRAPI application that runs applications controlled by TAS script code.

transient process

A process that is created dynamically only when needed.

troubleshooting

The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSO

(1) Technical Services Organization; (2) time share operation

TSM

transaction state machine process

TTS

Text-to-Speech

TWIP

T1 interface process

U **UK**

United Kingdom

US

United States of America

UNIX operating system

A multiuser, multitasking computer operating system originally developed by Lucent Technologies.

UNIX shell

The command language that provides a user interface to the UNIX operating system.

upgrade scenario

The particular combination of current hardware, software, application and target hardware, software, applications, and so on.

usability

A measurement of how easy an application is for callers to use. The measurement is made by making observations and by asking questions. An application should have high usability to be successful.

USOC

universal service ordering code

UVL

unified voice library

V

VDC

video display controller

vi editor

A screen editor used to create and change electronic files.

virtual channel

A channel that is not associated with an interface to the telephone network (T1, LSE1/LST1, or PRI). Virtual channels are intended to run "data-only" applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications can be initiated only by a "virtual seizure" request to TSM from a DIP.

vocabulary

A collection of words that the system is able to recognize using either WholeWord, FlexWord, or Natural Language Speech Recognition.

vocabulary activation

The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

vocabulary loading

The process of copying the vocabulary from the system where it was developed and adding it to the target system.

Voice@Work

An optional software package that provides a graphical interface to assist in the development of voice response applications on the system (see also Script Builder).

voice channel

A channel that is associated with an interface to the telephone network (T1, E1, LSE1/LST1, or PRI). Any system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a "soft seizure" request to TSM from a DIP or the **soft_szr** command.

voice processing co-marketer

A company licensed to purchase voice processing equipment to sell based on their own marketing strategies.

voice response output process

A software process that transfers digitized speech between system hardware (for example, SSP circuit cards) and data storage devices (for example, hard disk, and so on).

voice response unit

A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update a databases, and transfer and monitor calls.

voice system administration

The means by which you are able to administer both voice-related and nonvoice-related aspects of the system.

VPC

voice processing co-marketer

VROP

voice response output process

VRU

voice response unit

W **warning**

An admonishment or advisory statement used in the system documentation to alert the user to the possibility of equipment damage.

WholeWord speech recognition

An optional feature, available in several languages, based on whole-word technology that can recognize the numbers one through zero, "yes", and "no" (the key words). This feature is reliable, regardless of the individual speaker. This feature can identify the key words when spoken in phrases with other words. A string of key words, called *connected digits*, can be recognized. During the prompt announcement, the caller can speak or use touchtones (or dial pulses, if available). See also whole-word technology.

whole-word technology

The ability to recognize an entire word, rather than just the phoneme or a part of a word. Compare to subword technology.

wink signal

An interruption of current to a busy lamp indicating that there is a line on hold.

word

A unique utterance understood by the recognizer.

wordlist

A set of words available for FlexWord recognition by an application during a Prompt & Collect action step.

word spotting

The ability to search through extraneous speech during a recognition.

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