



CONVERSANT® System

Version 8.0

Administration

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About This Book

Overview

This book describes the procedures needed to perform full system administration for the CONVERSANT system in the following areas:

- The UNIX operating system
- The voice system
- Specialized feature packages
- Databases
- Switch interfaces

This document also describes the procedures needed to create and access system reports and to monitor the system.

Intended Audience

The primary audience for this document are system administrators. This includes:

- On-site technicians who perform system administration at the customer site
- End customers who administer their own systems

The secondary audience includes personnel from the Technical Service Organization (TSO) who support the on-site technicians or customers.

We assume that the primary users of this book have completed the CONVERSANT administration course (see Training on page xxvii).

How to Use This Book

This book is designed to step you through the system administration process. Each chapter contains procedures for a specific product area that requires administration.

Administration Procedures and Information

- Chapter 1, Administration Overview — familiarizes you with the user interface and the system administration process, including the user interface and the menus.
- Chapter 2, UNIX Administration — contains information about how to access the SYSADM menu, as well as the procedures to perform basic UnixWare-level administration.

- Chapter 3, Voice System Administration — contains information about how to access the Voice System Administration menu, and describes all the administrative options. This chapter contains the reference and procedural information for the Configuration Management option.
 - Chapter 4, Feature Package Administration — contains information about administering Fax Actions and ASAI for use with the voice system.
 - Chapter 5, Switch Interface Administration — contains procedures and reference information for administering the supported analog and digital switch interfaces.
 - Chapter 6, Database Administration — contains procedures and information for administering databases for use with the voice system.
 - Chapter 7, Peripheral Administration — contains procedures and information for configuring and administering the peripheral equipment connected to the voice system, namely modems, printers, and remote terminals.
 - Chapter 8, Common Administration — contains quick reference information about some of the more common administrative tasks. Daily administration includes running system reports, and common procedures such as system monitoring, media formatting, backups, and administering the date and time.
- Reference Material**
- Appendix A, Summary of Commands — provides an alphabetical list of every command in the CONVERSANT system command language.
 - Appendix B, Country Switch Packages — provides an alphabetical list of the country-specific switch package for every country where the CONVERSANT system is sold, for both the DEFINITY switch and for public switched telephone networks (PSTNs). Also included in this appendix is a list of tunable circuit card/line parameters.
 - Glossary— defines the terms, abbreviations, and acronyms used in the system documentation.
 - Index — Alphabetically lists the principal subjects covered in the book.

Conventions Used in This Book

Understanding the typographical and other conventions used in this book is necessary to interpret the information.

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 “enter” 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
Enter **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 system displays menus, screens, and windows. Menus allow you to select options or to choose to view another menu, screen, or window (Figure 1 on page xxiii). Screens and windows both show and request system information (Figure 2 on page xxiii through Figure 5 on page xxiv).

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

Figure 1. Example of a CONVERSANT Menu

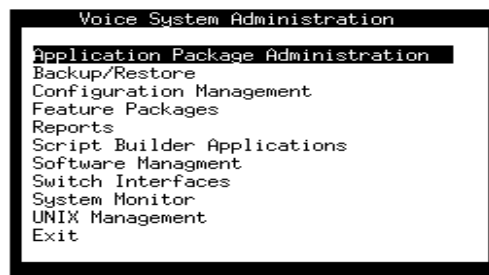


Figure 2. Example of a CONVERSANT Window Showing Information

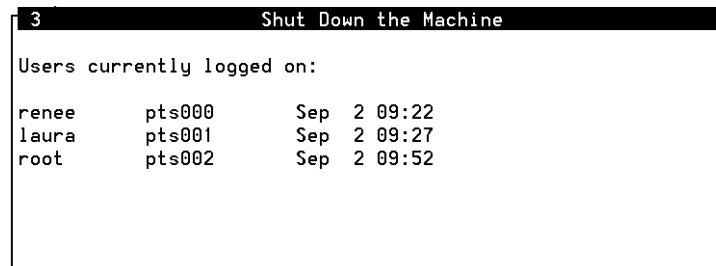


Figure 3. Example of a CONVERSANT window Requesting information

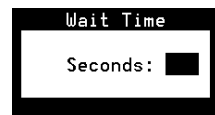


Figure 4. Example of a CONVERSANT Screen Showing Information

```

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 least 4200 MBs and labeled
"ACTIVE."

Press 'ENTER' to continue

```

Figure 5. Example of a CONVERSANT 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

```

Keyboard and Telephone Keypad Representations

- 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 in small capitalized **BOLD** text. For example, an instruction to press and hold the Alt key 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 **BOLD** 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 appear in small capitalized **BOLD** text. For example, an instruction to press the first key on your telephone keypad is shown as

Press **1** to record a message.

Cross References and Hypertext

Blue underlined type indicates a cross reference or hypertext link that takes you to another location in the document when you click on it with your mouse.

Screen Displays

- Values, system messages, field names, prompts that appear on the screen, and simulated screen displays appear in typewriter-style constant width type, as in the following examples:
 - ~ Enter the number of ports to be dedicated to outbound traffic in the Maximum Simultaneous Ports field.
 - ~ Alarm Form Update was successful.
Press <Enter> to continue.
- 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:



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 option.

Other Typography

- Commands and text you type in or enter appear in **bold type**, as in the following examples:
 - Enter **change-switch-time-zone** at the Enter command: prompt.
 - Type **high** or **low** in the Speed: field.
- Command variables are shown in ***bold italic*** type when they are part of what you must type in, and in *blue italic type* when they are referred to, for example:
 - Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.
- Command options are shown inside square brackets, for example:
 - Enter **connect *switchname* [-d] [-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.

Getting Help

The CONVERSANT system provides online help to assist you during installation, administration, and application development tasks.

To use the online help:

- Press **F1** (Help) when you are in a menu or window.

The first time you press **F1**, the system displays information about the currently active window or menu.

- ~ When you are in a window, the help explains the purpose of the window and describes its fields.
- ~ When you are in a menu, the help explains how to use menus.

If you press **F1** again, the system displays a General Help screen that explains how to use the online help.

- Press **F2** (Choices) when you are in a field.

The system displays valid field choices either in a pop-up window or on the status line directly above the function keys.

- Press **F6** (Cancel) to exit the online help.

Technical Assistance

Web Site

The following customer support web site contains resources where you can find solutions for technical problems:

<http://support.avaya.com>

Contact Numbers

Technical assistance on the CONVERSANT product is available through the following telephone contacts:

- In the United States, call 1-800-242-2121.
- In Canada, call one of the following numbers, depending on your location:
 - ~ 1-800-363-1882 for assistance in Quebec and eastern Canada
 - ~ 1-800-387-4268 for assistance in Ontario and western Canada
- In any other country, call your local distributor or check with your project manager or systems consultant.

Related Resources

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

Training

To obtain training on the CONVERSANT product, call Avaya 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 the Avaya training website:

<http://learning2.avaya.com>.

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

- For technicians doing repairs on CONVERSANT systems
 - ~ BTT509H, CONVERSANT Installation and Maintenance Voice Information System
- For technicians and administrators
 - ~ BTC344M, CONVERSANT Administration Overview (CD-ROM)
- For application developers
 - ~ BTC128H, Introduction to Script Builder
 - ~ BTC166H, Introduction to Voice@Work
 - ~ BTC204H, Intermediate Voice@Work
 - ~ BTC301H, Advanced CONVERSANT Programming

Documentation	Appendix A, "Documentation Guide," in <i>CONVERSANT System Version 8.0 System Description</i>, 585-313-219, describes in detail all books included in CONVERSANT documentation library and referenced in this book. Note: Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining a CONVERSANT system. Additional Suggested Documentation It is suggested that you also obtain and use the following book for information on security and toll fraud issues: • <i>GBCS Products Security Handbook</i>, 555-025-600 Obtaining Printed Versions of the Documentation See Documentation Ordering Information on page vii of Copyright and Legal Notices for information on how to purchase CONVERSANT documentation in printed form. You can also print documentation locally from the CD-ROM (see Printing the Documentation on page xxix).

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: When viewing documents online, it is recommended that you use a separate platform and not the CONVERSANT 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 links appear in blue underlined text. 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 select **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** **Note:** For information on purchasing printed copies of the documents, see Obtaining Printed Versions of the Documentation on page xxviii.
- 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-inch 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).
- 4 The document prints.
- 5 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.

How To Comment on This Book

While we have tried to make this document fit your needs, we are interested in your suggestions for improving it and urge you to send your comments to us.

Comment Form

A comment form, available in paper and electronic versions, is available via the documentation CD-ROM. To use the comment form:

- 1 Select **Comments** from the Main Menu of the CD-ROM.
- 2 Follow the instructions provided on the CD-ROM to do one of the following:
 - ~ Print the paper version of the form, complete it, and either fax or mail it to us.
 - ~ Access a Avaya website where you can enter your comments electronically.

1 Administration Overview

Overview

This chapter provides an overview of system administration, the user interface, and the system administration process. Topics covered include:

- User Interface Overview on page 1
- CONVERSANT User Interface on page 1
 - ~ Cursor Movement Keys on page 2
 - ~ Menus and Windows on page 3
 - ~ Message Line on page 5
 - ~ Function Keys on page 5
 - ~ CONVERSANT Main Administration Menu Options on page 10
- Online Help on page 8
- Accessing the CONVERSANT Administration Menus on page 9

User Interface Overview

A user interface is a method by which a computer user accesses the information on the computer. For example, Microsoft Windows is a graphical user interface (also known as GUI).

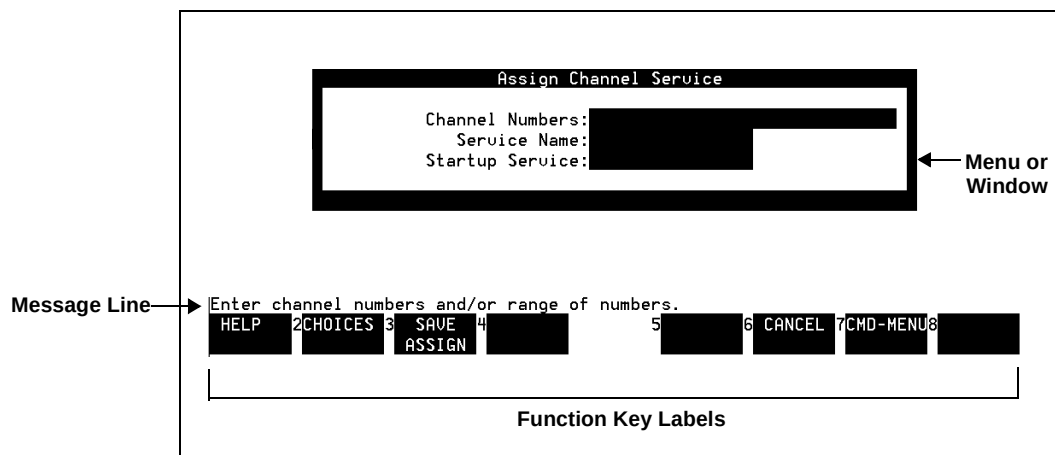
The CONVERSANT user interface is menu-driven; that is, you select an option from a list to display another menu or window. You can display more than one menu or window concurrently, but only the last one displayed is active. To return to the previous menu or window, you can cancel the active one.

CONVERSANT User Interface

Administering the voice system involves many activities, and all share a common user interface, or method of interaction. This means that regardless of the administrative task, the user interface follows a consistent format and style. Although the information on the screen changes often, the information arrangement does not change. The typical screen contents is as follows (Figure 6 on page 2):

- Menu and/or window
- Message line
- Function key labels

Figure 6. Sample CONVERSANT System Screen



Cursor Movement Keys

Table 1 lists the keys used to maneuver within a menu or window. They are referred to throughout this book as the cursor movement keys.

Table 1. Cursor Movement Keys

Type of Movement	Key
Move to next line in menu, list, or text; "wrap" from last item to first item in a menu or form	▼
Move to previous line in menu, list, or text; "wrap" from first item to last item in a menu or form	▲
Move down one "screenful"	Page Down
Move up one "screenful"	Page Up
Move to beginning of menu, text, or list	Home
Move to end of menu, text, or list	End
Move to next field in a screen or window	Tab, or Enter
Move to previous field in a screen or window	Shift, or Tab
Move to next character within a field	►
Move to previous character within a field	◄
Delete character to the left of the cursor	BackSpace

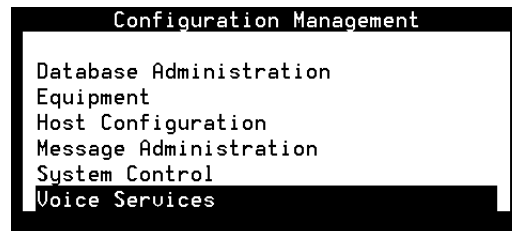
Menus and Windows

You use menus and windows to exchange information with the voice system. This exchange may involve activities such as making menu selections or populating fields. Since the display may contain more than one menu or window at the same time, each menu/window is outlined so that it is clear what information it contains. At any given time, only one menu or window on screen is designated as active.

Menus

A menu allows you to select an option that takes you to the next menu or window (Figure 7).

Figure 7. Sample Menu



The components of a menu include:

- **Title** — The title describes the information contained within the menu, or the tasks you can accomplish using it. In this book, titles are shown with the first letter of each word capitalized, followed by the word *menu*, such as the *Configuration Management menu*.
- **Scroll Indicator** — The scroll bar indicates whether there is additional text to be displayed. The ▼ indicates there is more information to view below what is presently shown. The ▲ indicates there is more information to view above what is currently displayed. Not every menu has a scroll indicator.

Selecting a Menu Item

To select a menu item, highlight it using one of the following methods and then press **ENTER**:

- Use the cursor movement keys to move the highlight bar:
 - ~ Press ▼ to move the highlight bar down.
 - ~ Press ▲ to move the highlight bar up.

Menus have a “rollover” feature. When the cursor reaches the last item of the menu, press ▼ to return to the first menu item. If the cursor is highlighting the first menu item, press ▲ to move to the last menu item.

- Type the first character(s) of the menu line. The system highlights the first menu item beginning with that letter. For example, in Figure 7 on page 3, type **S** to select **S**ystem **C**ontrol. If there is another menu item beginning with “s,” type more characters.

The menu items are not case-sensitive; that is, typing **A** is the same as typing **a**. If you type a letter for which there is no matching item, the system “beeps” and does not move the highlight bar.

Windows

A window allows you to enter and view information, and can range in size. See Figure 8 and Figure 9.

Figure 8. Sample Window

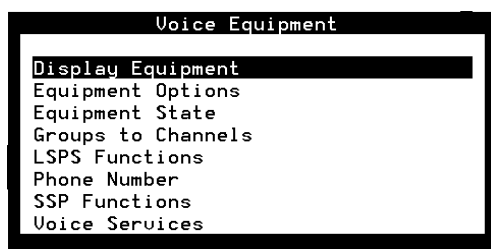
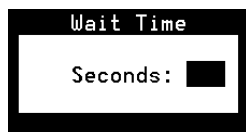


Figure 9. Sample Window



The components of a window include:

- **Title** — The title describes the information contained within the window, or the tasks you can accomplish using it. In this book, titles are shown with the first letter of each word capitalized, followed by the word *window*, such as the *Voice Equipment window*.
- **Scroll Indicator** — The scroll bar indicates whether there is additional text to be displayed. The ▼ indicates there is more information to view below what is presently shown. The ▲ indicates there is more information to view above what is currently displayed. Not every window has a scroll indicator.
- **Fields** — Fields are the areas on a window where you enter information. For example, in Figure 6 on page 2 the fields are Channel Numbers, Service Name, and Startup Service. Use the **TAB** or **ENTER** keys to move through the fields in succession.

Populating Fields

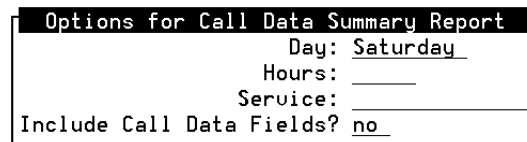
You can enter information in a field in the following three ways:

- **Type the first character(s) of the entry.**
With the cursor positioned on the field, begin to type the entry. As soon as you type enough characters to uniquely identify the desired entry, the system automatically supplies the remaining characters. If the entry is invalid, the system beeps and removes the invalid characters.

For example, given the Day: field in Figure 10, assume that valid entries are the names of the days in the week. When you type **M**, the system fills in the entire word *Monday* because there is only one valid entry that begins with *M*.

However, if you type **S**, the system waits before filling in the day of the week because there are two valid entries that begin with *S* (Saturday and Sunday). At this point, if you type **a**, the system fills in the word *Saturday*. If you type **u**, the system fills in the word *Sunday*. This technique is not case-sensitive. In other words, typing either **M** or **m** in the above example results in the system filling in the word *Monday*.

Figure 10. Fields in the Call Data Summary Report Window



Options for Call Data Summary Report	
Day:	Saturday
Hours:	
Service:	
Include Call Data Fields?	no

- Type the entire entry.
Move to the desired field and type the entire entry. While in a field, you can also edit the entry.
- Use the CHOICES screen selections.
Press **F2** (Choices) to open a menu which shows the available choices for a field. Select an option as you would in a standard menu. The content of the CHOICES menu varies depending on the situation, and sometimes no CHOICES menu is available for a screen or window.

Message Line

The message line, if present on the screen, contains a brief instruction to help you decide what to do next. The message line also reports the successful or unsuccessful completion of a task.

Function Keys

Your keyboard has eight to twelve function keys. The system uses the first eight function keys, labeled **F1** through **F8**.

The boxed labels at the bottom of the display correspond to the function keys on your keyboard. Function keys are the means by which you command the system to perform a function within the active menu or window. The label describes the instruction that is sent to the system when you press the corresponding function key. The commands, and therefore the labels, that are available at any given time vary depending on the active menu/window. Menus and windows may have one or two rows of function key labels. See Figure 11 on page 6 for an example window with function key labels.

In Figure 11 you would press **F1** to access the Help screen for the System Monitor window. Also in Figure 11 on page 6, notice that the label for **F4** is blank. This indicates that no command is issued if you press the **F4** function key. If you press an inactive function key, the system beeps and the message line either indicates an undefined function key or continues to display the last message. The function key labels displayed apply only to the active menu or window.

Figure 11. Function Key Labels — System Monitor Window

System Monitor - Voice Channels					
Channel	Calls Today	Voice Service	Service Status	Caller Input	Dialed Digits
48	0		*On Hook		
49	0		*Foos		
50	0		*Foos		
51	0		*Foos		
52	0		*Foos		
53	0		*Foos		
54u	0	BGM			

HELP

PREVPAGE

NEXTPAGE

CANCEL

CMD-MENU

CHG-KEYS

Standard Function Key Labels

Standard function key labels remain constant regardless of the active menu or window. They represent commands that are valid for every menu or window in the system. See Table 2 for a description of standard function key labels.

Table 2. Standard Function Key Labels

Key	Description
F1 (Help)	Opens an online help window. See Online Help on page 8 for more information about online help.
F6 (Cancel)	Closes the active screen and cancels any additions, deletions, or changes made. The screen that immediately precedes the just-closed screen becomes the active screen. If there is an activity in progress, such as making a back-up copy of an application on a floppy disk, pressing F6 (CANCEL) does not interrupt the operation.
F7 (Cmd-Menu)	Opens the Command Menu. Options include System Monitor, Trace Service, and Exit. See Command Menu on page 201 in Chapter 8, Common Administration, for more information.

Optional Function Key Labels The optional function key labels change based on the active menu or window, and provide commands that are unique to the menu or window. See Table 3 for a description of optional function key labels.

Table 3. Optional Function Key Labels

Function Key Label	Description
F2 (Choices)	Opens a menu screen containing choices for the current field, if there is a finite set of choices for a particular field. Move the cursor to the field you want to fill, then press F2 (CHOICES). The CHOICES menu opens, displaying the options available for that field.
F2 (Prevpage)	Scrolls back one full page, towards the beginning of text that is too long to fit within the active screen or window.
F3 (Nextpage)	Scrolls forward, toward the end of text that is too long to fit within the active screen, menu, or window. For example, pressing F3 in Figure 11 on page 6 orders the system to move to the next page, while pressing F3 in Figure 12 on page 8 sounds a beep, but does nothing else because that key is “empty.”
F3 (Save)	Preserves all changes made in the screen.
F4 (Top)	Scrolls toward the top of a page.
F5 (Bottom)	Scrolls toward the bottom of a page.
F6 (Print)	Prints the information provided by the active screen, such as a report.
F7 (Frm-Mgmt)	Opens the Frame Management Menu. See Command Menu on page 201 in Chapter 8, Common Administration, for more information. Options include list, move, refresh, and UNIX system.
F8 (Chg-Keys)	Switches the function key labels displayed from standard to optional, or vice versa. For example, Figure 11 on page 6 and Figure 12 on page 8 show the System Monitor window. Figure 12 on page 8 displays the optional function key labels through the use of F8 (Chg-Keys) to switch between the standard (Figure 11 on page 6) and optional (Figure 12 on page 8) labels.

Figure 12. Change Keys — System Monitor Screen

System Monitor - Voice Channels					
Channel	Calls Today	Voice Service	Service Status	Caller Input	Dialed Digits
48	0		*On Hook		
49	0		*Foos		
50	0		*Foos		
51	0		*Foos		
52	0		*Foos		
53	0		*Foos		
54u	0	BGM			

CHG-RATE HOST MON PRINT FRM-MGMT CHG-KEYS

Note: The Host Mon function key selection does not appear unless host software is installed.

Online Help

Most screens and windows have a companion text window that contains helpful reference information. Figure 13 shows the help screen associated with the Database Access ID Table window. The system online help windows are not designed to be a substitute for this book. They briefly describe each of your options for a given menu/window. Press **F1** to access online help.

Figure 13. Sample Online Help Screen, Database Access ID Table

Database Access ID Table - Help
Use the PREVPAGE and NEXTPAGE function keys to move through this help window. Press the CANCEL function key to close this window. The Database Access ID Table window displays all currently defined Database Access IDs. Each Database Access ID represents a connection (for script access) to an ORACLE database. If the Remote Machine Name and DB SID fields are blank, the connection is to the local ORACLE database, instance A, on this machine. Otherwise, the connection is to an ORACLE database on the

Accessing the CONVERSANT Administration Menus

To access the CONVERSANT administration menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 At the prompt, enter either **cvis_mainmenu** or **cvis_menu**

The system displays the CONVERSANT menu (Figure 14).

Figure 14. CONVERSANT Menu

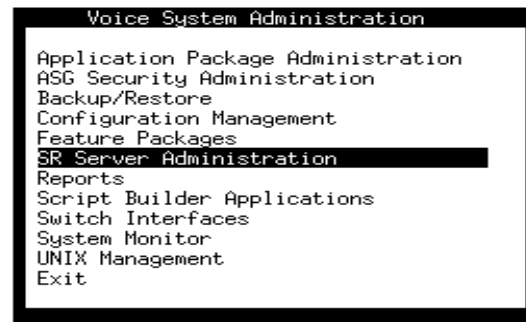


! CAUTION:

Do not create multiple, simultaneous **cvis_menu** processes. This could severely impact performance and may lock up the system.

The system displays the Voice System Administration menu (Figure 15). See Chapter 3, Voice System Administration, for more information and procedures on voice system administration.

Figure 15. Voice System Administration Menu



CONVERSANT Main Administration Menu Options

From the CONVERSANT main menu, you can initiate two administration options, UNIX System Administration and Voice System Administration, or you can exit.

UNIX System Administration

The UNIX System Administration menu allows you to set up a variety of generic software operations. See Chapter 2, UNIX Administration, for more information and procedures on UNIX administration.

Voice System Administration

The Voice System Administration menu allows you to begin your session for administering the system, such as application package administration and reports. See Chapter 3, Voice System Administration, for more information and procedures on voice system administration.

Exit

Exit takes you out of the CONVERSANT administration menus and returns you to the UNIX system prompt.

Press **F6** (Cancel) from almost any place in the CONVERSANT Administration menu structure to close the active window and return to the previous menu. If you press **F6** (Cancel) enough times, depending on how deep into the menus you are, you will eventually exit the menu structure completely and return to the operating system prompt.

Note: **F6** (Cancel) does not exit from the UNIX System Administration menus. See All of the procedures in this document assume that you are using the SCOADM user interface menus. The procedures provide references to the books detailing command line interfaces when possible. on page 12 in Chapter 2, UNIX Administration, for the procedure to exit from the UNIX System Administration menus.

2 UNIX Administration

Overview

This chapter the procedures to access the UnixWare administration menu.

For complete information on UnixWare administration, see the UnixWare documentation at <http://www.sco.com/documentation>.

UNIX System Administration Access

To access SCOADM, the OA&M menu interface of UnixWare:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_mainmenu**

The system displays the CONVERSANT menu (Figure 16).

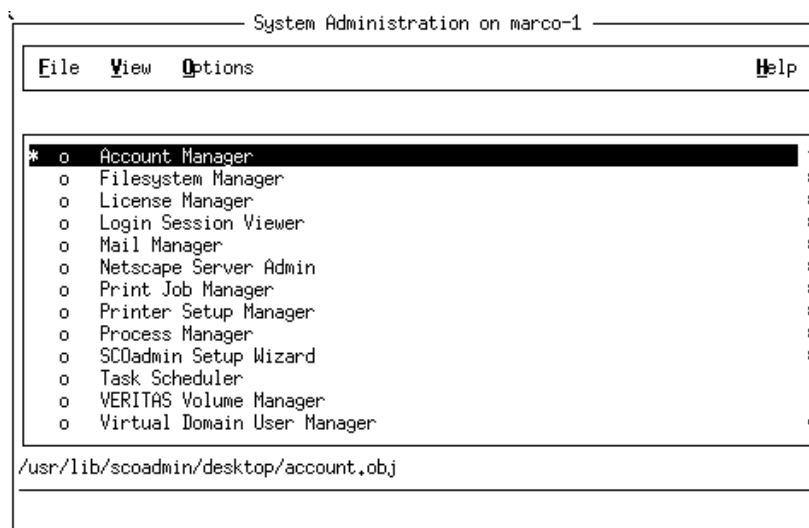
Figure 16. CONVERSANT V8.0 Menu



- 4 Select UNIX System Administration.

The system displays the UNIX System V Administration menu (Figure 17 on page 12).

Figure 17. UNIX System Administration Menu



All of the procedures in this document assume that you are using the SCOADM user interface menus. The procedures provide references to the books detailing command line interfaces when possible.

3 Voice System Administration

Overview

The Voice System Administration menu provides access to many administrative options. This chapter describes the procedures needed to perform voice system administration through the Voice System Administration user interface. All the administrative options are described.

This chapter contains the reference and procedural information for the Configuration Management option.

Note: Analog interfaces are currently not supported on the UCS 1000.

Accessing the Voice System Administration Menu

To access the Voice System Administration menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

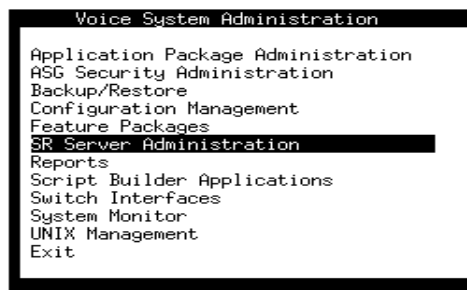
- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

The system displays the Voice System Administration menu (Figure 18).

Figure 18. Voice System Administration Menu



Voice System Administration Menu Options

From the Voice System Administration menu, you have access to all the major administrative features of the voice system.

This section provides a brief overview of each administrative option in this menu.

Application Package Administration	The Application Package Administration menu provides administrative access to the applications currently installed on your system. Administer the Script Builder FAX Actions, if installed, through the Application Package Administration menu. See Chapter 4, Feature Package Administration for more information on administering Fax Actions.
Backup/Restore	The Backup/Restore menu simplifies the backup and restore procedures by providing a user interface for differential and full backups. See “Common System Procedures”, in the <i>CONVERSANT System Version 8.0 System Reference</i>, 585-313-215, for more information on performing backup and restore procedures.
Configuration Management	The Configuration Management menu allows you to perform the following administrative tasks: • Add or remove database access IDs • License features to the voice system • Configure host sessions and manage host protocols • Modify system messages • Administer alarms • Diagnose equipment • Report system status • Stop and start the voice system • Manage all voice system circuit card resources • Administer channels numbers and functionality See Configuration Management for more information.
Feature Packages	The Feature Packages menu provides administrative access to the optional feature packages currently installed. Administer the Adjunct/Switch Application Interface (ASAI) package, if installed, through the Feature Packages menu. See Chapter 4, Feature Package Administration for more information about administering ASAI.
Reports	The Reports menu allows you to generate and customize reports for: • Call classification and data • System messages • System traffic • Feature and resource use See Chapter 8, Common Administration, for more information on using the Reports menu.

Script Builder Applications

The Script Builder Applications menu provides access to the Script Builder applications installed on the system.

See *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217, for complete instructions for developing, installing, and administering Script Builder applications.

Switch Interfaces

The Switch Interfaces menu provides access to administer analog and/or digital switch parameters.

See Chapter 5, Switch Interface Administration, for information on using the Switch Interfaces menu.

System Monitor

The System Monitor window displays the voice channels on the system and provides input on channel states (on-hook, dialing, and so on), call states, and caller input.

See Chapter 8, Common Administration, for information on using the System Monitor window.

Unix Management

The Unix Management menu provides capabilities to format floppy diskettes and tapes, administer printers and modems, install and remove software, modify the system time and date, and administer TCP/IP.

See Chapter 7, Peripheral Administration, for information on administering printers, modems, and terminals.

Configuration Management

To access the Configuration Management menu:

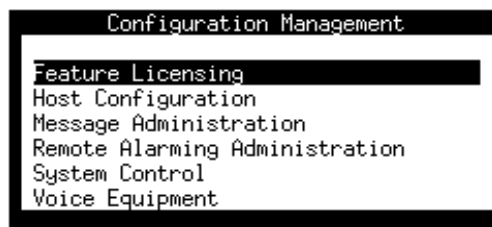
- 1 Start at the Voice System Administration menu (Figure 18 on page 13) and select:



```
> Configuration Management
```

The system displays the Configuration Management menu (Figure 19).

Figure 19. Configuration Management Menu



Use the procedures in this section to perform voice system administration for the following Configuration Management menu options:

- Feature licensing (display Feature Licensing *only*)
- Host configuration (if applicable)
- Message administration
- Remote alarming administration
- System control
- Voice equipment

See Chapter 6, Database Administration, for information on Database Administration.

Feature Licensing

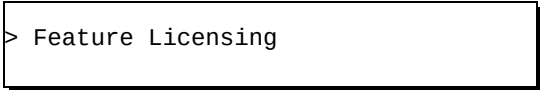
Feature Licensing allows customers to purchase features on a per-channel basis. Only Avaya services personnel can activate and change the feature licenses. Feature licenses cannot be modified by the administrator.

An administrator can display and print a report of the current feature licenses.

Note: Your system's machine name is used by the Feature Licensing software. Call your support center before changing the machine name and thus avoid losing any of your feature licenses.

To access the Feature Licensing window and display the current feature licenses:

- 1 Start at the Configuration Management menu (Figure 19 on page 15) and select:



```
> Feature Licensing
```

The system displays the Display Feature Licensing window (Figure 20 on page 17).

Note: Figure 20 on page 17 is a sample window. Your Display Feature Licensing window may look different depending on the feature packages you have purchased.

Figure 20. Display Feature Licensing Window

Display Feature Licensing	
Feature	Value
Text to Speech	144
Dial Pulse Recognition	144
Flexword Recognition	144
Whole Word Recognition	144
Fax	0

Printing a Feature License Report

To print a report of the current system feature licenses:

- 1 Start at the Display Feature Licensing window (Figure 20) and press **F8** (Actions).

The system displays the Actions menu (Figure 21).

Figure 21. Actions Menu



- 2 Select:



The system prints a copy of the Display Feature Licensing window (Figure 20).

Note: A printer must be configured for use with the voice system for this report to print. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

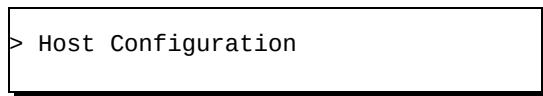
Host Configuration

Use the Host Configuration menu to access, configure, and display host sessions. See the Interface Systems, Inc. (ISI) *TN3270 Quick Start Guide* for information about configuring the CONVERSANT system to access an IBM mainframe through the following connections:

- TN3270
- SNA 3270 (SDLC, Token Ring, or LLC2)

To access the Host Configuration menu:

- 1 Start at the Configuration Management menu (Figure 19 on page 15) and select

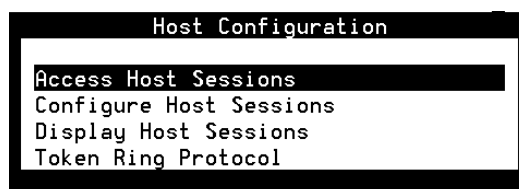


> Host Configuration

The system displays the Host Configuration menu (Figure 22).

Note: The Host Configuration menu displays either SDLC Protocol or Token Ring Protocol, but not both.

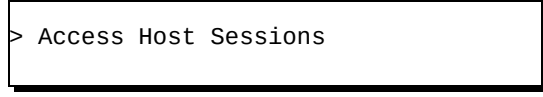
Figure 22. Host Configuration Menu



Accessing Host Sessions

To access the Access Host Sessions menu:

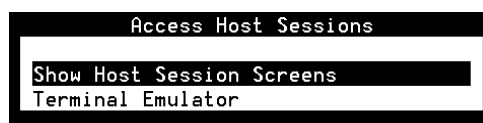
- 1 Start at the Host Configuration menu (Figure 22) and select



> Access Host Sessions

The system displays the Access Host Sessions menu (Figure 23).

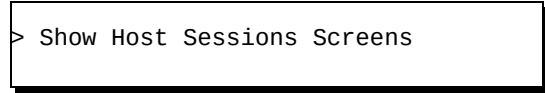
Figure 23. Access Host Sessions Menu



Showing the Host Session Screens Window

To display the image that is currently connected to a Logical Unit (LU):

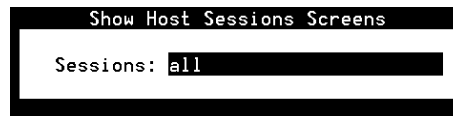
- 1 Start at the Access Host Sessions menu (Figure 23 on page 18) and select



```
> Show Host Sessions Screens
```

The system displays the Show Host Sessions Screens window (Figure 24).

Figure 24. Show Host Sessions Screens Window



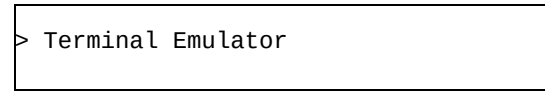
- 2 Enter the desired host session in the Sessions: field, or press **F2** (Choices) to select from a menu. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** for all sessions.
- 3 Press **F3** (Save).

The system displays the selected host session information.

Specifying Terminal Emulator Sessions

To specify the host sessions for which you want to use the terminal emulator program:

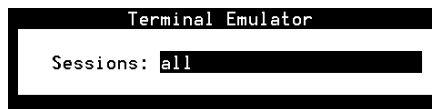
- 1 Start at the Access Host Sessions menu (Figure 23 on page 18) and select:



```
> Terminal Emulator
```

The system displays the Terminal Emulator window (Figure 25).

Figure 25. Terminal Emulator Window



- 2 Enter the desired terminal emulator session in the Sessions: field, or press **F2** (Choices) to select from a menu. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** for all sessions. Only 10 LUs can be included if specific host sessions are listed. You can specify “all” even if more than 10 LUs are configured.

The system uses the terminal emulator program with the specified host sessions.

Configuring Host Sessions

Use the Configure Host Sessions menu to:

- Assign and unassign applications
- Free (disconnect) the host link
- Log in and out of a host session
- Renumber host sessions
- Display host sessions
- Change the display options
- Print a host sessions report

To access the Configure Host Sessions menu:

- 1 Start at the Host Configuration menu (Figure 19 on page 15) and select:



```
> Configure Host Sessions
```

The system displays the Configure Host Sessions menu (Figure 26).

Figure 26. Configure Host Sessions Menu



Assigning Host Sessions

This procedure allows you to assign installed applications to the host sessions or channels available on the system. These assignments supersede assignments currently in effect.

To assign host sessions:

- 1 Start at the Configure Host Sessions menu (Figure 26) and select:



```
> Assign
```

The system displays the Assign Service to Host Sessions window (Figure 27 on page 21).

Figure 27. Assign Service to Host Sessions Window



- 2 Enter the name of the application or service you want to assign to host sessions in the **Service:** field, or press **F2** (Choices) to select from a menu. Valid entries are installed applications that have host control sessions defined.
- 3 Enter the session number(s) in the **Sessions:** field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** to assign the service to all channels, not just the channels that have no current service assignment.

Note: The File Transfer field is not available for CONVERSANT System Version 8. However, this field still appears on the screen.

- 4 Enter **Yes** in the **File Transfer:** field to have the service and session handle Enhanced File Transfer. Enter **No** if Enhanced File Transfer is not installed or if you do not want the service and session to handle enhanced file transfer. You can also press **F2** (Choices) to select from a menu.

Note: This field applies only if the Enhanced File Transfer software package is installed.

- 5 Press **F3** (Save–Assign).

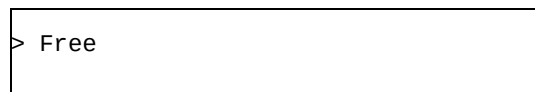
The system saves the host session information.

Freeing Host Sessions Use the Free Host Sessions window to free the host lines for other sessions.

To free the host lines for other sessions:

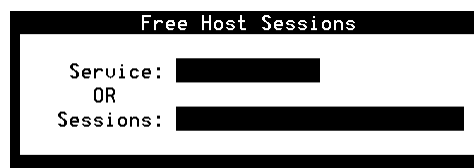
Note: The LU must be logged in for the logout sequence to work.

- 1 Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



The system displays the Free Host Sessions window (Figure 28 on page 21).

Figure 28. Free Host Sessions Window



2 Do one of the following:

- ~ Enter the name that specifies the services associated with the host sessions you want to free in the **Service:** field, or press **F2** (Choices) to select from a menu.
- ~ Enter the session number(s) you want to free in the **Sessions:** field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** for all sessions.

3 Press **F3** (Save).

The system frees the specified host session.

Logging In to Host Sessions

Use the Login Host Sessions window to log in to a host to establish sessions.

To log in to a host to establish sessions:

- 1** Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



The system displays the Login Host Sessions window (Figure 29).

Figure 29. Login Host Sessions Window

**2** Do one of the following:

- ~ Enter the name that specifies the services associated with the host sessions you want to log in to in the **Service:** field, or press **F2** (Choices) to select from a menu.
- ~ Enter the session number(s) you want to log in to in the **Sessions:** field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or the **all** for all sessions.

3 Press **F3** (Save).

The system logs in to the specified host session.

Logging Out of Host Sessions

Use the Logout Host Sessions window to log out of existing host sessions.

To log out of existing host sessions:

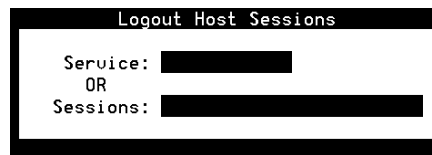
Note: The LU must be logged out for the login sequence to work.

- 1 Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



The system displays the Logout Host Sessions window (Figure 30).

Figure 30. Logout Host Sessions Window



- 2 Do one of the following:

- ~ Enter the name that specifies the services associated with the host sessions you want to log out of in the Service: field, or press **F2** (Choices) to select from a menu.
- ~ Enter the session number(s) you want to log out of in the Sessions: field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** for all sessions.

- 3 Press **F3** (Save).

The system logs out of the host session.

Renumbering Host Sessions

To renumber Host Sessions:

- 1 Complete the procedure Stopping the Voice System on page 42.
- 2 Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



The system displays a message indicating that renumbering has begun.

Unassigning Host Sessions

Use the Unassign Service from Host Sessions window to remove the service assignments for specific host sessions and free the host session channels. This deletes the host session assignment that was made using the Assign Host Sessions window, but does not make a new assignment. To change the host session assignments, use the Assign Host Session window, which will replace the current assignments with the new assignments you specify.

To unassign host sessions:

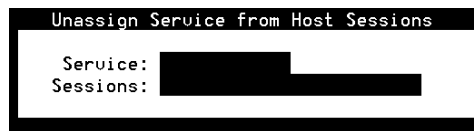
- 1 Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



```
> Unassign
```

The system displays the Unassign Service from Host Sessions window (Figure 31).

Figure 31. Unassign Service from Host Sessions Window



- 2 Do one of the following:
 - ~ Enter the name that specifies the services associated with the host sessions you want to unassign in the Service: field, or press **F2** (Choices) to select from a menu.
 - ~ Enter the session number or numbers you want to unassign in the Sessions: field. Valid values are a single session number such as 0, 1, 2; a range of numbers such as 3–4; or **all** for all sessions.
- 3 Press **F3** (Save).

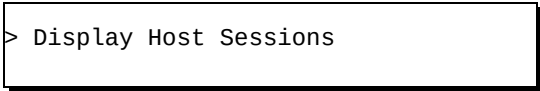
The system unassigns the selected host sessions.

Displaying Host Sessions

The Display Host Sessions window displays all host sessions currently running on the system, or a subset as specified by the Host Sessions Options window.

To display host sessions:

- 1 Start at the Configure Host Sessions menu (Figure 26 on page 20) and select:



```
> Display Host Sessions
```

The system displays the Display Host Sessions window (Figure 32).

Figure 32. Display Host Sessions Window

Display Host Sessions				
SESSION	CONN NAME	LU	SERVICE	STATE
0	TKR1	2		free
1	TKR1	3		unassigned
2	TKR1	4		unassigned
3	TKR1	5		unassigned
4	TKR1	6		unassigned
5	TKR1	7		unassigned
6	TKR1	8		unassigned
7	TKR1	9		unassigned
8	TKR1	10		unassigned
9	TKR1	11		unassigned

Table 4 describes the columns in this window.

Table 4. Field Descriptions for Display Host Sessions Window

Column Name	Description
SESSION	Identifies a logical session with the host. Numbers range from 0 to the maximum host session number allowed by the system. For each session number there is an LU number. Session numbers are unique across all connections, while LU numbers are unique per connection.
SNA_SERVER	Identifies the name and IP address of the TN server.
LU	The logical unit number which can range from 2 to the maximum LU number allowed by the system. LU numbers are unique per connections. Session numbers are unique across all connections.
SERVICE	Application assigned to the system. This must be an application that is installed on the system.
1 of 2	

Table 4. Field Descriptions for Display Host Sessions Window

Column Name	Description
STATE (con't.)	Identifies the current state of a host session. Valid values are: • Not Avail — Cannot open the device, the session is not configured, or the DIP cannot parse the host script • Free — Session was freed manually; use the Assign Host Sessions window to put the session back in use • Unassigned — Service was never assigned to the session, or service was assigned and later deleted manually • Logging In — Temporary state while DIP tries to log into the session (part of the Assign Host Sessions or Login Host Session procedure) • Logged In — Successfully logged in but not involved in a transaction; alternates with the Transaction state • Transaction — Currently involved in a transaction; alternates with the Logged In state • Recovering — Login procedure failed, the transaction ended on a window other than the transaction base window, or the recovery procedure ended on a window other than the transaction base window
STATE (con't.)	Identifies the current state of a host session. Valid values are: • Logging Out — Temporary state while DIP logs out of the session; appears immediately after the Logout Host Sessions window is used • Logged Out — Shown only after the Logout Host Sessions window is used; use the Login Host Sessions window to put the session back in use
2 of 2	

Host Sessions: Actions Menu

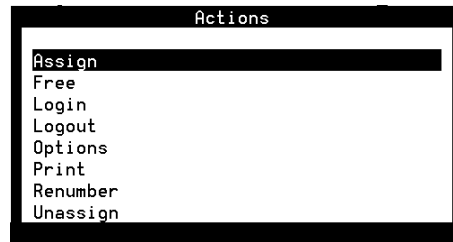
The Actions menu is another way to perform the same activities as described above in Configuring Host Sessions. In addition, the Actions menu has two additional functions: print a host session report, and change the display options.

To access the Host Sessions: Actions menu:

- 1 Start at the Display Host Sessions window (Figure 32 on page 25) and press **F8** (Actions).

The system displays the Host Sessions: Actions menu (Figure 33 on page 27).

Figure 33. Host Sessions: Actions Menu



See Configuring Host Sessions on page 20 for information on how to perform these assign, free, login, logout, renumber, and unassign actions.

See Changing Options for the Display Host Sessions Window and Printing a Host Sessions Report on page 28 for information on the options and print actions.

Changing Options for the Display Host Sessions Window

The Options action allows you to customize the Display Host Sessions window. You can display a full range of sessions, a subrange of sessions, or sessions assigned with a specific service name.

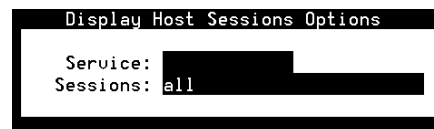
To define the Display Host Sessions window options:

- 1 Start at the Host Sessions: Actions menu (Figure 33 on page 27) and select



The system displays the Display Host Sessions Options window (Figure 34).

Figure 34. Display Host Sessions Options Window



- 2 Enter the name of an application or service in the Service: field, or press F2 (Choices) to select from a menu.
- 3 Enter one or more session numbers or **all** in the Sessions: field, or press F2 (Choices) to select from a menu.
- 4 Press F3 (Save).

The system stores the information to use the next time it processes a Display Host Sessions request.

Printing a Host Sessions Report

To print a report showing all host sessions currently defined:

- 1 Start at the Host Sessions: Actions Menu (Figure 33 on page 27) and select:



The system sends the Display Host Sessions window to the system printer.

Note: This report will not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

Message Administration

Messages are used to provide information about events and errors during system operations. System messages vary in content, priority, destination, and threshold parameters. Use the System Message Administration window to:

- List all the parameters associated with a particular system message.
- Add or remove a new destination to or from the current list of destinations for the current system message.
- Modify a message priority.
- Modify the system message threshold period.
- Add or remove a new threshold or threshold message ID pair to or from the current list of thresholds for the current system message.

Note: Some messages are generated with destinations and priorities that are not administrable through System Message Administration windows (that is, GEN001, GEN002, and THR001–4). Almost all other messages can be administered through the System Message Administration windows.

Accessing Message Administration

To access message administration:

- 1 Start at the Configuration Management menu (Figure 19 on page 15) and select:

> Message Administration

The system displays the System Message Administration window (Figure 35).

Figure 35. System Message Administration Window

System Message Administration	
Message ID:	

- 2 Enter the message ID of the message you want to administer in the Message ID: field, or press **F2** (Choices) to choose from a menu of currently defined messages.
- 3 Press **F3** (Save).

The system displays the System Message Display window (Figure 36).

Figure 36. System Message Display Window

System Message Display	
Message Id:	SPIP001 (SPIP_SBRK)
Message Priority:	-
Message Destinations:	log event uexLog uexLog
Threshold Period:	3m
Message Thresholds:	
Threshold	Threshold Message Id
-----	-----
50	THR003 (THRESH_MAJOR)
Message Text:	

Table 5 describes the fields in this window.

Table 5. Field Description for System Message Display Window

Field	Description
Message ID:	Specifies a unique name for each message in the system.
Message Priority:	Specifies the urgency level of the message. The Message Priority may be NONE or – (for none), * (for minor), ** (for major), or *C (for critical).
Message Destinations:	Specifies a list of destinations where the message should be sent. By default, messages are sent to the message master log and either the alarm (if the message is an alarm) or event (if the message is an event).
Threshold Period:	Specifies the length of time the message is included in the threshold count, provided that one or more thresholds are defined for this message.

1 of 2

Table 5. Field Description for System Message Display Window

Field	Description
Message Thresholds:	Shows the message threshold for the corresponding Message ID in the Threshold Message ID column. Most messages will not be associated with a threshold.
Threshold:	Specifies the number of messages to be generated within the threshold period necessary to trigger the threshold action.
Threshold Message ID:	Specifies the ID of the message to be generated when a threshold is reached. The priority and the destinations for the threshold message should be meaningful as a thresholding action. For example, message ID VROP003 may have a priority of minor (*), while its corresponding threshold message ID could be THR003 which has a major (**) priority. Generating the THR003 message after enough VROP003 messages have been generated within the Threshold Period is the threshold action. THR001, THR002, THR003, and THR004 have priorities of none (–), minor (*), Major (**), and critical (*C), respectively.
Message Text:	Text displayed when the message is generated. The message text can not be administered from the System Message Display window.
2 of 2	

Adding Message Destinations

The system's message log provides a complete account of all messages generated by the voice system. All system messages are assigned to the appropriate destination during installation.

Note: If a message is changed from the event destination to the alarm destination, a similar change should be made on the message priority from none (–) to minor (*) and vice versa.

To add a destination to a message:

- 1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press **F8** (Chg-Keys).
- 2 Press **F1** (Add-Dest).

The system displays the Add Message Destination window (Figure 37).

Figure 37. Add Message Destination Window

Add Message Destination
Message Destination: _____

- 3 Enter the destination for the message you want to add in the Message Destination: field or press **F2** (Choices) to select from a menu.

Valid message destinations are:

- ~ stderr — The standard error of the process generating the message. Since most system processes redirect standard error to the system console, specifying this destination may result in the message being sent to the system console.
- ~ console — The system console or **/dev/console**.
- ~ alertPipe — A specially named pipe for messages that must be sent directly to the alerter. The alerter pipe is used for some special system processes. Specification of the alerter pipe for other system messages has little or no effect on the system message facility or the alerter itself. The system is distributed with some messages specified with the alerter pipe as a destination. This destination should not be removed from the message.

Note: Separating alarm destinations from event destinations ensures that alarm messages do not overrun event messages, and vice versa.

- ~ alarm — Specifies that the delivery system send all alarm level messages (priority “*”, “**” and “*C”) to the alarm log. The alarm log may be accessed via the **display messages** command or the Message Log Report window.
- ~ event — Specifies that the delivery system send all event level messages (priority “—”) to the event log. The event log may be accessed via the **display messages** command or the Message Log Report window.
- ~ mxmtr — Used only when the Netview Alarms package is installed. Messages sent to mxmtr are sent to the appropriate Netview Alarm device. If this package is not installed, messages with this destination have no effect on the system.

- 4 Press **F3** (Save).

The system redisplay the System Message Display window (Figure 36 on page 29) showing the new message destination.

- 5 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Removing Message Destinations

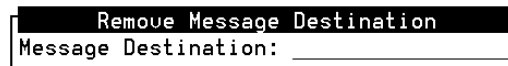
This procedure allows you to remove a destination from the current list of destinations for the current system message.

To remove a message destination:

- 1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press **F8** (Chg-Keys).
- 2 Press **F2** (Rem-Dest).

The system displays the Remove Message Destination window (Figure 38).

Figure 38. Remove Message Destination Window



- 3 Enter the Message Destination that you want to remove in the Message Destination: field, or press **F2** (Choices) to select from a menu.

Note: **log** is not a valid destination choice since this destination cannot be removed using the Remove Message Destination window.

- 4 Press **F3** (Save).

The system redisplay the System Message Display window (Figure 36 on page 29) showing the removed message destination.

- 5 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Adding Thresholds

Message thresholds are triggering devices that alert operations personnel to take action when a certain number of messages are generated over a certain period of time. Message thresholding allows for escalation of message priority or criticality. A system message may be of little concern when it occurs in small numbers over long time intervals. However, if message occurrences increase over shorter time intervals, this may indicate more serious problems with the system. Message thresholding sends a new message to be sent when a threshold is reached. The new message may be higher in priority and have a different destination set than the original message.

This procedure adds a new threshold and thresholding message ID pair to the current list of thresholds for the current system message.

To add a message threshold:

- 1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press **F8** (Chg-Keys).
- 2 Press **F3** (Add-Thsh).

The system displays the Add Threshold window (Figure 39).

Figure 39. Add Threshold Window

Add Threshold	
Threshold:	_____
Threshold Message Id:	_____

- 3 Enter a nonnegative integer threshold value or **none** in the Threshold: field.
- 4 Enter **THR001** (for none), **THR002** (for minor), **THR003** (for major), or **THR004** (for critical) in the Threshold Message Id: field, or press **F2** (Choices) to select from a menu.
- 5 Press **F3** (Save).

The system redisplay the System Message Display window (Figure 36 on page 29) showing the new message threshold.

- 6 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Removing Thresholds

This procedure allows you to remove a threshold or a threshold message ID pair from the list of thresholds for the current system message.

To remove a message threshold:

- 1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press **F8** (Chg-Keys).
- 2 Press **F4** (Rem-Thsh).

The system displays the Remove Threshold window (Figure 40).

Figure 40. Remove Threshold Window

Remove Threshold	
Threshold:	_____

- 3 Enter a nonnegative integer message threshold value in the Threshold: field.

4 Press F3 (Save).

The system redisplay the System Message Display window (Figure 36 on page 29) showing the message threshold removed.

5 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Modifying Message Priorities

This procedure allows you to modify message priority. When the system is installed, each message is assigned a particular priority. In most cases, these priorities are appropriate and do not need to be modified. Depending on the type of application, however, you may want to modify a message priority.

Events are messages of priority none (denoted by “–” in the System Message Administration window). Alarms are messages of priority minor, major, and critical (denoted by “*”, “***”, and *C, respectively, in the System Message Administration window).

To modify a message priority:

1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press F8 (Chg-Keys).**2 Press F5 (Msg–Prio).**

The system displays the System Message Priority window (Figure 41).

Figure 41. System Message Priority Window



System Message Priority
Message Priority: _____

3 Enter a priority in the Message Priority: field or press F2 (Choices) to select from a menu.**4 Press F3 (Save).**

The system redisplay the System Message Display window (Figure 36 on page 29) showing the message threshold removed.

5 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Modifying Threshold Periods

This procedure allows you to modify the system message threshold period, or the interval of time over which messages are counted for a given threshold.

To modify a threshold period:

- 1 Start at the System Message Display window (Figure 36 on page 29) for a given message, and press **F8** (Chg-Keys).
- 2 Press **F6** (Thsh-Per).

The system displays the System Message Threshold Period window (Figure 42).

Figure 42. System Message Threshold Period Window

System Message Threshold Period
Threshold Period: _____

- 3 Enter a time interval in the Threshold Period: field or press **F2** (Choices) to select from a menu.

You must enter the threshold period as a time interval with the following syntax:

***number*[*dimension*] *number*[*dimension*]**

where *number* is a positive integer and *dimension* is one of the following single characters:

- ~ **w** for weeks
- ~ **d** for days
- ~ **h** for hours
- ~ **m** for minutes
- ~ **s** for seconds.

Table 6 provides examples of threshold periods and the required syntax.

Table 6. Threshold Period Examples

Specification	Value or Description
1s 1h	A 3601-second threshold period
2w	A 14-day threshold period
5m 30s	A 330-second threshold period
5m 3m	BAD INTERVAL — Two minute specifications.

- 4 Press **F3** (Save).

The system displays the System Message Display window (Figure 36 on page 29) showing the new threshold period.

- 5 Complete the Saving Changes and Exiting Message Administration on page 36 procedure.

The system installs the changes on the voice system.

Saving Changes and Exiting Message Administration

CAUTION:

You **MUST** perform this procedure if you want to save your message administration changes.

To save message administration changes and exit the Message Administration menu.

- 1 Start from any menu/window in the Message Administration menus, and press **F6** (Cancel) until you return to the System Message Administration window (Figure 35 on page 29).

- 2 Press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 3 Press **F4** (Install).

The system saves changes and returns to the Configuration Management menu (Figure 19 on page 15).

Remote Alarming Administration

Remote Alarming allows the field support personnel to receive notice when your system is experiencing difficulty. Alarms levels are categorized by their severity: critical, major and minor.

Accessing Remote Alarming Administration

To access the Alarm Management window:

- 1 Start at the Configuration Management menu (Figure 18 on page 13) and select:

```
> Remote Alarming Administration
```

The system displays the Alarm Management window (Figure 43).

Figure 43. Alarm Management Window

Alarm Management	
Product ID	_____
Alarm Destination	_____
Alarm Origination	INACTIVE
Alarm Level	MINOR
Alarm Suppression	INACTIVE
Clear Alarm Notification	ACTIVE

Table 7 describes the fields on this window.

Table 7. Field Descriptions for Remote Alarming Window

Field	Description
Product ID:	Must be either a null string or a 10-digit code; the first number must be 2.
Alarm Destination:	The telephone number to which the alarm will be sent • 0 through 9 • = (to wait for dialtone) • – (to pause)
Alarm Origination:	Valid field only for CONVERSANT alarm messages ADMIN002, ADMIN003, ADMIN008. CGEN005, CGEN020, CGEN038, and MTC003. • ACTIVE: enabled • INACTIVE: disabled (default)
Alarm Level:	Not a valid field for the CONVERSANT system.
Alarm Suppression:	ACTIVE: temporarily overrides alarm origination even if the alarm origination field is set to ACTIVE (intended for use during troubleshooting). INACTIVE: alarm origination determined by the alarm origination field (default).
Clear Alarm Notification:	Not a valid field for the CONVERSANT system.

System Control

Use the System Control menu to:

- Display the status of the CONVERSANT system
- Start and stop the voice system
- Diagnose circuit cards, channels, and buses

To access the System Control menu:

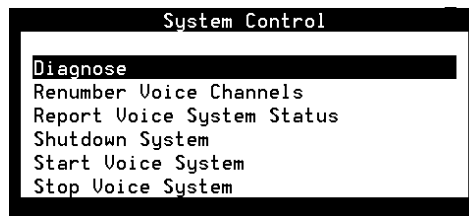
- 1 Start at the Configuration Management menu (Figure 19 on page 15) and select:



```
> System Control
```

The system displays the System Control menu (Figure 44).

Figure 44. System Control Menu



Diagnose

The Diagnose menu allows you to perform diagnostics on system equipment and voice port loop around test.

Diagnosing Equipment

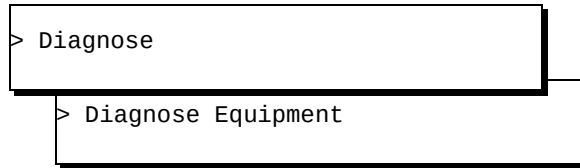
CAUTION:

Run diagnostics on a TDM bus master circuit card during off-hours. The diagnostic procedure has a negative impact on call processing. See Modifying the Display Voice Equipment Window Parameters on page 47 for more information about identifying the circuit card that serves as the TDM bus master.

You can run diagnostics on tip/ring, E1/T1 or SSP circuit cards or the TDM bus. Run diagnostics whenever the system displays a message indicating circuit card failure.

To diagnose equipment:

- 1 Start at the System Control menu (Figure 44 on page 38) and select:



The system displays the Diagnose Equipment window (Figure 45).

Figure 45. Diagnose Equipment Window

Diagnose Equipment	
Equipment to diagnose:	_____
Equipment number:	_____
Immediate diagnosis?:	_____

Table 8 describes the fields in this window.

Table 8. Field Descriptions for Diagnose Equipment Window

Field	Description
Equipment to diagnose:	Specifies whether the type of equipment to be diagnosed is either a circuit card, channel, or bus. Enter card , channel , or bus , or press F2 (Choices) to select from a menu. There is no default value for this field. This is a required field.
Equipment number:	Number that identifies each tip/ring, E1/T1 and SSP circuit card. Equipment numbers are defined by the position of the circuit card in the circuit card table shown on the Display Voice Equipment window (Figure 52 on page 46). Card range can be from 0 (zero) to 15. When you specify a range of circuit cards, cards are diagnosed in order, one at a time. This is a required field. The bus value must be either 1 or all.
Immediate diagnosis?:	Specifies whether or not there should be immediate diagnosis on the selected circuit card or bus. Type y for yes, n for no, or press F2 (Choices) to select from a menu. If you choose yes, all calls on active channels for the specified equipment are terminated. If there are active calls and you choose no, the circuit card is returned to the original state and diagnostics are not performed. This is a required field.

- 2 Enter the information as described in Table 8.

- 3 Press **F3** (Save).

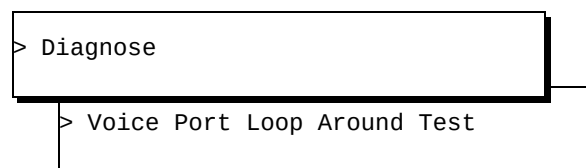
The system displays a report showing the status of the specified equipment.

- 4 Press **F6** (Cancel) repeatedly until you return to the System Control menu.

Voice Port Loop Around Test The voice port loop around test allows you to initiate loop around test for a given channel.

To run the voice port loop around test:

- 1 Start at the System Control menu (Figure 44 on page 38) and select



The system displays the Voice Port Loop Around Test window (Figure 45 on page 39).

Figure 46. Voice Port Loop Around Test Window

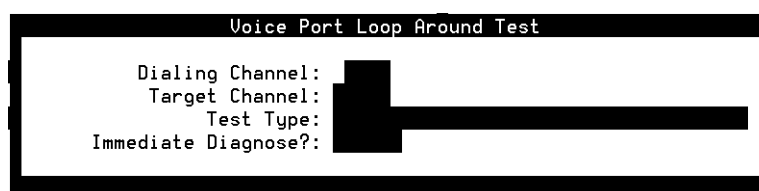


Table 9 describes the fields in this window.

Table 9. Field Descriptions for Voice Port Loop Around Test Window

Field	Description
Dialing Channel:	Enter the channel number to use to diagnose the target channel, or AUTO to have the system select a channel.
Target Channel:	Enter the channel you want to diagnose.
Test Type:	Enter the test type, press F2 (Choices) to select a test type, or all to perform all tests. Regardless of the choice entered, the following test are always run: • Manipulation of hook state • Gain control • Speed control • Ring detection • Touchtone receive • Touchtone transmit • Loop current/dial tone detection
Immediate diagnosis?:	Specifies whether or not there should be immediate diagnosis on the selected channel. Type y for yes, n for no, or press F2 (Choices) to select from a menu. Note: Immediate diagnosis is not an option when AUTO is selected for the Dialing Channel.

- 1 Enter the information as described in Table 9 on page 40.
- 2 Press **F3** (Save).

The system displays a report showing the status of the specified channel.

- 3 Press **F6** (Cancel) repeatedly until you return to the System Control menu.

Renumbering Voice Channels

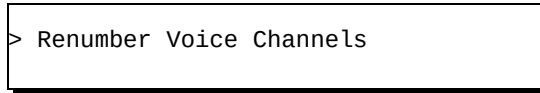
The Renumber Voice Channels option removes all nonexistent (NONEX) circuit cards from the voice equipment table, and then reorders all existing equipment with E1/T1 circuit cards first, followed by tip/ring circuit cards, and then SSP circuit cards. This reordering changes the channel numbers of some circuit cards. However, user-defined characteristics such as options, attributes, and script assignments do not change. If a circuit card is found in the system that was not in the voice equipment table, it is added under the appropriate heading (E1/T1, tip/ring, or SSP) with default settings.

CAUTION:

Renumbering voice channels brings down the system immediately and restarts it. When you select this option, a warning is displayed and you are given the option of continuing with the procedure or returning to the System Control menu.

To renumber voice channels:

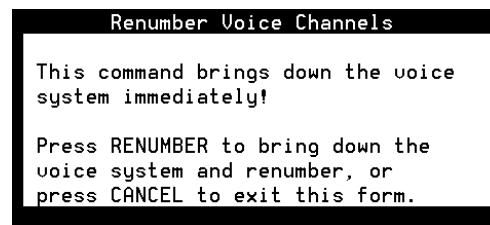
- 1 Start at the System Control menu (Figure 44 on page 38) and select:



```
> Renumber Voice Channels
```

The system displays the Renumber Voice Channels window (Figure 47).

Figure 47. Renumber Voice Channels Window



- 2 Press **F3** (Renumber) to continue.

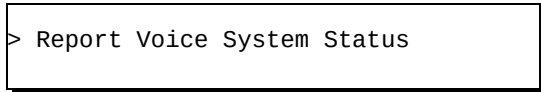
The system renumbers voice channels.

Reporting Voice System Status

Use the following procedure to see whether the voice system is running or stopped, and to view the current voice system run level.

To report the voice system status:

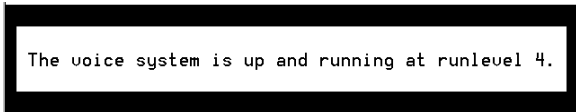
- 1 Start at the System Control menu (Figure 44 on page 38) and select:



```
> Report Voice System Status
```

The system displays the Status of Voice System window (Figure 48).

Figure 48. Status of Voice System Window



```
The voice system is up and running at runlevel 4.
```

- 2 Press F1 (Acknowledge Message).

The system returns to the System Control menu (Figure 44 on page 38).

Stopping the Voice System

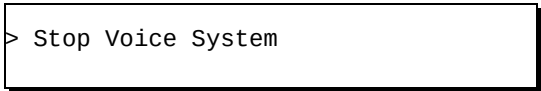
This procedure stops the voice system by taking all system channels out of service with the option to wait for in-progress calls to end. Stopping the system is usually done when you are performing some type of routine service such as backup and restore. When the system is stopped, the CPU does the following:

- Places the entire system in the idle state when all lines are free
- Saves internal system tables
- Turns off voice system processes

Stopping the voice system takes approximately 2 to 3 minutes to complete.

To stop the voice system:

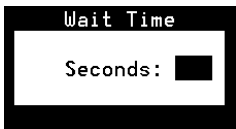
- 1 Start at the System Control menu (Figure 44 on page 38) and select:



```
> Stop Voice System
```

The system displays the Wait Time window (Figure 49).

Figure 49. Wait Time Window



```
Wait Time
```

```
Seconds: [Progress Bar]
```


- 2 Enter a time interval between 60 and 600 seconds in the Second : field, or press **F2** (Choices). The default is 180.

Note: During this wait time, all calls in progress are completed, but no new calls are accepted.

- 3 Press **F3** (Save).

The system displays a message telling you it will stop the voice system if you press **ENTER**.

Note: Press **F6** (Cancel) to return to the System Control menu without stopping the system.

- 4 Press **ENTER**.

The system displays messages telling you it is stopping the voice system.

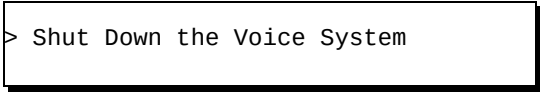
Shutting Down the System

CAUTION:

Always stop the voice system before executing a shutdown. Shutting down the system without stopping the voice system may negatively affect the software.

To shut down the system:

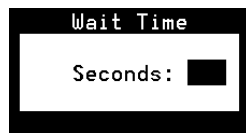
- 1 Start at the System Control menu (Figure 44 on page 38) and select:



```
> Shut Down the Voice System
```

The system displays the Wait Time window (Figure 50).

Figure 50. Wait Time Window



- 2 Enter a time interval between 0 and 60 seconds in the Seconds : field or press **F2** (Choices).

- 3 Press **F3** (Save).

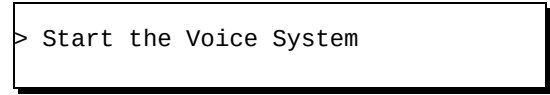
The system waits the amount of time indicated, then shuts the system down. The system then returns to the System Control menu (Figure 44 on page 38).

Starting the Voice System

This procedure allows you to start or restart the voice system. When this process is invoked, all channels that were deactivated when you stopped the voice system are returned to service in the maintenance state they had when the voice system was last running.

To start the voice system:

- 1 Start at the System Control menu (Figure 44 on page 38) and select:



```
> Start the Voice System
```

- 2 Press **ENTER**.

The system displays messages telling you it is starting up the voice system.

Note: Immediately after starting the voice system, you will be unable to perform some administrative commands and you may receive a system message indicating that MTC is busy. After the system is initialized, MTC will be free to handle administrative commands.

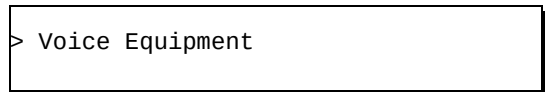
If you have started the system monitor (**sysmon**) prior to starting the voice system, **sysmon** must be stopped and restarted. If you do not do so, **sysmon** may display the channels in a pending state.

Voice Equipment

Voice equipment includes those circuit cards and their associated channels in the system that provide voice system functionality, such as the digital and analog circuit cards (E1/T1 and tip/ring, respectively), and the speech processing circuit cards (SSP cards).

To access the Voice Equipment menu:

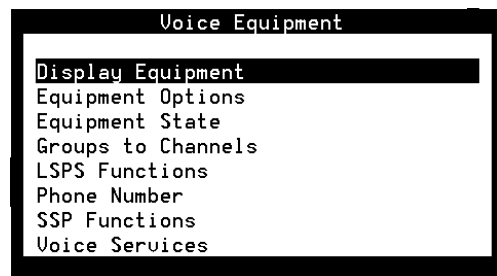
- 1 Start at the Configuration Management menu (Figure 19 on page 15) and select:



```
> Voice Equipment
```

The system displays the Voice Equipment menu (Figure 51).

Figure 51. Voice Equipment Menu



Use the Voice Equipment menu to:

- Assign, display, and unassign voice system equipment options and states
- Change channel maintenance states
- Assign, display, and unassign channel and telephone number services
- Assign, display, and unassign circuit card and channel functions
- Print a report of voice system circuit card and channel options

Displaying the Voice Equipment Window

To access the Display Voice Equipment window:

- 1** Start at the Voice Equipment menu (Figure 51 on page 45) and select:

```
|> Display Equipment
```

The system displays the Display Equipment window (Figure 52).

Figure 52. Display Voice Equipment Window

Display Voice Equipment								
CD	PT	CHN	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS TYPE
CARD	3		STATE: Manooos	CLASS: Signal_Processor(LSPS)	O.S.INDEX: 3			
			NAME: 6UB5	OPTIONS: slave,tdm1				
			FUNCTION: CS_BASIC-TTS-6UB5+text2speech					
CARD	4		STATE: Manooos	CLASS: Signal_Processor(SSP)	O.S.INDEX: 4			
			NAME: CWB1	OPTIONS: slave,tdm1				
			FUNCTION: UNASSIGNED					
CARD	6		STATE: Manooos	CLASS: Signal_Processor(SSP)	O.S.INDEX: 6			
			NAME: CWB1	OPTIONS: slave,tdm1				

This window, by default, displays all channels currently in the system, including:

- ~ Channel circuit card and port (CD.PT)
- ~ Channel number (CHN)
- ~ Channel state (STATE)
- ~ Time of last state change (STATE-CHNG-TIME)
- ~ Associated service name (SERVICE-NAME)
- ~ Telephone number (PHONE)
- ~ Group number (GROUP)
- ~ Options (OPTS)
- ~ Circuit card type (TYPE)

This window can be several pages long, depending on the display parameters for the window, and the equipment installed in the system.

Press **F2** (Prev Page) and **F3** (Next Page) to move up and down through the pages of this window.

Press **F4** (First Page) to view the first page of the window. Press **F5** (Last Page) to view the last page of the window.

Use the following procedure to modify the default display parameters for the Display Voice Equipment window.

Modifying the Display Voice Equipment Window Parameters

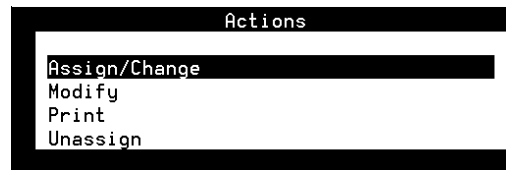
You can tailor the Display Voice Equipment window to show a full range of channels or a subrange. The parameters you specify are saved in a file and remain in effect until you change them.

To change the display parameters:

- 1 Start at the Display Voice Equipment window (Figure 52 on page 46) and press **F8** (Actions).

The system displays the Actions menu (Figure 53).

Figure 53. Actions Menu

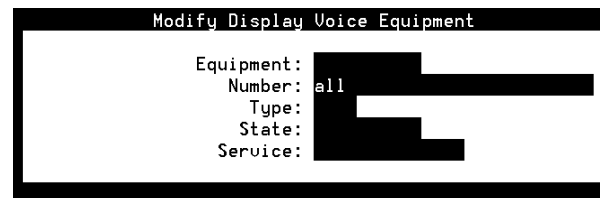


- 2 Select:



The system displays the Modify Display Voice Equipment window (Figure 54).

Figure 54. Modify Display Voice Equipment Window



- 3 Enter **card**, **channel** (default), or **group** in the Equipment: field, or press **F2** (Choices) to select from a menu.

- ~ card — This parameter displays the version of software running on each circuit card (in the FUNCTION: field), circuit card options, and the circuit card O.S. Index (dip switch setting) for each of the voice system circuit cards installed.
 - SSP circuit cards: Information on SSP circuit cards is displayed with the card options only. SSP circuit cards do not have channels associated with them.
 - E1/T1 or tip/ring: The circuit card parameter also shows all channel information (with the first two columns in the order CHAN, then CD.PT), since these types of circuit cards also have associated channels.

- ~ channel — Information displayed with the channel and card parameters is almost identical. However, the card parameter also displays the version of software running on each circuit card (in the **FUNCTION:** field), circuit card options, and the circuit card O.S. Index (dip switch setting).
 - ~ group — In the standard display, with the **GROUP** column last, only the first seven characters in that field are displayed. For example, a channel may be assigned to groups “1,2,3,4,5,6,7,8,9,10”, but the **GROUP** column only displays “1,2,3,4”.
- 4 (Optional) Enter a single number, or a range of numbers separated by commas or spaces, or **all** (default) in the **Number :** field to specify a certain equipment number or number range to be displayed.
 - 5 (Optional) In the **Type :** field, enter **SSP**, **E1/T1** or **T/R** to specify an equipment type, or press **F2** (Choices) to select from a menu. If you leave this field blank, all equipment types are displayed.
 - 6 (Optional) In the **State :** field, enter a maintenance state, or press **F2** (Choices) to select from a menu. This field limits the voice equipment display to circuit cards/channels in a particular state. If you leave this field blank, all maintenance states will be displayed.

See Equipment State on page 50 for a list and description of each maintenance state.
 - 7 (Optional) In the **Service :** field, enter a service name, or press **F2** (Choices) to select from a menu. This field is used to limit the voice equipment display to channels associated with a particular service or function. This field is valid only if the **Equipment :** field is channel. If you leave this field blank, the system does not restrict the display to any one service.

A special service name of “*DNIS_SVC” is available. If you enter ***DNIS_SVC**, the voice equipment display shows the number service based on the calling party's number.
 - 8 Press **F3** (Save).

The system saves the display settings to a file and returns to the Display Voice Equipment window with the modified parameters.

Equipment Options

The equipment options, talk or tdm, indicate to the voice system the functionality of the analog and/or digital circuit cards (also known as voice circuit cards).

To change voice equipment options for analog and digital circuit cards:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:

```
> Equipment Options
```

The system displays the Change Options of Voice Equipment window (Figure 55).

Figure 55. Change Options of Voice Equipment Window

Change Options of Voice Equipment	
Talk-tdm:	_____
Equipment:	_____
Equipment Number:	_____

- 2 Enter **talk** or **tdm** in the Talk-tdm: field, or press **F2** (Choices) to select from a menu.

If you enter **talk**, the circuit card indicated is used for speech processing.

When you enter **tdm**, the circuit card indicated is not used for speech processing. If you have an SSP circuit card in the system, it is used for speech processing.

For E1/T1 circuit cards, the only valid option is tdm. No speech processing function is available. The SSP circuit card performs the speech processing function. For IVP4 and IVP6 tip/ring circuit cards, the option can be either talk or tdm.

Table 10 shows the valid equipment option settings.

Table 10. Valid Equipment Option Settings for Circuit Card Types

Card Type	Valid Setting	Notes
E1/T1	tdm	No speech processing function available. The SSP circuit card performs speech processing function.
Tip/ring	talk	The tip/ring circuit card performs speech processing function.
Tip/ring	tdm	The SSP circuit card performs speech processing function.

Note: If a system application uses background speech (or music), changing the equipment option may affect how the callers hears background speech. When the channel is set to *tdm*, foreground speech plays simultaneously with background speech. (Background speech plays at a lower volume than foreground speech.) If the channel is set to "talk," foreground speech interrupts background speech.

- 3 Enter **circuit card** or **channel** in the Equipment: field, or press **F2** (Choices) to select from a menu. If you specify a circuit card, the option is set for all channels of that circuit card.

- 4 Enter a single number or range of numbers to select the voice circuit cards or channels to change in the Equipment Number : field, or **all** (default).
- 5 Press **F3** (Save).

The system saves the voice equipment options.

Equipment State

The equipment states, listed below, indicate to the voice system whether or not a voice circuit card/channel is ready and able to receive calls, process speech, and so on — in other words, whether it can perform the job required of it.

The Change Equipment State menu option allows you to change the state, or maintenance state, of a card/channel. Some states are valid only for cards and cannot be used for channels. The following is a description of the different maintenance states for voice equipment:

- **MANOOS** (manual out-of-service) — Indicates the circuit card or channel has been taken out of service with a command issued manually.

Note: E1 (CAS) channel 0 and 16 are used for framing and signaling, respectively. They will always display as manoos even when the circuit card is in service and cannot be changed to inserv.

Change an SSP circuit card to the manoos state only when there are no active calls on the system. The manoos state disrupts voice playback on all SSP circuit card channels (if only one SSP circuit card is installed) or negatively affects voice playback performance on all channels (if more than one SSP circuit card is installed).

- **INSERV** (in service) — Indicates the circuit card or channel is in service and able to carry a transaction.
- **FOOS** (facility out-of-service) — Indicates the circuit card or channel has been taken out of service by the voice system because the link to the switch is out of service (not physically connected, switch down, and so on).
- **BROKEN** (broken) — Indicates the circuit card or channel did not pass the diagnostics and has been taken out of service by the system.

Channels are placed in the broken state by the system. An administrator cannot change a channel to the broken state.

- **HWOOS** (hardware out-of-service) — Indicates the circuit card or channel is out of service due to one or more of its dependencies being out of service, broken, or not physically connected.
- **NETOOS** (network out-of-service) — For digital circuit cards/channels only: Indicates the system is ready for the channel to go inserv, but is waiting for the network switch to also be ready for the channel to be inserv. Channels may freeze in this state if the switch is not ready for the channel to be inserv.

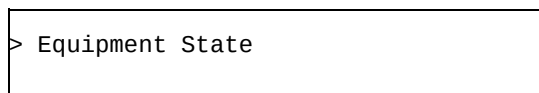
As indicated in the list, some maintenance states are reserved for the voice system only. A system administrator cannot place the equipment in these states. However, a system administrator can place the equipment into the **manoos** state, and then into the **inserv** state. See Table 11 for a description of the valid administrator changes.

Table 11. Valid Equipment State Changes

If a Card/Channel is:	You May Change It to:	For Equipment Type:
MANOOS	INSERV	circuit cards or channels
INSERV	MANOOS	circuit cards or channels
FOOS	MANOOS	circuit cards or channels
NETOOS	MANOOS	digital circuit cards or channels
HWOOS	MANOOS	circuit cards or channels
BROKEN	MANOOS	circuit cards or channels

To change the maintenance state of a circuit card or channel:

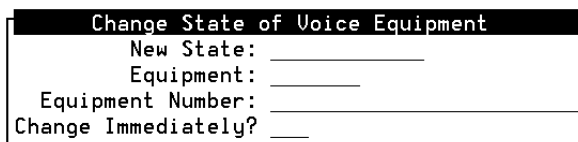
- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:



> Equipment State

The system displays the Change State of Voice Equipment window (Figure 56).

Figure 56. Change State of Voice Equipment Window



Change State of Voice Equipment

New State: _____

Equipment: _____

Equipment Number: _____

Change Immediately? _____

- 2 Enter the state to which the designated equipment should be changed in the **New State:** field or press **F2** (Choices) to select from a menu. Valid choices are **inserv** (in service) and **manoos** (manual out-of-service).
- 3 Enter **channel** or **card** for the type of equipment in the **Equipment:** field, or press **F2** (Choices) to select from a menu.
- 4 Enter the equipment number or numbers for which you want to change the state in the **Equipment Number:** field. Type a single number, a range of numbers, separated by commas or spaces, or **all** (default).
- 5 (Optional) Enter **Yes** or **No** in the **Change Immediately:** field. If you enter **Yes**, active calls on the specified equipment are disconnected abruptly. If you enter **No**, the state is changed after all current calls end. The changes may not be displayed immediately if you use the No value. If you leave this field blank, the No value is used as the default.

6 Press F3 (Save).

The system changes the maintenance state of selected voice equipment.

**Suggestions for
Changing the
Maintenance State of
Channels**

Use the following information to help you determine why a channel may be placed in a given maintenance state.

Manoos E1/T1 Channels Using Line Side E1/T1 Protocol

Certain switches, or switch configurations, cannot remove a large number of channels from service in a timely manner. Therefore, a delay has been added to the `/vs/data/mtc.rc` file to change the time between taking a channel out of service and taking the next channel out of service for a E1/T1 circuit card using Line Side E1/T1 protocol. To change this delay for a circuit card using Line Side E1/T1 protocol, add or modify the following line in the `/vs/data/mtc.rc` file:

LST1_D_REMOVE_DELAY=xxx

where xxx is the amount of delay in milliseconds. The default is 200.

Manoos E1/T1 Channels Using E&M Protocol

The following suggestions apply only to individual manoos E1/T1 channels using the E&M protocol. Other E1/T1 protocols provide the ability to remove individual channels from service.

At times, you may want to limit the number of calls the system handles by removing some of the E1/T1 channels from service. Removing E1/T1 channels, however, may negatively impact the system if the switch uses an inappropriate hunting pattern.

The E&M protocol does not allow you to remove individual channels from service. If a switch using the E&M protocol does not recognize that a channel is in a manoos state, it continues to route calls to that channel.

The system thus returns a busy signal to the caller if the switch directs the call to a manoos channel. For some hunting patterns (for example, those using a round-robin pattern for new call delivery), this is not desirable. With round-robin style delivery, the switch routes a new call to the next channel in the hunt group. When the switch reaches the end of the group, it starts again at the beginning. Consequently, the caller may receive a busy signal even though there may be other idle channels that are in service.

Ideally, the switch should use all inserv channels before attempting to use any manoos channels. You can force the switch to use inserv channels before using manoos channels by requesting a switch hunting pattern that always scans for idle channels starting at the beginning of the hunt group. On a 4ESS switch, for example, this is achieved by requesting a "trunk hunt without memory." You can then limit the number of simultaneous incoming calls by placing the least-used channels (that is, those channels at the end of the hunt group) into the manoos state. A new call is routed to a manoos channel only if all inserv channels are being used.

Manoos E1/T1 Channels

When all channels on a E1/T1 circuit card are in the manoos state, the circuit card generates a BLUE alarm to the switch. Calls are not routed to any of the channels on that E1/T1 circuit card.

Manoos Tip/Ring Circuit Card

Certain switches or switch configurations cannot remove a large number of channels from service in a timely manner. Therefore, a delay has been added to the **/vs/data/mtc.rc** file to change the time between taking a channel out of service and taking the next channel out of service for a tip/ring circuit card.

To change this delay for a tip/ring circuit card, add or modify the following line in the **/vs/data/mtc.rc** file:

TIP_RING_REMOVE_DELAY=xxx

where xxx is the amount of delay in milliseconds. The default is 0.

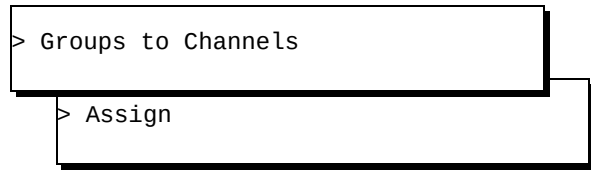
Groups to Channels

The Group to Channel menu option allows you to assign and unassign channels to equipment group(s). For example, an equipment group can be dedicated to outbound call bridging so that bridging does not interfere with incoming calls.

Assigning Groups to Channels

To assign an equipment group to channels:

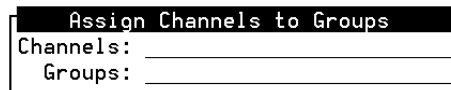
- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:



```
> Groups to Channels
  > Assign
```

The system displays the Assign Channels to Groups window (Figure 57).

Figure 57. Assign Channels to Groups Window



Assign Channels to Groups	
Channels:	
Groups:	

- 2 Enter the channel or range of channels that you want to assign to equipment groups in the Channels: field. Type a single channel number or a range of channel numbers, separated by commas or spaces, or **all** — this assigns all channels to the equipment groups specified in the Groups: field.

- 3 Enter the equipment group or groups to which you want to assign the channels in the **Groups:** field. Type a single equipment group number, or a range of equipment group numbers separated by commas or spaces. Valid equipment group numbers are 0–30.

Note: Equipment group 31 is a reserved group, used to specify channels that the system should ignore when it executes a soft seizure (**soft_szt** command). This allows you to mark certain channels as not being in the channel group specified by a soft seizure request on “any channel, any equipment group.” If a channel is assigned to equipment groups 0 and 31, it is only considered for soft seizures that specifically request equipment group 0.

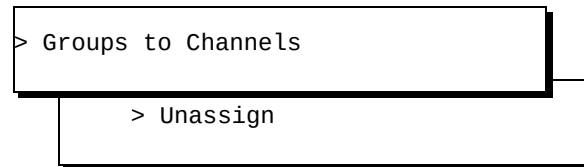
- 4 Press **F3** (Save).

The system assigns the specified channels to the selected equipment groups.

Unassigning Groups to Channels

To unassign an equipment group to channels:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:



The system displays the Unassign Channels From Groups window (Figure 58).

Figure 58. Unassign Channels From Groups Window

Unassign Channels From Groups	
Channels:	
Groups:	

- 2 Enter the channel or range of channels that you want to unassign to equipment groups in the **Channels:** field. Type a single channel number, a range of channel numbers separated by commas or spaces, or **all** — this unassigns all channels from the equipment groups specified in the **Groups:** field.
- 3 Enter the equipment group or groups to which you want to unassign the channels in the **Groups:** field. Type a single equipment group number, or a range of equipment group numbers separated by commas or spaces. Valid equipment group numbers are 0–30, with equipment group 31 used as a reserved group.
- 4 Press **F3** (Save).

The system unassigns the specified channels from the selected equipment groups.

PBX Extension

The PBX Extension menu option allows you to assign an ASAI channel (only) to a PBX extension telephone number.

CAUTION:

Be careful when assigning and reassigning ASAI channels to a PBX extension. Assignments made overwrite PBX extensions currently in effect on the specified channel.

Assigning a PBX Extension

To assign a PBX extension telephone number to an ASAI channel:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select



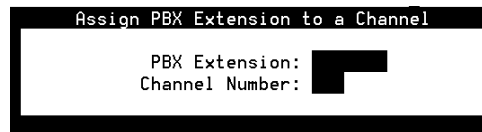
> PBX Extension



> Assign

The system displays the Assign PBX Extension to a Channel window (Figure 59).

Figure 59. Assign PBX Extension to a Channel Window



Assign PBX Extension to a Channel

PBX Extension:	
Channel Number:	

- 2 Enter the extension telephone number for the channel, up to 7 digits, in the PBX Extension: field.
- 3 Enter a single channel number in the Channel Number: field.
- 4 Press **F3** (Save).

The system assigns the specified PBX extension telephone number to the selected channel.

Unassigning PBX Extensions from Channels

To unassign PBX extensions from channels:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select



> PBX Extension



> Assign

The system displays the Unassign PBX Extension from a Channel window (Figure 60 on page 56).

Figure 60. Unassign PBX Extension from a Channel Window

- 2 Enter the channel number from which you want to unassign in the Channel Number: field.
- 3 Press **F3** (Save).

The system unassigns the PBX extension from the specified channel.

SSP Functions

The SP/SSP Functions menu option allow you to assign functions to the SSP circuit cards, or to change the currently assigned functions of SSP circuit cards.

Assigning SSP Functions

To assign functions to SSP circuit cards:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:

The system displays the Assign SSP Functions window (Figure 61).

Figure 61. Assign/Change Functions to SSP Cards Window

CAUTION:

The SSP circuit card must be in the manoos state before functions may be assigned to it. Be careful when making assignments and reassignments. Assignments made in the Assign Functions to SP/SSP Cards window overwrite any other assignments currently in effect on the specified circuit cards. See Equipment State on page 50 for information on changing states.

- 2 Enter a single number or press **F2** (Choices) to select from a menu in the Card Number : field. After entering the card number, the current settings are displayed.

- 3 In the remaining fields, enable the function with **Yes**, or disable with **No**.

The optional feature packages shown below may or may not appear in the Assign/Change Functions to SP/SSP Cards window, depending on the software installed on your voice system.

Several of these functions can be used in combination with another, depending on the type of circuit card, and the software installed. Table 12 describes the valid functionality combinations.

Table 12. Valid SP/SSP Function Combinations

Function	Valid for SSP
All functions	Yes (except ISDN-PRI which is not supported on SSP)
Call Classification Analysis (only)	Yes
FlexWord speech recognition (only)	Yes
ISDN-PRI (only)	No
Fax	Yes
Dial Pulse Recognition	Yes
Text to Speech (only)	Yes
Code + Play	Yes
Code + Play + FlexWord	Yes
Code + Play + WholeWord + Echo Cancellation	Yes
WholeWord + Echo Cancellation	Yes

Displaying SP/SSP Functions

To view the current assignments for the SSP cards in your system:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:

> SP/SSP Functions

> Display SP/SSP Functions

The system displays the Display SP/SSP Functions window (Figure 62 on page 58).

Figure 62. Display SSP Functions Window

```

Display SP/SSP Functions

Card Number: █

Call Classification Analysis:
    Code:
Dial-Pulse Recognition:
    Echo Cancellation:
        Play:
Text to Speech:
Whole Word Recognition:
  
```

- 2 In the Card Number : field, enter a single number or press **F2** (Choices) to select from a menu. After entering the card number, the current settings are displayed.
- 3 Press **F6** (Cancel) twice to return to the Voice Equipment menu (Figure 51 on page 45).

PBX Extension

The PBX Extension menu option allows you to assign an ASAI channel (only) to a PBX extension telephone number.



CAUTION:

Be careful when assigning and reassigning ASAI channels to a PBX extension. Assignments made overwrite PBX extensions currently in effect on the specified channel.

Assigning a PBX Extension

To assign a PBX extension telephone number to an ASAI channel:

- 1 Start at the Voice Equipment menu (Figure 51 on page 45) and select

```

> PBX Extension
    > Assign
  
```

The system displays the Assign PBX Extension to a Channel window (Figure 63).

Figure 63. Assign PBX Extension to a Channel Window

```

Assign PBX Extension to a Channel

PBX Extension: █
Channel Number: █
  
```

- 2 Enter the extension telephone number for the channel, up to 7 digits, in the **PBX Extension:** field.

3 Enter a single channel number in the **Channel Number:** field.

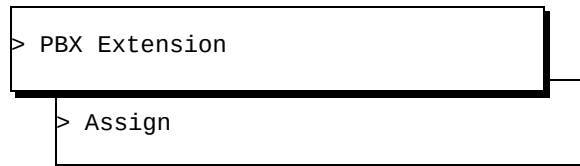
4 Press **F3** (Save).

The system assigns the specified PBX extension telephone number to the selected channel.

Unassigning PBX Extensions from Channels

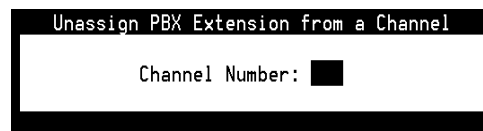
To unassign PBX extensions from channels:

1 Start at the Voice Equipment menu (Figure 51 on page 45) and select



The system displays the Unassign PBX Extension from a Channel window (Figure 64).

Figure 64. Unassign PBX Extension from a Channel Window



2 Enter the channel number from which you want to unassign in the **Channel Number:** field.

3 Press **F3** (Save).

The system unassigns the PBX extension from the specified channel.

Voice Services

The Voice Services menu option allows you to assign, display, and unassign channel and number services.

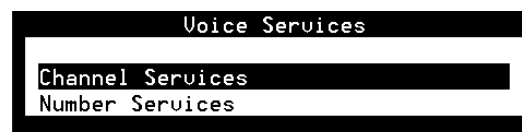
To access the Voice Services menu:

1 Start at the Voice Equipment menu (Figure 51 on page 45) and select:



The system displays the Voice Services menu (Figure 65).

Figure 65. Voice Services Menu



Channel Services

The Channel Services menu option allows you to assign, display, and unassign channel services.

To access the Channel Services menu:

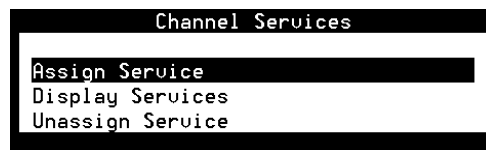
- 1 Start at the Voice Services menu (Figure 65 on page 59) and select:



```
> Channel Services
```

The system displays the Channel Services menu (Figure 66).

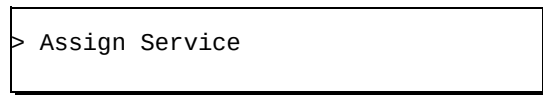
Figure 66. Channel Services Menu

**Assigning Service**

The Assign Services to Channels window allows you to specify the service or application to use for incoming calls on one or more channels.

To assign services to channels:

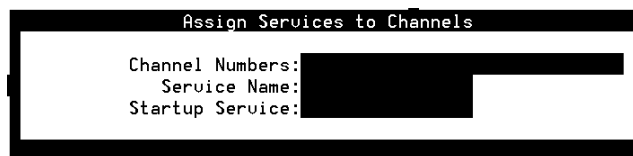
- 1 Start at the Channel Services menu (Figure 66 on page 60) and select:



```
> Assign Service
```

The system displays the Assign Services to Channels window (Figure 67).

Figure 67. Assign Services to Channels Window



- 2 In the Channel Numbers: field, enter the channel number or range of numbers.

Valid numbers range from 0 to the maximum number of channels in the system. Multiple channels may be entered separated by commas, or a range of channels may be entered using a dash. For example, an entry of **1, 3-5, 10** would specify channels 1, 3, 4, 5, and 10.

- 3** Enter the name of service that will handle the incoming call in the Service Name: field. Valid names are a string of 16 characters or less, or press **F2** (Choices) to select from a menu.

A special service name of “*DNIS_SVC” is available. It allows you to select a number service based on the called and calling numbers. It is also used when multiple services are supported by a single trunk or special services are required for specific callers. DNIS (called party) is available with E1/T1 (E&M), E1 (CAS), and PRI. DNIS is also available when ASA1 is used with a tip/ring, LST1, or LSE1 connection to a DEFINITY switch.

Another special service name “ANI” (calling party) is available with PRI, or when ASAI is used with a tip/ring, LST1, or LSE1 connection to a DEFINITY switch.

- 4** (Optional) Enter the name of the application that handles the call setup procedures in the **Startup Service:** field.

This field can be used to collect additional information, such as ANI and DNIS via the use of the converse vector step, when a new call arrives. Currently, the Application Dispatch process only uses this service for new calls. When an **exec** action occurs on this channel, the prior service name field is used.

- 5** Press **F3** (Save Assign).

The system assigns the indicated services to the selected channel or range of channels.

Displaying Channel Services

The Display Channel Services window displays all currently assigned channel services.

To display channel services:

- 1** Start at the Channel Services menu (Figure 66 on page 60) and select:

- ▷ Display Services

The system displays the Display Channel Services window (Figure 68).

Figure 68. Display Channel Services Window

[illegible]

Table 13 describes the columns in this window.

Table 13. Descriptions for Display Channel Services Window

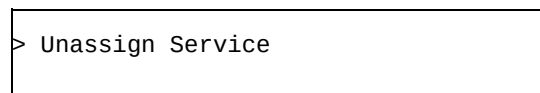
Column Name	Description
CHANNEL	Channel number assigned to the service displayed in the SERVICE column
SERVICE	Name of the service that corresponds to the channel number displayed in the CHANNEL column
STARTUP SERVICE	Name of the service that handles calls requiring special call set up procedures

Unassigning Channel Service

The Unassign Service menu option allows you to unassign services from one or more channels.

To unassign channel service:

- 1 Start at the Channel Services menu (Figure 66 on page 60) and select:



The system displays the Unassign Services from Channels window (Figure 69).

Figure 69. Unassign Services From Channels Window



- 2 Enter the channel number or range of numbers to be unassigned in the Channel Numbers: field.

Valid numbers range from 0 to the maximum number of channels in the system. You can enter multiple channels separated by commas or a range of channels can be entered using a dash. For example, an entry of **1, 3-5, 10** would specify channels 1, 3, 4, 5, and 10.

- 3 Press **F3** (Save).

The system unassigns the selected channel or range of channels.

Number Services

The Number Services menu option allows you to assign, display, and unassign numbers services.

To access the Number Services menu:

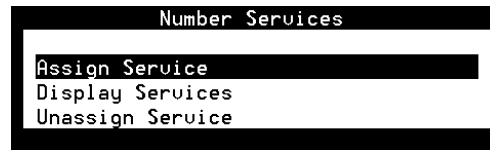
- 1 Start at the Voice Services menu (Figure 65 on page 59) and select:



```
> Number Services
```

The system displays the Number Services menu (Figure 70).

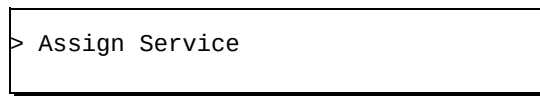
Figure 70. Number Services Menu

**Assigning Number Service**

The Assign Services to Number window allows you to specify a service or application to use for incoming calls on the called number (DNIS) or calling number (ANI), and is only valid for channels assigned to *DNIS_SVC.

To assign number service:

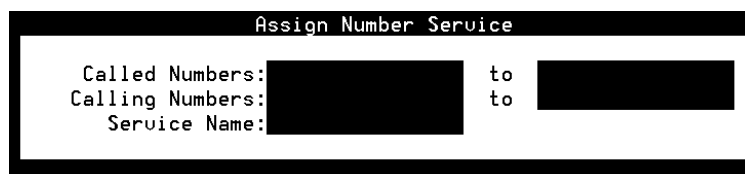
- 1 Start at the Number Services menu (Figure 51 on page 45) and select:



```
> Assign Service
```

The system displays the Assign Number Service window (Figure 71 on page 63).

Figure 71. Assign Number Service Window



Assign Number Service

Called Numbers:		to	
Calling Numbers:		to	
Service Name:			

- 2 Enter a number, range of numbers, or *any* in the Called Numbers: field.

The number represents the telephone number to dial to reach the specified service. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word *any*, or the first number in the range. The second column contains the last number in the range.

For example, to specify the extension 4876, enter **4876** in column 1 and leave column 2 blank. To specify any number, enter **any** in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter **555–4876** in column 1 and **555–5210** in column 2.

- 3 Enter the number, range of numbers, or *any* in the Calling Numbers: field.

This number represents the caller's (or calling party) number. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word **any**, or the first number in the range. The second column contains the last number in the range.

For example, to specify the single number 6148604876, enter **6148604876** in column 1 and leave column 2 blank. To specify any number, enter **any** in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter **555–4876** in column 1 and **555–5210** in column 2.

- 4 Enter a string of 16 characters or less in the Service Name: field or press **F2** (Choices) to select from a menu. This field represents the name of the service that handles the incoming call on the channel(s).
- 5 Press **F3** (Save).

The system assigns a service to the specified number or numbers.

Displaying Number Services

The Display Number Services window displays all currently assigned number services.

To display number services:

- 1 Start at the Number Services menu (Figure 70 on page 63) and select:

> Display Services

The system displays the Display Number Services window (Figure 72).

Figure 72. Display Number Services Window

Display Number Services				
CALLED NUMBERS		CALLING NUMBERS		SERVICE NAME
FROM	TO	FROM	TO	
any	any	any		any agent

Table 14 describes the columns in this window.

Table 14. Description for Display Number Services Window

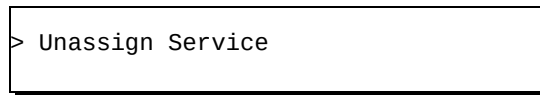
Column Name	Description
CALLED NUMBERS	Displays the called number corresponding to the service (E&M and PRI)
CALLING NUMBERS	Displays the calling number corresponding to the service (PRI)
SERVICE NAME	Displays the name of the service that corresponds to the called or calling number

Unassigning Number Service

The Unassign Service menu option allows you to unassign services from one or more numbers.

To unassign number service:

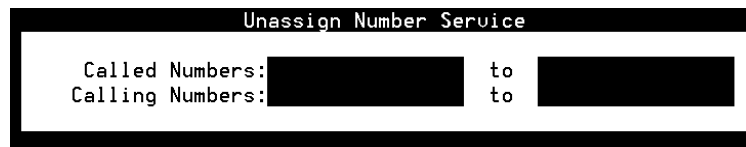
- 1 Start at the Number Services menu (Figure 70 on page 63) and select:



> Unassign Service

The system displays the Unassign Number Service window (Figure 73 on page 65).

Figure 73. Unassign Number Service Window



The screenshot shows a window titled "Unassign Number Service". Inside, there are two rows of input fields. The first row is labeled "Called Numbers:" and has two input boxes separated by the word "to". The second row is labeled "Calling Numbers:" and also has two input boxes separated by the word "to".

- 2 Enter a number, range of numbers, or **any** in the Called Numbers: field.

The number represents the telephone number to dial to reach the specified service. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word *any*, or the first number in the range. The second column contains the last number in the range.

To specify the single number 6148604876, enter **6148604876** in column 1 and leave column 2 blank. To specify any number, enter **any** in column 1 and leave column 2 blank. To specify a range 5554876–5555210, enter **555–4876** in column 1 and **555–5210** in column 2.

- 3 Enter the number, range of numbers, or **any** in the Called Numbers: field.

This number represents the caller's (or calling party) number. The number of digits must match those that the switch provides. You can enter numbers with a comma, a dash, or a space as delimiters. The first column contains a single number, the word *any*, or the first number in the range. The second column contains the last number in the range.

To specify the single number 6148604876, enter **6148604876** in column 1 and leave column 2 blank. To specify any number, enter **any** in column 1 and leave column 2 blank. To specify a range 5554876–555210, enter **555–4876** in column 1 and **555–5210** in column 2.

- 4 Press **F3** (Save).

The system unassigns a service from the specified number or numbers.

Printing a Voice Equipment Report

Use the voice equipment print option to obtain a complete printout of the voice equipment report.

To print a voice equipment report:

- 1 Start at the Display Voice Equipment window (Figure 52 on page 46) and press **F8** (Actions).

The system displays the Actions menu (Figure 21 on page 17).

- 2 Select:



> Print

Note: This report does not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

4 Feature Package Administration

Overview

This chapter describes the procedures to administer the following optional feature packages in the voice system:

- Script Builder Fax Actions
- Adjunct/Switch Application Interface (ASAI)
- Universal Call ID (UCID)

Note: Analog interfaces are currently not supported on the UCS 1000.

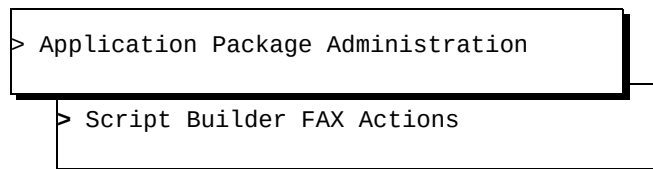
Script Builder Fax Actions Administration

Fax loading and printing and fax transmission queue management is accomplished through the Script Builder Fax Actions menu.

Note: To create applications using Script Builder Fax Actions, see Chapter 8, “Using Optional Features,” of *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217. Once an application is developed, assign it to any fax-enabled analog or digital channel. See Voice Equipment on page 45 in Chapter 3, Voice System Administration.

To access the Script Builder Fax Actions menu:

- 1 Start at the Voice System Administration menu (Figure 18 on page 13) and select:



```
> Application Package Administration
> Script Builder FAX Actions
```

The system displays the Script Builder FAX Actions menu (Figure 74).

Figure 74. Script Builder FAX Actions Menu



```
Script Builder FAX Actions
> FAX Loading and Printing
FAX Transmission Control
```

Note: An application that uses the Script Builder FAX actions must be assigned to the specific channels and/or groups that have fax resources enabled. See Voice Equipment on page 45 in Chapter 3, Voice System Administration for the procedures.

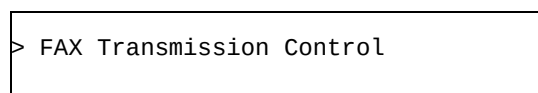
FAX Transmission Control

The FAX Transmission Control window allows you to view the list of jobs currently in the fax queue waiting for transmission. This feature also allows you to improve the performance of the system by:

- Eliminating jobs that overload the fax transmission queue and hinder system performance
- Canceling large jobs that may have been sent by mistake

To access the FAX Transmission Control window:

- 1 Start at the Script Builder FAX Actions menu (Figure 74 on page 67) and select:



The system displays the FAX Transmission Control window (Figure 75).

Figure 75. FAX Transmission Control Window

FAX Transmission Control					
Mon Feb 23 13:34:06 1998					
Job Id	Date/Time Submitted	Date/Time Next Attempt	S	Pgs/Snt	Destination
>map100p6-00001 02/23/98 13:23 02/23/98 13:43 W 002/000 111					
map100p6-00002 02/23/98 13:24 02/23/98 13:44 W 001/000 123					

The FAX Transmission Control window lists the details (such as time, date, and size) for every fax job in queue. The fax jobs are listed in the order in which they appear in the fax transmission queue.

Table 15 describes the columns and what they represent in this window.

Table 15. Description of Columns on the FAX Transmission Control Window

Column Name	Description
Job ID	The job identification number
Date/Time Submitted	The date and time the fax request was submitted
Date/Time Next Attempted	The date and time the fax job is to be processed; this is the time specified by the application if no attempt to send the job has been made, or the subsequent retry attempt time if the original attempt failed
1 of 2	

Table 15. Description of Columns on the FAX Transmission Control Window

Column Name	Description
S	The current status of the job; entries include: • F — Job has failed (final failure) • W — Job is waiting for a retry attempt • R — Job is ready to be processed; the outgoing call is in progress • D — Job is delayed by user (scheduled for future delivery) • A — Job is waiting for an address; destination number is not found • X — Job is transmitting the fax • P — Job is being processed • S — Job has sent the fax • f — Job process has failed
Pgs/Snt	The number of pages submitted and the number of pages transmitted
Destination	The telephone number where the fax is to be delivered
2 of 2	

Updating the FAX Transmission Control Window

The system does not automatically update the FAX Transmission Control window when new entries are added to the fax queue.

To update the FAX Transmission Control window:

- 1 From the FAX Transmission Control window (Figure 75 on page 68), press **F6** (Cancel) to return to the Script Builder FAX Actions menu. You may need to press **F8** (Chg-Keys) to access CANCEL.
- 2 In the Script Builder FAX actions menu, select FAX Transmission Control.
The system displays the updated fax queue.

Removing a Fax from the FAX Transmission Control Window

It may be necessary to remove a fax from the queue to perform channel diagnostics or to relieve an overburdened system.

To remove a fax from the fax job queue:

- 1 In the FAX Transmission Control window, select the fax to be removed.
- 2 Press **F2** (Remove). You may need to press **F8** (Chg-Keys) to access REMOVE.
The system removes the selected fax.
- 3 Press **F6** (Cancel) repeatedly to return to the Script Builder FAX Actions menu.

Loading and Printing Faxes

The FAX Loading and Printing window allows you to load a fax in the system, preview a fax, or send a fax to the printer.

To access the FAX Loading and Printing window:

- 1 Start at the Script Builder FAX Actions menu (Figure 74 on page 67) and select:

> FAX Loading and Printing

The system displays the FAX Loading and Printing window (Figure 76).

Figure 76. Sample FAX Loading and Printing Window

FAX Loading and Printing		
FaxMenu Name: <u>FaxMenu1</u>		Page <u>1</u> of <u>1</u>
Code	FAX ID	Comments
1001:	<u>fax1</u>	<u>FAX Zapper FAX #1</u>
1002:	<u>fax2</u>	<u>FAX Zapper FAX #2</u>
1003:	<u>fax3</u>	<u>FAX Zapper FAX #3</u>
1004:	<u>fax4</u>	<u>FAX Zapper FAX #4</u>
1005:	<u>fax5</u>	<u>FAX Zapper FAX #5</u>
1006:	<u>fax6</u>	<u>FAX Zapper FAX #6</u>
1007:	<u>fax7</u>	<u>FAX Zapper FAX #7</u>
1008:	<u>fax8</u>	<u>FAX Zapper FAX #8</u>
1009:	<u>fax9</u>	<u>FAX Zapper Broadcast FAX</u>
1010:	<u>fax10</u>	<u>FAX Zapper Cover Sheet Top Half</u>

Figure 76 is a sample of the FAX Loading and Printing window. The window in your system may appear differently. The columns and what they represent, however, are the same. See Table 16 for a description of the columns in this window.

Table 16. Description of Columns on the FAX Loading and Printing Window

Column Name	Description
FaxMenu Name :	Name of the menu displayed in the window.
Page	Number of pages in the menu. (Figure 76 on page 70 is one page.)
Code	A 4-digit identifier; the first digit may not be a zero.
FAX ID	An alphanumeric string in the form of faxN where N is a number between 1 and 999 (Figure 76 on page 70).
Comments	A description of the fax; maximum of 30 alphanumeric characters.

- 2 Press **F8** (Chg-Keys).

The system displays the alternate set of function keys.

- 3 Press **F4** (FAX-ADM).

The system displays the fax queue.

- 4 Select the fax to be loaded or printed, and then do one of the following:

- ~ Press **F2** (Load-FX) to load the fax onto the system.
- ~ Press **F3** (Print-FX) to send the fax to the system printer.

See Chapter 8, "Using Optional Features," of *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217, for additional information on loading and printing faxes.

- 5 Press **F6** (Cancel) repeatedly until you return to the Script Builder FAX Actions menu.

ASAI Administration

ASAI is a software standard that allows applications, such as those written in Script Builder, to effectively communicate with DEFINITY switches.

The ASAI Administration menu is used to administer channels, domains, and parameters.

To access the ASAI Administration menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

The system displays the Voice System Administration Menu (Figure 18 on page 13).

- 4 Select:

```
> Feature Packages
  > ASAI Administration
```

The system displays the ASAI Administration Menu (Figure 77).

Figure 77. ASAI Administration Menu

```
ASAI Administration
>Channel Administration
Domain Administration
Parameter Administration
```

Channel Administration

Channel Administration maps the voice system channels to the DEFINITY switch extension numbers. The Channel Administration window (Figure 78 on page 72) displays one entry for each tip/ring or LST1/LSE1 channel (voice system agent) that is a member of the voice system automatic call distributor (ACD) split.

Use the Channel Administration window to:

- Add an ASAI channel — Assigns a tip/ring or LST1 channel as a voice system agent
- Change an ASAI channel — Changes the switch extension assigned to a tip/ring or LST1 channel
- Remove an ASAI channel — Unassigns a tip/ring or LST1 channel as a voice system agent
- Log in an ASAI channel — Logs in a channel as an agent of the ACD split, enabling the channel to receive calls from the ACD
- Log out an ASAI channel — Unassigns a channel from the ACD split, and prevents the ACD from delivering calls to it

To access the Channel Administration window:

- 1 Start at the ASAI Administration menu (Figure 77) and select:

> Channel Administration

The system displays the Channel Administration window (Figure 78).

Figure 78. Channel Administration Window

Channel Administration					
CHANNEL	EXTENSION	SPLIT/AGT	PASSWORD	LOGIN	STATUS
64	6000	3851	-	YES	manoos
65	6001	3851	-	YES	manoos
66	6002	3851	-	YES	manoos
67	6003	3851	-	YES	manoos
68	6004	3851	-	YES	manoos
69	6005	3851	-	YES	manoos
70	6006	3851	-	YES	manoos
71	6007	3851	-	YES	manoos
72	6008	3851	-	YES	manoos

Table 17 describes the columns in the Channel Administration window.

Table 17. Description of Columns in the Channel Administration Window

Column Name	Description
CHANNEL	Tip/ring or LST1 channel number on the voice system.
EXTENSION	Switch extension number assigned for the channel.
1 of 2	

Table 17. Description of Columns in the Channel Administration Window

Column Name	Description
SPLIT/ AGT	DEFINITY switch login number, either ACD extensions or Agent IDs. Maximum length of 9 characters. - If the channel is an ACD split extension, the number represents the split number. - If the channel is an Agent ID in an expert agent select (EAS) environment, the number represents the Agent ID.
PASSWORD	Password for the Agent ID. Channel password must match the password for the corresponding Agent ID. Maximum length of 9 characters. Dash indicates no channel password used.
LOGIN	Yes represents channel login for ACD split. If No, ACD does not deliver any calls to this channel.
STATUS	Channel maintenance state; one of the following: - broken — A possible malfunction is detected on the line. - foos (facility out-of-service) — The line is not functional. - hwoos (hardware out-of-service) — The channel cannot be logged in because ASAI digital link is not operating. - logout (logged out) — The channel has not been administered to be logged in. - manoos (manual out-of-service) — The channel has been taken out of service by the administrator. - netoos (network out-of-service) — The ASAI link is up, but switch attempts to log into the channel are failing. - nonex (nonexistent) — The channel does not exist. - login — The tip/ring or LST1 channel is ready to receive calls from the ACD.
2 of 2	

Adding a Channel Entry To add a channel entry:

- 1 Start at the Channel Administration window (Figure 78 on page 72) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F1** (Add).

The system displays the Add A Channel Entry window (Figure 79).

Figure 79. Add A Channel Entry Window

```

Add A Channel Entry
Channel: _____
Extension: _____
Split/Agent: _____
Password: - _____
  
```

- 3 Enter the tip/ring or LST1 channel number that you want to add in the **Channel:** field. The channel number must be unique.
- 4 Enter the switch extension number assigned to the application in the **Extension:** field. The extension number must be unique.
- 5 If the channel is an extension in an ACD split, enter the split number in the **Split/Agent:** field. If the channel is logged in as an Agent ID in an EAS environment, enter the Agent ID in the **Split/Agent:** field.
- 6 If the channel is used for an Agent ID, enter the password of the corresponding Agent ID on the DEFINITY switch in the **Password:** field.
- 7 Press **F3** (Save).
The system adds the new agent line and returns to the Channel Administration window.
- 8 Complete the procedure in Logging In a Channel on page 75.

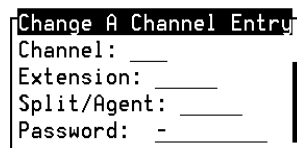
Changing a Channel Entry

Note: The channel must be logged out before you can change it. If the channel is not logged out, complete the procedure in Logging Out a Channel on page 75.

To change the switch extension associated with a channel:

- 1 Start at the Channel Administration window (Figure 78 on page 72) and select the channel you want to change using the **▲** or **▼** keys or by typing the channel number.
- 2 Press **F8** (Chg-Keys).
The system displays the alternate set of function keys.
- 3 Press **F2** (Change).
The system displays the Change A Channel Entry Window (Figure 80).

Figure 80. Change A Channel Entry Window



A screenshot of a terminal window titled "Change A Channel Entry". The window contains four input fields: "Channel: _____", "Extension: _____", "Split/Agent: _____", and "Password: - _____". The cursor is positioned at the end of the "Channel" field.

- 4 Enter the tip/ring or LST1 channel number extension you want to change in the **Channel:** field.
- 5 Enter the new switch extension number in the **Extension:** field.

Note: The new extension number must be unique.

- 6 If the channel is an extension in an ACD split, enter the split number in the **Split/Agent:** field. If the channel is logged in as an Agent ID in an EAS environment, enter the Agent ID in the **Split/Agent:** field.
- 7 If the channel is used for an Agent ID, enter the password of the corresponding Agent ID on the DEFINITY switch in the **Password:** field.

8 Press F3 (Save).

The system changes the switch extension of the selected channel and returns to the Channel Administration window.

9 Complete the procedure in Logging In a Channel on page 75.**Removing a Channel Entry**

Note: The channel must be logged out before you can remove it. If the channel is not logged out, complete the procedure in Logging Out a Channel on page 75.

To remove a channel entry:

1 Start at the Channel Administration window (Figure 78 on page 72) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.**2 Press F8 (Chg-Keys).**

The system displays the alternate function keys.

3 Press F3 (Remove).

The system displays a confirmation screen asking you if you want to remove the selected item.

4 Press ENTER.

The system unassigns the selected channel and returns to the Channel Administration window (Figure 78 on page 72).

Logging In a Channel

Note: Once the tip/ring or LST1 channels are logged in, no manual intervention is required to log the channels back in during recovery (for example, switch or voice system reboot) or upon restarting the voice system.

To log in a channel:

1 Start at the Channel Administration window (Figure 78 on page 72) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.**2 Press F8 (Chg-Keys).**

The system displays the alternate set of function keys.

3 Press F4 (Login).

The system logs in the selected channel to the ACD and returns to the Channel Administration window.

Logging Out a Channel

To log out a channel:

1 Start at the Channel Administration window (Figure 78 on page 72) and select the channel you want to change using the ▲ or ▼ keys or by typing the channel number.**2 Press F8 (Chg-Keys).**

The system displays the alternate set of function keys.

3 Press F5 (Logout).

The system unassigns the selected channel from the ACD and returns to the Channel Administration window.

Domain Administration

Use the Domain Administration window to:

- Add a domain to the switch domain set.
- Change a voice system domain assignment.
- Remove a domain from the switch domain set.
- Enable a domain; place the domain in service.
- Disable a domain; take a domain out of service.

Once the domain is placed in service, no manual intervention is required to bring the domain back into service during recovery (for example, switch or voice system reboot) or upon restarting the voice system.

By default, the voice system updates the Domain Administration window every 2 seconds.

To access the Domain Administration window:

- 1 Start at the ASAI Administration Menu (Figure 77 on page 71) and select:

```
> Domain Administration
```

The system displays the Domain Administration window (Figure 81).

Figure 81. Domain Administration Window

Domain Administration				
NAME	TYPE	EXT	SERVICE	STATUS
trana	ACD	4805	VIS	in serv
tranb	CTL	ANY	bank_s1_2b	initing
tranc	RTE	3504	bank_s2_1c	initing
trand	RTE	3506	bank_s2_1c	initing

Table 18 on page 77 describes the columns in this window.

Table 18. Description of Columns in Domain Administration Window

Column Name	Description
NAME	Domain name
TYPE	Domain type for the voice system; must be one of the following: • ACD — Monitors calls to the corresponding split domain on the switch. • VDN — Monitors calls to the corresponding VDN domain on the switch. • CTL — Monitors calls transferred away from the voice system (by a voice script using the A_Tran action) to destinations on the switch that are not monitored by an ACD or VDN domain (for example, monitor calls transferred using A_Tran to miscellaneous extensions). CTL domains are defined only by the voice system and do not correspond to any domain on the switch. • RTE — Accepts Route Requests from the switch. RTE domains are defined by only the voice system and do not correspond to any domain on the switch.
EXT	Extension; must enter any for calls transferred to any destination not already monitored by another domain, or one of the following, depending on the domain type: • ACD switch extension — Corresponding ACD split switch extension being monitored. • VDN switch extension — Corresponding VDN switch extension being monitored. • CTL extension — Extension for which calls are being transferred by a voice system channel using the A_Tran action and processed by the CTL domain. Extension must correspond to an extension used in the Destination field of the A_Tran action used by an application assigned to the ASAI channel. • RTE extension — Extension that limits the processing of route requests based on the extension that was dialed. Only route requests for the specified extension are processed.
1 of 2	

Table 18. Description of Columns in Domain Administration Window

Column Name	Description
SERVICE	Application name that services the domain, and can be assigned to any type of domain (ACD, VDN, and so on). SERVICE can be one of the following, depending on the domain type: - ACD/VDN domains — If the application, ACD or VDN, directs calls to the voice system tip/ring or LST1 channel, must enter the special service VIS. VIS service provides the ability to start voice scripts on the tip/ring channels based on the DNIS. It also provides the ability for those voice scripts to use the A_Callinfo and A_Tran action. The service can be assigned to multiple ACD or VDN domains. All channels that are administered as agents must be members of at least one ACD or VDN domain. - CTL domains — The SERVICE must be monitoring. See Chapter 3, "Adjunct/Switch Application Interface," in <i>CONVERSANT System Version 8.0 Communication Development</i>, 585-313-220, for more information. - RTE domains — The SERVICE must be routing. See Chapter 3, "Adjunct/Switch Application Interface," in <i>CONVERSANT System Version 8.0 Communication Development</i>, 585-313-220, for a more information.
STATUS	Domain maintenance state; one of the following: - broken (broken) — A virtual channel could not be allocated for the service assigned to this domain. - foos (facility out-of-service) — The ASAI digital link is not operating. - initing (initializing) — The service assigned to the domain is failing initialization. - inserv¹ (in service) — The domain is ready to receive call information from the switch. - manoos (manual out-of-service) — The domain has not been placed into service. - netoos (network out-of-service) — The ASAI link is up, but attempts to receive call information from the switch are failing.

2 of 2

¹ The default application is invoked if a voice system domain is in any state but inserv. If the domain for the voice system agent (tip/ring or LST1) line is disabled, the voice system still takes calls on these lines.

Adding a Domain

The system supports 64 domains or fewer.

To add a domain:

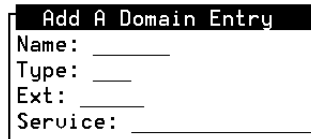
- 1 Start at the Domain Administration window (Figure 81 on page 76) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F1** (Add).

The system displays the Add A Domain Entry window (Figure 82).

Figure 82. Add A Domain Entry Window



- 3 Enter the domain name in the Name: field. This is the name that has been given to the ACD on the PBX.
- 4 Enter the domain type in the Type: field or press **F2** (Choices) to select from a menu. Valid choices are ACD, VDN, CTL, or RTE.
- 5 Enter the switch extension of the domain in the Ext: field.
- 6 Enter the service for the domain in the Service: field or press **F2** (Choices) to select from a menu. This may be any application that was designed and developed for use with the ASAI feature.
- 7 Press **F3** (Save).

The system adds the new domain and returns to the Domain Administration window.

- 8 Complete the procedure in Enabling a Domain on page 80.

Changing a Domain

Note: The domain must be disabled before you can change it. If it is not disabled, complete the procedure Disabling a Domain on page 80.

To change a domain:

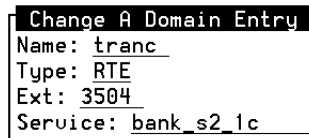
- 1 Start at the Domain Administration window (Figure 81 on page 76) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F2** (Change).

The system displays the Change A Domain Entry Window (Figure 83).

Figure 83. Change A Domain Entry Window



- 3 Enter the domain type in the Type: field or press **F2** (Choices) to select from a menu. Valid entries are ACD, VDN, CTL, or RTE.
- 4 Enter the switch extension number assigned to the ACD split in the Ext: field.
- 5 Enter the service that specifies how the calls offered to the domain are handled by the voice system in the Service: field or press **F2** (Choices) to select from a menu. This may be any application that was designed and developed for use with the ASAI feature.
- 6 Press **F3** (Save).

The system makes the specified changes to the domain and returns to the Domain Administration window.

- 7 Complete the procedure in Enabling a Domain.

Removing a Domain

Note: The domain must be disabled before you can remove it. If it is not disabled, complete the procedure in Disabling a Domain on page 80.

To remove a domain:

- 1 Start at the Domain Administration window (Figure 81 on page 76) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F3** (Remove).

The system displays a confirmation screen asking you if you want to remove the selected item.

- 3 Press **ENTER**.

The system removes the selected domain and returns to the Domain Administration window.

Enabling a Domain

To enable a domain:

- 1 Start at the Domain Administration window (Figure 81 on page 76) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F4** (Enable).

The system changes the Status: field to "inserv".

Disabling a Domain

To take a domain out of service:

- 1 Start at the Domain Administration window (Figure 81 on page 76) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F5** (Disable).

The system changes the Status: field to "manoo".

Parameter Administration

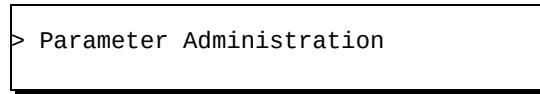
Use Parameter Administration menu option to administer:

- “Connect Event” reporting to the **A_Event** variable in an application assigned to an ACD, VDN, or CTL domain
- Details displayed with the **trace dip7** command to monitor messages and events processed by the ASAI feature

Note: See Trace Service on page 205 in Chapter 8, Common Administration for more information on **trace**.

To set ASAI parameters regarding connect event reporting and the level of trace detail:

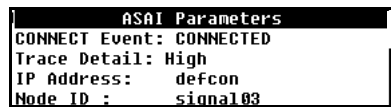
- 1 Start at the ASAI Administration menu (Figure 77 on page 71) and select:



```
> Parameter Administration
```

The system displays the ASAI Parameters window (Figure 84).

Figure 84. ASAI Parameters Window



```
ASAI Parameters
CONNECT Event: CONNECTED
Trace Detail: High
IP Address: defcon
Node ID : signal03
```

- 2 Enter either **Connected** or **Alerting** in the **CONNECT Event:** field to specify when the Connect event is reported to the **A_Event** action in a script assigned to an ACD, VDN, or CTL type domain. Or, you may press **F2** (Choices) to select from a menu. The default is **Connected**.
- 3 Enter **Low**, **Normal**, or **High** in the **Trace Detail:** field to specify the amount of trace detail to display. Or, you may press **F2** (Choices) to select from a menu. Table 19 on page 81 summarizes the **trace** command settings and the level of detail achieved with each one.

Table 19. Trace Detail Display Settings

Setting	Display
Low	Information displayed about ASAI error and warning conditions
Normal	All information displayed by the Low setting, plus ASAI script action (that is, A_Callinfo, A_Tran, A_Event, and A_RouteSel)
High	All information displayed by the Low and Normal settings, plus call event descriptions received from the PBX

- 4 Enter the IP address or host name of the MAPD in the **IP Address** field.

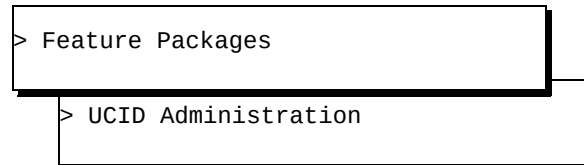
- 5 Enter Node ID of the CONVERSANT system as administered on the MAPD in the Node ID field. This field contain the value from **signal01** to **signal08**.
- 6 Press **F3** (Save).
The system displays the level of trace detail specified.
- 7 Press **F6** (Cancel) repeatedly to return to the ASAI Administration menu (Figure 77 on page 71).

UCID Administration

The UCID Administration screen allows you to select the UCID network node identifier for a CONVERSANT system.

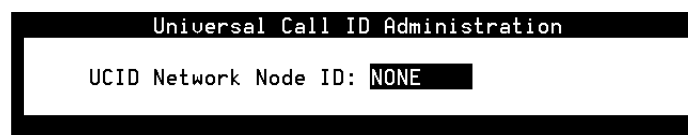
To access the UCID Administration menu:

- 1 At the Console Login: prompt, enter **root**
The system prompts you for a password.
- 2 Enter your root password.
The system displays the system prompt #.
- 3 Enter **cvis_menu**
The system displays the Voice System Administration menu (Figure 18 on page 13).
- 4 Select:



The system displays the Universal Call ID Administration screen (Figure 85).

Figure 85. Universal Call ID Administration Screen



5 Enter a UCID Network Node ID. This value is used to uniquely identify this CONVERSANT system within a DEFINITY Enterprise Communication System (ECS) Call Center. Each node (DEFINITY ECS, CONVERSANT, and so on) must have a distinct UCID Network Node ID. Valid values are:

- ~ NONE — This node is not administered with a node number
- ~ *nnnnn* — A number between 1 and 32767

Note: The recommended range for CONVERSANT systems is 10000 to 19999.

6 Press **F3** (Save) to save the values.

7 Press **F3** (Cancel) twice to exit the screen and return to the Voice System Administration menu.

Note: In order for changes to take affect for UCID administration, you must first stop and start the voice system. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration.

5 Switch Interface Administration

Overview

The Switch Interfaces menu lets you to define the interaction between the CONVERSANT system and the switches connected to it by allowing you to modify switch interface parameters and protocol options for both analog and digital interfaces.

This chapter provides procedural information and reference information for administering the supported analog and digital switch interfaces.

Note: Analog interfaces are not currently supported on the UCS 1000.

Switch Interfaces Hardware

A voice system can utilize analog and digital interfaces in the same platform. The circuit cards that provide analog and digital interfaces have a unique card number (Card 1, Card 2...Card *n*) that corresponds to the card slot number.

For information about configuration limits, see Chapter 6, "Requirements and Specifications," of *CONVERSANT System Version 8.0 System Description*, 585-313-219.

Once a card number is determined and assigned, this card number is used in the fields and windows discussed in this chapter.

Analog Interfaces

Analog interfaces are administered on a system-wide basis; that is, analog parameters apply to all analog circuit cards installed in the system.

The analog interfaces currently supports the following switches:

- DEFINITY System 25, System 75, and System 85
- Dimension
- MERLIN LEGEND
- System 25
- Nortel Meridian M1

Advanced features for some switches (for example, message waiting lamp) are available with the purchase of optional switch integration packages.

To administer the analog interface, you may specify several parameters or accept the default values. Default values and parameters are discussed later in this chapter.

Digital Interfaces

Digital interfaces are administered on a card-by-card basis; that is, digital parameters apply to individual digital circuit cards installed in the system.

The digital interfaces currently support the digital circuit cards and protocols described in Table 20.

Table 20. Card Types and Their Available Protocols

Protocol	Circuit Card Supported
T1 A/B Robbed-bit E&M	T1
Loop Start FXS	T1 and E1
ISDN-Primary Rate Interface, ETSI PRI, National ISDN (with BCAS and without BCAS) and Nortel	T1 and E1
Digital R2 MFC — Mexico, Brazil, Argentina, and ITU	E1
E1 CAS P2 — Australia on the DEFINITY switch	E1
E1 CAS P2 — Australia Network	E1

Administering the digital interface consists of selecting a protocol based on the circuit card type (Table 20) and either accepting the default values as displayed, or changing the default values. If the default parameters are acceptable, you do not need to make any changes and can simply save the default values.

Accessing the Switch Interfaces Menu

To access the Switch Interfaces menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter the root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

The system displays the Voice System Administration menu (Figure 18 on page 13).

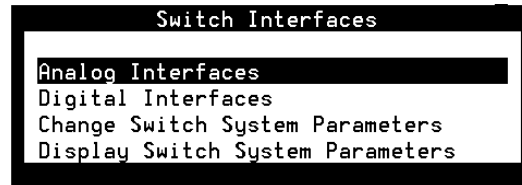
- 4 Select

```
> Switch Interfaces
```

5 Press **ENTER**.

The system displays the Switch Interfaces menu (Figure 86).

Figure 86. Sample Switch Interfaces Menu



The Switch Interfaces screen may offer two choices: Analog Interfaces (tip/ring) and Digital Interfaces (E1/T1), depending on the circuit cards and software drivers installed in the system.

Analog Interfaces

Note: Analog interfaces are currently not supported on the UCS 1000.

Use the Analog Interfaces window to define the analog interface parameters between the voice system and the switch. If you have not previously established your own parameter settings for analog interfaces, the default values appear in the window.

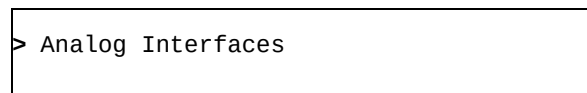
If you do not have any analog (tip/ring) circuit cards installed in your platform, the Analog Interfaces selection does not appear in the Switch Interfaces menu.

Note: The term *PBX* (private branch exchange) is used in some of the windows and menus discussed in the following sections. This term is used synonymously with the term *switch*.

Accessing the Analog Interfaces Window

To access the Analog Interfaces window:

- 1 Start at the Switch Interfaces menu (Figure 86) and select:



The system displays the Analog Interfaces window (Figure 87 on page 88).

Figure 87. Analog Interfaces Window

Analog Interfaces	
default	
Switch Hook Flash Duration:	500
Wink Disconnect Interval:	300
Type of Signaling:	TT
Incoming Speech Volume:	4000
Outgoing Speech Volume:	1000
Outgoing Text Volume:	4000
Dial Tone Training:	Yes
Blind Transfer Actions	
To Initiate Transfer:	FW
To Complete Transfer:	H
Intelligent Transfer Actions	
To Initiate Transfer:	FW
To Complete Transfer:	H
To Reconnect Caller	
No Answer:	FPF
Busy:	FPF

Setting Default Analog Interfaces Parameters

To set the default analog switch interface parameters:

- 1 Start at the Analog Interfaces window (Figure 87) and press **F8** (Chg-Keys).

The system displays the alternate set of function keys.

- 2 Press **F1** (Defaults).

The system displays the PBX Defaults menu (Figure 88).

Figure 88. PBX Defaults Menu

PBX Defaults
Other Switch/PBX/ACD
AT&T Merlin Legend
AT&T Dimension
AT&T System 25
AT&T System 75
AT&T System 85
Definity(Brasil)
default
>Definity(US)
Current Settings

The switches listed depend on the switch interface software packages installed in your system.

- 3 Select the desired switch from the menu.

The system displays the Analog Interfaces window (Figure 87) window showing the default values for the selected switch.

Note: If you select Other Switch/PBX/ACD, the values are the same as those under "AT&T System 75".

If you select Merlin Legend, you must administer the lines connected to the voice system with "outside line" dial tone. See "Inside Dial Tone" in *MERLIN LEGEND Communications System Installation, Programming, and Maintenance* for additional information.

If you have a Nortel Meridian M1 switch, select **Definity(US)**.

Table 21 shows the values that are displayed in the Analog Interfaces when a particular switch is selected.

Note: A key to the abbreviations used follows the table.

- 4 (Optional) Make changes to any of the default switch value fields in the Analog Interfaces window to meet your requirements. See Table 21 for information about the default values.
- 5 Press **F3** (Save).
The system saves the information as default values.
- 6 Stop and start the voice system if the current settings were modified so that the changes take effect. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration.
- 7 Reinstall any scripts that use transfer sequences.

Table 21. Default Parameter Values for Analog Switch Interfaces

Parameter	Switch Name					
	AT&T Dimension	Merlin Legend	AT&T System 25	AT&T System 75	AT&T System 85	DEFINITY ECS and Nortel Meridian M1
Switch Hook Flash Duration:	700 msec	500 msec	700 msec	500 msec	600 msec	500 msec
Wink Disconnect Interval:	300 msec	300 msec	300 msec	300 msec	300 msec	300 msec
Type of Signaling:	TT	TT	TT	TT	TT	TT
Incoming Speech Volume:	4000 dB	4000 dB	4000 dB	4000 dB	4000 dB	4000 dB
1 of 2						

Table 21. Default Parameter Values for Analog Switch Interfaces

Parameter	Switch Name					
	AT&T Dimension	Merlin Legend	AT&T System 25	AT&T System 75	AT&T System 85	DEFINITY ECS and Nortel Meridian M1
Outgoing Speech Volume:	1000 dB	1000 dB	1000 dB	1000 dB	1000 dB	1000 dB
Outgoing Text Volume: ¹	4000 dB	4000 dB	4000 dB	4000 dB	4000 dB	4000 dB
Dial-Tone Training:	Yes	Yes	Yes	Yes	Yes	Yes
Blind Transfer Actions						
• To Initiate Transfer:	FW	FW	FW	FW	FW	FW
• To Complete Transfer:	H	H	H	H	H	H
Intelligent Transfer Actions						
• To Initiate Transfer:	FW	FW	FW	FW	FW	FW
• To Complete Transfer:	H	H	H	H	H	H
To Reconnect Caller						
• No Answer:	FP	FPF	FPF	FPF ²	FP ³	FPF ²
• Busy:	FP	FPF	FP	FPF ²	FP ³	FPF ²

2 of 2

1 Appears only when Text-to Speech is installed.

2 Values represented support DEFINITY G3 switch.

3 Values represented support DEFINITY G2 switch.

Table Key:

- TT = touchtone signaling
- DP = dial-pulse signaling
- F = switch hook flash; the valid range for all switches is 0–1550 milliseconds
- W = wait for dial tone; if there is no dial tone after 5 seconds, an error conditions exists
- P = pause for 3 seconds
- H = hang-up (onhook)

Setting Analog Interfaces Parameters

To set the parameters in the Analog Interface window if the default parameters described above do not meet your switch interface needs.

Note: All selected options must match the corresponding options on the switch (either PBX or network) to avoid service problems.

Setting Standard Analog Interface Parameters

To set parameters in the Analog Interface window:

- 1 Start at the Switch Interfaces menu (Figure 86 on page 87) and select



The system displays the Analog Interfaces window (Figure 87 on page 88).

- 2 Enter the length of flash duration in the Switch Hook Flash Duration: field. Valid values are 0–1550 milliseconds.

Note: Flash is a short, on-hook interval that is recognized by many switches as a request for special services, including hold or transfer.

- 3 Enter the minimum amount of time needed for a loop current interruption to occur in the Wink Disconnect Interval: field. Valid values are 80–800 milliseconds. The default is 300.
- 4 Enter the type of address signaling for outbound dialing in the Type of Signaling: field, or press **F2** (Choices) to select from a menu. Valid values are **TT** (touchtone signaling) or **DP** (dial-pulse signaling). The default is **TT**.
- 5 Enter the volume adjustment for all incoming speech on analog circuit cards in the Incoming Speech Volume: field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 4000.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the Incoming Speech Volume: field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, and so on.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, and so on.

Table 22 shows the relationship between the volume number and the actual change in volume expressed in decibels.

Table 22. Incoming Speech Volume Parameter Affect on Decibels

Parameter Setting	Gain in Decibels
500	-6
707	-3
1000	0
1414	+3
2000	+6
2828	+9
4000 ¹	+12

¹ The default value.

- 6** Enter the volume adjustment for all outgoing speech played on analog circuit cards in the **Outgoing Speech Volume:** field. Valid values are 0–32000. The default value for analog (tip/ring) circuit cards is 1000.

The value in this field and its effect are the same as for the **Incoming Speech Volume:** field. Any adjustment is applied to recorded speech as it is processed for playback.

- 7** (Optional) Enter the outgoing volume of speech in the **Outgoing Text Volume:** field. Valid values are 0–32000 (-30 to +30 dB). The default value is 4000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

- 8** Enter **Yes** or **No** in the **Dial Tone Training:** field to specify system training for existing dial tones. The default is **Yes**.

If this field is set to “Yes,” dial tone training is performed on each analog circuit card when the voice system is started or the state of the circuit card is changed to “inserv.” If the field is set to “No,” default dial-tone recognition parameters are used and no training is performed.

If a switch integration package is installed on your system, the package may specify that the default **Dial Tone Training:** field cannot be changed. If changing the field is not allowed, you receive an error message when you attempt to save your settings.

Blind Transfer Actions

- 9** Enter one or more code letters from Table 23 on page 93 in the **To Initiate Transfer:** field.

If you are using a DEFINITY switch with tip/ring circuit cards, FW is the default.

Intelligent Transfer Actions

- 10** Enter one or more code letters from Table 23 in the To Complete Transfer : field.

If you are using a DEFINITY switch with tip/ring circuit cards, H is the default.

- 11** Enter one or more code letters from Table 23 in the To Initiate Transfer : field.

If you are using a DEFINITY switch with tip/ring circuit cards, FW is the default.

- 12** Enter one or more code letters from Table 23 in the To Complete Transfer : field.

If you are using a DEFINITY switch with tip/ring circuit cards, H is the default.

- 13** Enter one or more code letters from Table 23 in the No Answer : field.

If you are using a DEFINITY switch with tip/ring circuit cards, FPF is the default.

- 14** Enter one or more code letters from Table 23 in the Busy : field.

If you are using a DEFINITY switch with tip/ring circuit cards, FPF is the default.

- 15** Press **F3** (Save).

The system displays the following message:

In order for the Analog Interface Parameters to be effective, execute Stop Voice System. For changes to Transfer Sequences to be effective, any installed applications must be reinstalled.

Press ENTER to continue.

- 16** Press **ENTER**.

The system saves the specified analog switch parameters.

Table 23. Transfer Code Sequences Defined

Code Letter	Description
F	Switch hook flash
W	Wait for dial tone
P	Pause (waits for approximately 3 seconds)
0-9, #, * (any touchtone digit)	Transmit that touchtone digit to the PBX
H	Hang up

Printing Analog Interface Information

To print analog interface information:

- 1 Start at the Analog Interfaces window (Figure 87 on page 88) and press **F8** (Chg-Keys).

The system displays the alternate set of function keys.

- 2 Press **F6** (Print).

The system prints the selected analog interface information.

Note: This information does not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

Non-U.S. Analog Switch Integration

Currently, several international switch integration packages are available for the voice system. When a non-U.S. switch integration package is installed in the system, it includes the following packages:

- *Country_name* DEFINITY switch integration package
- *Country_name* Public Telephone Network switch integration package

These choices appear in the PBX Defaults menu (Figure 88 on page 88) if these packages are installed on the system. Select the DEFINITY switch choice for the country when you are connecting the voice system to a DEFINITY switch or select the telephone network package for that country if you are connecting the voice system to the public switch network. The differences in these two packages are in internal configuration.

To find out the countries for which switch integration packages are available, contact the International Technical Assistance Center (ITAC) at 800-538-4666.

Country-Specific Switch Packages

See Country-Specific Switch Packages on page 427 in Appendix B, Country Switch Packages for switch package parameters, and country switch package supported call progress tones.

For all countries, the following information applies:

- S/N Ratio is 55 dB
- Twist is +3 (dB)
- Frequency Deviation is +/- 3 Hz

Digital Interfaces

Administering the digital interfaces consists of selecting a protocol based on the circuit card type, and either accepting the default values as displayed, or changing the default values. If the default parameters are acceptable, you do not need to make any changes and can simply save the default values.

Accessing the Digital Interfaces Menu

The Digital Interfaces menu displays all digital protocols installed on your system.

If there are no E1/T1 circuit cards installed in your platform, the Digital Interfaces selection does not appear in the Switch Interfaces menu.

Note: All selected options must match the corresponding options on the switch (PBX or network) to avoid service problems.

To access the Digital Interfaces menu:

- 1 Start at the Switch Interfaces menu (Figure 86 on page 87) and select

```
> Digital Interfaces
```

The system displays the Digital Interfaces menu (Figure 89).

Figure 89. Digital Interfaces Menu



Note: Figure 89 does not display all currently supported digital protocols. The specific digital protocol packages must be installed before it is displayed on this menu.

From this menu, you can either display the current digital assignments or select the protocol that you want to administer. Each item in the menu is described in its own section.

Displaying Digital Interface Assignments

The Display Digital Interface Assignments window displays the E1/T1 circuit cards installed in the voice system and the function to which each is assigned.

To display the installed E1/T1 circuit cards and their digital protocol assignments:

- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select:

```
> Display Assignments
```

The system displays the Display Digital Interface Assignments window (Figure 90).

Figure 90. Sample Display Digital Interface Assignments Screen

Display Digital Interface Assignments	
CARD	PROTOCOL
0	Digital R2 MFC - Mexico
1	Digital R2 MFC - Mexico
2	Line Side DEFINITY

By default, a circuit card is marked unassigned. A protocol must be installed on the voice system before it can be assigned to an E1/T1 card (CWB21, formerly CWB2).

The CWB21 can operate as either a T1 or E1 circuit card. See "Settings for Optional Circuit Cards," in the "Installing or Replacing Circuit Cards" chapter in the maintenance book for your platform for more information on configuring the E1/T1 circuit card.

Supported Digital Protocol Parameters

Table 24 on page 97 and Table 25 on page 98 show the valid parameters and default values for digital protocols T1 and E1, respectively. The procedures in this section detail each protocol and how to set the parameter values for each. Refer to these table as you set the parameters for your protocol.

Table 24. Valid Parameter and Default Values for T1 Digital Protocols

Field Name	Valid Parameter Values	Protocol Name			
		T1 A/B Robbed-Bit E&M Default	Loop Start	Ground Start	PRI
Type	AT&T, National, National BCAS, Nortel, ETSI	—	—	—	AT&T
Framing/Line Coding	D4ZCS, ESFB8ZS	D4ZCS	D4ZCS	D4ZCS	ESFB8ZS
DTMF Muting	Yes, No	Yes	Yes	Yes	Yes
CSU Distance	0–666 ft	0–133 ft	0–133 ft	0–133 ft	0–133 ft
Wink Time	10–2550 msec	230 msec	—	—	—
Post Wink Time ¹	10–2550 msec	80 msec	—	—	—
Max. Digits in Called Number ¹	0–16	4	—	—	—
D-channel on This Card?	Yes, No	—	—	—	Yes
Wink Disconnect Interval ²	10–2550 msec	—	300 msec	300 msec	—
Switch Hook Flash Duration ²	10–2550 msec	—	700 msec	700 msec	—
Incoming Speech Volume	0–32000 (-30 to +30 dB)	1414	1414	1414	1414
Outgoing Speech Volume	0–32000 (-30 to +30 dB)	707	707	707	707
Outgoing Text Volume ³	0–32000 (-30 to +30 dB)	1000	1000	1000	1000

1 Applies only to T1 A/B Robbed-bit E&M protocol.

2 Applies only to Loop/Ground Start protocols.

3 Applies only when Text-to-Speech is installed.

Table 25. Valid Parameter and Default Values for E1 Digital Protocols

Field Name	Valid Parameter Value(s)	Protocol Name		
		E1 CAS Default	Loop Start/ Ground Start	E1 PRI
Type	AT&T, National, National BCAS, Nortel, ETSI	—	—	AT&T
Framing/ Line Coding	CEPTHDB3	CEPTHDB3	CEPTHDB3	CEPTHDB3
DTMF Muting	Yes, No	Yes	Yes	Yes
D-channel on This Card?	Yes, No	—	—	—
Incoming Speech Volume	0–32000 (-30 to +30 dB)	1414	1414	1414
Outgoing Speech Volume	0–32000 (-30 to +30 dB)	707	707	707
Outgoing Text Volume ¹	0–32000 (-30 to +30 dB)	1000	1000	1000
Idle Code	01010100	01010100	01010100	01010101
A-LAW or MU-LAW	A-LAW	A-LAW	A-LAW	A-LAW
CRC	Yes, No	Yes	No	Yes

1 Applies only when Text-to-Speech is installed.

FXS or Line Side Digital Protocols

The line side digital protocol set has been expanded. The protocol formerly called "Line Side T1 for Definity" is a standard loop start Foreign eXchange Station (FXS) protocol specified in the ANSI generic PBX requirements (ANSI TIA/EIA-464-B-1996, section 6.2.3). In addition to the loop start version of the protocol, a ground start version of the protocol (TIA/EIA-464-B-1996, section 6.2.4) is also provided. These two protocols are widely supported by PBXs, central office switches, and channel banks under names like "line side digital," "FXS," or "off premise station (OPS)." Purchase of the FXS digital feature provides both protocols. These protocols will work over digital cards configured as T1 or E1. Switches known to support either or both of the loop start and ground start FXS protocols include Avaya DEFINITY, Nortel Meridian, and Rockwell Spectrum.

This section describes how to set the parameters and assign circuit cards to support loop start and ground start FXS protocols for switch integration with the voice system.

Loop Start FXS

Accessing the Loop Start FXS Menu

To access the loop start FXS protocol:

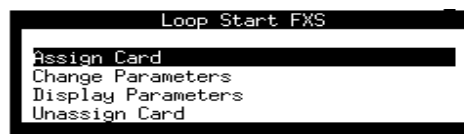
- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select



```
> Loop Start FXS
```

The system displays the Loop Start FXS menu (Figure 91).

Figure 91. Loop Start FXS Menu



Use the following procedures to assign/unassign the Loop Start FXS protocol to digital circuit cards, and administer switch interface parameters.

Assigning the Loop Start FXS Protocol to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be "unassigned." See the appropriate unassign procedure in this chapter for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manooos" state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

To assign the Loop Start FXS protocol to a T1 or E1 circuit card:

- 1 Start at the Loop Start FXS menu (Figure 91) and select

```
> Assign Card
```

The system displays the Assign Card: Loop Start FXS window (Figure 92 on page 100).

Figure 92. Assign Card: Loop Start FXS Window

```

Assign Card: Loop Start FXS
Card Number: 1
Country: U.S. & Canada
DTMF Muting: YES
Wink Disconnect Interval: 300 msec.
Switch Hook Flash Duration: 700 msec.
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707

Dial Tone Delay: 1000 msec.
CSU Distance: 0-133 ft.
Idle Code: 01010100
A-LAW or MU-LAW: A-LAW
CRC: NO
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 92. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card, either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Enter the name of the country in the Country: field, or press **F2** (Choices) to select from a menu.
- 4 Enter **Yes** to enable or **No** to disable in the DTMF Muting: field, or press **F2** (Choices) to select from a menu. **Yes** is the default.

Enter **Yes** to use dial-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touchtones. **Yes**, then turns on DTMF muting.

- 5 Enter the duration of the on-hook signal from the switch that indicates that the far end has hung up in the `Wink Disconnect Interval:` field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 300 milliseconds.
- 6 Enter the duration of the on-hook signal used to initiate a transfer in the `Switch Hook Flash Duration:` field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 700 milliseconds.
- 7 Enter the volume adjustment for all incoming speech on analog circuit cards in the `Incoming Speech Volume:` field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the `Incoming Speech Volume:` field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, and so on.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, and so on.

See Table 22 on page 92 for the relationship between the volume number and the actual change in volume expressed in decibels.

Note: The incoming speech volume value is set on a per-card basis for digital circuit cards, versus on a system-wide basis for analog circuit cards.

- 8 Enter the volume adjustment for all outgoing speech played on the circuit card in the `Outgoing Speech Volume:` field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for `Incoming Speech Volume:` field. Any adjustment is applied to recorded speech as it is processed for playback.

- 9 (Optional) Enter the outgoing volume of speech in the `Outgoing Text Volume:` field. Valid values are 0–32000 (–30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

- 10 Enter the time from when the flash ends until control is returned to the script in the `Dial Tone Delay:` field. This is the amount of delay to be inserted before digits are dialed when originating a call or a blind transfer. The delay should be long enough to handle the maximum dial tone delay anticipated from the switch. The delay is dependent on the configuration of the switch. Valid values are multiples of 20 ranging from 20–5100. The default is 1000 milliseconds. If you enter a value that is not a multiple of 20, the value is rounded down.

Note: For blind transfers to work with the loop start FXS protocol, you must set the `To Initiate Transfer:` field to “FW”, and the `To Complete Transfer:` field to “H,” in the Analog Interface window. See Setting Analog Interfaces Parameters on page 91 for more information.

U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for T1 and E1 using a CWB21 (formerly CWB2) digital circuit card. In order for Full CCA to work with the loop start FXS protocol, you must set both the `No Answer:` and `Busy:` fields to “FPF” in the Analog Interface window. See Setting Analog Interfaces Parameters on page 91 for more information.

- 11 (T1 only) Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the `CSU Distance:` field, or press **F2** (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.



CAUTION:

The `Idle Code:`, `A-LAW or MU-LAW:`, and `CRC:` field parameters must match the settings on the DEFINITY switch to avoid service complications.

- 12 (E1 only) Enter the 8-digit code generated when the channel is idle in the `Idle Code:` field.
- 13 (E1 only) Enter **A-LAW** or **MU-LAW** in the `A-LAW or MU-LAW:` field.
- 14 (E1 only) Enter **Yes** to enable the cyclical redundancy check error checking or **No** to disable the error checking in the `CRC:` field.
- 15 Press **F3** (Save).

The system saves the parameter information and assigns the loop start FXS protocol to the selected E1/T1 circuit card.

Changing the Loop Start FXS Parameters

The digital circuit card must first be assigned to the loop start FXS protocol to use this procedure. See Assigning the Loop Start FXS Protocol to Digital Circuit Cards on page 99, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

To change the loop start FXS parameters:

- 1 Start at the Loop Start FXS menu (Figure 91 on page 99) and select

```
> Change Parameters
```

The system displays the Change Parameters: Loop Start FXS window (Figure 93).

Figure 93. Change Parameters: Loop Start FXS Window

```

Change Parameters: Loop Start FXS

Card Number: [redacted]
Country: [redacted]
DTMF Muting: [redacted]
Wink Disconnect Interval: [redacted] msec.
Switch Hook Flash Duration: [redacted] msec.
Incoming Speech Volume: [redacted]
Outgoing Speech Volume: [redacted]
Dial Tone Delay [redacted] msec.
CSU Distance: [redacted] ft.
Idle Code: [redacted]
A-LAW or MU-LAW: [redacted]
CRC: [redacted]

```

- 2 Enter the circuit card number in the Card Number : field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

The Card Number : field is blank in Figure 93. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card, either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

~ CSU Distance:

- 3 Change any of the parameters described in Assigning the Loop Start FXS Protocol to Digital Circuit Cards on page 99.

- 4 Press F3 (Save).

The system saves the changed parameters.

Displaying the Loop Start FXS Parameters

The digital circuit card must first be assigned to the Loop Start FXS protocol to use this procedure. See Assigning the Loop Start FXS Protocol to Digital Circuit Cards on page 99, for more information about making the initial assignment.

To display the Loop Start FXS parameters of a digital circuit card:

- 1 Start at the Loop Start FXS menu (Figure 91 on page 99) and select

```
> Display Parameters
```

The system displays the Display Parameters: Loop Start FXS window (Figure 94).

Figure 94. Display Parameters: Loop Start Window

```

Display Parameters: Loop Start FXS

Card Number: 
Country:
DTMF Muting:
Wink Disconnect Interval:      msec.
Switch Hook Flash Duration:    msec.
Incoming Speech Volume:
Outgoing Speech Volume:

Dial Tone Delay                msec.
CSU Distance:                  ft.
Idle Code:
A-LAW or MU-LAW:
CRC:
  
```

- 2 Enter the circuit card number in the Card Number : field, or press F2 (Choices) to select from a menu.

The Card Number : field is blank in Figure 94. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

3 Press **F6** (Cancel) to return to the Loop Start FXS menu.

Unassigning the Loop Start FXS Protocol to Digital Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

To unassign the loop start FXS protocol:

1 Start at the Loop Start FXS menu (Figure 91 on page 99) and select

```
> Unassign Card
```

The system displays the Unassign Card: Loop Start FXS window (Figure 95).

Figure 95. Unassign Card: Loop Start FXS Window

```

Unassign Card: Loop Start FXS

Card Number: 
Country:
DTMF Muting:
Wink Disconnect Interval:      msec.
Switch Hook Flash Duration:    msec.
Incoming Speech Volume:
Outgoing Speech Volume:

Dial Tone Delay                msec.
CSU Distance:                  ft.
Idle Code:
A-LAW or MU-LAW:
CRC:
  
```

2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The Card Number: field is blank in Figure 95. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific fields are:

~ CSU Distance:

3 Press F3 (Save).

The system removes the Loop Start FXS assignment from the selected circuit card.

4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.

Ground Start FXS

Accessing the Ground Start FXS Menu

To access the ground start FXS protocol:

1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select

```
> Ground Start FXS
```

The system displays the Ground Start FXS menu (Figure 96).

Figure 96. Ground Start FXS Menu

```
Ground Start FXS
Assign Card
Change Parameters
Display Parameters
Unassign Card
```

Use the following procedures to assign/unassign the ground start FXS protocol to digital circuit cards, and administer switch interface parameters.

Assigning the Ground Start FXS Protocol to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See the appropriate unassign procedure in this chapter for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

To assign the ground start FXS protocol to a T1 or E1 circuit card:

1 Start at the Ground Start FXS menu (Figure 91 on page 99) and select

```
> Assign Card
```


The system displays the Assign Card: Ground Start FXS window (Figure 97).

Figure 97. Assign Card: Ground Start FXS Window

```

Assign Card: Ground Start FXS

Card Number: 
Country: U.S. & Canada
DTMF Muting: YES
Wink Disconnect Interval: 300 msec.
Switch Hook Flash Duration: 700 msec.
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707

Dial Tone Delay 1000 msec.
CSU Distance: 0-133 ft.
Idle Code: 11111111
A-LAW or MU-LAW: MU-LAW
CRC: NO
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 97. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card, either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Enter the name of the country in the Country: field, or press **F2** (Choices) to select from a menu.
- 4 Enter **Yes** to enable or **No** to disable in the DTMF Muting: field, or press **F2** (Choices) to select from a menu. **Yes** is the default.

Enter **Yes** to use dial-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touchtones. **Yes**, then turns on DTMF muting.

- 5 Press **TAB** to move to the Switch Hook Flash Duration: field
- 6 Enter the duration of the on-hook signal used to initiate a transfer in the Switch Hook Flash Duration: field. Valid values are multiples of 10 ranging from 10–2550. If you enter a value that is not a multiple of 10, the value is rounded down. The default is 700 milliseconds.

- 7 Enter the volume adjustment for all incoming speech on analog circuit cards in the `Incoming Speech Volume:` field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the `Incoming Speech Volume:` field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, and so on.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, and so on.

See Table 22 on page 92 for the relationship between the volume number and the actual change in volume expressed in decibels.

Note: The incoming speech volume value is set on a per-card basis for digital circuit cards, versus on a system-wide basis for analog circuit cards.

- 8 Enter the volume adjustment for all outgoing speech played on the circuit card in the `Outgoing Speech Volume:` field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for `Incoming Speech Volume:` field. Any adjustment is applied to recorded speech as it is processed for playback.

- 9 (Optional) Enter the outgoing volume of speech in the `Outgoing Text Volume:` field. Valid values are 0–32000 (–30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

- 10 Enter the time from when the flash ends until control is returned to the script in the `Dial Tone Delay:` field. This is the amount of delay to be inserted before digits are dialed when originating a call or a blind transfer. The delay should be long enough to handle the maximum dial tone delay anticipated from the switch. The delay is dependent on the configuration of the switch. Valid values are multiples of 20 ranging from 20–5100. The default is 1000 milliseconds. If you enter a value that is not a multiple of 20, the value is rounded down.

Note: For blind transfers to work with the ground start FXS protocol, you must set the `To Initiate Transfer:` field to "FW", and the `To Complete Transfer:` field to "H," in the Analog Interface window. See Setting Analog Interfaces Parameters on page 91 for more information.

U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for T1 and E1 using a CWB21 (formerly CWB2) digital circuit card. In order for Full CCA to work with the ground start FXS protocol, you must set both the `No Answer:` and `Busy:` fields to "FPF" in the Analog Interface window. See Setting Analog Interfaces Parameters on page 91 for more information.

- 11 (T1 only) Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the `CSU Distance:` field, or press **F2** (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

 CAUTION:

The `Idle Code:`, `A-LAW` or `MU-LAW:`, and `CRC:` field parameters must match the settings on the DEFINITY switch to avoid service complications.

- 12 (E1 only) Enter the 8-digit code generated when the channel is idle in the `Idle Code:` field.
- 13 (E1 only) Enter **A-LAW** or **MU-LAW** in the `A-LAW` or `MU-LAW:` field.
- 14 (E1 only) Enter **Yes** to enable the cyclical redundancy check error checking or **No** to disable the error checking in the `CRC:` field.
- 15 Press **F3** (Save).

The system saves the parameter information and assigns the loop start FXS protocol to the selected E1/T1 circuit card.

Changing the Ground Start FXS Parameters

The digital circuit card must first be assigned to the ground start FXS protocol to use this procedure. See Assigning the Ground Start FXS Protocol to Digital Circuit Cards on page 106, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must make the change on the switch as well.

To change the ground start FXS parameters:

- 1 Start at the Ground Start FXS menu (Figure 91 on page 99) and select

> Change Parameters

The system displays the Change Parameters: Ground Start FXS window (Figure 93 on page 103).

Figure 98. Change Parameters: Ground Start FXS Window

Change Parameters: Ground Start FXS

Card Number:	
Country:	
DTMF Muting:	
Wink Disconnect Interval:	msec.
Switch Hook Flash Duration:	msec.
Incoming Speech Volume:	
Outgoing Speech Volume:	
Dial Tone Delay	msec.
CSU Distance:	ft.
Idle Code:	
A-LAW or MU-LAW:	
CRC:	

- 2 Enter the circuit card number in the Card Number : field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.

The Card Number : field is blank in Figure 93 on page 103. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card, either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Change any of the parameters described in Assigning the Loop Start FXS Protocol to Digital Circuit Cards on page 99.
- 4 Press **F3** (Save).

The system saves the changed parameters.

Displaying the Ground Start FXS Parameters

The digital circuit card must first be assigned to the ground start FXS protocol to use this procedure. See Assigning the Ground Start FXS Protocol to Digital Circuit Cards on page 106, for more information about making the initial assignment.

To display the Ground Start FXS parameters of a digital circuit card:

- 1 Start at the Ground Start FXS menu (Figure 91 on page 99) and select

```
> Display Parameters
```

The system displays the Display Parameters: Ground Start FXS window (Figure 99).

Figure 99. Display Parameters: Ground Start Window

```
Display Parameters: Ground Start FXS
Card Number: [ ]
Country:
DTMF Muting:
Wink Disconnect Interval: msec.
Switch Hook Flash Duration: msec.
Incoming Speech Volume:
Outgoing Speech Volume:
Dial Tone Delay msec.
CSU Distance: ft.
Idle Code:
A-LAW or MU-LAW:
CRC:
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The Card Number: field is blank in Figure 99. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Press **F6** (Cancel) to return to the Ground Start FXS menu.

Unassigning the Ground Start FXS Protocol to Digital Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

To unassign the ground start FXS protocol:

- 1 Start at the Ground Start FXS menu (Figure 91 on page 99) and select

```
> Unassign Card
```

The system displays the Unassign Card: Ground Start FXS window (Figure 100).

Figure 100. Unassign Card: Ground Start FXS Window

```

Unassign Card: Ground Start FXS

Card Number: [ ]
Country:
DTMF Muting:
Wink Disconnect Interval: msec.
Switch Hook Flash Duration: msec.
Incoming Speech Volume:
Outgoing Speech Volume:

Dial Tone Delay msec.
CSU Distance: ft.
Idle Code:
A-LAW or MU-LAW:
CRC:
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The Card Number: field is blank in Figure 100. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific fields are:

- ~ CSU Distance:

- 3 Press **F3** (Save).

The system removes the Ground Start FXS assignment from the selected circuit card.

- 4 Press **F6** (Cancel) repeatedly to return to the Digital Interfaces menu.

E1 CAS

Several country-specific signaling protocols have been developed using E1-CAS. The system supports the E1 CAS for Australia, and R2-MFC for Mexico, Argentina, Brazil, and International Telecommunication Union (ITU).

E1 CAS P2 - Australian DEFINITY Protocol

Accessing the E1 CAS P2 - Australian DEFINITY Menu

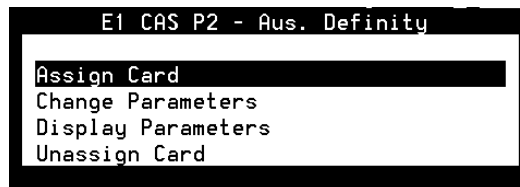
To access the E1 CAS P2 - Australian DEFINITY protocol menu:

- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select

```
> E1 CAS P2 - Australian DEFINITY
```

The system displays the E1 CAS P2 - Australian DEFINITY menu (Figure 101 on page 113).

Figure 101. E1 CAS P2 - Australian DEFINITY Menu



Use the following procedures to assign and unassign the E1 CAS P2 - Australian DEFINITY protocol to digital circuit cards, and administer the switch interface parameters.

Assigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be "unassigned." See Unassigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 117 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To assign the E1 CAS P2 - Australian DEFINITY protocol to an E1 circuit card:

- 1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 101 on page 113) and select

```
> Assign Card
```

The system displays the Assign Card: E1 CAS P2 - Australian DEFINITY window (Figure 102).

Figure 102. Assign Card: E1 CAS P2 - Australian DEFINITY Window

```

Assign Card: E1 CAS P2 - Aus. Definity

Card Number: 
Framing/Line Coding: CEPTHDB3
Idle Code: 01010100
DTMF Muting: YES
A-LAW or MU-LAW: A-LAW
CRC: YES
Max. Digits in Called Number: 4
Outgoing Addressing Type: DTMF
Incoming Addressing Type: DTMF
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707
Outgoing Text Volume: 1000
  
```

- 2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.
- 3 Enter the values as shown in Table 26 for each of the fields in the window.

Table 26. Parameter Values for Assign Card: E1 CAS P2 - Australian DEFINITY Window

Field Name	Enter Value
Framing/Line Coding:	CEPTHDB3
Idle Code:	01010100
DTMF Muting:	Yes
A-LAW or MU-LAW:	A-LAW
CRC:	Yes
Max. Digits in Called Number:	4
Outgoing Addressing Type:	DTMF
Incoming Addressing Type:	DTMF
1 of 2	

Table 26. Parameter Values for Assign Card: E1 CAS P2 - Australian DEFINITY Window

Field Name	Enter Value
Incoming Speech Volume:	1414
Outgoing Speech Volume:	707
2 of 2	

4 Press F3 (Save).

The system saves the parameter information and assigns the E1 CAS P2 - Australian DEFINITY protocol to the selected E1 circuit card.

Changing the E1 CAS P2 - Australian DEFINITY Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian DEFINITY protocol to use this procedure. See Assigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 113, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To change the E1 CAS P2 - Australian DEFINITY parameters:

- 1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 101 on page 113) and select

> Change Parameters

The system displays the Change Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 103 on page 116).

Figure 103. Change Parameters: E1 CAS P2 - Australian DEFINITY Window

Change Parameters: E1 CAS P2 - Aus. Definity

Card Number: ■

Framing/Line Coding: ■

Idle Code: ■

DTMF Muting: ■

A-LAW or MU-LAW: ■

CRC: ■

Max. Digits in Called Number: ■

Outgoing Addressing Type: ■

Incoming Addressing Type: ■

Incoming Speech Volume: ■

Outgoing Speech Volume: ■

Outgoing Text Volume: ■

- 2 Enter the circuit card number in the Card Number : field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.
- 3 Change any of the parameters described in Assigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 113.
- 4 Press **F3** (Save).

The system saves the changed parameters.

Displaying the E1 CAS P2 - Australian DEFINITY Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian DEFINITY protocol to use this procedure. See Assigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards on page 113, for more information about making the initial assignment.

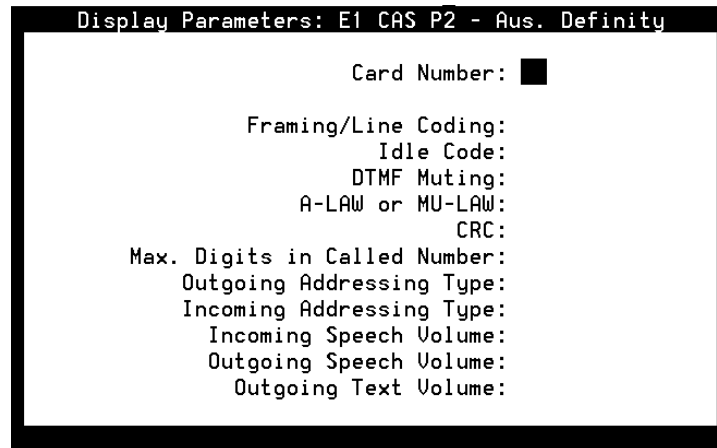
To display the E1 CAS P2 - Australian DEFINITY parameters of an E1 circuit card:

- 1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 101 on page 113) and select

> Display Parameters

The system displays the Display Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 104 on page 117).

Figure 104. Display Parameters: E1 CAS P2 - Australian DEFINITY Window



```
Display Parameters: E1 CAS P2 - Aus. Definity

Card Number: ■

Framing/Line Coding:
Idle Code:
DTMF Muting:
A-LAW or MU-LAW:
CRC:
Max. Digits in Called Number:
Outgoing Addressing Type:
Incoming Addressing Type:
Incoming Speech Volume:
Outgoing Speech Volume:
Outgoing Text Volume:
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The system displays the parameter values for the selected circuit card.

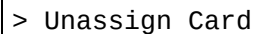
- 3 Press **F6** (Cancel) to return to the E1 CAS P2 - Australian DEFINITY menu.

Unassigning the E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

To unassign the E1 CAS P2 - Australian DEFINITY protocol:

- 1 Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 101 on page 113) and select



```
> Unassign Card
```

The system displays the Unassign Card: E1 CAS P2 - Australian DEFINITY window (Figure 105 on page 118).

Figure 105. Unassign Card: E1 CAS P2 - Australian DEFINITY Window

```

Unassign Card: E1 CAS P2 - Aus. Definity

Card Number: ■

Framing/Line Coding:
Idle Code:
DTMF Muting:
A-LAW or MU-LAW:
CRC:
Max. Digits in Called Number:
Outgoing Addressing Type:
Incoming Addressing Type:
Incoming Speech Volume:
Outgoing Speech Volume:
Outgoing Text Volume:

```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

- 3 Press **F3** (Save).

The system removes the E1 CAS P2 - Australian DEFINITY assignment from the selected circuit card.

- 4 Press **F6** (Cancel) repeatedly to return to the Digital Interfaces menu.

E1 CAS P2 - Australian Network Protocol

Accessing the E1 CAS P2 - Australian Network Menu

To access the E1 CAS P2 - Australian Network protocol menu:

- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select

```
> E1 CAS P2 - Australian Network
```

The system displays the E1 CAS P2 - Australian Network menu (Figure 106).

Figure 106. E1 CAS P2 - Australian Network Menu

```

E1 CAS P2 - Aus. Network

Assign Card
Change Parameters
Display Parameters
Unassign Card

```

Use the following procedures to assign and unassign the E1 CAS P2 - Australian Network protocol to digital circuit cards, and administer the switch interface parameters.

Assigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See Unassigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 123 for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manooos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To assign the E1 CAS P2 - Australian Network protocol to an E1 circuit card:

- 1 Start at the E1 CAS P2 - Australian Network menu (Figure 106 on page 118) and select

```
> Assign Card
```

The system displays the Assign Card: E1 CAS P2 - Australian Network window (Figure 107).

Figure 107. Assign Card: E1 CAS P2 - Australian Network Window

```

Assign Card: E1 CAS P2 - Aus. Network

Card Number: 
Framing/Line Coding: CEPTHDB3
Idle Code: 01010100
DTMF Muting: YES
A-LAW or MU-LAW: A-LAW
CRC: YES
Max. Digits in Called Number: 4
Outgoing Addressing Type: DTMF
Incoming Addressing Type: DTMF
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707
Outgoing Text Volume: 1000
  
```

- 2 Enter the circuit card number in the Card Number : field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.
- 3 Enter the values as shown in Table 27 on page 120 for each of the fields in the window.

Table 27. Parameter Values for Assign Card: E1 CAS P2 - Australian Network Window

Field Name	Enter Value
Framing/Line Coding:	CEPTHDB3
Idle Code:	01010100
DTMF Muting:	Yes
A-LAW or MU-LAW:	A-LAW
CRC:	Yes
Max. Digits in Called Number:	4
Outgoing Addressing Type:	DTMF
Incoming Addressing Type:	DTMF
Incoming Speech Volume:	1414
Outgoing Speech Volume:	707

4 Press F3 (Save).

The system saves the parameter information and assigns the E1 CAS P2 - Australian Network protocol to the selected E1 circuit card.

Changing the E1 CAS P2 - Australian Network Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian Network protocol to use this procedure. See Assigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 119, for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To change the E1 CAS P2 - Australian Network parameters:

- 1 Start at the E1 CAS P2 - Australian Network menu (Figure 106 on page 118) and select

> Change Parameters

The system displays the Change Parameters: E1 CAS P2 - Australian Network window (Figure 108).

Figure 108. Change Parameters: E1 CAS P2 - Australian Network Window

Change Parameters: E1 CAS P2 - Aus. Network

Card Number:	
Framing/Line Coding:	
Idle Code:	
DTMF Muting:	
A-LAW or MU-LAW:	
CRC:	
Max. Digits in Called Number:	
Outgoing Addressing Type:	
Incoming Addressing Type:	
Incoming Speech Volume:	
Outgoing Speech Volume:	
Outgoing Text Volume:	

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the current values for the circuit card number entered.
- 3 Change any of the parameters as described in Assigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 119.
- 4 Press **F3** (Save).

The system saves the changed parameters.

Displaying the E1 CAS P2 - Australian Network Parameters

The E1 circuit card must first be assigned to the E1 CAS P2 - Australian Network protocol to use this procedure. See Assigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards on page 119, for more information about making the initial assignment.

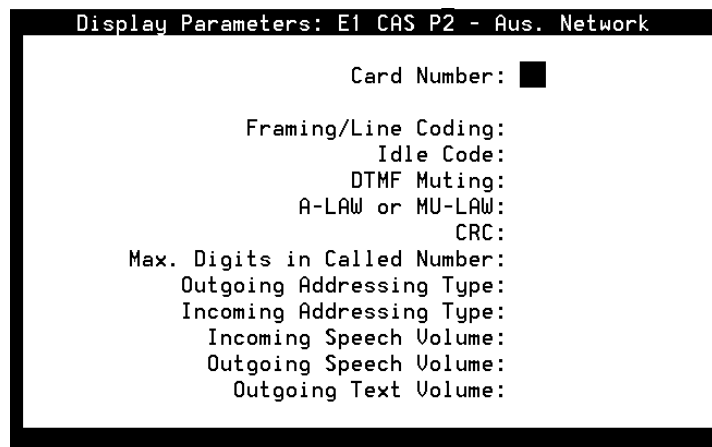
To display the E1 CAS P2 - Australian Network parameters of an E1 circuit card:

- 1 Start at the E1 CAS P2 - Australian Network menu (Figure 106 on page 118) and select

```
> Display Parameters
```

The system displays the Display Parameters: E1 CAS P2 - Australian Network window (Figure 109).

Figure 109. Display Parameters: E1 CAS P2 - Australian Network Window



- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The system displays the parameter values for the selected circuit card.

- 3 Press **F6** (Cancel) to return to the E1 CAS P2 - Australian Network menu.

Unassigning the E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

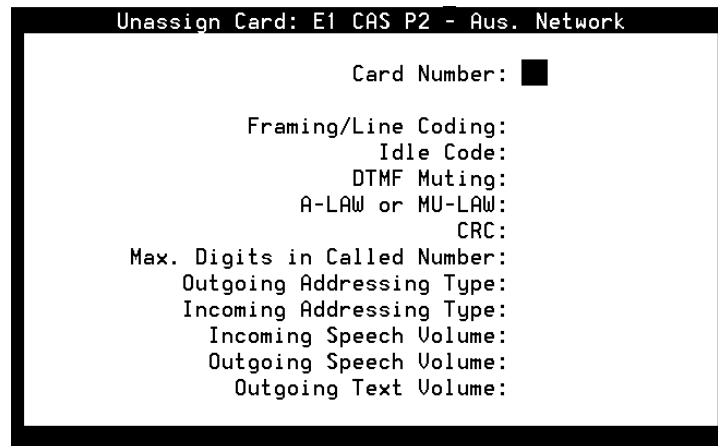
To unassign the E1 CAS P2 - Australian Network protocol:

- 1 Start at the E1 CAS P2 - Australian Network menu (Figure 106 on page 118) and select

> Unassign Card

The system displays the Unassign Card: E1 CAS P2 - Australian Network window (Figure 110).

Figure 110. Unassign Card: E1 CAS P2 - Australian Network Window



Unassign Card: E1 CAS P2 - Aus. Network

Card Number:

Framing/Line Coding:
Idle Code:
DTMF Muting:
A-LAW or MU-LAW:
CRC:
Max. Digits in Called Number:
Outgoing Addressing Type:
Incoming Addressing Type:
Incoming Speech Volume:
Outgoing Speech Volume:
Outgoing Text Volume:

- 2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

- 3 Press F3 (Save).

The system removes the E1 CAS P2 - Australian Network assignment from the selected circuit card.

- 4 Press F6 (Cancel) repeatedly to return to the Digital Interfaces menu.

T1 A/B Robbed-bit E&M Protocol

Make sure that the switch to which the system is connected is programmed with the following options:

- The T1 interface uses wink start robbed-bit E&M signaling on a link using D4 framing with zero code suppression (ZCS).
- The E1/T1 interface outputs dual tone multifrequency (DTMF) tones at 7 pulses per second when originating outbound calls and requires DTMF when taking inbound calls.

Accessing the T1 A/B Robbed-bit E&M Menu

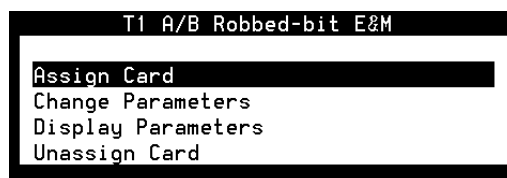
To access the T1 A/B Robbed-bit E&M menu:

- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select:

```
> T1 A/B Robbed-bit E&M
```

The system displays the T1 A/B Robbed-bit E&M menu (Figure 111).

Figure 111. T1 A/B Robbed-bit E&M Menu



Assigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be "unassigned". See Unassigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 129 below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To assign the T1 A/B Robbed-bit E&M protocol to a digital circuit card:

- 1 Start at the T1 A/B Robbed-bit E&M menu (Figure 111 on page 124) and select:

```
> Assign Card
```

The system displays the Assign Card: T1 A/B Robbed-bit E&M window (Figure 112).

Figure 112. Assign Card: T1 A/B Robbed-bit E&M Window

```

Assign Card: T1 A/B Robbed-bit E&M

Card Number: 
DTMF Muting: YES
CSU Distance: 0-133 ft.
Wink Time: 230 msec.
Post-Wink Delay: 80 msec.
Max. Digits in Called Number: 4
Outgoing Addressing Type: DTMF
Incoming Addressing Type: DTMF
Outgoing Signaling Type: WINK
Incoming Signaling Type: WINK
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707
Outgoing Text Volume: 1000
Idle Code: 11111111
A-LAW or MU-LAW: MU-LAW
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 112 on page 125. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).

- 3 Enter **Yes** to enable or **No** to disable in the DTMF Muting: field, or press **F2** (Choices) to select from a menu. **Yes** is the default.

Enter **Yes** to use dual-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touchtones.

Enter **No** when the interface is used for bridging; DTMF needs to pass through without muting.

- 4 Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the CSU Distance: field, or press **F2** (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.

- 5 Enter the desired wink time, in multiples of 10 between 10 and 2550 milliseconds in the `wink Time:` field. The default is 230. This specifies the length of the wink returned to the calling end on incoming calls.
- 6 Enter the desired post-wink delay, in multiples of 10 between 10 and 2550 milliseconds in the `Post-Wink Delay:` field. The default is 80 milliseconds.
- 7 Enter the number of digits, between 0 and 16, that the interface waits for when receiving an incoming call in the `Max. Digits in Called Number:` field. The default value is 4.
- 8 Enter addressing to be used with outgoing calls, either **DTMF**, **MF**, or **DECADIC** in the `Outgoing Addressing Type:` field. The default value is DTMF.
- 9 Enter addressing to be used with incoming calls, either **DTMF**, **MF**, or **DECADIC** in the `Incoming Addressing Type:` field. The default value is DTMF.
- 10 Enter signaling to be used with outgoing calls, either **Wink** or **Immediate** in the `Outgoing Signaling Type:` field. The default value is **Wink**.
- 11 Enter signaling to be used with incoming calls, either **Wink** or **Immediate** in the `Incoming Signaling Type:` field. The default value is **Wink**.
- 12 Enter the volume adjustment for all incoming speech on circuit cards in the `Incoming Speech Volume:` field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the `Incoming Speech Volume:` field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, and so on.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, and so on.

See Table 29 on page 141 for the relationship between the volume number and the actual change in volume expressed in decibels.

Note: The incoming speech volume value is set on a per-card basis for digital circuit cards, versus on a system-wide basis for analog circuit cards.

- 13** Enter the volume adjustment for all outgoing speech played on the circuit card in the `Outgoing Speech Volume:` field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for `Incoming Speech Volume:` field. Any adjustment is applied to recorded speech as it is processed for playback.

- 14** (Optional) Enter the outgoing volume of speech in the `Outgoing Text Volume:` field. Valid values are 0–32000 (-30 to +30 dB). The default value is 1000.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

- 15** Ignore the last two fields: `Idle Code:` and `A-LAW or MU-LAW:`.

- 16** Press **F3** (Save).

The system assigns the protocol to the selected circuit card.

Changing the T1 A/B Robbed-bit E&M Parameters

The circuit card must first be assigned to the T1 A/B Robbed-bit E&M protocol to use this procedure. See *Assigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards* on page 124 for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See *Equipment State* on page 50 in Chapter 3, *Voice System Administration*, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To change the T1 A/B Robbed-bit E&M parameters:

- 1 Start at the T1 A/B Robbed-bit E&M menu (Figure 111 on page 124) and select:

> Change Parameters

The system displays the Change Parameters: T1 A/B Robbed-bit E&M window (Figure 113).

Figure 113. Change Parameters: T1 A/B Robbed-bit E&M Window

Change Parameters: T1 A/B Robbed-bit E&M

Card Number:

DTMF Muting:

CSU Distance:

Wink Time:

Post-Wink Delay:

Max. Digits in Called Number:

Outgoing Addressing Type:

Incoming Addressing Type:

Outgoing Signaling Type:

Incoming Signaling Type:

Incoming Speech Volume:

Outgoing Speech Volume:

Outgoing Text Volume:

Idle Code:

A-LAW or MU-LAW:

- 2 Enter the circuit card number in the Card Number : field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number : field is blank in Figure 113. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).

- 3 Change any of the parameters as described in Assigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 124.
- 4 Press **F3** (Save).

The system changes the protocol parameters on the selected circuit card.

Displaying the T1 A/B Robbed-bit E&M Parameters

The circuit card must first be assigned to the T1 A/B Robbed-bit E&M protocol to use this procedure. See Assigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards on page 124 for more information about making the initial assignment.

To display the T1 A/B Robbed-bit E&M parameters:

- 1 Start at the T1 A/B Robbed-bit E&M menu (Figure 111 on page 124) and select:

```
> Display Parameters
```

The system displays the Display Parameters: T1 A/B Robbed-bit E&M window (Figure 114).

Figure 114. Display Parameters: T1 A/B Robbed-bit E&M Window

```

Display Parameters: T1 A/B Robbed-bit E&M

Card Number: 
DTMF Muting:
CSU Distance:      ft.
Wink Time:         msec.
Post-Wink Delay:   msec.
Max. Digits in Called Number:
Outgoing Addressing Type:
Incoming Addressing Type:
Outgoing Signaling Type:
Incoming Signaling Type:
Incoming Speech Volume:
Outgoing Speech Volume:
Outgoing Text Volume:
Idle Code:
A-LAW or MU-LAW:
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 114. After you enter the circuit card number, certain E1-only fields disappear (Idle Code:, A-LAW or MU-LAW:, and CRC:).

The system displays the parameter values for the selected circuit card.

- 3 Press **F6** (Cancel) to return to the T1 A/B Robbed-bit E&M menu.

Unassigning the T1 A/B Robbed-bit E&M to Digital Circuit Cards

Note: Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To unassign the T1 A/B Robbed-bit E&M protocol to a digital circuit card:

- 1 Start at the T1 A/B Robbed-bit E&M menu (Figure 111 on page 124) and select

```
> Unassign Card
```

The system displays the Unassign Card: T1 A/B Robbed-bit E&M window (Figure 115).

Figure 115. Unassign Card: T1 A/B Robbed-bit E&M Screen

```
Unassign Card: T1 A/B Robbed-bit E&M

Card Number: ■

DTMF Muting:
CSU Distance:      ft.
Wink Time:        msec.
Post-Wink Delay:  msec.
Max. Digits in Called Number:
Outgoing Addressing Type:
Incoming Addressing Type:
Outgoing Signaling Type:
Incoming Signaling Type:
Incoming Speech Volume:
Outgoing Speech Volume:
Outgoing Text Volume:
Idle Code:
A-LAW or MU-LAW:
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

- 3 Press **F3** (Save).

The system removes the T1 A/B Robbed-bit E&M assignment from the selected circuit card.

- 4 Press **F6** (Cancel) repeatedly to return to the Digital Interfaces menu.

PRI Protocols

CONVERSANT V8 supports the following PRI protocols for E1 and T1 circuit cards:

- National (with and without BCAS)
- AT&T
- ETSI
- Nortel

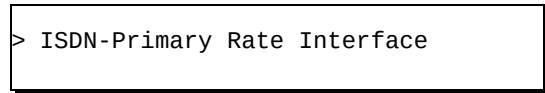
Note: The screens in this section apply to all PRI protocols, even though the titles of screens only display ISDN-PRI Layer 1. The Type field allows you to specify the specific protocol.

Accessing the PRI Menu

Note: All selected options must match the corresponding options on the network switch, otherwise service problems can occur.

To access the PRI protocols menu:

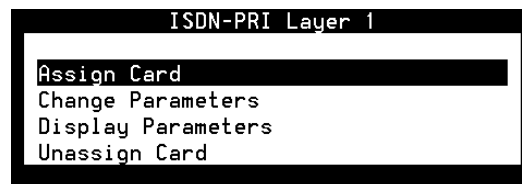
- 1 Start at the Digital Interfaces menu (Figure 89 on page 95) and select



```
> ISDN-Primary Rate Interface
```

The system displays the ISDN-PRI Layer 1 menu (Figure 116).

Figure 116. ISDN-PRI Layer 1 Menu



Assigning the PRI Protocol to Digital Circuit Cards

Note: Before a new protocol can be assigned to a circuit card, any existing protocol must first be “unassigned.” See the appropriate unassign procedure in this chapter for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To assign the PRI protocol to a digital circuit card:

- 1 Start at the ISDN-PRI Layer 1 menu (Figure 116 on page 131) and select

```
> Assign Card
```

The system displays the Assign Card: ISDN-PRI Layer 1 window (Figure 117 on page 132).

Figure 117. Assign Card: ISDN-PRI Layer 1 Window

```

Assign Card: ISDN-PRI Layer 1
Card Number: 
Framing/Line Coding: ESFB8ZS
Type: AT&T
DTMF Muting: YES
D-Channel on This Card?: YES
Incoming Speech Volume: 1414
Outgoing Speech Volume: 707
Idle Code: 11111111
A-LAW or MU-LAW: MU-LAW
CSU Distance: 0-133 ft.
CRC: NO
  
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 117.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Enter the framing/line coding in the Framing/Line Coding: field, or press **F2** (Choices) to select from a menu.

- ~ The valid values for T1 PRI are D4ZCS or ESFB8ZS. ESFB8ZS is the default.
- ~ The only valid choice for E1 PRI is CEPTHDB3.

- 4 Enter the PRI protocol (AT&T, ETST, National, National BCAS, or Nortel), or press **F2** (Choices) to select from a menu. **AT&T** is the default.

- 5 Enter **Yes** to enable or **No** to disable in the `DTMF Muting:` field, or press **F2** (Choices) to select from a menu. **Yes** is the default.

Enter **Yes** to use dual-tone multifrequency (DTMF) muting to reduce false DTMF recognitions that sometimes result from the network echoing back sounds that the voice system falsely recognizes as touchtones.

Enter **No** when the interface is used for bridging; DTMF needs to pass through without muting.

- 6 Enter **Yes** or **No** to specify whether or not the circuit card carries the D-channel in the `D-channel on this Card?:` field, or press **F2** (Choices) to select from a menu.

Up to thirteen PRI T1 circuit cards can have a D-channel. The voice system supports up to thirteen 23B+D interfaces (each with its own D-channel and each set to **Yes** in this field) or up to 311 B+D (where one card has the D-channel and the other twelve cards are controlled by that D-channel and are set to **No** in this field since they do not have a D-channel). The system also supports configurations with two to twelve D-channels. Typically, each E1 PRI interface has its own D-channel and the system supports up to three 30B+D interfaces.

- 7 Enter the volume adjustment for all incoming speech on circuit cards in the `Incoming Speech Volume:` field. Valid values are 0–32000. Values less than 100 or greater than 8000 may distort the incoming speech. The default is 1414.

Any adjustment occurs before the system processes the incoming speech for coding it later for playback. The value in the `Incoming Speech Volume:` field represents a gain applied to the speech input using a logarithmic scale. A value of 1000 equals no gain; that is, the input is coded at the same level as it is received. Multiplying by 1.414 (the square root of two) approximately doubles the input volume, or increases it by 3 dB. Therefore, a value of 1414 in the field doubles the volume of incoming speech before it is coded, 2000 doubles it a second time, 2828 doubles it a third time, and so on.

To decrease the incoming speech volume, multiply by 0.707 to approximately half the value or decrease it by 3 dB. Therefore, a value of 707 in the field reduces the volume by half, 500 by half a second time, and so on.

See Table 29 on page 141 for the relationship between the volume number and the actual change in volume expressed in decibels.

Note: The incoming speech volume value is set on a per-card basis for digital circuit cards, versus on a system-wide basis for analog circuit cards.

- 8 Enter the volume adjustment for all outgoing speech played on the circuit card in the `Outgoing Speech Volume:` field. Valid values range from 0–32000. The default is 707.

The value in this field and its effect are the same as for `Incoming Speech Volume:` field. Any adjustment is applied to recorded speech as it is processed for playback.

**CAUTION:**

The `Idle Code:`, `A-LAW` or `MU-LAW:`, and `CRC:` field parameters must match the settings on the DEFINITY switch to avoid service complications.

- 9 (E1 only) Enter the 8-digit code that are generated when the channel is idle in the `Idle Code:` field.
- 10 (E1 only) Enter **A-LAW** or **MU-LAW** in the `A-LAW` or `MU-LAW:` field.
- 11 Enter the cable distance, in feet, between the Channel Service Unit (CSU) and the voice system in the `CSU Distance:` field, or press **F2** (Choices) to select from a menu. Valid values are 0–133, 134–266, 267–399, 400–533, and 534–666. The default is 0–133 feet. If there is no CSU, the value entered in this field should be the cable distance between the voice system and the equipment to which it is connected.
- 12 (E1 only) Enter **Yes** to enable the cyclical redundancy check error checking or **No** to disable the error checking in the `CRC:` field.
- 13 (Optional) Enter the outgoing volume of speech in the `Outgoing Text Volume:` field. Valid values are 0–32000 (-30 to +30 dB). The default value is **1000**.

Note: The optional Text-to-Speech feature package must be installed on your system for this field to be visible.

- 14 Press **F3** (Save).

The system saves the parameter information and assigns PRI protocol to the selected E1/T1 circuit card.

**CAUTION:**

You must stop and start the voice system in order for the changes to take effect.

PRI Parameters

Your PRI service provider may need to know some Layer 2 and Layer 3 parameters used by the voice system. Table 28 provides a list of the most commonly requested parameters. Incoming calls to the voice system should be provisioned so that the channel number is exclusive and not preferred.

If the switch is configured to deliver ANI on a subscription basis, it is not possible for the voice system to request a different type of ANI on a call-by-call basis.

While it is not recommended to change timer values from their defaults, the *lvs/man/cat4/pri.rc.4* manual page describes how PRI timer values and a few other parameters can be changed if that becomes necessary.

Table 28. PRI Parameters and Values

Parameter	AT&T ISDN	ETSI PRI	National BCAS ISDN (with Service messages)	National ISDN (without Service messages)	Nortel PRI
DCHAN_DELAY	0	0	0	0	0
NPI_TOA	0x400	0x400	0x400	0x400	0x400
PROTOCOL	0	0	0	0	0
FLAGS	0x33609	0xc80	0x409a1	0x40980	0x80941
Timer T203 ¹	30 seconds	10 seconds	30 seconds	30 seconds	10 seconds
Timer T302	15 seconds	15 seconds	15 seconds	15 seconds	15 seconds
Timer T303 ¹	4 seconds	4 seconds	4 seconds	4 seconds	4 seconds
Timer T304 ¹	30 seconds	30 seconds	30 seconds	30 seconds	30 seconds
Timer T305 ¹	4 seconds	30 seconds	30 seconds	30 seconds	30 seconds
Timer T308 ¹	4 seconds	4 seconds	4 seconds	4 seconds	4 seconds
Timer T309 ¹	30 seconds	90 seconds	90 seconds	90 seconds	90 seconds
Timer T310 ¹	10 seconds	40 seconds	30 seconds	30 seconds	10 seconds
Timer T313 ¹	4 seconds	4 seconds	4 seconds	4 seconds	4 seconds
Timer T316 ¹	120 seconds	120 seconds	30 seconds	30 seconds	120 seconds
Timer T3M1 ¹	120 seconds	120 seconds	120 seconds	120 seconds	120 seconds
Timer T372	7 seconds	7 seconds	7 seconds	7 seconds	7seconds

¹ All timers are adjustable as described in the */vs/man/cat4/pri.rc.4* file

Changing the PRI Card Parameters

The circuit card must first be assigned to a PRI protocol to use this procedure. See Assigning the PRI Protocol to Digital Circuit Cards on page 131 for more information about making the initial assignment.

Note: Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To change the PRI protocol parameters:

- 1 Start at the ISDN-PRI Layer 1 menu (Figure 116 on page 131) and select

> Change Parameters

The system displays the Change Parameters: ISDN-PRI Layer 1 window (Figure 118 on page 136).

Figure 118. Change Parameters: ISDN-PRI Layer 1 Window

```

Change Parameters: ISDN-PRI Layer 1
Card Number: 
Framing/Line Coding: 
Type: 
DTMF Muting: 
D-Channel on This Card?: 
Incoming Speech Volume: 
Outgoing Speech Volume: 
Idle Code: 
A-LAW or MU-LAW: 
CSU Distance:  ft. 
CRC: 
  
```

- 2 Enter the circuit card number in the Card Number: field, or press F2 (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 118. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific field is:

- ~ CSU Distance:

- 3 Change any of the parameters as described in Assigning the PRI Protocol to Digital Circuit Cards on page 131.



CAUTION:

If you change the Type field, you must stop and start the voice system in order for the changes to take effect.

- 4 Press F3 (Save).

The system changes the specified parameters for the selected circuit card.

Displaying the PRI Protocol Parameters

The circuit card must first be assigned to a PRI protocol to use this procedure. See Assigning the PRI Protocol to Digital Circuit Cards on page 131 for more information about making the initial assignment.

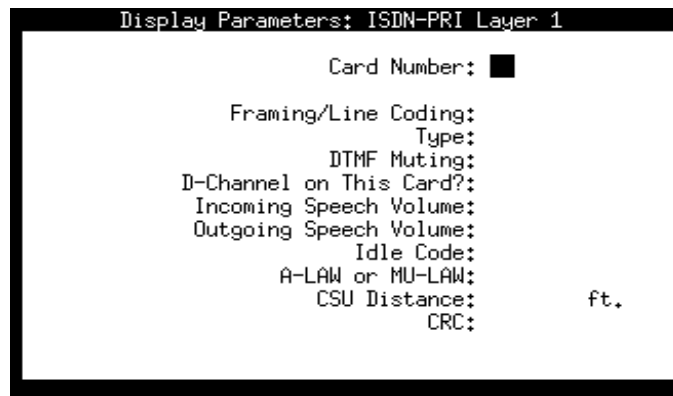
To display the PRI protocol parameters:

- 1 Start at the ISDN-PRI Layer 1 menu (Figure 116 on page 131) and select

```
> Display Parameters
```

The system displays the Display Parameters: ISDN-PRI Layer 1 window (Figure 119).

Figure 119. Display Parameters: ISDN-PRI Layer 1 Window



- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu. Initially, all fields are populated with the default values for the circuit card number entered.

The Card Number: field is blank in Figure 119. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card.

The E1-specific fields are:

- ~ Idle Code:
- ~ A-LAW or MU-LAW:
- ~ CRC:

The T1-specific fields is:

- ~ CSU Distance:

The system displays the parameter values for the selected circuit card.

- 3 Press **F6** (Cancel) to return to the ISDN-PRI Layer 1 menu.

Unassigning the PRI Protocol from a Card

Note: Before attempting to make any assignment changes to circuit cards, they must be in the MANOOS state. See Equipment State on page 50 in Chapter 3, Voice System Administration, for additional information.

If you change digital protocol assignments on the voice system, you must also make the change on the switch.

To unassign a PRI protocol to a digital circuit card:

- 1 Start at the ISDN-PRI Layer 1 menu (Figure 116 on page 131) and select:

```
> Unassign Card
```

The system displays the Unassign Card: ISDN-PRI Layer 1 window (Figure 120).

Figure 120. Unassign Card: ISDN-PRI Layer 1 Window

```
Unassign Card: ISDN-PRI Layer 1

Card Number: █

Framing/Line Coding:
Type:
DTMF Muting:
D-Channel on This Card?:
Incoming Speech Volume:
Outgoing Speech Volume:
Idle Code:
A-LAW or MU-LAW:
CSU Distance:      ft.
CRC:
```

- 2 Enter the circuit card number in the Card Number: field, or press **F2** (Choices) to select from a menu.

The system displays the current parameter values for the selected circuit card.

- 3 Press **F3** (Save).

The system removes the PRI assignment from the selected circuit card.

- 4 Press **F6** (Cancel) repeatedly to return to the Digital Interfaces menu.

T1 Configuration for the CONVERSANT System for 4ESS Applications

The following options should be used when connecting a CONVERSANT system to a 4ESS via an E1/T1 line when using the E&M protocol.

Note: Some parameters on the switch side may require that you stop and restart the voice system once you have made changes. For example, when changing the frame format from D4ZCS to ESF, your PRI link to the switch may not come up if you have not stopped and started the voice system. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration.

- T1 E&M Options

The following options should be set on the E1/T1 circuit card when it is connected to an AT&T 4ESS:

- ~ Wink Timing: 230 msec
- ~ Maximum Digits in Called Number: 4 is typical
- ~ Post-wink Delay: 80 msec

- E1/T1 E&M Fixed Parameters:

- ~ Framing/Line Coding: D4/ZCS
 - Signaling: A or AB Robbed-bit E&M protocol
 - Incoming/Outgoing Start Dialing: wink/wink
 - Incoming/Outgoing Addressing: DTMF/DTMF
- ~ Timing Source: Looped Timed

- 4ESS Options

The following information is requested by AT&T when provisioning the 4ESS for a E1/T1 connection:

- ~ TYPE CPE: DIGITAL PBX/ACD (WITH DS1 INTERFACE)
 - 4E NETWORK SWITCHED BASED SERVICES: MEG (Megacom), MEG8 (Megacom 800), or MULTIQUEST* as desired
 - ACCESS TYPE: T1
 - TRUNK OPERATION: The voice system always allows two-way traffic. If you expect only incoming calls, it is recommended that you select 1W/IN TOWARDS CPE. If you expect only outgoing calls, it is recommended that you select 1W/OUT FROM CPE. If you expect two-way traffic, select 2WAY.
 - SUPERVISION: EM
 - ADDRESS SIGNALING (TYPE OF PULSING) TO CPE: DTMF(TT)
 - ADDRESS SIGNALING TT DELAY: 70MS
 - ADDRESS SIGNALING from CPE: DTMF(TT)

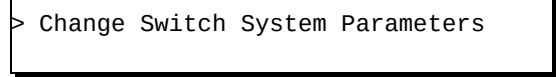
- START DIAL SIGNALING PROVIDED BY CPE: WK
- START DIAL SIGNALING PROVIDED TO CPE: WK (senderized operation)
- CPE DOES NOT SUPPORT DIFFERENT SIGNALING BIDIRECTIONALLY
- NUMBER OF DIGITS OUTPUTTED TO CPE: This number should match the number selected in the "Maximum Digits in Called Number" E1/T1 option
- THE CPE CAN ACCEPT "O" AS THE FIRST DIGIT
- GLARE CONTROL: CPE WILL YIELD (WILL RELEASE)
- DIRECT INWARD DIAL (DID): N
- PBX ANSWER SUPERVISION WITHHELD: N
- NETWORK AUTHORIZATION CODES: N
- FRAME FORMAT: D4
- IS PBX SENDERIZED: YES
- CPE TIMING CAPABILITY: loop timed
- SOURCE OF SYNCHRONIZATION PROVIDED BY CPE: NONE
- SOURCE OF AUDIBLE RINGING ON CALLS TO CPE: PBX (CPE)

Changing the Switch System Parameters

To change the switch system parameters:

Note: Stop the voice system before changing the switch system parameters.

- 1 Start at the Switch Interfaces menu (Figure 86 on page 87) and select



```
> Change Switch System Parameters
```

The system displays the Change Switch System Parameters window (Figure 121).

Figure 121. Change Switch System Parameters



- 2 Change the field values using the information in Table 29 and Table 30.

Table 29. DTMF Tone Table

Keys on Telephone Keypad			Corresponding DTMF Tone
1	2	3	A
4	5	6	B
7	8	9	C
*	0	#	D

Table 30. Switch System Parameters

Field Name	Description	Valid Values
DTMF Connection Tone:	This parameter indicates the DTMF tone that represents answer detection. This value is used in conjunction with the DEFINITY optional feature for DTMF Feedback to VRU. This parameter and the DTMF Disconnection Tone parameter must be selected so that the two tones are in the same row or column of the DTMF Tones table (Table 29).	0–9, A–D, #, * N indicates that answer detection is not enabled. The default is C.
DTMF Disconnection Tone:	This parameter indicates the DTMF tone that will represent the caller disconnection (hanging up). This value is used in conjunction with the DEFINITY optional feature for DTMF Feedback to VRU. This parameter and the DTMF Connection Tone parameter must be selected so that the two tones are in the same row or column of the DTMF Tones table (Table 29).	0–9, A–D, #, * N indicates that answer detection is not enabled. The default is D.
Background Output Volume:	This parameter specifies the adjustment to the output volume level in percent for the speech being played in the background.	A numeric entry for the percentage.
Number of Rings to Wait for DNIS:	This parameter specifies the number of tries to obtain DNIS on a tip/ring channel before running a default script (if any).	A numeric entry.
Hunt Group Method:	This parameter specifies the order of hunting for idle channels.	ascending (default), descending, or random Press F2 (Choices) to select from a menu.

- 3 Press **F3** (Save).

The system displays the message that the switch system parameters have been changed.

- 4 Press **F1** to acknowledge the message.
- 5 Press **F6** (Cancel) to return to the Switch Interfaces menu.
- 6 Starting the Voice System on page 44 as described in Chapter 3, Voice System Administration.

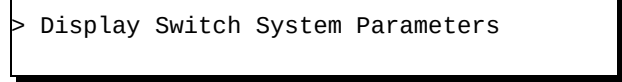
Displaying the Switch System Parameters

The Display Switch System Parameters window allows you to view the current setting for the switch system parameters.

To display the switch system parameters:

Note: Stop the voice system before changing the switch system parameters.

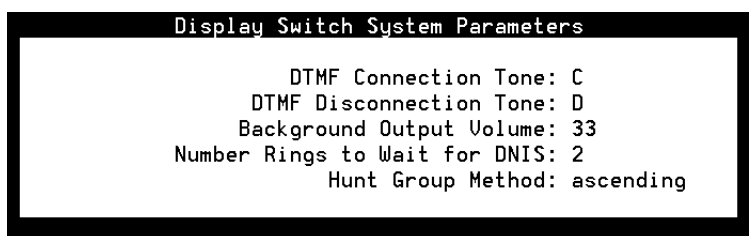
- 1 Start at the Switch Interfaces menu (Figure 86 on page 87) and select



```
> Display Switch System Parameters
```

The system displays the Display Switch System Parameters window (Figure 122).

Figure 122. Display Switch System Parameters



```
Display Switch System Parameters

DTMF Connection Tone: C
DTMF Disconnection Tone: D
Background Output Volume: 33
Number Rings to Wait for DNIS: 2
Hunt Group Method: ascending
```

- 2 Press **F6** (Cancel) to return to the Switch Interfaces menu.

6 Database Administration

Overview

ORACLE databases store voice system call data. This chapter describes how to administer the ORACLE databases used with the voice system, including how to determine database space requirements, size the databases, and administer database tables. In addition, this chapter reviews the SQL*PLUS software program, a tool that is used to access the ORACLE database.

Databases and the Voice System

Databases are used by the voice system to access various types of data, depending on the application. However, the information in this chapter focuses on ORACLE databases that are used to store and retrieve call data.

The information in databases is arranged into tables. The following section describes the database tables associated with call data.

Call Data Tables

Table 31 lists the database tables that the base ORACLE software package creates to store call data. All these tables are created and owned by the sqlplus user sti/sti. The voice system provides four reports that use the data accumulated in these tables. See Chapter 8, Common Administration, for procedures showing how to display, modify, print and update the available reports.

Table 31. ORACLE Call Data Tables

Table Name	Table Description
CCA	Call classification analysis data (contains one record for each attempted transfer or outdial).
CCASUM	Summary data for the CCA table (contains one record per hour, telephone number, and result code).
CALL ¹	Basic call information (contains one record per call).
SERVICE	Basic service information (contains one or more service records per call).
CDHSUM	Summary data for the CALL and SERVICE tables (contains one record per hour and service).

1 of 2

Table 31. ORACLE Call Data Tables

Table Name	Table Description
EVENTS	Event data defined for a service (contains one record per event). There can be more than one EVENTS records per SERVICE record.
EVSUM	Summary data for the EVENTS table (contains one record per hour and event number).
TRASUM	Overall traffic summary data (contains one record per hour and channel).
2 of 2	

¹ The CALL and SERVICE tables replace the CDH table. Since more than one service (application) may be run during a call, there may be multiple entries in the SERVICE table related to a single entry in the CALL table. A database view named OLDCDH, consisting of fields from the CALL and SERVICE tables, has been created to represent the old CDH table.

CCA Table

The CCA table contains the following information:

- **START_TIME** — A date field that specifies the starting time of each attempted transfer or outdialed call.
- **PHONE_NUM** — A variable-length character field that specifies the telephone number of an attempted transfer or outdialed call. This field can be up to 16 characters in length.
- **RESULT_CODE** — A variable-length character field that indicates the disposition of the call. This field can be 1 character in length.

CCASUM Table

The CCASUM table contains the following information:

- **PHONE_NUM** — A variable-length character field that specifies the telephone number of an attempted transfer or outdialed call. This field can be up to 16 characters in length.
- **START_TIME** — A date field that specifies the starting time of the call summary period.
- **END_TIME** — A date field that specifies the ending time of the call summary period.
- **SUM_TOT** — A numeric field that indicates the number of calls transferred or outdialed in this period with this disposition and associated telephone number.
- **RESULT_CODE** — A variable-length character field that indicates the disposition of the call. This field can be 1 character in length.

Note: Records are generated on per hour, per telephone number, and per result_code basis.

CALL Table

The CALL table contains the following information:

- **CID** — A numeric field that specifies a unique identification number that joins one CALL.CID to multiple SERVICE.CID.
- **CHANNEL** — A positive numeric field that specifies the channel number on which the call was running. This field can be up to three digits in length.
- **START_TIME** — Date field that specifies the starting time of each call.
- **END_TIME** — Date field that specifies the ending time of each call.

SERVICE Table

The SERVICE table contains the following information:

- **CID** — Numeric field that specifies a non-unique identification number that joins multiple SERVICE.CID to one CALL.CID.

Each call creates one or more SERVICE records, depending on the number of services used to handle the call. All SERVICE records associated with a call have the same SERVICE.CID as the CALL.CID in the CALL record. See Relationship Between the CALL, SERVICE, and EVENT Tables on page 147.

- **SID** — A numeric field that specifies a unique identification that joins one SERVICE.SID to multiple EVENTS.SID.
- **SERVICE**—Variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.
- **START_TIME** — Date field that specifies the starting time of each service.
- **END_TIME** — Date field that specifies the ending time of each service.

CDHSUM Table

The CDHSUM table contains the following information:

- **SUMID** — Numeric field that specifies a unique identification number which joins CDHSUM.SUMID to EVSUM.SUMID.
- **SERVICE**— Variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.
- **START_TIME** — Date field that specifies the start of the hour (for example 10:00:00).
- **DURATION** — Numeric field that specifies the sum of service run times during this hour in seconds.
- **USAGE** — Numeric field that indicates the total number of times the service was run for calls during a one-hour period.

Note: Records are generated on per hour and per service basis.

EVENTS Table

The EVENTS table contains the following information:

- SID — Numeric field that specifies a non unique identification number.

Note: Each service run during a call creates a certain number of event records, depending on the number of events defined. All events records associated with this call have the same SID number as the SID field of the corresponding SERVICE record.

See Relationship Between the CALL, SERVICE, and EVENT Tables on page 147.

- EVENT_NUMBER — Numeric field that is an internal mapping number of each of the defined events. Their values can be found in the *appl.D* file in the */att/trans/sb/appl* directory.

The value stored in EVENT_CNT, EVENT_TM, or EVENT_STR is the value of the Script Builder event variable when the script terminates. Two of the following three fields will have null values when the script terminates:

- EVENT_CNT — Numeric field that will contain the value of the event variable if the event type is a Script Builder number, otherwise it is null.
- EVENT_TM — Date field that will contain the value of the event variable if the event type is a Script Builder time or date, otherwise it is null.
- EVENT_STR — Character field that contains the value of the event variable if the event type is a Script Builder character string, otherwise it is null.

EVSUM Table

The EVSUM table contains the following information:

- SUMID — Numeric field that specifies a unique identification number.

Note: The values in this field are related to the SUMID values in the CDHSUM table.

- EVENT_NUMBER — Numeric field that specifies the internal mapping between the event and an internal number.
- SUM_TOT — Numeric field that indicates the total number of occurrences for this event.

Note: If the event type is a numeric, the value in SUM_TOT is the sum of the values of this event field for all the calls. For example, if an event field, NUM_TRANS, keeps track of the number of transactions for each call, SUM_TOT will contain the sum of NUM_TRANS for all calls during this time period. On the other hand, if the event type is not a number, each call will increment SUM_TOT by one.

TRASUM Table

The TRASUM table contains the following information:

- **START_TIME** — Date field that specifies the start of hour (for example 10:00:00).
- **CHANNEL** — Numeric field that indicates the channel number. This field can be up to 3 digits in length.
- **CALL_TOT** — Numeric field that specifies the total number of calls.
- **DUR_TOT** — Numeric field that specifies the total duration in seconds.

Note: Records are generated on a per-hour and a per-channel basis. No calls during this hour on this channel result in no record.

OLDCDH View

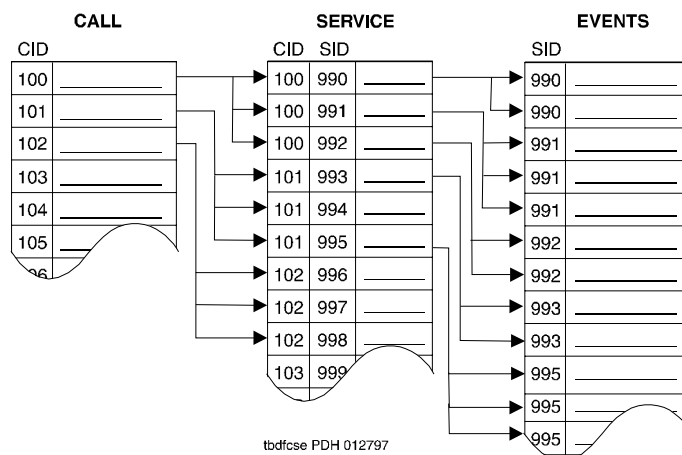
The OLDCDH view is an ORACLE database view provided to be compatible with the CDH table that is not supported in newer releases.

Relationship Between the CALL, SERVICE, and EVENT Tables

The relationship between these three call data handling tables can be summarized by the following statements and in Figure 123 on page 147:

- Each telephone call creates one record in the CALL table.
- Each record in the CALL table is linked to one or more records in the SERVICE table.
- Each record in the SERVICE table is linked to zero or more records in the EVENTS table.

Figure 123. Relationship of CALL, SERVICE and EVENTS Tables



Resizing Call Data Tables

The sizes of the call data handling tables are defined in **/oracle/dist/cdh.sql** file. Although the sizes are carefully engineered, it is possible that one or more of the tables should be increased to accommodate the heavier traffic on the system or the greater number of events defined in your applications. The most likely candidates for resizing are the EVENTS, SERVICE, and CALL tables, and their index tables.

To increase the size of a call data table:

- 1 At the Console Login: prompt, enter **root**
The system prompts you for a password.
- 2 Enter your **root** password.
The system displays the system prompt #.
- 3 Enter **cd /oracle/dist**
The system changes to the **oracle/dist** directory.
- 4 Enter **cp cdh.sql o.cdh.sql**
The system saves the original copy of the **cdh.sql** file to a file named **o.cdh.sql**.
- 5 Enter **dbused**
The system displays the number of megabytes used by the table.
- 6 Write down this number.
- 7 Use the UNIX vi editor to modify the **cdh.sql** file as follows:
 - a Find the **create table xxx** statement block, where xxx is the table name (for example, CALL, SERVICE or EVENTS).
 - b Modify the statement **storage (initial 999k)** to a bigger number, where 999 is the current initial size for the table and k stands for kilobytes (1024 bytes).

Note: The new values specified should be at least twice as large as the current table size you wrote down in Step 6. You may use the megabyte format, 99m, where *m* is mbytes (1,000,000 bytes = mbyte). For example, modify the storage statement to read:

storage (initial 3m)

to make the table have an initial size of 3 mbytes.

- 8 Enter **stop_vs**

The systems stops the voice system. See stop_vs on page 406 in Appendix A, Summary of Commands for more information about the **stop_vs** command.

Note: If you do not want to preserve existing call data, skip Step 9 through Step 11.

9 Enter `systblsav file`

The system saves the table storage information, where *file* is a UNIX file or a device name where the data will be saved (such as, */dev/rmt/c0s0*).

10 Enter `sqlplus \@ /oracle/dist/cdh.sql`

The system reinitializes the table(s).

11 Enter `systblres file`

The system restores the table storage information from the UNIX file or device name where it was saved in Step 9 (such as, */dev/rmt/c0s0*).

12 Enter `start_vs`

The system restarts the voice system. See `start_vs` on page 405 in Appendix A, Summary of Commands for more information about the `start_vs` command.

Verifying Call Data Tables

Periodically, the field definitions of a table need to be reviewed for accuracy, or to assist with troubleshooting.

To verify the field definitions of a table (such as, the CCA table):

1 At the Console Login: prompt, enter `root`

The system prompts you for a password.

2 Enter your root password.

The system displays the system prompt #.

3 Enter `sqlplus sti/sti`

The system starts a sqlplus session.

4 Enter `describe CCA`

The system displays the current definition of the CCA table, similar to the following:

Name	Null?	Type
-----	-----	-----
START_TIME	DATE	
PHONE_NUM	VARCHAR2(16)	
RESULT_CODE	VARCHAR2(1)	

Note: If the table name contains lower case characters, use double quotes (") to surround the table name. For example:

`desc "mytable"`

5 Enter `quit`

The system exits the sqlplus session.

Table Searches

Think of a database table as a book. If you want to find information on a subject, you must search the book to find it. However, checking the index first helps you to locate the information in the book much more quickly than paging through the book. The same is true for finding data in a database table.

Indexes and Key Fields For large databases, you can use indexes on key fields to greatly reduce the time necessary to search the tables.

Indexed fields can be especially important in applications that require a “lookup” from a large table based on user input. This input generates an SQL statement for accessing the database that has the following form:

```
SELECT * from "table_name" where "FIELD1" = 'data';
```

If FIELD1 has an index created for it in the database, all records that match the criteria specified in the select statement are located much faster than if there is no index.

FIELD1 is a key field in this example because it is the field used to specify selection criteria. Indexes only decrease read time when they are created on key fields.

An SQL statement may have more than one key field, as in the following example:

```
SELECT * from "table_name" where "FIELD1" = 'data1' AND  
"FIELD2" = 'data2';
```

In this example, FIELD1 and FIELD2 are key fields. Create an index for each of these fields to enhance system performance.

Unique Indexes

Unique indexes on fields enforce uniqueness of the data in that field across the entire table of records. For example, a field for which you might create a unique index is one that contains a social security number (SSN). A unique index on an SSN field ensures that only one record with a given SSN can exist in the table. Attempts to add records with that SSN will fail.

To create a unique index on a field called FIELD1 in a table called *table_name*.

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **sqlplus sti/sti**

The system starts a sqlplus session.

- 4 Enter

create unique index *index_name* on *table_name* ("FIELD1");

The system creates a unique index for FIELD1 in the table.

Non-Unique Indexes

Non-unique indexes do not prevent the same data from appearing in that field in several records in the same table. For example, if a field contains the area code of a telephone number and an index is created for that field, it must be a non-unique index since other records may require the same number in their area code field.

To create non-unique indexes on fields called FIELD1 and FIELD2 in a table called *table_name*:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **sqlplus sti/sti**

The system starts a sqlplus session.

- 4 Enter **create index *index_name* on *table_name* ("FIELD1");**

The system creates a non-unique index for FIELD1 in the table.

Note: The *index_name* must be unique.

- 5 Enter **create index *index_name* on *table_name* ("FIELD2");**

The system creates a non-unique index for FIELD2 in the table.

Flat File Structure

If ORACLE is not installed, the **filecdh** process handles all the IPC messages for call, service and event data from IRAPI.

The data files location is specified in the **/vs/data/filecdh.rc** file. This file contains an entry called **DATA_PATH=/oracle/add-on/calldata**. If the directory does not exist, the DATA_PATH directory is created by **filecdh** process. The filecdh process defaults to **/oracle/add-on/calldata** directory if the **filecdh.rc** file is missing or corrupted, or the value for DATA_PATH cannot be extracted.

The **filecdh** process creates 3 new files every day in **<DATA_PATH>/<YYYYMMDD>** directory. One such directory is created for each day. New files are created every night and these file creations are done based on Unix alarm event, which is set to every 60 seconds or 12:00 a.m. whichever ever is first. The <YYYYMMDD> represent the 4 digit year, month and the date.

The following is the list of flat files that are created:

- call.csv — This file has all the fields of the CALL table in ORACLE. One record per call is created in this file. The format of the record is

<Call ID>, <Channel Number>, <Start Time>, <End Time>

The Start Time and End Time are in the format **YYYY/MM/DD-HH:MI:SS**.

- service.csv — This file has all the fields of the SERVICE table in ORACLE. One record per service is created in this file. The format of the record is

<Call ID>, <Service ID>, <Service Name>, <Start Time>, <End Time>

The Start Time and End Time are in the format YYYY/MM/DD-HH:MI:SS.

- events.csv — This file has all the fields of the EVENTS table in ORACLE. One record per event is created in this file. The format of the record is

<Service ID>, <Event Number>, <Count Event>, <Time Event>, <String Event>

If the string event contains a field which has commas in it, the string event will be enclosed in double quotes ("").

Storage Period

The data files are stored for a period of 7 days. Files older than 7 days are deleted by the **croncdh** utility. This utility will be run by CRON every day and checks if ORACLE is used for call data repository. Then, **croncdh** executes appropriate utilities to remove old files.

Changing the Call Data Storage

The call data repository can be changed from ORACLE to flat files and flat files to ORACLE using the **changerep** utility when ORACLE is installed.

Note: If ORACLE is not installed, call data repository must remain as flat files. It cannot be changed.

If ORACLE is Installed

- 1 Login as root.

- 2 Enter **changerep**

The system displays the following message:

Currently the reports repository is ORACLE.

Do you want to change the repository to FILES? \ (Y/y/N/n\)
[N]:

- 3 Enter **y**

The system displays the following message:

Please enter the repository directory [/oracle/add-on/calldata]:

- 4 Enter the repository directory, or press **ENTER** to select the default directory **/oracle/add-on/calldata**.

The system displays the following message:

Confirm repository location as /oracle/add-on/calldata
(Y,y/N,n) [Y]:

5 Enter y

The system displays the following message:

```
Disabling reports menus in CVIS_MENU
Please stop and start the voice system for the changes to
take effect.
```

6 Stop and start the voice system. See "Common Maintenance Procedures," in *CONVERSANT System Version 8.0 System Reference*, 585-313-215.**If ORACLE is Not Installed****1 Login as root.****2 Enter `changerep`**

The system displays the following message:

```
Notice: ORACLE is not installed.
```

```
This utility is used to change reports repository from FILES
to ORACLE and ORACLE to FILES. This can be done only if ORACLE
is installed.
```

```
Making sure that reports repository is FILES
```

Tablespace and Log File Structure

Table 32 and Table 33 provide the ORACLE tablespace and log file structure on CONVERSANT Version 8.0 systems.

Note: Initial size is the size of the tablespace at the time of installation. Tablespace sizes grow automatically using the AUTOEXTEND feature as long as space exists in the /oracle has available free space.

Enabling and Disabling Automatic Extension for a Datafile

You can create tablespaces or alter existing tablespaces so that they automatically increase in size when more space is needed in the database. The files increase in specified increments up to a specified maximum.

Setting your datafiles to extend automatically results in the following:

- Reduces the need for immediate intervention when a tablespace runs out of space
- Ensures applications will not halt because of failures to allocate extents

To find out if a datafile is auto-extensible, query the DBA_DATA_FILES view and examine the AUTOEXTENSIBLE column.

Automatic file extension is specified during installation. You can enable or disable automatic file extension for existing datafiles, or manually resize a datafile using the SQL statement ALTER DATABASE.

The following example enables automatic extension for a datafile, FILENAME2, added to the USERS tablespace:

```
ALTER TABLESPACE users
  ADD DATAFILE 'filename2' SIZE 10M
  AUTOEXTEND ON
  NEXT 512K
  MAXSIZE 250M;
```

The value of NEXT is the minimum size of the increments added to the file when it extends. The value of MAXSIZE is the maximum size to which the file can automatically extend.

The next example disables automatic extension for the datafile FILENAME2:

```
ALTER DATABASE DATAFILE 'filename2'
  AUTOEXTEND OFF;
```

For more information about the SQL statements for creating or altering datafiles, see the *Oracle8i SQL Reference* in *ORACLE 8i On-Line Gernice Documentation CD-ROM*.

Table 32. Tablespace Description

Tablespace	Description	Initial Size (MB)
SYSTEM	The SYSTEM tablespace contains data dictionary views for the creation of the database. The SYSTEM tablespace requires 175 MB for storage as it needs to create the Data Dictionary views and tables for all the products that are installed to function properly. The system database file is \$ORACLE_HOME/oradata/A/System01A.dbf . This tablespace has the AUTOEXTEND feature ON.	175
USERS	This tablespace contains all the objects, tables, views, and stored procedures for the "sti" ORACLE user. This data file is \$ORACLE_HOME/oradata/A/users01A.dbf . This tablespace has the AUTOEXTEND feature ON.	100
RBS	This tablespace contains four rollback segments: r1, r2, r3, and r4. The data file is \$ORACLE_HOME/oradata/A/rbs01A.dbf . This tablespace has the AUTOEXTEND feature ON.	10
INDX	This tablespace is used for creation of indexes on tables and to improve the performance of the database. The data file is \$ORACLE_HOME/oradata/A/oemrep01A.d . This tablespace has the AUTOEXTEND feature ON.	25

1 of 2

Table 32. Tablespace Description

Tablespace	Description	Initial Size (MB)
TEMP	This is a temporary tablespace. The data file is &ORACLE_HOME/oradata/A/temp01A.dbf . This tablespace has the AUTOEXTEND feature ON.	25
OEM_REPOSITORY	This tablespace is a repository for Oracle Enterprise Manager. The data file is \$ORACLE_HOME/oradata/A/oemrep01A.d . The tablespace has AUTOEXTEND on next 25 MB and Maxsize is 80 MB.	5
2 of 2		

Table 33. Log File Description

Log File Group	Log File Name	Initial Size (MB)
GROUP 1	\$ORACLE_HOME/oradata/A/redo01a.log \$ORACLE_HOME/oradata/A/redo01b.log	5
GROUP 2	\$ORACLE_HOME/oradata/A/redo02a.log \$ORACLE_HOME/oradata/A/redo02b.log	5

Database Interface Process

A voice system application accesses the database tables through a single database interface process (DIP). A DIP is a software program that connects to the database and provides the only interface between the application and the database. The CONVERSANT system provides a generic database DIP (oraldb) for application interfacing with the ORACLE database.

Database DIP Timeout

The voice system and remote database ORACLE connection is established when the voice system starts. After the connection is established, the voice system does not keep track of status changes on the remote machine. The connection between it and the voice system is dropped if the remote machine is turned off or rebooted. If the remote machine is shut down and rebooted while the voice system is still active, the voice system detects this status change only when calls come in to the system that involve remote database access for call processing. The voice system attempts to reestablish the remote connection and is not able to process calls during this time.

In certain cases, the database DIP (**oraldb**) may not receive a timely response from the server machine. This may be due to a variety of factors, such as the server machine being down, the server machine is operating slowly, an application query of a large nonindexed table, network congestion, and so on.

While the DIP is waiting for a response from the server machine, the message queue of the DIP may back up. A full message queue (current maximum is 255) may result in performance problems for the voice system.

In order to prevent this, the DIP is equipped with a timeout mechanism. By default, the DIP will timeout every 45 seconds while waiting for a response. After the timeout, the DIP deletes the messages currently queued and continues to wait for a response from the database. The DIP continues to timeout every 45 seconds and to empty the message queue. After the default of 300 seconds, the DIP will automatically respawn and reinitialize.

The 45-second and 300-second timeout values can be altered in **/vs/data/ldb dip.rc** file. This file is included with the generic package and contains the following default values:

```
FIRST_TMOUT=45
SECOND_TMOUT=300
```

You may change these default values to any number that is appropriate for your database and applications. If the **ldb dip.rc** file is missing, the DIP uses the default timeout values of 45 and 300 seconds. You must restart the voice system after changing the **ldb dip.rc** file in order for the new timeout values to take effect.

**CAUTION:**

Always stop the voice system before shutting down the remote database machine to avoid an unexpected interruption of service.

Database Cursors

An internal data structure called a database cursor is used to monitor the point from which the DIP is reading in a specific database table. One cursor is allocated for each read of each database table by each channel running a service that requires access to that database. The cursor remains assigned to that table until the service ends on the channel for which the cursor was allocated.

The number of cursors is tunable in the **/oracle/dbs/initA.ora** file (**open_cursors** is a tunable parameter). At least 500 cursors are supported in the CONVERSANT system. Once the limit of cursors is reached, database transactions do not complete successfully; that is, table reads may fail and inserts or updates may not occur.

Database Cursor Calculations

To ensure the integrity and consistency of the data in the database, you must keep this limiting factor in mind when you design your applications. Use the following formula to determine the number of database tables that may be accessed by an application with the voice system:

$$\text{channel} \times \text{read} \times \text{cursor} < 500$$

where:

- channel = number of channels running application with database access
- read = number of read table operations performed on different tables by applications (per channel)
- cursor = number of cursors involved in read table

Note: Multiple reads of the same table use only one cursor.

The following are sample calculations using various configurations and numbers of read table operations.

- If you have a 24-channel system running an application that performs four read table operations on four different tables per channel, the calculation is:

$$24 \times 4 \times 1 = 96$$

Since 96 is less than 500, the database operations proceed properly.

- If you have a 36-channel system running an application that performs four read table operations on a single table per channel, the calculation is:

$$36 \times 1 \times 1 = 36$$

Since 36 is less than 500, the database operations proceed properly.

- If you have a 48-channel system running an application with five Read table operations on five different tables per channel, the calculation is:

$$48 \times 5 \times 1 = 240$$

In this case, if all 48 channels are performing five read table operations, some database operations may fail because of the multiple read table operations on the same channels.

- An application developer wants to develop an application that executed six read table operations on six different tables per channel:

$$500 / (6 \times 1) = 83.33$$

Therefore, the application can run on as many as 80 channels before it encounters database access problems.

- An application developer wants to develop an application to run on 72 channels simultaneously:

$$500 / (72 \times 1) = 6.94$$

Therefore, the application can perform up to six read table operations on up to six different tables per channel before it encounters database access problems.

Increasing the Database Storage Size

Note: The AUTOEXTEND feature automatically increases space within the **/oracle** filesystem. Use this procedure if you want to manually increase database storage in **/oracle**, or in another filesystem

To increase the database size:

Note: The voice system does not need to be stopped while resizing the database.

1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

2 Enter your root password.

The system displays the system prompt #.

3 Enter **/vs/bin/util/dbfrag**

The system displays the number of free database blocks.

4 Multiply the number of free database blocks by 4 to get the actual number of free 512-byte blocks.

5 Enter **df <filesystem>**

The system displays the number of free blocks available in the specified file system.

6 Determine the number of bytes to add to the database by subtracting the current database size (in blocks) from the optimum size.

7 Enter **dbadisv svrmgrl**

The system enters the server manager mode.

8 Enter **connect internal**

9 Enter **alter tablespace X**

where *X* is the tablespace name.

10 Enter **add datafile /oracle/oradata/A/dbs**.dbf**

Note: The file name must be unique.

11 Enter **size *number***

where *number* is the number of bytes calculated in Step 6 that you want to add to the database.

12 Enter **exit**

Note: We recommend that you use the above commands as written. However, if you are concerned about the **/oracle** file system size, substitute the command,
add datafile '/home2/dbsA2.dbf'
for
add datafile '/oracle/dbs/dbsA2.dbf'

13 Enter `/vs/bin/util/dbfrag`

The system displays the number of free database blocks.

14 Check that the database size has been increased as desired.**15 Enter `exit`**

The system exits the server manager mode.

16 Enter `exit`

Decreasing the Database Storage Size

To minimize database storage and access problems, the voice system provides two ways to minimize the storage space required for call data: store fewer call data events, or store fewer days of information in your applications.

Reducing the Amount of Call Data Stored

You can decrease the amount of database space needed by reducing the number of stored call data events. This reduction must be accomplished at the application design level. Unlike Reducing the Number of Days for which Data Is Stored, there are no system variables to modify. This minimization technique involves modifying every application that stores call data events to store fewer of them.

Reducing the Number of Days for which Data Is Stored

Another way to minimize the amount of storage required for call classification and call data detail information is to store fewer than seven days worth of data. The voice system knows how many days of data to archive by reading the contents of the **croncdh** file in the **/vs/bin/util** directory.

The following is a sample **croncdh** file:

```
DAYS=7
RCFILE=/vs/data/filecdh.rc
grep "^REP_REPOSITORY" $RCFILE >/dev/null
if [ $? = 0 ]
then
    REP_REPO='grep "^REP_REPOSITORY" $RCFILE | cut -d"=" -f2'
else
    logit -p4 "ERROR: Reports repository not set. Use
/vs/bin/util/changerep to set the reports repository" >
/dev/null
    exit
fi
if [ k"$REP_REPO" = "kFILES" ]
then
    #
    # Execute the file cleanup routines
    #
```

```

#
#Get the path for the data files
#
FILE_PATH='grep "^DATA_PATH" $RCFILE | cut -d"=" -f2'
echo $FILE_PATH

if [[ ! -a $FILE_PATH ]]; then
    echo "Path to the data files not found"
    exit
fi

#Remove the data files older than a week
find $FILE_PATH -mtime +$DAYS -exec rm -f {} \;
exit
fi

if [ k"$REP_REPO" = "kORACLE" ]
then
    # Start the ORACLE DBMS
    VSUTIL=/vs/bin/util
    ORACLE_SID=A;export ORACLE_SID
    ORACLE_HOME='/usr/lbin/dbhome $ORACLE_SID';export
    ORACLE_HOME
    PATH=$PATH:$ORACLE_HOME/bin;export PATH
    LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$ORACLE_HOME/lib
    export LD_LIBRARY_PATH
    ulimit 2113674
    if /usr/lbin/orastat -s >/dev/null
    then
        :
    else
        ulimit 2113674; ior w
    fi

    # perform the cron jobs

    $VSUTIL/cdhsum
    $VSUTIL/trasum
    $VSUTIL/cdhdel
    $VSUTIL/ccasum
    $VSUTIL/ccadel

    # clean up the unwanted ORACLE log files
    $VSUTIL/logdel
else
    logit -p4 "ERROR: Reports repository not set. Use
    /vs/bin/util/changerep to set the reports repository" >
    /dev/null
    exit
fi

```

Changing the Data Storage Number of Days

Currently, the only report produced for the call classification data is the Call Classification Summary report. Therefore, saving zero days worth of call classification data saves database space without affecting the reports produced by the voice system. Storing zero days worth of data means that only the call classification data for the current day is available until the clean up and summary programs run each night after midnight. The voice system always maintains the current day's data.

To change the number of data days, modify the following commands in the **croncdh** file, where *x* is the number of days of data to store:

```
$VSUTIL/cdhdel -x
$VSUTIL/ccadel -x
```

Note: If **cdhdel** and **ccadel** do not have any arguments, the default of seven days is used, as illustrated in the sample **croncdh** file in Reducing the Number of Days for which Data Is Stored on page 159.

To store two days worth of call detail data information, and four days of call classification data, modify your **croncdh** file as follows:

```
# Start the ORACLE DBMS
VSUTIL=/vs/bin/util
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME='/usr/lbin/dbhome $ORACLE_SID';export
ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin;export PATH
if /usr/lbin/orastat -s >/dev/null
then
:
else
    ulimit 2113674; ior w
fi

# perform the cron jobs
$VSUTIL/cdhsum
$VSUTIL/cdhdel -2
$VSUTIL/ccasum
$VSUTIL/ccadel -4

# cleanout the unwanted ORACLE files
$VSUTIL/logdel
/vs/bin/util/dbcheck -w 15,20
```

Increasing the Shared Pool Size

You may need to allocate additional memory resources for ORACLE if you are trying to write to several database tables at once and you receive the ORACLE error message number ORA-04031 in the message log.

Note: This procedure increases the amount of main memory that ORACLE uses.

To allocate additional memory resources for ORACLE:

- 1 Check the message log for ORA-04031. The text portion of this message indicates there is not enough shared memory space.
- 2 Access the `/oracle/dbs/initA.ora` file.
- 3 Place a pound sign (#) in front of the value `shared_pool_size=35000000`.
- 4 Remove the # from the front of the value `shared_pool_size=60000000`.
- 5 Save and exit the file.
- 6 Enter `/oracle/bin/ior c` to stop the database system.
- 7 Enter `/oracle/bin/ior w` to start the database system.

Rollback Segment

A rollback segment is a storage buffer that records actions that can be undone under certain circumstances. The rollback segment grows as needed as long as there is available space in the database. However, in V8 the rollback segment will automatically shrink back to 6 MB each.

Rollback Segment Tablespace Structure

Table 34 on page 162 provides information on the tablespace structure for the rollback segment.

Table 34. Rollback Segment Tablespace

Rollback Segment	Tablespace
SYSTEM	Default rollback segment for SYSTEM tablespace
R1	Rollback segment for USER tablespace. This rollback segment is used to provide read consistency and to rollback transactions when it is necessary to recover the database
r01, r02, r03, r04	Rollback segments for RBS tablespace These rollback segments is used to provide read consistency and to rollback transactions when it is necessary to recover the database

Verifying or Recreating the Size of the Rollback Segment

Note: In previous releases, this procedure was used to reduce the size of the rollback segments. With this release, this is no longer necessary as the rollback segment grows as needed as long as there is available space in the database and will automatically shrink back to 6 MB each.

The procedure to recreate the rollback segment requires that the voice system and database system be stopped. The procedure to verify the size of the rollback segment does not require that the voice system and the database system be stopped. Consequently, you may verify the size of the rollback segment at any time.

To verify or recreate the size of the rollback segment:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **/vs/bin/util/rb_init** to display the total current size of all rollback segments.

The system displays a message similar to the following:

```
Rollback segments are currently <#> bytes in size, would you
like to reduce the size of these rollback segments? (y/n)
```

~ To terminate this procedure, go to Step 4.

~ To continue with this procedure and recreate the rollback segment, go to Step 5.

- 4 To terminate the **rb_init** command without recreating the rollback segment, enter **n**

The system returns to the system prompt #. You have completed this procedure.

- 5 Enter **y** to recreate the rollback segment.

The system executes the **rb_init** command. The system displays the following message If the voice system is running:

```
The voice system is running. Is it OK to stop the voice
system? (y/n)
```

- 6 Enter **y** to shut down the voice system and continue with the procedure to recreate the rollback segment.

The system displays the following message if the database system is running:

```
The database system is running. Is it OK to shutdown the
database? (y/n)
```

7 Enter **y**

The system stops the database system and executes the **rb_init** command.

When the **rb_init** command is finished, the system displays the following message:

Would you like to restart the voice system? (y/n)

8 Enter **y** to restart the voice system, or enter **n** to wait to start the voice system.

If you do not want to restart the voice system and the database at this point, you may do so manually at a later time.

Voice System Database Administration

To access the Database Administration window:

1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

2 Enter your root password.

The system displays the system prompt #.

3 Enter **cvis_menu**

The system displays the Voice System Administration menu (Figure 18 on page 13).

4 Start at the Voice System Administration menu and select:

```
> Configuration Management
    > Database Administration
```

The system displays the Database Access ID Table window (Figure 124).

Figure 124. Database Access ID Table Window

Database Access ID Table		
DATABASE ACCESS ID	REMOTE/DESCRIPTOR	DB SID
DB1_local	-	-
Press CHG-KEYS to ADD or REMOVE a Database Access ID. Press CANCEL to exit.		

Database Access ID Table Window

The Database Access ID Table window displays currently recognized database IDs. Use the Database Access ID Table window to perform the following tasks:

- Add a local or remote database access ID
- Remove a local or remote database access ID

Table 35 describes each field in the Database Access ID Table window.

Table 35. Field Description for Database Access ID Table Window

Field Name	Description
Database Access ID	List of database access IDs, each representing an established ORACLE database connection to the system. See Database Access IDs on page 165 for more information.
Remote Machine ¹	Remote machine name.
DB SID ¹	Database instance, ORACLE_SID or database name (dbname) on ORACLE systems. There could be multiple instances on a remote machine.

¹ If these fields are blank, the connection is to a local ORACLE database. If these fields are populated, connection is to an ORACLE database on the system machine or to an ORACLE database on the machine specified in the Remote Machine field.

Database Access IDs

Each ID listed in the Database Access ID Table window represents an established local or remote connection to an ORACLE database. This connection is used by the voice system's applications to access a customer's database tables. The database ID, then, represents each local or remote database to the voice system.

An application can access multiple database tables in a local database (that is, residing on the voice system's hard disk). However, you can improve the access performance by adding multiple database access IDs to that local database to split the access evenly between the multiple database access IDs.

Adding a Local Database Access ID

To add a local database access ID:

- 1 Start at Database Access ID Table window (Figure 124 on page 164).

- 2 Press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 3 Press **F1** (Add).

The system displays the Add A Database Access ID menu (Figure 125).

Figure 125. Add A Database Access ID Menu



- 4 Select:

> Add a Local Database Access ID

The system displays the Add a Local Database Access ID window (Figure 126).

Figure 126. Add a Local Database Access ID Window



- 5 Enter the local database access ID in the Database Access ID: field, or press **F2** (Choices) to select from a menu. Valid values are **DB2_local**, **DB3_local**, **DB4_local**, and **DB5_local**.

DB1_local is the standard connection to a local ORACLE database. The CHOICES menu lists only those local database access IDs that have not yet been added.

- 6 Press **F3** (Save) to save the database access ID and exit the window. The Add a Database Access ID menu remains active, allowing you to add other database access IDs, if desired.
- 7 If you are finished adding database access IDs, press **F6** (Cancel) twice to return to the Configuration Management menu.
- 8 Stop and start the voice system. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration, for more information.

The system establishes the local database connections.

Adding a Remote Database Access ID Using SQL*NET V2/NET8

Before you establish a SQL*NET V2/NET8 connection, verify that the following are true:

- The SQL*NET V2/NET8 listener for TCP/IP is running on the remote database server.
- The `$ORACLE_HOME/network/admin/tnsnames.ora` configuration file on the CONVERSANT system has been updated to provide system information for the server. The CONVERSANT software automatically attempts to update the existing `tnsnames.ora` file (or create a new file if none exists), but manual alterations are sometimes necessary. For assistance with this requirement, see the database administrator for the server.
- Make sure the `/etc/hosts` file is updated with the name and the IP address for the remote server.

See Chapter 7, "Managing Archived Redo Logs" in *ORACLE8i Administrator's Guide, Release 8.1.5*, for more information on these configuration files.

To add a remote database access ID using SQL*NET V2/NET8:

Note: The screens only display SQL*NET V2, but apply to both SQL*NET V2 and NET8.

- 1 Start at Database Access ID Table window (Figure 124 on page 164).
- 2 Press **F8** (Chg–Keys).

The system displays the alternate function keys.

- 3 Press **F1** (Add).

The system displays the Add a Database Access ID menu (Figure 127).

Figure 127. Add a Database Access ID Menu



```

Add A Database Access ID
Add A Local Database Access ID
>Add A SQL*Net V2 Remote Database Access ID

```

4 Select:

```
> Add a SQL*Net V2 Remote Database Access ID
```

The system displays the Add V2 Remote Database ID window (Figure 128).

Figure 128. Add V2 Remote Database Access ID Window

Add V2 Remote Database Access ID	
U2 Database Access ID:	
Remote DB's Connect Descriptor:	
Remote Server's DB Instance:	
Remote Server's Network Name:	
TCP/IP Port Number:	1521
Will this Conversant be a DB server?: No	

5 Complete the fields in this window using the information in Table 36 on page 168.

Table 36. Field Descriptions for Add V2 Remote Database Access ID

Field Name	Description	Valid Values
Database Access ID:	This field specifies the name by which you want to refer to this connection. This name can be used in Script Builder when referring to tables in that database.	—
Remote DB's Connect Descriptor:	This field specifies the database instance on the remote database server to which you want to connect. This connect descriptor is put into the /oracle/network/admin/tnsnames.ora file if it is not already in that file.	—
Remote Server's DB Instance:	This field specifies the name of the ORACLE database instance on the remote database server. This field is also known as the ORACLE SID.	This name must match the corresponding ORACLE SID on the server system. Contact the server's database administrator for this name.
Remote Server's Network Name:	This field specifies the network name or TCP/IP address of the remote database server. If the network name is entered, it must already exist in the local /etc/hosts file.	Contact the network administrator for this name or TCP/IP address.

1 of 2

Table 36. Field Descriptions for Add V2 Remote Database Access ID

Field Name	Description	Valid Values
TCP/IP Port Number :	This field contains the TCP/IP port number.	This port number must match the one on the remote database server. Contact the server's database administrator for this port number.
Will this CONVERSANT be a DB server?:	This field indicates whether this is a database server. Note: It is strongly recommended that the local system not be used as a database server due to performance considerations.	Yes or No If No, the system can only be a client to a remote database server. If Yes, the system can be both a client and a database server. Also, if Yes, the system sets up a listener process and a connect descriptor entry is created in the tnsnames.ora file for this system.
2 of 2		

6 Press F3 (Save).

The system saves the information and redisplay the Database Access ID Window.

7 Press F6 (Cancel) twice.

The system closes the Database Access ID Table.

8 Stop and start the voice system. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration, for more information.**Setting the User ID and Password to Access the Remote Database**

Script Builder uses the **oraldb** database DIP to interface with the database tables. The DIP deals with tables (local) created by the SQL*Plus user **sti**. Starting with V8 for remote ORACLE tables, you can specify the user ID and password to connect to a remote database. Use the **setorapass** command to set the user ID and password for the each remote database separately. If the user ID and Password are not set for remote databases, **oraldb** tries to connect to remote database using the **sti** user account.

If, for an reason tables in an application cannot be created and owned by the user **sti** on the local database, a few extra operations must be performed before an application can refer to such a table.

Using setorapass

The following information describes the **setorapass** command.

Note: The remote database ID should already be configured through the CONVERSANT menus and the appropriate files have already been created.

1 Login to the system as **root**.

2 Enter **setorapass**

The system displays a message similiar to the following:

The following remote databases are configured

Dip Id	DB Desc	User ID	Password
2	intuity2	Not Set	Not Set

Note: Dip Id 2 refers to DB2_remote.

Which instance do you want to modify?. (Type q to quit):

3 Enter the instance number.

The system displays a message similiar to the following:

```
Changing Database configuration for
Dip Instance                      :2
Remote Database Description :intuity2
Remote Database User Id      :Not Set
Remote Database Password     :Not Set
Do you want to continue <Y/N> [N]
```

4 Enter **y**

5 Enter the user name.

6 Enter the password for the user name.

7 Enter the password again for the user name.

The system displays a message similar to the following:

Changing configuration please wait.!!

The following remote databases are configured

Dip Id	DB Desc	User ID	Password
2	intuity2	xxx	yyy

Which instance do you want to modify?. (Type q to quit):

8 Enter **q**.

Completing the ORACLE Environment Setup if the Server is Not A CONVERSANT System

If the database server is a UNIX based system running ORACLE V7 or V8 but not a CONVERSANT system, you must perform the following procedures to complete the ORACLE environment setup:

Note: This procedure assumes the following:

- ~ The network is a TCP/IP local area network and consists of a single server and any number of clients (CONVERSANT systems).
- ~ The server runs a single listener process to permit access to the server's database.
- ~ The entries for the server and all clients are in the **/etc/hosts** file on the server and all the clients.
- ~ All remote database files are created and/or updated on the server.
- ~ Files can be remotely copied from the server to all clients.

- 1 Administer the SQL*NET V2/NET8 product so that the listener process can be launched.
- 2 Start the listener process.
- 3 Provide the server's network name and database instance name (ORACLE_SID) to each CONVERSANT client system.

Removing a Database Access ID

The Remove a Database Access ID window allows you to remove one or more existing database access IDs, thereby dropping the connection to the associated ORACLE database.



CAUTION:

When you remove a remote database access ID, make sure that no applications use that Database Access ID. If an application uses an ID that has been removed, the application will fail when it tries to access data stored in that database.

To remove a database access ID:

- 1 Start at Database Access ID Table window (Figure 124 on page 164).
- 2 Press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 3 Press **F2** (Remove).

The system displays the Remove a Database Access ID window (Figure 129).

Note: DB1_local represents the standard connection to the local ORACLE database and cannot be removed, because there must always be at least one connection to the local database.

Figure 129. Remove a Database Access ID Window

- 4 Enter the access ID of the database you want to remove in the Database Access ID: field, or press **F2** (Choices) to select from a menu.
- 5 Press **F3** (Save).

The system saves the ID of the remote database connection to be deleted.

Stop and start the voice system. See Stopping the Voice System on page 42 and Starting the Voice System on page 44 in Chapter 3, Voice System Administration, for more information.

The system removes the database connection.

SQL*PLUS Database Administration

The SQL*PLUS software program is a tool used to access the ORACLE RDBMS. It is included in the Base ORACLE software package. This tool can be used to review database information without having to access the voice system directly.

CAUTION:

Do not alter any data, schema, logins, or passwords using SQL*PLUS. Doing so may corrupt the voice system and Script Builder software and result in non-warranty maintenance. The ORACLE right-to-use license is restricted solely to CONVERSANT applications.

Administration for Applications and Databases

Application table manipulation (creation, drop, or schema change) is best administered using Script Builder software. If you use SQL*PLUS to drop a table or change a table schema, you must reverify and reinstall the application referring to the table. The applications may not be able to communicate with the database correctly if you fail to reverify and reinstall them.

Application Conventions

Script Builder and SQL*PLUS have different conventions for naming tables and columns. Script Builder is case sensitive; table or column names may use either uppercase or lowercase characters in Script Builder.

SQL*PLUS is not case sensitive; table or column names using lowercase characters are interpreted to uppercase characters. Consequently, if you use lowercase characters while naming a table or column in Script Builder, when later executing SQL*PLUS, you must enclose the lowercase references (including table names and columns) in double quotes (").

An easy way to avoid this confusion would be to use upper case letters on all tables and columns in Script Builder.

Monitoring the Database

See the *ORACLE8i Server Administrator's Guide* for information on commands and procedures used to monitor the database.

Database Commands

The following commands may be used to monitor database space utilization. See the information under the command name in Appendix A, Summary of Commands.

The dbcheck Command The **dbcheck** command checks space usage and rollback segment growth.

The dbcheck Command Options

The **dbcheck** command has three different options:

- **-i** — installs **cron** entries and error messages. The **cron** job can be placed in either the root **cron** file or added to the end of **/vs/bin/util/croncdh** job that runs once a day. The **-i** option also asks if you want new error messages added to the **att** errors file along with explanations used with the **explain** command. This installation only needs to be run if you want the warnings to show up in the system message log or you want to schedule automatic checking at regular intervals.
- **-r** — removes any cron entry set up by the **-i** option
- **[-w n[,m]][-s][-e][-m user[~user...]]** — checks database space against user-set thresholds. The following occurs:
 - ~ Free space is checked against the user set threshold *n*, 15% default
 - ~ Rollback segment growth is checked against the user set threshold *m*, 20% default

When executed, the **dbcheck** command generates the appropriate warnings if the database falls below *n* percent free or if the rollback segments grow to be more than *m* percent of the total database size.

The command, by default, sends warning messages to the error log indicating a threshold has been exceeded (the **-i** option must be run first). The **-e** option will disable entries from going into the log file. The **-s** option will print the warning messages to standard output. The **-m** user option allows for the messages to be mailed to *user*. Multiple users can be sent the mail by separating the user names with ~. Following are sample outputs:

(Output to error log when less than 13% available or more than 23% used by rollback)

```
# dbcheck -w13,23
```

The dbcheck Command Output

The **dbcheck** program returns the following values:

- 0 — Success (no limits exceeded)
- 1 — Threshold exceeded
- 2 — Processing error
- 3 — Database is not running

The dbfree Command

The **dbfree** command is a shell script that lists the amount of free space in the database by free contiguous blocks. The result will be a detailed listing of each free memory area followed by the sum of each tablespace. The free blocks listed are in 2048 bytes/block (ORACLE blocks). There is also a column that lists the same information in Mbytes.

The dbfree Command Options

The **-h** option removes the column headers.

The dbfree Command Output

The **dbfree** program returns the following values:

- 0 — success
- 1 — processing error

The dbfrag Command

The **dbfrag** command is a shell script that reports on database allocation, usage, and fragmentation. The block size reported is in ORACLE blocks (2048 bytes). This command is useful to get a quick check on database usage and provides a shell interface into some key ORACLE statistics. This command only reports on information in the 'SYSTEM' tablespace.

The dbfrag Command Options

The **dbfrag** command has two options:

- **-b** — requests the information be reported in Mbytes.

Example # **dbfrag -b**

- **-h** — the listing is printed without a header. This option is useful if you want to parse the output to select a specific field.

The dbfrag Command Output

The **dbfrag** program returns the following values:

- 0 — success
- 1 — processing error

The dbused Command The **dbused** command is a shell script that displays the amount of space used by each object for a given user. Objects are tables, indexes, clusters, rollback, and cache. The default user is sti/sti.

The dbused Command Options

The **dbused** command has three options:

- **-h** — Print the listing without a header. This option is useful if you want to parse the output to select a specific field.
- **-s** — Produce only summary information grouped by objects.
- **-u uid/passwd** — Specify ORACLE user id and password (sti/sti is default) for all users.

The dbused Command Output

The **dbused** program returns the following values:

- 0 — success
- 1 — processing error

Database Trace Files

ORACLE creates a trace file in the **/oracle/rdbms/log** directory each time the system is rebooted. These trace files are not automatically removed by ORACLE and must be removed by the user or administrator if the files are no longer wanted. In addition, ORACLE creates a log file **/oracle/tcp/log/orasrv.log** that contains all the remote login information which is automatically created and appended by ORACLE. This log file is not automatically removed by ORACLE and may be removed or truncated by the user or administrator.

7 Peripheral Administration

Overview

This chapter provides the information and procedures needed to configure and administer the peripheral equipment connected to your voice system.

Topics covered include:

- Modem Administration on page 178
- Printer Administration on page 189
- Remote Terminal Administration on page 196

Accessing the Unix Management Menu

To access the Unix Management menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

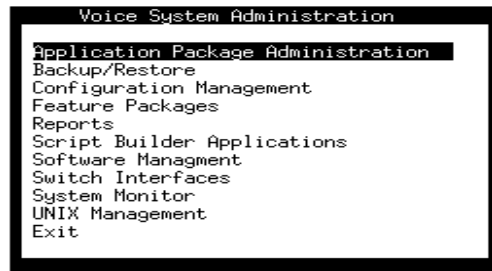
- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

The system displays the Voice System Administration menu (Figure 130 on page 177).

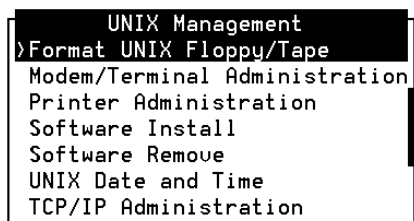
Figure 130. Voice System Administration Menu



- 4 Select Unix Management.

The system displays the Unix Management menu (Figure 131 on page 178).

Figure 131. Unix Management Menu



The procedures in this chapter detail administration for modems, printers, and TCP/IP.

The other menu options in the UNIX Management menu are discussed in detail in Chapter 8, Common Administration.

Modem Administration

Procedures to configure and administer a 3820 or 3920 modem for use with your voice system include the following:

- Installing the Modem on page 178
- Configuring the Modem on page 178
- Administering the Modem on page 183

Installing the Modem

To install the modem:

- 1 Physically connect the modem to the system.

See "Connecting the 3820 Modem to the Platform," in Chapter 4, "Completing System Installation," in *CONVERSANT System Version 8.0 New System Installation*, 585-313-149, for the procedure.

Configuring the Modem

For the 3820 or 3920 plus modem to work properly with the voice system, you must configure the modem using one of the two following methods:

- Configure the modem via its control panel after connecting it to the COM port on the hardware platform. See *Configuring the Modem Via the Modem Control Panel* on page 179 for more information.
- Connect the modem to a terminal that acts as a DTE and configure the modem via the terminal. See *Configuring the Modem Via a Terminal* on page 182 for more information.

Configuring the Modem Via the Modem Control Panel

The 3820 and 3920 Plus modems have a Diagnostic Control Panel (DCP) that is the user interface to the modem. Complete the following procedures to configure the 3820 modem via its control panel:

- Activating the Unix Dial Default Factory Configuration on page 179
- Setting the Async DTE Rate on page 180
- Setting the DTR Action and DSR Control to Standard RS-232 on the Modem on page 180
- Setting the Error Control Mode to Buffer Mode on the 3820 Modem on page 181

Activating the Unix Dial Default Factory Configuration

To activate the UNIX Dial default factory setting:

- 1 Turn the modem off and then back on.
- 2 Press ◀ or ▶ on the modem to display Configure.
- 3 Press the function key under Configure (**F1** or **F2**).

Modem response:

Ld EditArea frm.

- 4 Press ◀ or ▶ to display Factory.
- 5 Press (**F1** to display the factory preset configuration.

Modem response:

LD Fact Preset:

- 6 Press ◀ or ▶ to display Unix Dial.
- 7 Press **F2** (Select).

Modem response:

Choose Function
Edit and Save.

- 8 Press **F3** (Save).

Modem response:

Sav EditArea to
Active.

- 9 Press **F1** (Save).

~ 3820 modem: Modem response:

Command Complete

~ 3920 Plus modem: After a power reset, modem response:

Idle: 288

- 10 Press ▲ to return to the top-level menu.

Setting the Async DTE Rate

To set the Async DTE rate to the required speed:

- 1 Press ◀ or ▶ on the modem to display Configure.
- 2 Press the function key under Configure (**F1** or **F2**).

Modem response:

Ld EditArea frm.

- 3 Press ◀ or ▶ to display Active.
- 4 Press **F1** (Save).

Modem response:

Choose Function

Edit and Save

- 5 Press **F1** (Edit).

Modem response:

Edit StrapGroup

DTE Interface

- 6 Press **F1** (Edit).

Modem response:

Async/Sync Mode

- 7 Press **F1** (Next) to display Async DTE Rate.

- 8 Press ◀ or ▶ to display baud rates.

- 9 Press **F2** (Select).

The LCD displays the baud rate.

- 10 Continue with the procedure in Setting the DTR Action and DSR Control to Standard RS-232 on the Modem on page 180. Do not return to the top-level menu.

Setting the DTR Action and DSR Control to Standard RS-232 on the Modem

To set the DTR action to standard RS-232 on the modem:

- 1 Press **F1** (Next), more than once if necessary, to display DTR Action.
- 2 Press ◀ or ▶ to display Stndrd_RS-232.
- 3 Press **F2** (Select).
- 4 Press **F1** (Next) to display DSR Control.
- 5 Press ◀ or ▶ to display Stndrd_RS-232.
- 6 Press **F2** (Select).

- 7 Press the single **▲**.

Modem response:

Edit StrapGroup

- 8 Press **◀** or **▶** to display DTE Dialer.

- 9 Press **F1** (Edit).

Modem response:

DTE Dialer Type

- 10 Press **F1** (Next) to display AT Escape Char.

- 11 Use **◀** or **▶** and **F2** (Select) to adjust the number to 128 ASCII.

- 12 Press **▲**.

Modem response:

Edit StrapGroup

- 13 Press **◀** or **▶** to display Dial Line.

- 14 Press **F1** (Edit).

Modem response:

Dial Line Rate

- 15 Press **◀** or **▶** to display baud rates.

- 16 Press **F2** (Select).

The LCD displays the baud rate.

- 17 Press the single **▲**.

Modem response:

Edit StrapGroup

- 18 Continue with the procedure in Setting the Error Control Mode to Buffer Mode on the 3820 Modem on page 181. Do not return to the top-level menu.

Setting the Error Control Mode to Buffer Mode on the 3820 Modem

To set the error control mode to buffer mode:

- 1 Press **◀** or **▶** to display V42/MNP/Buffer.

- 2 Press **F1** (Edit).

Modem response:

Err Control Mode

- 3 Press **◀** or **▶** to display BufferMode.

- 4 Press **F2** (Select).

- 5 Press **F1** (Next) to display Flw Cntl of DTE.

- 6 Press **◀** or **▶** to display CTS_to_DTE.

7 Press **F2** (Select).

8 Press **▲**.

Modem response:

Edit StrapGroup

9 Press **▲**.

Modem response:

Choose Function

Edit and Save

10 Press **F3** (Save).

Modem response:

Sav EditArea to

Active

11 Press **F1**.

Modem response:

Command Complete

12 Press **▲** to return to the top-level menu.

Configuring the Modem Via a Terminal

To configure the modem terminal:

1 Connect a terminal to the 3820 modem.

Note: See the documentation provided with the terminal.

2 Verify that the terminal is acting as a DTE.

3 Set the terminal line to 8 bits, no parity, and 1 stop bit.

4 Set the baud rate of the terminal line to the required modem speed.

5 Enter **AT** from the terminal.

Modem response:

OK

Note: If the modem does not display OK, the modem is unable to accept AT commands from the terminal. Check the connection and the terminal setup.

6 Enter

AT&F3L0&D2&S1\N0\Q3S41=dial_line_rateS2=128&W0

where *dial_line_rate* is one of the following baud:

~ 3 = 9600

~ 5 = 4800

~ 6 = 2400

~ 7 = 200, V.22

~ 8 =1200, 212A

~ 20 = 19200

For example, to set the 3820 modem to use COM1, where the baud is 19200, enter **20** as the *dial_line_rate* as shown here:

AT&TF3L0&D2&S1\N0\Q3S41=20S2=128&W0

Modem response:

OK

7 Disconnect the terminal.

8 Connect the modem to the communication port (COM port 1).

The system activates the RTS, CTS, and LSD indicators.

Administering the Modem

The following procedures are necessary to administer the modem:

- Administering the Voice System to Recognize the Modem on page 183
- Setting Up UnixWare to Use a Modem for Outgoing Calls on page 184
- Setting Up UnixWare to Use a Modem for Incoming Calls on page 186

Administering the Voice System to Recognize the Modem

For the 3820 or 3920 plus modem to work properly with the voice system, you must administer the voice system to recognize the modem port.

To administer the voice system to recognize the modem:

1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

2 Enter your root password.

The system displays the system prompt #.

3 Enter **cvis_menu**

4 Select:

> UNIX Management

> Modem/Terminal Administration

> Install Modem/Terminal Software

The system displays the Install Modem/Terminal window (Figure 132 on page 184).

Figure 132. Install Modem/Terminal Window

- 5 Enter **modem** in the Device: field.
- 6 Press **F2** (Choices) to display a list of valid port numbers for the Serial Port Number: field.
- 7 Select one of the port numbers from the list.
 - ~ If you physically connected the modem to COM port 1, choose **/dev/tty00**
 - ~ If you physically connected the modem to COM port 2, choose **/dev/tty01**
 - ~ If you physically connected the modem to one of the multi-port serial ports, choose **/dev/ttysaa – /dev/ttysah** (ports 1–8 on multi-port serial card).
- 8 Enter **19200** in the Speed: field.
- 9 Press **F3** (Save).
The system displays a confirmation window.
- 10 Press **F6** (Cancel) to finish and return to the Modem/Terminal Installation menu.

Setting Up UnixWare to Use a Modem for Outgoing Calls

To configure UnixWare for a modem:

- 1 Start at the UNIX System V Administration menu (Figure 17 on page 12) and select:

- 2 The system displays the Adds a Device for Use by Basic Networking window (Figure 133 on page 185).

Figure 133. Adds a Device for Use by Basic Networking Window

```

5 Adds a Device for Use by Basic Networking
Device category: Modem
  
```

3 Enter **Modem** in the Device category: field, or press **F2** (Choices) to select from a menu. The default is **Modem**.

4 Press **F3** (Save).

The system displays the Add a Modem Device for use by Basic Networking (1) window (Figure 134).

Figure 134. Add a Modem Device for use by Basic Networking (1) Window

```

6 Add a Modem Device for use by Basic Networking
Device Type: ACU
Modem Type: att2212c
  
```

5 Enter **ACU** in the Device Type: field.

6 Enter the appropriate modem in the Modem Type: field, or press **F2** (Choices) to select from a menu. If your modem uses the “atdt” command set, select one of the Hayes modems.

7 Press **F3** (Save).

The system displays the Add a Modem Device for use by Basic Networking (2) window (Figure 135) with several of the fields already filled in.

Figure 135. Add a Modem Device for use by Basic Networking (2) Window

```

8 Add a Modem Device for use by Basic Networking
Device Type: ACU
Modem Type: att2212c
Port:
Speed: 1200
Flow Control: Software
  
```

8 Enter a port number in the Port: field, or press **F2** (Choices) to select from a menu. A port number is the full pathname of port devices recognized by UNIX.

- ~ If you physically connected the modem to COM port 1, select **/dev/tty00**
- ~ If you physically connected the modem to COM port 2, select **/dev/tty01**
- ~ If you physically connected the modem to one of the multi-port serial ports, select **/dev/ttysaa – /dev/ttysah** (ports 1–8 on the multi-port serial card).

Note: The port devices in the Choices menu are usually listed twice: once with *hardware* flow control, and once with *software* flow control. If you select term/01h, you are choosing port 1 with hardware flow control, and Hardware displays in the Flow Control: field. If you select term/01s, you are choosing port 1 with software flow control, and Software displays in the Flow Control: field.

9 Enter **9600** in the Speed: field, or accept the default.

10 Press **F3** (Save).

The system displays the following message:

Entry was added to the system. Use Ports menu to add a port monitor for a bidirectional port.

Setting Up UnixWare to Use a Modem for Incoming Calls

To configure UnixWare for a modem that can process incoming calls:

1 Start at the UNIX System V Administration menu (Figure 17 on page 12) and select:

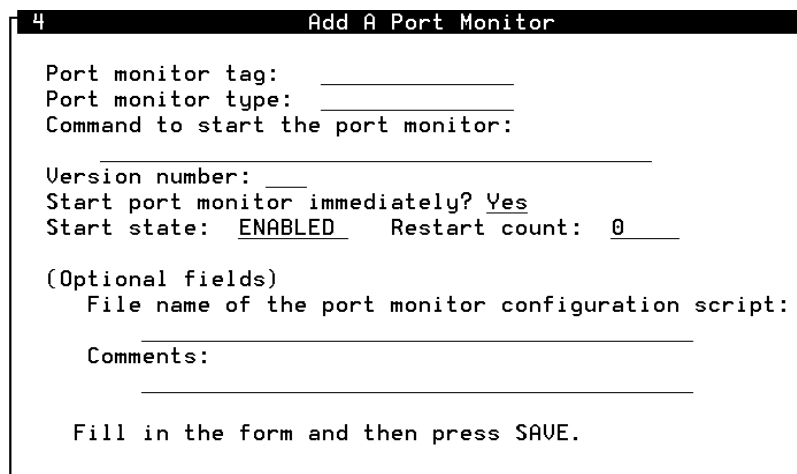
```
> ports
```

```
> port_monitors
```

```
> add
```

The system displays the Add A Port Monitor window (Figure 136).

Figure 136. Add A Port Monitor Window



```

4      Add A Port Monitor

Port monitor tag: _____
Port monitor type: _____
Command to start the port monitor:
_____
Version number: _____
Start port monitor immediately? Yes
Start state: ENABLED   Restart count: 0

(Optional fields)
File name of the port monitor configuration script:
_____
Comments:
_____

Fill in the form and then press SAVE.

```

2 Enter **ModemMon** in the Port monitor tag: field.

3 Enter **ttymon** in the Port monitor type: field.

- 4 Enter **/usr/lib/saf/ttymon** in the Command to start the port monitor: field.
- 5 Enter **2** in the Version number: field.
- 6 Enter **Yes** in the Start port monitor immediately: field.
- 7 Enter **Enabled** in the Start state: field.
- 8 Enter **0** in the Restart count: field.
- 9 Press **F3** (Save).

The system displays the Service Access Management menu (Figure 137).

Figure 137. Service Access Management Menu

```

2      Service Access Management
>port_monitors - Port Monitor Management
port_services - Port Service Management
quick_terminal - Quick Terminal Setup
tty_settings  - Terminal Line Setting Management

```

- 10 Select:

```

> port services
> add
> add to one
> ModemMon

```

- 11 The system displays the Add Port Services to Port Monitor window (Figure 138).

Figure 138. Add Port Services to Port Monitor Window

```

6      Add Port Services to Port Monitor <inet
                                           Page 1 of 2

Service tag: _____
Identification & authentication scheme:
_____
Service invocation identity: _____
Port/service state: ENABLED
utmp entry to be created for this service? No
Version number: _____

(Optional fields)
File name of the port service configuration script:
_____
Comments:
_____

Fill in the form and then press [SAVE] to continue on page 2.

```

- 12 Enter **Modem** in the Service Tag: field.
- 13 Enter **login** in the Identification & Authentication Scheme: field.
- 14 Leave the Service invocation identity: field blank.
- 15 Enter **ENABLED** in the Port/service State: field.
- 16 Enter **YES** in the utmp entry to be created for this service: field.
- 17 Enter **2** in the Version number: field.

Leave the remaining fields blank.

- 18 Press **F3** (Save).

The system displays the Add Port Services for ttymon window (Figure 139).

Figure 139. Add Port Services for ttymon Window

```

7 Add Port Services for ttymon Page 2 of 2
Name of TTY device: /dev/<serial port>
ttylabel: 19200
Service command: /usr/bin/shserv
TTY line options:
  Hangup: No      Connect-on-carrier: No
  Bidirectional: Yes  Wait-read: Yes (Wait-read count: 0)
Timeout: 0
Prompt message: login:
(Optional fields)
  Modules to be pushed: ldterm
  Disabled response message:

Fill in the form and then press [SAVE].

```

- 19 Enter **/dev/serial_port_selected** in the Name of TTY device: field, where *serial_port_selected* is the port connected to the modem.
- 20 Enter **19200** in the ttylabel: field.
- 21 Enter **/usr/bin/shserv** in the Service command: field.
- 22 Enter **No** in the Hangup: field.
- 23 Enter **No** in the Connect-in-Carrier: field.
- 24 Enter **Yes** in the Bidirectional: field.
- 25 Enter **Yes** in the wait-read Count: field.
- 26 Enter **0** in the Timeout: field.
- 27 Enter **login:** in the Prompt Message: field.
- 28 Enter **ldterm** in the Modules to be Pushed: field.
- 29 Leave the Disabled Response Message: field blank.

30 Press F3 (Save).

The system saves the configuration information and displays the following message:

Service <tty00s> is added successfully.

31 Press F3 (Cont).

The system returns to the Port Service Management menu (Figure 140).

Figure 140. Port Service Management Menu

3	Port Service Management
>add	- Add Port Services
disable	- Disable Port Services
enable	- Enable Port Services
list	- List Port Service Information
modify	- Modify Port Services
remove	- Remove Port Services

32 Press F6 (Cancel) repeatedly to return to the UNIX System V Administration menu.

Printer Administration

The printer must be configured and administered for use with the voice system. Procedures for the printer include the following:

- Installing the Printer on page 189
- Configuring the Printer on the Voice System on page 190
- Administering the Printer on the Voice System on page 195
- Setting Up a Printer on page 195

Installing the Printer

See "Connecting the Printer," in Chapter 4, "Connecting Peripherals and Powering up," in *CONVERSANT System Version 8.0 New System Installation*, 585-313-149, for the procedure to physically connect the printer.

Configuring the Printer on the Voice System

Avaya supports the standard parallel printers that have the UnixWare 2.1.3 driver. Contact your field support personnel if you want to connect a serial printer to the system.

To configure a local parallel printer:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

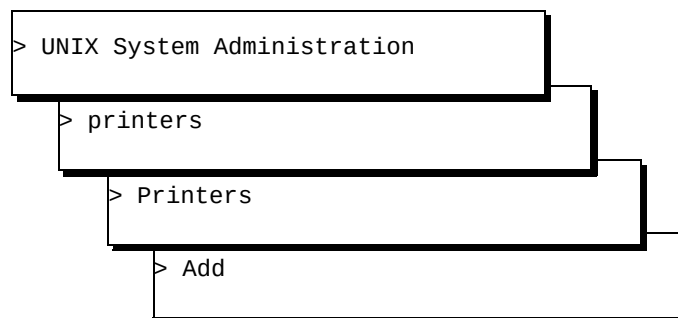
- 3 Enter **cvis_mainmenu**

The system displays the menu (Figure 141).

Figure 141. Voice System Main Menu

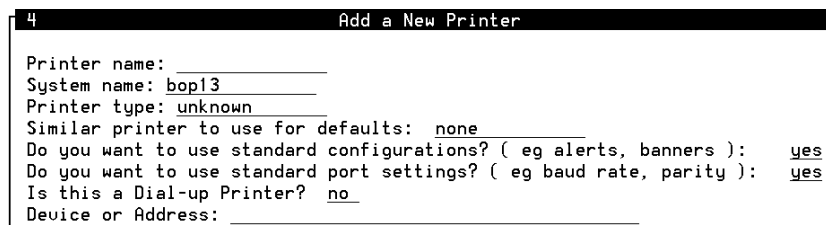


- 4 Select:



The system displays the Add a New Printer window (Figure 142).

Figure 142. Add a New Printer Window



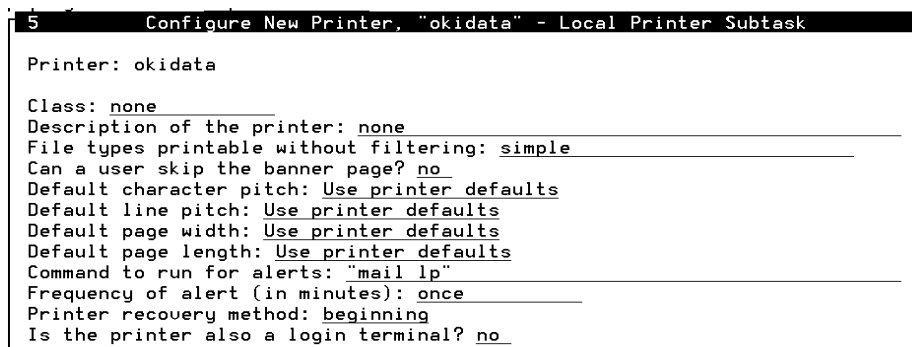
- 5 Enter the name of the new printer in the **Printer Name:** field.

- 6 Enter the local system name in the **System Name:** field.

- 7 Enter **oki-320** in the Printer Type: field.
 - 8 Enter **none** in the Similar printer to use for defaults: field.
 - 9 Enter **no** in the Do you want to use standard configurations? (eg alerts, banners): field.
 - 10 Enter **yes** in the Do you want to use standard port settings? (eg baud rate, parity): field.
 - 11 Enter **no** in the Is this a Dial-up Printer? field.
- Note:** If you enter **yes**, the system displays a Dial-info: field.
- 12 Enter **/dev/lp0** in the Device or Address: field.
 - 13 Press **F3** (Save).

The system displays the Configure New Printer window (Figure 143).

Figure 143. Configure New Printer Window



```
5 Configure New Printer, "okidata" - Local Printer Subtask
Printer: okidata
Class: none
Description of the printer: none
File types printable without filtering: simple
Can a user skip the banner page? no
Default character pitch: Use printer defaults
Default line pitch: Use printer defaults
Default page width: Use printer defaults
Default page length: Use printer defaults
Command to run for alerts: "mail lp"
Frequency of alert (in minutes): once
Printer recovery method: beginning
Is the printer also a login terminal? no
```

- 14 Enter **none** in the Class: field.
- 15 Enter **printer one** in the Description of the printer: field.
- 16 Enter **simple** in the File types printable without filtering: field.
- 17 Enter **yes** in the Can a user skip the banner page? field.
- 18 Enter **Use printer defaults** in the following fields:
 - ~ Default char. pitch:
 - ~ Default line pitch:
 - ~ Default page width:
 - ~ Default page length:
- 19 Enter **mail lp** in the Command to run for alerts: field.
- 20 Enter **once** in the Frequency of alert (in minutes): field.
- 21 Enter **beginning** in the Printer recovery method: field.
- 22 Enter **no** in the Is Printer also a login terminal: field.

23 Press **F3** (Save).

The system displays the Printer: Successfully Added window (Figure 144).

Figure 144. Printer: Successfully Added Window

```

6      Printer tmp: Successfully Added.

      Press CONT to Continue.

      Information on tmp:
printer tmp disabled since Fri Nov 22 10:13:23 EST
1996. available.
      new printer
      Form mounted:
      Content types: simple
      Printer types: oki-320

```

24 Press **F8** (Cont).

The system displays the Setup Printer Access window (Figure 145).

Figure 145. Setup Printer Access Window

```

7      Setup Printer Access

Printer: tmp

Users who are allowed access to this printer: all
Users who are denied access to this printer: none
Forms allowed on this printer: none
Forms denied on this printer: all

```

25 Enter **all** in the Users who are allowed access to this printer: field.

Note: Do not press **ENTER** until all of the fields are complete.

26 Enter **none** in the Users who are denied access to this printer: field.

27 Enter **all** in the Forms allowed on this printer: field.

28 Enter **none** in the Forms denied on this printer: field.

29 Press **F3** (Save).

The system displays the Configure Printers for the Printer Service window (Figure 146).

Figure 146. Configure Printers for the Printer Service Window

```

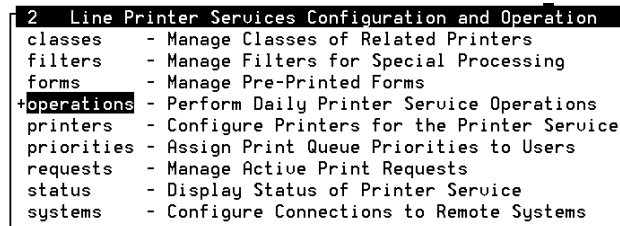
3 Configure Printers for the Printer Service
+add - Add a New Printer
list - List Printer Configurations
modify - Modify a Printer Configuration
remove - Remove Printers

```

30 Press **F6** (Cancel).

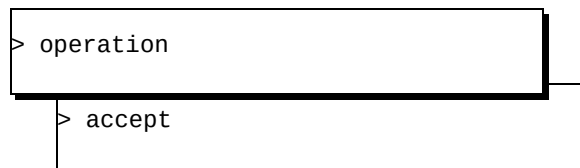
The system displays the Line Printer Services Configuration and Operations window (Figure 147).

Figure 147. Line Printer Services Configuration and Operations Window



Note: Wait at least 10 minutes before continuing with Step 31.

31 Select:



The system displays the Allow Classes/Printers to Accept Requests window (Figure 148).

Figure 148. Allow Classes/Printers to Accept Requests Window



32 Enter the name of the printer in the Printer(s) and/or Class(es): field, or press **F2** (Choices) to select from a menu. If you select from the Choices menu, you must press **F2** (Mark) to mark each class or printer you want to accept print requests, then press **F3** (Enter).

33 Press **F3** (Save).

34 Press **F6** (Cancel) twice.

The system displays the Line Printer Services Configuration and Operations window (Figure 147 on page 193).

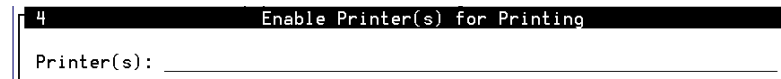
35 Select:



A screenshot of a menu interface. The first option is 'operation'. A sub-menu is displayed below it, containing the option 'enable'.

The system displays the Enable Printer for Printing window (Figure 149).

Figure 149. Enable Printer for Printing Window



A screenshot of a window titled '4 Enable Printer(s) for Printing'. It contains a text field labeled 'Printer(s):' followed by a blank line for input.

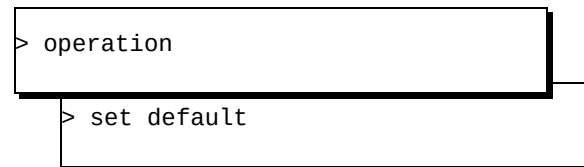
36 Enter the name of the printer in the Printer(s) : field, or press **F2** (Choices) to select from a menu. If you select from the Choices menu, you must press **F2** (Mark) to mark each printer you want to enable, then press **F3** (Enter).

37 Press **F3** (Save).

38 Press **F6** (Cancel).

The system displays the Line Printer Services Configuration and Operations window (Figure 147 on page 193).

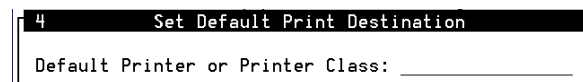
39 Select:



A screenshot of a menu interface. The first option is 'operation'. A sub-menu is displayed below it, containing the option 'set default'.

The system displays the Set Default Print Destination window (Figure 150).

Figure 150. Set Default Print Destination Window



A screenshot of a window titled '4 Set Default Print Destination'. It contains a text field labeled 'Default Printer or Printer Class:' followed by a blank line for input.

40 Enter the name of the printer in the Default Printer or Printer Class: field, or press **F2** (Choices) to select from a menu.

41 Press **F3** (Save).

The system saves the printer configuration information.

Administering the Printer on the Voice System

To administer the voice system to recognize the printer:

- 1 At the Console Login: prompt, enter **root**
The system prompts you for a password.
- 2 Enter your root password.
The system displays the system prompt #.
- 3 Enter **cvis_menu**
- 4 Select one of the following:

```
> UNIX Management
> Printer Administration
> Install Okidata 320 Printer Software
```

OR

```
> UNIX Management
> Printer Administration
> Install Okidata Laser Printer Software
```

The system installs the printer software.

- 5 Press **F6** (Cancel) to finish and return to the Printer Administration menu.

Setting Up a Printer

To set up a parallel printer for use with the system:

- 1 Log on to the system as root.
- 2 Enter **cd /etc/uucp**
- 3 Edit the Systems file to add an entry for the printer. This entry must include the hex representation for the printer IP address and port.

hp4si Any hplaser - \x002 *hex_value_for_port* *hex_value_for_IP address*

For example, **hp4si Any hplaser - \x0002238cc776928** would use 238c as the hex representation for port 9100 and c7769828 as the hex representation for IP address 199.118.152.40.

- 4 Edit the Devices file with the following line:
hp4si tcp - - TLI \D
- 5 Save and exit the Devices file.
- 6 Enter:
lpsystem -tbsd -Tnever -R0 -y"printer_name IP_address" hp4si
where *printer_name* and *IP_address* are appropriate for the printer you are adding.
- 7 Enter **lpadmin -php4si -Uhp4si -lpcl -Thplaserjet**
- 8 If you do not want a banner page, perform the following procedure. Otherwise, go to Step 9.
 - a Enter **/usr/lib/lp/model**
 - b Enter **cp standard LANHP**
 - c Edit the **LANHP** file and change nobanner="no" to nobanner="yes".
- 9 Enter **lpstat -t**
- 10 The output should indicate the lpstat spooler is running and the printer you added should be displayed.
- 11 To make this printer the default, enter **lpadmin -dhp4si**

Remote Terminal Administration

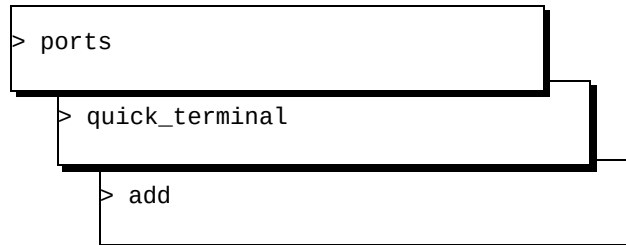
Procedures to configure and administer a remote terminal for use with the voice system include the following;

- Configuring the Remote Terminal on page 197
- Administering the Remote Terminal on page 197

Configuring the Remote Terminal

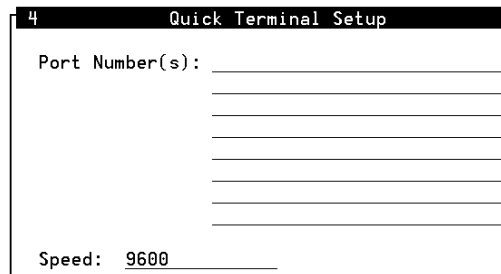
To configure a terminal (monitor):

- 1 Start at the UNIX System V Administration menu (Figure 17 on page 12) and select:



The system displays the Quick Terminal Setup window (Figure 151).

Figure 151. Quick Terminal Setup Window



- 2 If you know the name of the port monitor, enter the name in the Port Number(s): field, or press **F2** (Choices) to select from a menu.
- 3 Enter the speed in the Speed: field, or press **F2** (Choices) to select from a menu. The default speed is **19200**.
- 4 Press **F3** (Save).

The system adds the terminal to the selected port monitor names, and displays a confirmation window.

- 5 Press **F3** (Cont).

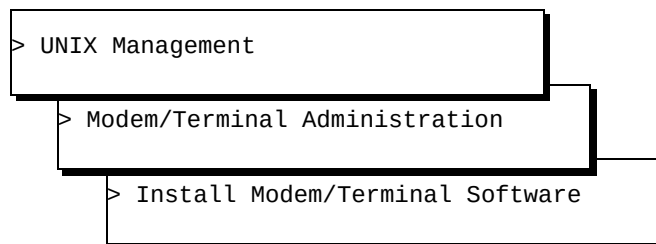
The system displays the Quick Terminal Setup menu.

Administering the Remote Terminal

To administer the voice system to recognize the modem:

- 1 At the Console Login: prompt, enter **root**
The system prompts you for a password.
- 2 Enter your root password.
The system displays the system prompt #.
- 3 Enter **cvis_menu**

4 Select:



The system displays the Install Modem/Terminal window (Figure 152).

Figure 152. Install Modem/Terminal Window

Install Modem/Terminal	
Device:	_____
Serial Port Number:	_____
Speed:	_____

- 5 Enter **terminal** in the Device: field.
- 6 Enter a serial port number or press **F2** (Choices) to display a list of valid port numbers for the Serial Port Number: field.
- 7 Enter **19200** in the Speed: field.
- 8 Press **F3** (Save).

The system displays a confirmation window.
- 9 Press **F6** (Cancel) to finish and return to the Modem/Terminal Installation menu.

TCP/IP Administration

The following procedure is necessary to administer TCP/IP for use with the voice system:

- Administering TCP/IP on page 199

Administering TCP/IP

To administer the voice system to administer TCP/IP:

- 1 At the Console Login: prompt, enter **root**

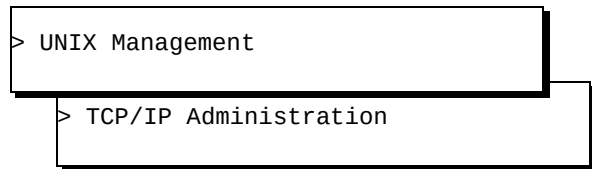
The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

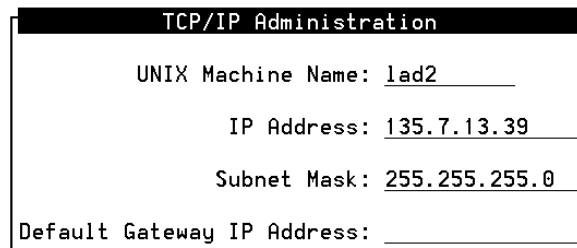
- 4 Select:



```
> UNIX Management
> TCP/IP Administration
```

The system displays the TCP/IP Administration window (Figure 153).

Figure 153. TCP/IP Administration Window



TCP/IP Administration	
UNIX Machine Name:	<u>lad2</u>
IP Address:	<u>135.7.13.39</u>
Subnet Mask:	<u>255.255.255.0</u>
Default Gateway IP Address:	<u> </u>

- 5 Enter your machine name in the UNIX Machine Name: field.
- 6 Enter your machine's IP address in the IP Address: field.
- 7 Enter your network domain address in Subnet Mask: field.
- 8 Enter a default address to route to in the Default Gateway IP Address: field.
- 9 Press **F3** (Save).

The system redisplay the TCP/IP Administration window.

Press **F6** (Cancel) to finish and return to the Unix Management menu.

8 Common Administration

Overview

The information and procedures in this chapter are organized together to provide quick reference for some of the more common, or daily, administrative tasks. Common administration includes running system reports, and performing common procedures such as system monitoring, media formatting, backups, and administering the date and time.

Note: Analog interfaces are not currently supported on the UCS 1000.

Command Menu

The Command Menu enables you to quickly access the System Monitor and Trace services, and exit the voice system. The Command Menu key appears as **F7** on almost every administration menu or window.

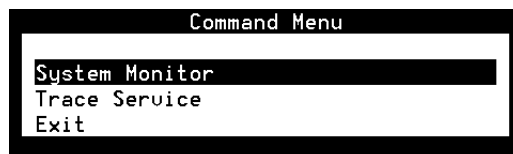
Accessing the Command Menu

To access the Command Menu:

- 1 Once you have accessed the Voice System Administration menus (see Chapter 3, Voice System Administration), from almost any menu or window, press **F7** (Cmd-Menu).

The system displays the Command Menu (Figure 154).

Figure 154. Command Menu



System Monitor

System administrators frequently use System Monitor first when troubleshooting a voice channel problem because the System Monitor window displays several important pieces of data in one location.

Accessing the System Monitor

To access the System Monitor window from the Command Menu:

- 1 Start at the Command Menu (Figure 154 on page 201) and select:

```
> System Monitor
```

The system displays System Monitor-Voice Channels window (Figure 155).

Figure 155. System Monitor-Voice Channels Window

System Monitor - Voice Channels				
Channel	Calls Today	Voice Service	Service Status	Caller Input Dialed Digits
0	0		*0n Hook	
1	0		*0n Hook	
2	0		*0n Hook	
3	0		*0n Hook	
4	0		*0n Hook	
5	0		*0n Hook	
6	0		*0n Hook	
7	0		*0n Hook	
8	0		*0n Hook	
9	0		*0n Hook	
10	0		*0n Hook	
11	0		*0n Hook	

Table 37 describes the columns in the System Monitor-Voice Channels window.

Table 37. Columns in the System Monitor Window

Column	Description
Channel	Lists the existing channels on the voice system. Virtual channels have the letter v appended to the channel number. These channels are not voice channels but are instead used for “data-only” applications. The number of virtual channels in the system depends on the software applications installed. In most systems, there is a single virtual channel for the playing of background speech.
Calls Today	Lists the number of calls made to a particular channel within the system. This column reflects the number of calls received during the day for the particular channel since the last stop and start of the voice system. When the end of the day occurs or the voice system is stopped and then restarted, the number of calls in the Calls Today column starts at zero. Calls are monitored for a 24-hour period, on any day beginning at midnight (12 a.m.). For virtual channels, this value is the number of times the service was used to run a data-only service.
Voice Service	Provides the name of the service associated with the corresponding voice or virtual channel.

1 of 2

Table 37. Columns in the System Monitor Window

Column	Description
Service Status	State of each channel in the voice system. All hardware states (for example, On Hook, Foos, Manoos, Broken) are marked with an asterisk. This field is blank for virtual channels except when a transaction with a DIP is running. See Table 38 on page 203 for a description of the status entries.
Caller Input	Last set of digits entered by the caller. For example, when a caller enters their account number in response to a transaction prompt, a series of touchtone digits is registered in the voice system from the caller. This information is collected by the voice system and displayed in this column by the System Monitor. This field always is blank for virtual channels.
Dialed Digits	Last set of digits dialed by the voice system during this transfer process. In many cases, the application transfers the caller to an attendant. The numbers used in this transfer process are collected by the voice system and displayed in this column. This field always is blank for virtual channels.
2 of 2	

Service Status Column Table 38 describes the Service Status column possible entries and their meanings:

Note: All hardware states are marked with an asterisk (*).

Table 38. Entries for Service Status Column

Service Status Entry	Description
*BROKEN	Channel is broken
CCA	Channel is in process of call classification
Coding	Channel is performing voice coding
Collect	Channel is waiting for caller input
dbdip1	Channel is used by local database DIP
*DIAGNOSE	Channel is on a circuit card that is being diagnosed
Dialing	Channel is dialing digits
*D-BROKEN	(PRI feature only) D-channel is broken
*D-HWOOS	(PRI feature only) D-channel hardware is out-of-service
*D-INSERV	(PRI feature only) D-channel is in service
*D-MANOOS	(PRI feature only) D-channel is manually out-of-service
D-NETOOS	(PRI feature only) D-channel network is out-of-service
D-NONEX	(PRI feature only) D-channel is non-existent
DIP <0 34>	Channel is processing a request from data interface process
*FOOS	Channel is facility out-of-service
1 of 2	

Table 38. Entries for Service Status Column

Service Status Entry	Description
Host	Channel is currently accessing a host
*HWOOS	(PRI feature only) Channel hardware is out-of-service
*INITING	Channel is on a circuit card being initialized
*MANOOS	Channel is manually out-of-service
*NETOOS	(PRI feature only) Channel is in a network that is out-of-service
Nonex	Channel is non-existent
Offhook	Channel is in service and has answered a call
*ON HOOK	Channel is in service and waiting for a call
Pending	Channel is going into or leaving an operational state
Talking	Channel is playing speech
Transfer	Channel is transferring a call
*UNKNOWN	Channel is experiencing a breakdown in communications or an internal voice system error has occurred
2 of 2	

Changing the System Monitor Refresh Rate

By default, the system updates the voice channel status every 5 seconds.

To specify the refresh rate:

- 1 Start at the System Monitor-Voice Channels window (Figure 155 on page 202) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F1** (Chg-Rate).

The system displays the Change Refresh Rate window (Figure 156).

Figure 156. Change Refresh Rate Window

The screenshot shows a window titled "Change Refresh Rate". Inside the window, there is a label "Refresh Rate:" followed by a text input field containing the number "5" and the unit "seconds".

- 3 Enter the refresh rate, in seconds, in the Refresh Rate: field. Valid values are 1–30 seconds. The shorter the refresh rate, the more system resources are used to update the window.

Note: Changing the refresh rate for the System Monitor window also changes the refresh rate for the Host Session Monitor window and vice versa.

- 4 Press **F3** (Save).

The system closes the Change Refresh Rate window and saves the new rate. The new refresh rate is automatically activated in the system.

Printing a System Monitor-Voice Channel Report

To print a System Monitor-Voice Channel report:

- 1 Start at the System Monitor-Voice Channels window (Figure 155 on page 202) and press **F8** (Chg-Keys).

The system displays the alternate function keys.

- 2 Press **F6** (Print).

The system prints the System Monitor-Voice Channel Report.

Trace Service

A trace is a record of the events that have occurred on a voice channel, the voice system, or a host system.

See trace on page 411 in Appendix A, Summary of Commands, for more information on the **trace** command-line format.

Performing a Trace

To trace a channel or session or both:

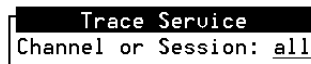
- 1 Start at the Command Menu (Figure 154 on page 201) and select:



```
> Trace Service
```

The system displays the Trace Service window (Figure 157).

Figure 157. Trace Service Window

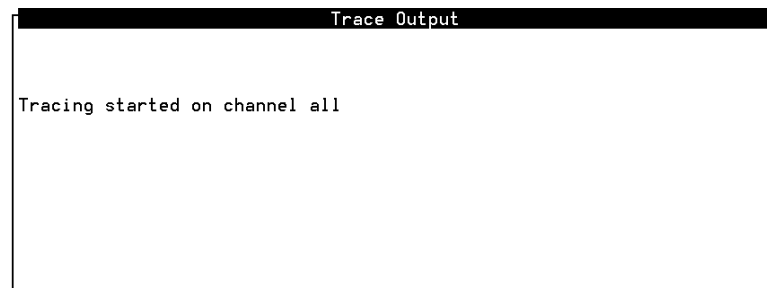


```
Trace Service
Channel or Session: all
```

- 2 Enter a single channel or session number, or **all** in the Channel or Session: field.
- 3 Press **F3** (Save).

The system displays the Trace Output window (Figure 158).

Figure 158. Trace Output Window



```
Trace Output

Tracing started on channel all
```

4 Select one of the following options while in the Trace Output window:

- ~ Press **F1** (Pause) to stop the information from scrolling.
- ~ Press **F2** (Prev Page) and **F3** (Next Page) to maneuver within the display.
- ~ Press **F1** (Resume) to continue scrolling through the trace output.
- ~ Press **DELETE** to stop the trace.
- ~ Press **F2** (Print) from the Trace Service window.

The last 250 lines of output will be printed.

Note: Space in the **root** partition may become full from the trace service, so you should occasionally remove old files from the **/vs/trans/hostdata** directory.

Administering the Access Security Gateway (ASG)

The Access Security Gateway (ASG) provides the newest generation of strong authentication for the CONVERSANT system logins. ASG protection is available for remote dial-up logins only. See Chapter 4, "Features," in *CONVERSANT System Version 8.0 System Description*, 585-313-219, and the *ASG Key User Guide*, 585-212-012, for more information about ASG and CONVERSANT security.

Overview of the ASG Process

ASG protects the CONVERSANT system by challenging each potential dial-up session user when both of the following conditions are met:

- The authentication type is set to ASG for that particular login. See Maintaining ASG Login IDs on page 207 for more information on adding an ASG login.
- ASG port validation is enabled for the dial-up port that the caller is trying to access. See Setting Security Port Administration on page 213 for information on enabling or disabling ASG port validation.

		Port Validation Enabled?	
		Yes	No
Authentication Type?	ASG	ASG Challenge/Response	UNIX system password
	UNIX	UNIX system password	UNIX system password
	blank	no access allowed	UNIX system password

To respond to the ASG challenge, the user must have a hand-held device, called the ASG Key. The ASG Key must be set with an ASG secret key number that matches that of the user's ASG secret key number in the CONVERSANT system. The handheld device can only support a "single" secret key, without re-administering the key. Also, users can purchase ASG mobile for the "site" if they have multiple systems.

Logging In with ASG

When you begin a remote session with a CONVERSANT system port that has the ASG feature activated, the system prompts you with a challenge.

To log in to a protected port on a system that has ASG activated for your login:

- 1 Enter your login ID at the `login:` prompt.

The terminal screen displays the following message:

Challenge: xxxxxxxx

Response:

- 2 Press ENTER () on the ASG Key to start the ASG Key.

The ASG Key displays the following message:

PIN:

- 3 On the ASG Key, type your PIN and press **ENTER**.

- 4 On the ASG Key, type the challenge number that is displayed on the terminal screen, and press **ENTER**.

The ASG Key displays the unique, 7-digit response number that corresponds to the challenge number you entered. The challenge and response numbers are valid for this session only.

- 5 On the terminal screen at the `Response:` prompt, enter the response number that is displayed on the ASG Key.

If the authentication process is successful, the system displays the CONVERSANT main menu for the login. If the authentication process fails, the system makes an entry in the system History Log and displays the following message:

INVALID LOGIN

After a certain number of unsuccessful attempts, which is set in the ASG Security Violation Warning Administration Window on page 216, a warning alarm is generated.

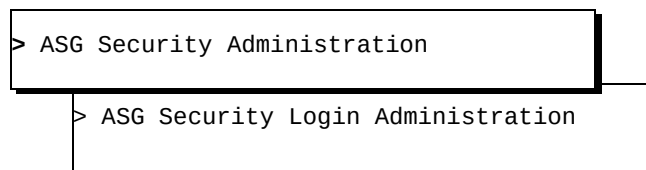
Maintaining ASG Login IDs

Once you establish an ASG login for a specific CONVERSANT system login user, anyone with that login who attempts to access your system remotely through a protected port is prompted for the challenge response number.

The default authentication type for root is *UNIX*, which requires the usual UNIX login and password. You must be logged in root to add an ASG login.

Adding an ASG Login To add a new ASG login to your system:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9) and select:



The system displays the ASG Security Login Administration window (Figure 159). Table 39 on page 208 provides the provides descriptions and valid values for each field in the window.

Figure 159. ASG Security Login Administration

```

ASG Security Login Administration
Login ID :
Access Via ASG Blocked ?
Authentication Type ?
System Generated Secret Key ?
Secret Key :
  
```

Table 39. Field Definitions: ASG Security Login Administration Window. .

Field Name	Valid Entries	Description/Procedure
Login ID:	craft tsc oracle	The login user name of all those who will administer the CONVERSANT system
Access Via ASG Blocked?	y=yes n=no	Y indicates that you want to temporarily disable this login ID. For example, if a user will be on vacation or travel for a long period of time, you can block access until he returns. N indicates that the login ID has full access privileges.
		1 of 2

Field Name	Valid Entries	Description/Procedure
Authentication Type?	ASG UNIX	ASG indicates that the user must have the ASG Key to produce the unique response number during login. UNIX indicates that the user can log in to the system with the normal UNIX password. The login process for a dial-up user will be the same as a local session.
System Generated Secret?	y=yes n=no blank	Y indicates that you want the system to create the secret key for this login ID. N indicates you will provide the secret key number in the next field. If you typed <i>UNIX</i> in the Authentication Type? field, leave the System Generated Secret? field blank.
Secret Key:	20-digit string, using only the digits 0 through 7 in any order	If you typed N in the System Generated Secret? field, provide a 20-digit secret key for this login. If you typed Y in the System Generated Secret? field, leave the Secret Key: field blank. If you typed <i>UNIX</i> in the Authentication Type? field, leave the Secret Key: field blank. The Secret Key number is not the challenge response number that is needed to access the system. The ASG hand-held device generates the challenge response number at the time of login.
		2 of 2

2 Type your login ID in the Login ID: field.

3 Type **n** in the Access Via ASG Blocked? field.

- 4 Type **ASG** in the Authentication Type? field to activate ASG authentication.

Note: If you type **UNIX** in the Authentication Type? field, the system uses regular CONVERSANT system password protection.

- 5 Do one of the following in the System Generated Secret? field:
 - ~ Type **y** to have the system randomly generate an ASG secret key number. Then leave the Secret Key: field blank.
 - ~ Type **n** if you want to enter the secret key that the system uses to generate ASG responses. Then type the secret key in the Secret Key: field.
 - ~ Leave the System Generated Secret? field blank if you typed **UNIX** in the Authentication Type? field. Then leave the Secret Key: field blank, also.

- 6 Press **F2** (Create) to save the information.

The system displays the following message:

You are about to modify the ASG user. Do you wish to continue (y/n)?

- 7 Press **F1** (Yes) or type **y** to make the change.

The system displays a confirmation message and provides the ASG secret key number that must match the ASG Key when a user attempts to log in. The ASG secret key number must be entered into the ASG Key as Key1 or Key2.

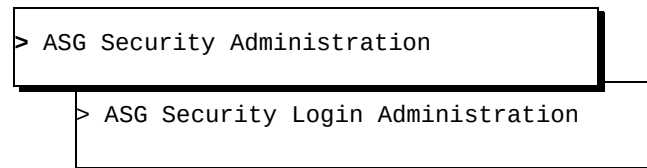
- 8 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu Figure 15 on page 9).

Blocking or Reinstating Access Privileges for an ASG Login

If a user does not need access to the system for a long period of time, you can block the ASG login ID's access temporarily.

To block or reinstate access for an ASG login:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9) and select:



The system displays the ASG Security Login Administration (Figure 159 on page 208. See Table 39 on page 208 for descriptions and valid values for each field in the window.

- 2 Type the user's ASG login ID in the Login ID: field.
- 3 Type **y** in the Access Via ASG Blocked? field if you want to revoke the user's access to the system.

4 Type **n** in the Access Via ASG Blocked? field if you want to reinstate the user's access to the system.

5 Press **F3** (Change) to save the changes.

The system displays the following message:

You are about to modify the ASG user. Do you wish to continue (y/n)?

6 Press **F1**(Yes) or type **y** to make the change.

The system displays a confirmation message.

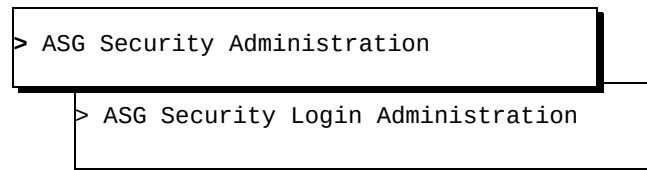
7 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Changing the ASG Secret Key Number for an ASG Login

The ASG secret key number is used by the system and by the ASG Key hand-held device to create challenge response pairs of numbers. If an ASG secret key number is lost or compromised, it must be changed in the system and in all associated ASG Key hand-held devices.

To change the ASG secret key number:

1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:



The system displays the ASG Security Login Administration (Figure 159 on page 208. See Table 39 on page 208 for descriptions and valid values for each field in the window.

2 Type the user's ASG login ID in the Login ID: field.

3 Type **y** in the System Generated Secret? field if you want the system to generate a unique Secret Key number.

4 Type **n** in the System Generated Secret? field if you want to enter your own Secret Key number.

5 Complete the Secret Key: field if you typed **n** in the System Generated Secret? field.

6 Press **F3** (Change) to save the changes.

The system displays the following message:

You are about to modify the ASG user. Do you wish to continue (y/n)?

- 7 Press **F1** (Yes) or type **y** to make the change.

The system displays a confirmation message and provides the ASG secret key number that must be entered into the ASG Key hand-held device.

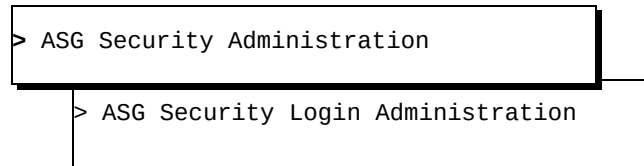
- 8 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Displaying ASG Login Information

You can check on the status of an ASG login whenever you need to.

To display ASG login information:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:



The system displays the ASG Security Login Administration (Figure 159 on page 208).

- 2 Type the user's ASG login ID in the Login ID: field.
- 3 Press **F4** (Display) to display information about the ASG login ID.

The system displays the ASG Display screen (Figure 160).

Figure 160. ASG Display Screen

User ID	Lev	Type	Blocked	Exp.date	#Sessions
CRAFT	03	PassKey	N		Unlimited
		No Restrictions			
Press Enter to continue.					

Note: If *Password* displays in the Type field, the login authentication type is UNIX, which refers to the normal UNIX login prompt. If *PassKey* displays in the Type field, the login authentication type is ASG, which requires the ASG challenge and response.

- 4 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Disabling ASG Authentication

If you want to discontinue ASG protection for a particular login, change the Authentication Type to *UNIX*. This will allow access to the CONVERSANT system with just the login ID and password.

To disable ASG authentication:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:

```
> ASG Security Administration
> ASG Security Login Administration
```

The system displays the ASG Security Login Administration (Figure 159 on page 208). See Table 39 on page 208 for descriptions and valid values for each field in the window.

- 2 Type the user's ASG login ID in the Login ID: field.
- 3 Type **UNIX** in the Authentication Type? field.
- 4 Press **F3** (Change) to save the information.

The system displays the following message:

You are about to modify the ASG user. Do you wish to continue (y/n)?

- 5 Press **F1** (Yes) or type **y** to make the change.

The system displays a confirmation message.

- 6 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Setting Security Port Administration**Enabling Port Validation**

You can determine on a port-by-port basis which ports require ASG validation for remote users. Once you enable port validation, each user who has an ASG login must respond to the ASG challenge to access the port.

⚠ CAUTION:

Enabling validation on some ports causes interruption of service, particularly for administration and remote assistance from the Avaya Technical Support Center. If Avaya technical support personnel need to access the system to install service patches, you must disable port validation.

To enable port validation for a specific port:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:

```
> ASG Security Administration
  > ASG Security Port Administration
```

The system displays the ASG Security Port Administration window (Figure 161 on page 214). See Table 40 on page 215 for descriptions and valid values for each field in the window.

- 2 In the Port Name column, locate the row for the port you want to administer.
- 3 Type entries in the Port Monitor Tag and Owner fields in the row that corresponds to the port.
- 4 Type **yes** in the Secure field.
- 5 Press **F3** (Save) to save the changes.

The system displays a confirmation message.

- 6 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Figure 161. ASG Security Port Administration Window

ASG Security Port Administration			
Enable/Disable Security Validation for Dial In Ports			
Port Name	Port Monitor Tag	Secure	Owner
/dev/tty00		NO	
/dev/tty01		NO	
/dev/term/ttysaa		NO	
/dev/term/ttysab		NO	
/dev/term/ttysac		NO	
/dev/term/ttysad		NO	
/dev/term/ttysae		NO	
/dev/term/ttysaf		NO	
/dev/term/ttysag		NO	
/dev/term/ttysah		NO	

Table 40. Field Definitions: ASG Security Port Administration

Field Name	Valid Entries	Description/Procedure
Port Name	Display only	The path and name of the port.
Port Monitor Tag	A unique identifier consisting of 1 to 10 alphanumeric characters	Use <i>serial</i> for a modem card (00 or Equinox multiport serial card) and use <i>alarm</i> for a remote maintenance card (01).
Secure	- Yes - No	<i>YES</i> indicates that ASG performs user validation for those who attempt to log in to the port. <i>NO</i> indicates that port users can log in without undergoing ASG validation.
Owner	root	The ASG user name of the person who is responsible for the port. The login designated as Owner is the only login that can be used to disable validation on an enabled port.

Disabling Port Validation

You can free ports from ASG validation if needed. If you disable port validation, remote users or Avaya technical support technicians can access the port without undergoing ASG validation.

To disable port validation for a specific port:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:

```

> ASG Security Administration
  > ASG Security Port Administration

```

The system displays the ASG Security Port Administration window (Figure 161 on page 214). See Table 40 on page 215 for descriptions and valid values for each field in the window.

- 2 Locate the Port Name row for the port you want to administer.
- 3 Clear the Port Monitor Tag and Owner fields in the row that corresponds to the port.
- 4 Type **no** in the Secure field.

- 5 Press **F3** (Save) to save the changes.

The system displays a confirmation message.

- 6 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Setting and Resolving Violation Warnings

ASG tracks the number of unsuccessful login attempts and the time between unsuccessful login attempts. If someone exceeds the allowed number of failed login attempts, a warning is added to the Alarm Log.

Setting Notification Limits

To set alarm parameters for ASG:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:

```
> ASG Security Administration
    > ASG Security Violation Warning Administration
```

The system displays the ASG Security Violation Warning Administration window (Figure 162 on page 216). See Table 40 on page 215 for descriptions and valid values for each field in the window.

- 2 Type a new value in the Number of failed login attempts: field, if needed.
- 3 Type a new value in the Failed login measurement window: field, if needed.
- 4 Press **F3** (Save) to save the changes.

The system displays the following confirmation message:

```
Assignment made
Press Enter to continue.
```

- 5 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Figure 162. ASG Security Violation Warning Administration Window

```
ASG Security Violation Warning Administration

Number of failed login attempts: 3
Failed login measurement window: 10 (Minutes)
Resolve existing alarm? N (Enter y to resolve alarm)
```

Table 41. Field Definitions: ASG Security Violation Warning Administration

Field Name	Valid Entries	Description/Procedure
Number of failed login attempts:	A number from 1 through 99	The number of times that the user can incorrectly type the login information before the system places an entry in the alarm log and disallows further login attempts. Note: A lower value in this field protects the system more fully. If the number of failed login attempts exceeds the number set in the Number of failed login attempts: field, an ASG warning alarm is created. Look for ASG alarms and resolve them using the Resolve existing alarm? field.
Failed login measurement window:	A number from 1 through 60	The system tracks the time, in minutes, between failed login attempts. This is the maximum time, in minutes, that can elapse between failed login attempts and still have the attempt count as one in a series. - If the attempt fails within the time you specify in the measurement window, the attempt is counted as an additional failed login attempt. - If the person waits until the time you specify between failed login attempts elapses, the system restarts the failed login attempt count. Note: A higher value in this field protects the system more fully.
Resolve existing alarm?	y=yes n=no	Y indicates that you want to resolve an active ASG warning alarm. N indicates you do not want to change the status of any active alarms.

Resolving ASG Violation Alarms

To resolve an ASG warning:

- 1 Start at the Voice System Administration menu (Figure 15 on page 9 and select:

> ASG Security Administration

> ASG Security Violation Warning Administration

The system displays the ASG Security Violation Warning Administration window (Figure 162 on page 216). See Table 40 on page 215 for descriptions and valid values for each field in the window.

- 2 Type **y** or **yes** in the Resolve existing alarm? field.

- 3 Press F3 (Save) to save the changes.

The system displays the following confirmation message:

```
Assignment made
Press Enter to continue.
```

- 4 Press **ENTER**, and then press **F6** (Cancel) twice to return to the Voice System Administration menu (Figure 15 on page 9).

Reports Administration

The Reports Administration window gives you access to the following system reports:

- Call Classification Report on page 219
- Call Data Detail Report on page 223
- Call Data Summary Report on page 227
- Out of Call Fax Report on page 230
- Message Log Report on page 234
- Administrative Commands Log Report on page 240
- Traffic Report on page 243
- Signal Processing Activity Report on page 247
- Custom Database Reports on page 248

The system allows you to tailor each report to meet your needs and requirements.

Accessing the Reports Administration Menu

To access the Reports Administration menu:

- 1 At the Console Login: prompt, enter **root**

The system prompts you for a password.

- 2 Enter your root password.

The system displays the system prompt #.

- 3 Enter **cvis_menu**

The system displays the Voice System Administration menu (Figure 18 on page 13).

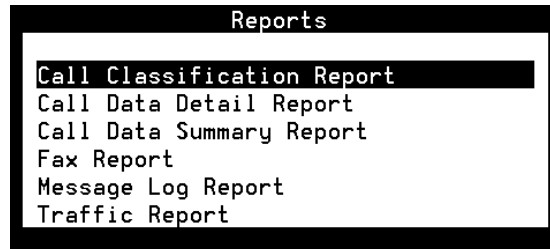
4 Select:



```
> Reports
```

The system displays the Reports menu (Figure 163).

Figure 163. Reports Menu



Use the procedures in this section to access and run the various reports in this menu.

Call Classification Report

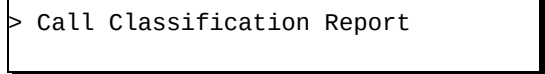
The Call Classification Report provides the following information for each extension or number dialed:

- The total number of calls
- The total number of failed calls
- The number of blind or intelligent transfer attempts that:
 - ~ Were answered
 - ~ Were busy
 - ~ Rang with no answer
 - ~ Experienced network problems
- Summary statistics

Displaying the Call Classification Report

To display the Call Classification Report:

- 1 Start at the Reports menu (Figure 163) and select:



```
> Call Classification Report
```

The system displays the Call Classification Report window (Figure 164 on page 220).

Figure 164. Call Classification Report Window

Call Classification Report									
Date: 04/13/1999									
Attempts									
Dialed Number	Total	Failed	Unclass	Class	Answer	Busy	Ring	Other	
0111220	1	0	0	1	0	0	0	1	
6111220	26	0	0	26	26	0	0	0	
Total	27	0	0	27	26	0	0	1	

Table 42 defines the columns in this window.

Table 42. Column Description for Call Classification Report

Column Name	Description
Dialed Number	Specifies the telephone number from the transfer attempt. Telephone numbers have a 16-digit maximum, however only 12 digits are displayed in the report. Longer numbers are truncated and displayed with an asterisk (*).
Total	Specifies the total transfer attempts to connect to the Dialed Number. This number is the sum of Failed, Unclass, and Class attempts.
Failed	Specifies the number of transfer attempts that failed because no dial tone or no energy was detected. This number corresponds to call dispositions equal to 1, 2, 3, 4, E, or p.
Unclass	Specifies the number of blind transfer attempts. This number corresponds to call dispositions equal to X.
Class	Specifies the number of intelligent transfer attempts. These are either Full CCA or Intelligent attempts. This number corresponds to call dispositions not equal to 1, 2, 3, 4, E, p, or X.
Answer	Specifies the number of transfer attempts that were answered. This number corresponds to call dispositions equal to A.
Busy	Specifies the number of transfer attempts that were busy. This number corresponds to call dispositions equal to B.
Ring	Specifies the number of transfer attempts that rang with no answer. This number corresponds to call dispositions equal to N.
Other	Specifies the number of times the network is busy and cannot complete a call (fast busy). This number corresponds to call dispositions F, H, T, or a recognized SIT.
Total	Specifies the sums of each column.
Percent	Specifies the percentage of the Total.

Modifying the Call Classification Report

You can specify the beginning and ending dates for the Call Classification Report.

To modify the Call Classification Report:

- 1 Start at the Call Classification Report window (Figure 164 on page 220) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165).

Figure 165. Actions Menu

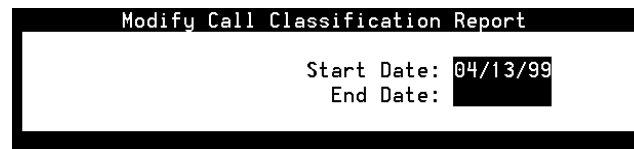


- 2 Select:



The system displays the Modify Call Classification Report window (Figure 166).

Figure 166. Modify Call Classification Report Window



- 3 Enter the beginning and ending dates for the report in the Start Date: and End Date: fields using the format of mm/dd/yyyy for month, day, and year to limit the report to a certain date range. If you do not specify the year, the report uses the current year.

A start date of 04/01/2000 and an end date of 04/30/2000 means that the voice system displays call classification information on calls made in the month of April 2000. You can specify a range of up to 365 days, including the current date. If you specify only the start date or the end date, you receive a report for that day only. The end date must be greater than or equal to the start date. Future start dates and end dates are invalid.

- 4 Press **F3** (Save).

The system displays the previous Call Classification Report window.

- 5 (Optional) Press **F8** (Actions).

The system displays the Actions Menu (Figure 165).

6 (Optional) Select:

A screenshot of a menu box with a black border. Inside, the text "> Update" is displayed, indicating that the 'Update' option is selected.

The system redisplay the Call Classification Report reflecting the new dates.

Printing the Call Classification Report

The print option provides a complete printout of the Call Classification report.

Note: This report will not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Call Classification Report:

- 1 Start at the Call Classification Report window (Figure 164 on page 220) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:

A screenshot of a menu box with a black border. Inside, the text "> Print" is displayed, indicating that the 'Print' option is selected.

The system prints the Call Classification Report using the last set of options saved to the voice system.

Updating the Call Classification Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system.

To update the Call Classification Report:

- 1 Start at the Call Classification Report window (Figure 164 on page 220) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:

A screenshot of a menu box with a black border. Inside, the text "> Update" is displayed, indicating that the 'Update' option is selected.

The system updates the report and displays the values last saved.

Call Data Detail Report

The Call Data Detail Report keeps data on the following voice system call date, time, and duration of the call

- Service run on the call
- Channel receiving the call
- Assigned database record number

Displaying the Call Data Detail Report To display the Call Data Detail Report:

- 1 Start at the Reports menu (Figure 163 on page 219) and select:

> Call Data Detail Report

The system displays the Call Data Detail Report window (Figure 167).

Figure 167. Call Data Detail Report Window

Call Data Detail Report				
Record	Channel	Start	Duration	Service
2	16	02:04:32pm(04/13/99)	23	agent
1	82	02:03:37pm(04/13/99)	90	SVC_Prov
3	81	02:03:00pm(04/13/99)	35	SVC_Prov
5	16	02:02:21pm(04/13/99)	23	agent
4	80	02:01:26pm(04/13/99)	90	SVC_Prov
6	79	02:00:01pm(04/13/99)	71	SVC_Prov
8	16	01:59:23pm(04/13/99)	22	agent

Table 43 defines the columns on this window. If multiple applications are invoked during a call, the report displays a line of summary data for the call, followed by a line of data for each application in the call.

Table 43. Column Description for Call Data Detail Report

Column Name	Description
Record	Specifies the database record number of each call made to the voice system.
Channel	Specifies the channel on which the call was made.
Start	Specifies the time and date the call began. If multiple applications were invoked during the call, the first line of the display shows the time and date the call began. Subsequent lines for the call show the time and date that each application began.

1 of 2

Table 43. Column Description for Call Data Detail Report

Column Name	Description
Duration	Specifies the length of the call in seconds. If multiple applications were invoked during the call, the first line of the display for the call shows the total length of all applications in the call. Subsequent lines for the call show the length of each application invoked in the call.
Service	Specifies the script that was associated with the call. If multiple applications were invoked during the call, the first line of the display for the call (the summary line) is blank. Subsequent lines for the call show the script associated with each application invoked in the call.
2 of 2	

Modifying the Call Data Detail Report

You can tailor the Call Data Detail Report to limit the display by changing one or more of the following parameters:

- Number of most recent call records you want to include
- Date of the data to include in the report
- Service associated with the call data

To modify the Call Data Detail Report:

- 1 Start at the Call Data Detail Report window (Figure 167 on page 223) and press **F8** (Actions).

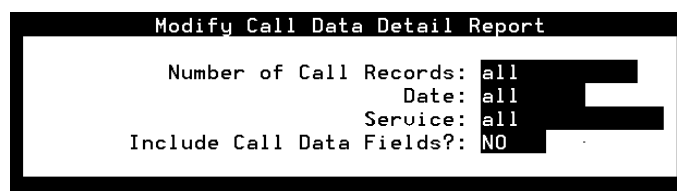
The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



A screenshot of a terminal window showing a menu with the option 'Modify' highlighted by a cursor.

The system displays the Modify Call Data Detail Report window (Figure 168).

Figure 168. Modify Call Data Detail Window


A screenshot of a terminal window titled 'Modify Call Data Detail Report'. It contains the following text: 'Number of Call Records: all', 'Date: all', 'Service: all', and 'Include Call Data Fields?: NO'. There is a large cursor block on the right side of the screen.

- 3 Enter the number, range of numbers, or **all** in the Number of Call Records: field to specify the number of most recent records to include in the report. The default is all.

- 4 Enter the date to which you want to limit the report information, or **all**, in the Date: field. Use the format of mm/dd/yyyy for month, day, and year. If you do not specify a year, the system uses the current year. The default is all, meaning the report displays all dates.

Note: The Number of Call Records: field and the Date: field work independently of each other. That is, if you search for a specific number of records, the Call Data Detail Report displays only the most recent call records up to that limit. From that set of records, it displays those that match the specified date and service.

For example, if the system contains 10 records for yesterday and 10 records for today and you enter **6** in the Number of Call Records: field and enter yesterday's date in the Date: field, the Call Data Detail Report displays no records. This is because the last six records were created for the current day, not for yesterday's date.

However, if you enter **all** in the Number of Call Records: field and yesterday's date in the Date: field, the Call Data Detail Report displays only the records from yesterday.

- 5 Enter a service name in the Service: field to limit the report to a particular service, or **all**, or press **F2** (Choice) to select from the menu. The default is all, meaning the report includes every service recognized by the voice system.
- 6 Enter **Yes** or **No**, or press **F2** (Choice) to select from a menu, in the Include Call Data Fields?: field to specify if call event data should be included in the report. The default is **No**. If call event data does exist for a particular record, the information appears immediately after the record entry on the Call Data Detail Report window (Figure 167 on page 223).
- 7 Press **F3** (Save).

The system displays the previous Call Data Detail Report window.

- 8 (Optional) Press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 9 (Optional) Select:



The system redisplay the Call Data Detail Report window with the new parameters.

Printing the Call Data Detail Report

The print option provides a complete printout of the Call Data Detail report.

Note: This report will not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Call Data Detail report:

- 1 Start at the Call Data Detail Report window (Figure 167 on page 223) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



The system prints the Call Data Detail Report using the last set of options saved to the voice system.

Updating the Call Data Detail Report

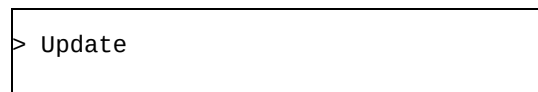
Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modifying the Call Data Detail Report on page 224.

To update the Call Data Detail Report:

- 1 Start at the Call Data Detail Report window (Figure 167 on page 223) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



The system updates the report and displays the values last saved.

Call Data Summary Report

The Call Data Summary Report provides an hourly summary of the calls made to the voice system. This report is similar to the Call Data Detail Report, except that the Call Data Summary Report shows the calls on an hourly basis by service. The system maintains approximately 7 days worth of data.

Note: Call data summary information is prepared at midnight for the entire day. Therefore, call data summary information for the current day is not available until after midnight.

Displaying the Call Data Summary Report To display the Call Data Summary Report:

- 1 Start at the Reports menu (Figure 163 on page 219) and select:

> Call Data Summary Report

The system displays the Call Data Summary Report window (Figure 169 on page 227).

Figure 169. Call Data Summary Report Window

Call Data Summary Report			
Period	Service	Average Hold Time	Usage
07:00pm - 08:00pm(04/12)	agent	0:22	1
06:00pm - 07:00pm(04/12)	SVC_Prou	1:06	4
05:00pm - 06:00pm(04/12)	SVC_Prou	0:59	2
04:00pm - 05:00pm(04/12)	(NULL)	0:00	1
04:00pm - 05:00pm(04/12)	SVC_Prou	0:43	5
03:00pm - 04:00pm(04/12)	SVC_Prou	0:49	8

Table 44 describes the columns on this window.

Table 44. Column Description for Call Data Summary Report

Column Name	Description	Comment
Period	Time, in hourly increments, when calls were made to the voice system.	
Service	Script associated with a group of calls made during the specified time.	
Average Hold Time	Average duration of a call for the specified time in minutes and seconds.	

1 of 2

Table 44. Column Description for Call Data Summary Report

Column Name	Description	Comment
Calls	Total number of calls for the specified time.	
Event Description	Name of the call data field.	Appears only when the Include Call Data Fields?: field is set to Yes. See Modifying the Call Data Summary Report on page 228.
Event No	Identifying number for each call data message.	Appears only when the Include Call Data Fields?: field is set to Yes. See Modifying the Call Data Summary Report on page 228.
Count	Either the total value of all calls for this event during the period if the event is a numeric field or the total number of all calls during the period if the event is a non-numeric field.	Appears only when the Include Call Data Fields?: field is set to Yes . See Modifying the Call Data Summary Report on page 228.
2 of 2		

Modifying the Call Data Summary Report

You can tailor the Call Data Summary Report to limit the display by changing one or more of the following parameters:

- Day of the week and hours to perform data collection
- Service to include
- Whether to show call data fields

To modify the Call Data Summary Report:

- 1 Start at the Call Data Detail Report window (Figure 167 on page 223) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:

> Modify

The system displays the Options for Call Data Summary Report window (Figure 170).

Figure 170. Options for Call Data Summary Report Window

Options for Call Data Summary Report	
Day:	_____
Hours:	_____
Service:	_____
Include Call Data Fields?	<u>no</u> _____

- 3 Enter the day of the week, **Monday** through **Sunday**, for which you want to obtain report information in the Day: field, or press **F2** (Choices) to select from a menu.
- 4 Enter the hours for which you want report information, or **all**, in the Hours: field. A valid range between 0–23 can be specified in this field, with 0 representing midnight and 23 representing 11 p.m.

If you enter a range between 9 and 16, the system displays call data for calls made between 9 a.m. and 5 p.m. The default is **all**; the system displays call data for the entire 24 hour period for the day.

Note: Hourly Call Data Summary Reports are not processed until midnight of each day. If you made a request for information on Tuesday, you would not see the information displayed until the following day, Wednesday.

- 5 Enter a service name, or **all**, or press **F2** (Choices) to select from a menu in the Service: field to limit the report to a particular service. The default is **all** to have the report displays call data for all services.
- 6 Enter **Yes** or **No**, or press **F2** (Choices) to select from a menu in the Include Call Data Fields?: field to specify if event data should be included on the report. The default is **No**. If call event data exists for a particular record, this information appears immediately after the record entry on the Call Data Summary Report window.

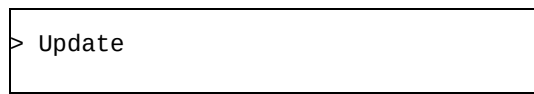
- 7 Press **F3** (Save).

The system displays the previous Call Data Summary Report window.

- 8 (Optional) Press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 9 (Optional) Select:

A screenshot of a software interface showing a menu with a single option, 'Update', which is preceded by a right-pointing arrow (>). The menu is enclosed in a rectangular box with a thick border.

The system redisplay the Call Data Summary Report window with the new parameters.

Printing the Call Data Summary Report

The print option provides a complete printout of the Call Data Summary report.

Note: This report will not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Call Data Summary Report:

- 1 Start at the Call Data Summary Report window (Figure 169 on page 227) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



The system prints the Call Data Summary Report using the last set of options saved to the voice system.

Updating the Call Data Summary Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modifying the Call Data Summary Report on page 228.

To update the Call Data Summary Report:

- 1 Start at the Call Data Summary Report window (Figure 167 on page 223) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



The system updates the report and displays the values last saved.

Out of Call Fax Report

The Out of Call Fax Report lists the transmission status of out-of-call faxes. It provides information that identifies each fax, including the date, time, job ID and destination number. It also indicates whether transmission was successful, the number of pages transmitted, and the transmission duration. If transmission was unsuccessful, the report provides a reason for failure.

The report displays information from the out-of-call fax log, which contains records for the most recent 14 days that faxes were transmitted. Faxes older than 14 days may be displayed if no faxes were transmitted on some days.

Note: The Out of Call Fax Report does not list incoming faxes or faxes sent when the delivery number is specified as CURRENT for a FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features," in *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217, for more information on CURRENT and out of call faxes. The report also does not include active fax jobs. Use the **faxq** command for information on active queued jobs. See Chapter 8, Common Administration, for information about the **faxq** command.

Displaying the Out of Call Fax Report

To display the Out of Call Fax Report:

- 1 Start at the Reports menu (Figure 163 on page 219) and select:



The system displays the Out of Call Fax Report window (Figure 171).

Figure 171. Out of Call Fax Report Window

OUT OF CALL FAX REPORT					
Date	Time	JobID	PSnt	Dur.	Destination
Status	Cause				

03/23/00	13:12:04	12	1	00:52	916148683660
Sent					
03/23/00	15:00:25	13	1	00:34	9011,886,229116276
Failed	No FAX protocol.				

- 2 Use **F2** (Prev Page) and **F3** (Next Page) to scroll through the report and **F6** (Cancel) to exit the report.

Table 45 defines the information on the Out of Call Fax Report window.

Table 45. Column Description for Out of Call Fax Report

Column	Description
Date	Date the fax job completed.
Time	Time the fax job completed.
JobID	A string identifying the fax job. The JobID is the Return Field: value associated with the fax transmission for non-CURRENT deliveries in the definition for the FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features", in <i>CONVERSANT System Version 8.0 Application Development with Script Builder</i> , 585-313-217, for more information.
PSnt	Number of pages transmitted
Dur	The amount of time (mm:ss) elapsed during the last try of the transmission
Destination	The FAX delivery number specified for the FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features," in <i>CONVERSANT System Version 8.0 Application Development with Script Builder</i> , 585-313-217, for more information.
1 of 2	

Table 45. Column Description for Out of Call Fax Report

Column	Description
Status	Status of the fax transmission: - Failed - Sent - Cancelled
Cause	If the transmission was successful or cancelled, this field is blank. If the transmission failed, this field contains an explanation for the failure. See "Repairing FAX Actions Troubles" in <i>CONVERSANT System Version 8.0 System Reference</i> , 585-313-215, for troubleshooting information on these failure types.
2 of 2	

Modifying the Out of Call Fax Report

You can modify the Out of Call fax report parameters to specify the time period for which fax information is displayed.

To modify the Out of Call Fax Report:

- 1 Start at the Fax Report window (Figure 171 on page 231) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:



The system displays the Modify Fax Report window (Figure 172).

Figure 172. Modify Fax Report Window

- 3 To display information about:

- ~ A single fax, enter the Fax Job ID in the Fax Job ID: field and leave the other fields blank.
- ~ All fax transmissions during a specified time period, enter **all** in the Fax Job ID: field and enter the beginning and ending dates for the report in the Start Date: and End Date: fields. Use the format of "mm/dd/yy" for month, day, and year. If you leave the End Date: field blank, the system uses today's date. If you leave the Start Date: field blank, the system uses the oldest date for which there is data in the fax log.

4 Press **F3** (Save).

5 Update the Out of Call Fax Report to display the new information. See Updating the Fax Report on page 233.

Printing the Out of Call Fax Report

The print option provides a complete printout of the Out of Call Fax Report.

Note: This report will not print unless the printer is configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Out of Call Fax Report:

1 Start at the Out of Call Fax Report window (Figure 171 on page 231) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

2 Select:



The system prints the Out of Call Fax Report using the last set of options saved to the voice system.

Updating the Fax Report

Use the Update function to redisplay the report to reflect the values last saved to the voice system. See Modifying the Out of Call Fax Report on page 232.

To update the Out of Call Fax Report:

1 Start at the Out of Call Fax Report window (Figure 171 on page 231) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

2 Select:



The system updates the report and displays the values last saved.

Message Log Report

The Message Log Report allows you to access voice system error messages including the:

- Priority level of the error
- Date and time the error occurred
- Source of the message
- Type of circuit card associated with the message, as well as the circuit card number and channel number
- Descriptive text

Displaying the Message Log Report To display the Message Log Report:

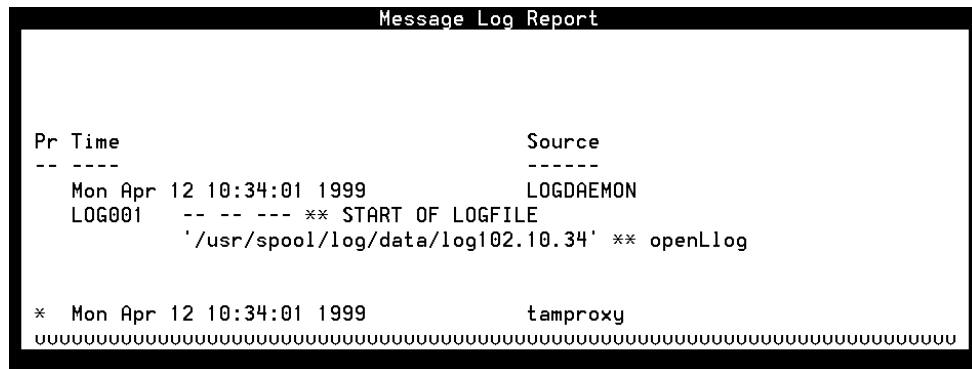
- 1 Start at the Reports menu (Figure 163 on page 219) and select:



> Message Log Report

The system displays the Message Log Report window (Figure 173).

Figure 173. Message Log Report Window



```

Message Log Report

Pr Time                               Source
-- ----                               -
Mon Apr 12 10:34:01 1999             LOGDAEMON
LOG001  -- -- -- ** START OF LOGFILE
        '/usr/spool/log/data/log102.10.34' ** openLlog

* Mon Apr 12 10:34:01 1999             tamproxy
*****

```


2 Use **F2** (Prev Page) and **F3** (Next Page) to scroll through the report.

Table 46 defines the information on the Message Log Report window.

Table 46. Entry Description for Message Log Report

Entry	Description
Pr	Priority classification of error messages. The priority is identified by one of the following codes: • *C (critical) — indicates the problem is interrupting service; immediate action is needed. • ** (major) — indicates a potentially serious problem and should be fixed soon. • * (minor) — indicates no immediate action is necessary, but the system condition should be monitored. • – (none) — no error; informational purposes only.
Time	Date and time when error message was generated.
Source	Originating software process; messages are divided into subgroups according to the software process that outputs them. Possible sources include: • The call data handler (CDH) process accumulates generic call statistics and application messages. • The data interface process (DIP). • The maintenance (MTC) process runs temporary diagnostics. • The tip/ring interface process (TRIP). • The transaction state machine (TSM) process controls transactions via script execution and commands. • The voice response output process (VROP) manages speech data base and downloads speech data to VRU. • The DIO processes are the disk input/output for VROP. • The T1 interface process (TWIP). • The speech processing interface process (SPIP). • The integrity checking (iCk) process.

Explain Message Log Report

The Explain option on the Actions Menu allows you to display more information about a specific message.

To get additional information about a particular message in the Message Log Report window:

- 1 Start at the Message Log Report window (Figure 173 on page 234) and press **F8** (Actions).

The system displays the Actions Menu (Figure 174).

Figure 174. Message Log Report Actions Menu



- 2 Press **F3** (Explain).

The system displays the Explain Message ID window (Figure 175).

Figure 175. Explain Message ID Window



- 3 Enter the ID of the message you want to have more information about in the Message ID: field.
- 4 Press **F3** (Save).

The system displays additional information about the specified message.

Modifying the Message Log Report

You can tailor the Message Log Report to limit the display by changing one or more of the following parameters:

- Message priority
- Message source
- Circuit card
- Start and stop time for the report
- Message ID
- Number of most recent messages to be displayed

By default, the Message Log Report is configured to display every message.

To limit what is displayed in the Message Log Report window:

- 1 Start at the Message Log Report window (Figure 173 on page 234) and press **F8** (Actions).

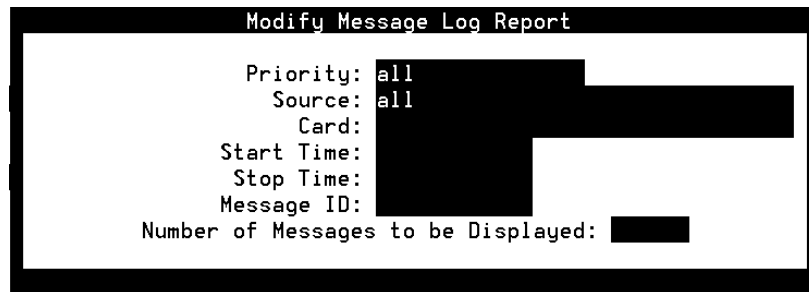
The system displays the Actions Menu (Figure 174 on page 236).

- 2 Select:



The system displays the Modify Message Log Report window (Figure 176).

Figure 176. Modify Message Log Report Window

A screenshot of a terminal window titled 'Modify Message Log Report'. It contains several fields with labels and values: 'Priority: all', 'Source: all', 'Card:', 'Start Time:', 'Stop Time:', 'Message ID:', and 'Number of Messages to be Displayed:'. The values for Priority, Source, and the number of messages are visible, while the others are redacted with black boxes.

- 3 Enter ***C** (critical), ****** (major), ***** (minor), **alarms**, **all**, or **events** in the Priority: field to limit the type of messages you want to see based on priority. Or, you may press **F2** (Choices) to select from a menu. The default is **all**.
- 4 Enter a single message source or multiple message sources separated by commas (for example, **TSM,MTC**) in the Source: field to limit the report to specific software processes, or press **F2** (Choices) to select from a menu. The default is **all**; all message sources are included.
- 5 Enter a single circuit card number or multiple circuit card numbers separated by commas in the Card: field to limit the display to specific circuit cards. There is no default value and the Choices menu is not available. If you specify all in the Card: field, the display is limited to messages about voice system circuit cards only.
- 6 Enter the start time for the message search in the Start Time: field, that is, the time of the first message to be displayed. For example, entering **02/05 10:00** indicates that you want to search messages that occurred on February 5 after 10 a.m.

Use the format MM/DD HH:MM for month, day, hour, and minute. If left blank, the beginning of the message log is used. If you enter **today**, all entries since the beginning of the current day are searched.

- 7 Enter the stop time for the message search in the **Stop Time:** field, that is, the time of the last message to be displayed.

Use the format MM/DD HH:MM for month, day, hour, and minute. If the **Stop Time:** field is left blank, the end of the message log is used. If you enter **today**, all messages logged up to (but not including) the current day are displayed.

Note: If nothing is entered in the **Start Time:** and **Stop Time:** fields, these fields default to 00:00 of the current date. As a result, no records are displayed in the Message Log Report.

- 8 Enter the ID of the messages to be displayed in the **Message ID:** field. Enter a single ID, multiple IDs separated by commas (for example, **TSM001,TWIP003**), or **all**.

- 9 Enter a single number from **1** to **999**, or **all** in the **Number of Messages to be Displayed:** field to specify the number of most recent messages to be displayed. If you enter **all**, the report displays all messages maintained by the log. If you enter **5**, the voice system searches all records and displays only the five most recent records that match the specified start and stop time, priority, circuit card, and source.

- 10 Press **F3** (Save).

The system displays the previously displayed Message Log report.

Use **F2** (Prev Page) and **F3** (Next Page) to scroll through the report.

- 11 (Optional) Press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 12 (Optional) Select:



A screenshot of a menu box with a black border. Inside the box, the text "> Update" is displayed, indicating that the 'Update' option is selected.

The system updates the report and displays the values last saved.

Printing the Message Log Report

The print option provides a complete printout of the Message Log Report.

Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Message Log Report:

- 1 Start at the Message Log Report window (Figure 173 on page 234) and press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 2 Select:



The system prints the Message Log Report using the last set of options saved to the voice system.

Updating the Message Log Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modifying the Message Log Report on page 236.

To update the Message Log Report:

- 1 Start at the Message Log Report window (Figure 173 on page 234) and press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 2 Select:



The system updates the report and displays the values last saved.

Administrative Commands Log Report

The Administrative Commands Log report provides the ability to log the use of critical administrative commands and activities such as voice system stops and starts. The Administrative Commands Log report identifies when the command was successfully executed and whether it was done manually or by the voice system.

Commands and Activities Included in the Report

The following administrative commands and activities are monitored for inclusion in this report:

- Analog and digital switch interface changes
- Enable/disable Adjunct/Switch Application Interface (ASAI)
- Script Builder commands: **hnewscript**, **verify**, **install**
- Voice equipment commands: **spfunc**, **t1prot**, **eqprot**
- Host interface commands: **assign**, **hassign**
- System control commands: **start_vs**, **stop_vs**, **disable**, **autoreboot**, **delete**, **remove**, **restore**, **hdelete**, **trace**, **erase**, **diagnose**, **vs_enable**
- Talkfile (speech files) commands: **add phrase**, **copy phrase**

Administrative Commands Log Report Content

The command or activity results in either one or two entries to the Administrative Commands Log:

- Start message entries — indicate the execution of the administrative command or activity
- End message entries — indicate the result of the command or activity if the information would be critical for troubleshooting purposes

Note: Some commands and activities log only a Start message entry.

Displaying the Administrative Commands Log Report

Display the Administrative Commands Log report through the Message Log Report.

To display the Administrative Commands Log Report:

- 1 Start at the Reports menu (Figure 163 on page 219) and select:



> Message Log Report

The system displays the Message Log Report window (Figure 173 on page 234).

- 2 Press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

3 Select:



```
> Modify
```

The system displays the Modify Message Log Report window (Figure 177).

Figure 177. Modify Message Log Report Window



```
Modify Message Log Report
Priority: all
Source: all
Card:
Start Time:
Stop Time:
Message ID:
Number of Messages to be Displayed:
```

- 4 Enter **admin** in the Priority: field.
 - 5 Enter a software process source in the Source: field, or enter **all** to include all software process sources.
 - 6 Leave the Card: field blank.
 - 7 Enter the start time for the message search in the Start Time: field, that is, the time of the first entry to be displayed. For example, entering **02/05 10:00** indicates that you want to search entries that occurred on February 5 after 10 a.m.

Use the format MM/DD HH:MM for month, day, hour, and minute. If left blank, the beginning of the administrative command log is used.
 - 8 Enter the stop time for the message search in the Stop Time: field, that is, the time of the last message to be displayed.

Use the format MM/DD HH:MM for month, day, hour, and minute. If the Stop Time: field is left blank, the end of the administrative command log is used.
- Note:** If nothing is entered in the Start Time: and Stop Time: fields, the entire administrative command log is displayed.
- 9 Leave the Message ID: field blank.
 - 10 Enter a single number from **1** to **999**, or **all** in the Number of Messages to be Displayed: field to specify the number of most recent entries to be displayed. If you enter **all**, the report displays all entries maintained by the log. If you enter **5**, the voice system searches all records and displays only the five most recent entries that match the specified start and stop time, and source.

11 Press F3 (Save).

The system displays the Message Log Report window, now with the Administrative Commands Log Report data (Figure 178).

Figure 178. Administrative Commands Log Report Window (Displayed under Message Log Report Window)

```

Message Log Report

Pr Time                               Source
-- ----                               -
Thu Apr  3 15:29:14 1997          LOGDAEMON
LOG001  -- - - - - ** START OF LOGFILE
        '/usr/spool/log/data/admin093.15.29' ** openLog

Thu Apr  3 15:29:14 1997          LOGDAEMON

```

Use **F2** (Prev Page) and **F3** (Next Page) to scroll through the report.

The list below describes the entries in the Administrative Commands Log window:

- ~ Time — Date and time when the command or activity was executed
- ~ Source — Name of the originating software process that executed the command or activity
- ~ Login ID — Login ID that executed the command or activity (if applicable). A common login ID to see is **root**
- ~ Administrative command text — Full text of the command or activity executed with all applicable parameters
- ~ Disposition — Full text of the result of the command or activity

12 (Optional) Press F8 (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

13 (Optional) Select:

> Update

The system updates the report and displays the values last saved.

Printing the Administrative Commands Log Report

The print option provides a complete printout of the Administrative Commands Log Report.

Note: This report will not print if a printer is not configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Administrative Commands Log Report:

- 1 Start at the Administrative Commands Log Report window (Figure 178 on page 242) displayed under the Message Log Report window and press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 2 Select:



> Print

The system prints the Administrative Commands Log Report using the last set of options saved to the voice system.

Updating the Administrative Commands Log Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See Modifying the Message Log Report on page 236.

To update the Message Log Report:

- 1 Start at the Administrative Commands Log Report window (Figure 178 on page 242) displayed under the Message Log Report window and press **F8** (Actions).

The system displays the Actions Menu (Figure 174 on page 236).

- 2 Select:



> Update

The system updates the report and displays the values last saved.

Traffic Report

The Traffic Report provides call volume information for approximately the last seven days, including the:

- Number of calls coming in to the system during a specific time period
- Average holding time
- Percentage of time a channel was occupied for a specific hour

Note: Traffic summary information is prepared at midnight for the entire day. Therefore, traffic summary information for the current day is not available until after midnight.

Displaying the Traffic Report

To display the Traffic Report:

- 1 Start at the Reports menu (Figure 163 on page 219) and select:

```
> Traffic Report
```

The system displays the Traffic Report window (Figure 179).

Figure 179. Traffic Report Window

Traffic Report					
TRAFFIC REPORT					
For the Period 12 am to 11 pm					
Channel	Period	Calls	Average Hold Time	% Occ	
8	07:00am - 08:00am(04/12)	1	0:23	0	
8	01:00am - 02:00am(04/12)	3	0:14	1	
16	07:00pm - 08:00pm(04/12)	1	0:22	0	

Table 47 describes the information on this window.

Table 47. Entry Description for Traffic Report Window

Entry	Description
Channel	Channel that handled the call.
Period	Time period when system traffic is monitored.
Calls	Number of calls made during the indicated time period.
Average Hold Time	Average duration of a call for the specified time in minutes and seconds.
%Occ	Percentage of occupancy (that is, the proportion of the hour that the channel was in use).

Modifying the Traffic Report

You change the Traffic Report with the Modify function on the Actions Menu (Figure 165 on page 221). You can specify the date and time when you want the system to monitor call traffic, and whether you would like the data summarized.

To modify the Traffic Report:

- 1 Start at the Traffic Report menu (Figure 179 on page 244) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

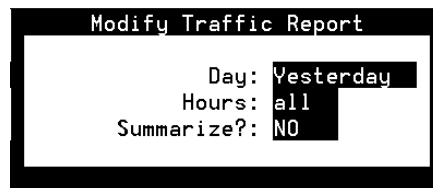
- 2 Select:



A screenshot of a terminal window showing the Actions Menu. The word 'Modify' is highlighted with a cursor, preceded by a greater-than sign (>).

The system displays the Modify Traffic Report window (Figure 180).

Figure 180. Modify Traffic Report Window



A screenshot of the 'Modify Traffic Report' window. It contains three fields: 'Day:' with the value 'Yesterday', 'Hours:' with the value 'all', and 'Summarize?:' with the value 'NO'.

- 3 Enter a day of the week, **Monday** through **Sunday**, or **Yesterday** in the Day: field, or press **F2** (Choices) to make a selection from a menu. The default is **Yesterday**.
- 4 Enter the hours for which you want the voice system to obtain report information in the Hours: field using 0 to represent midnight and 23 to represent 11 p.m. The default is **all**; directs the system to collect traffic data for the entire 24 hour period of the day specified in the Day: field.
- 5 Enter **Yes** or **No** in the Summarize?: field to specify whether or not you want to see a Traffic Summary Report. The default is **No**; the system displays the Traffic Report instead of the Traffic Summary Report. The two reports are described below:
 - ~ The Traffic Summary report provides information on the total traffic volume for each channel for the range of hours specified in the Traffic Report window.
 - ~ The Traffic Report provides traffic volume for each channel in one hour increments starting and ending with the hours specified in the Traffic Report window.
- 6 Press **F3** (Save)

The system displays the previously displayed call traffic report.

7 (Optional) Select:

A screenshot of a menu box with a black border. Inside the box, the word "Update" is preceded by a right-pointing arrow (>).

The system updates the report and displays the values last saved.

Printing the Traffic Report

The print option provides a complete printout of the Traffic Report.

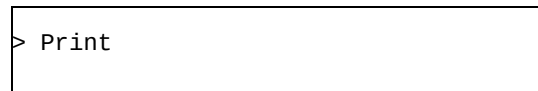
Note: This report will not print if a printer has not been configured for use with the voice system. See Printer Administration on page 189 in Chapter 7, Peripheral Administration, for more information about printer administration.

To print the Traffic Report:

- 1 Start at the Traffic Report window (Figure 179 on page 244) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:

A screenshot of a menu box with a black border. Inside the box, the word "Print" is preceded by a right-pointing arrow (>).

The system prints the Traffic Report using the last set of options saved to the voice system.

Updating the Traffic Report

Use the Update function to redisplay the report. The report reflects the values that were last saved to the voice system. See Modifying the Traffic Report on page 245.

To update the Traffic Report:

- 1 Start at the Traffic Report window (Figure 179 on page 244) and press **F8** (Actions).

The system displays the Actions Menu (Figure 165 on page 221).

- 2 Select:

A screenshot of a menu box with a black border. Inside the box, the word "Update" is preceded by a right-pointing arrow (>).

The system updates the report and displays the values last saved.

Signal Processing Activity Report

The Signal Processing Activity report display information about the voice system signal processing resources. These resources include:

- Signal processing algorithms
- Speech and signal processing (SSP) circuit cards
- Feature licensing

The data in the Signal Processing Activity report is collected by the **spadc** command. The **spar** command then summarizes and displays the data in an ASCII file.

Data Collection for Signal Processing Activity Report

The **spadc** command collects data for the day of the week on which the command is executed, and outputs the data to an ASCII file named **mm-dd-yyyy** (for example, 09-12-1999).

The **mm-dd-yyyy** file contains one line of data for each 5-minute period during which the voice system is running. Each line consists of 10 fields:

- Field 1 — Date and time using the format mm/dd/yyyy:HH:MM.
- Field 2 — Feature licensing usage information. This field contains 10 entries representing average and peak values for the Text-to-Speech, Dial Pulse Recognition, and WholeWord Speech Recognition feature package use of the signal processing resources.
- Fields 3–8 — One field for each of the SSP circuit cards in the system. Each field contains entries representing average and peak values for circuit card occupancy, followed by average and peak values for use by each of the following processes/features:
 - ~ WholeWord Speech Recognition
 - ~ FlexWord Speech Recognition
 - ~ Echo cancellation
 - ~ Call Classification Analysis
 - ~ Text-to-Speech
 - ~ Dial Pulse Recognition
 - ~ Play
 - ~ Code
 - ~ CELP

See **spadc** on page 392 and **spar** on page 393 in Appendix A, Summary of Commands, for more information about creating a Signal Processing Activity report.

Custom Database Reports

To write a **cron** job that generates your own ORACLE database reports, include the following ORACLE environment variables in the shell application:

```
# beginning of ORACLE environment variable definition
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME=/oracle;export ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin;export PATH
ulimit 2113674
# end of ORACLE environment variable definition
```

Common Administrative Procedures

See “Common System Procedures”, in the *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for information and procedures to perform the following common administrative tasks:

- Format floppy diskettes and cartridge tapes
- Create system backup
- Restore a system from backup
- Change the system date and/or time

A Summary of Commands

Overview

This appendix provides an alphabetical list and brief description of all commands. Table 48 shows all the commands.

Note: Analog interfaces are not currently supported on the UCS100.

Table 48. Command Synopsis

Command	Function
3270dip_off	Turns off the 3270 DIP.
3270dip_on	Turns on the 3270 DIP.
add	Adds a phrase to a UNIX talkfile.
addhdr	Adds a voice or code header to a speech file.
annotate	Annotates a TSM trace stream with a message.
assign card/channel	Assigns a group number to a card or channel.
assign_permissions	Assigns voice system security permissions to the user.
assign service/startup	Assigns an installed service to DNIS and ANI numbers or directly to a channel.
attach	Attaches a unit.
autoreboot	Changes or displays the parameters associated with the autoreboot feature.
backup_appl	Backs up an application if enhanced file transfer is installed.
bbs	Reports the status of the voice system Bulletin Board.
bk_appl	Backs up the speech and/or transaction component of a Script Builder application.
ccarpt	Generates a call classification data summary report.
cddrpt	Generates a call data detail report.
cdsrpt	Generates a call data summary report for a specific date.
checktf	Checks for the existence of talkfiles in the voice system.
codetype	Identifies the type of coding header in a speech file.
configure	Determines the allocation of resources for all devices to be included in the system configuration for a given hardware platform.
copy	Copies a phrase from one UNIX file to another UNIX file.
1 of 6	

Table 48. Command Synopsis

Command	Function
cpuType	Returns the type of CPU used in the system.
cvis_mainmenu	Accesses the administrative menu.
cvis_menu	Accesses the Voice System Administration menu.
dbcheck	Checks the resources available in the database.
dbfrag	Lists fragmentation information on the database.
dbfree	Checks the space available in the database by partition.
dbused	Provides database use by ORACLE user.
decode	Converts adpcm16 or adpcm32 files to pcm64 files.
defService	Defines an IRAPI service.
delete card/channel	Removes a card or channel from a service or an equipment group.
delete eqpgrp	Removes an equipment group.
delete service/startup	Removes the assignment of a service to DNIS and ANI numbers or of a service assigned directly to a channel.
detach	Places a unit in the nonexistent state.
diagnose bus	Tests a bus while it is in service.
diagnose card	Tests a card while it is in service.
dip_int	Sends a DIP interrupt to a script on a channel or a range or channels.
display assignments	Displays the services assigned to channels.
display card	Displays information about specified cards.
display channel	Displays channel information.
display dnis	Displays the services assigned to DNIS and ANI numbers.
display eqpgrp/group	Displays an equipment group report.
display messages	Displays system messages.
display_permissions	Displays voice system security permission information for the user.
display services	Lists all valid services to scripts.
edExplain	Edits the explanation text for one or more message tags.
encode	Converts ADPCM16 or ADPCM32 files to PCM64 files.
erase	Deletes a phrase from a UNIX talkfile.
explain	Displays on-line error message explanations.
faxit	Queues or sends a fax.
faxq	Outputs a report of all active fax jobs.
2 of 6	

Table 48. Command Synopsis

Command	Function
faxremove	Removes a fax job from the fax queue.
faxrpt	Prints a report of completed or failed out-of-call faxes.
faxutil	Merges two files to create a TIFF file.
findHomes	Populates a users home directory with files saved as part of assisted upgrade.
fixLogFile	Upgrades existing logging files.
get_config	Retrieves the /vs/data/conf_data file from a floppy disk.
hasRAID	Reports whether the system has RAID.
hassign	Assigns host services to host sessions.
hcapture	Captures the unrecognized screen exchanged between the host and CONVERSANT.
hdefine	Displays the host screens created by hcapture in a two page format.
hdelete	Removes host services from host sessions.
hdisplay	Shows host applications that have been successfully verified and installed.
hdump	Dumps screens exchanged between the host and CONVERSANT.
hfree	Releases host sessions from Script Builder host application assignments.
hlogin	Runs the login sequence of a host script.
hlogout	Runs the log out sequence of the host script.
hnewscrip	Installs a changed host script.
hsend	Sends a file to the host via CONVERSANT file transfer.
hspy	Displays a screen currently present on the specified host session.
hstatus	Shows the current status of the host sessions.
iCk, iCkAdmin	Performs various integrity checks based on the rules in a script file.
install_appl	Installs an application if enhanced file transfer is installed.
install_sw	Installs a software package if enhanced file transfer is installed.
lComp	Combines message files to produce compressed and expanded format files.
tif2itif	On a UnixWare system, converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the CONVERSANT FAX Actions Package. A command with the same functionality, tif2itif , is available for Windows systems.
3 of 6	

Table 48. Command Synopsis

Command	Function
tif2itf.exe	On a Windows 95, Windows 98, and Windows NT systems, converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the CONVERSANT FAX Actions Package. This command is a PC-based version of the tif2itf command.
list	Lists the directory entries for specific phrases.
logCat	Reads compressed logging files and outputs human readable messages.
logDstPri	Creates the shared memory containing the dynamic destinations and priorities of logging messages using logMsg .
logEvent/logMsg	Allows shell scripts to log a specific message.
logFmt	Displays and changes the parameters used to display messages and explanation texts.
logit	Logs the specified message in the logging files.
logTest	Reads a script of logging messages to be sent to the logdaemon and sends the messages at the specified times and as the specified process.
mkAlerter	Reads an alerter description and generates the code that implements the description.
mkheader	Allocates user memory for script variables.
mkimage	Performs a complete system backup of all the contents of the root disk file system.
msgadm	Facilitates the administration of system messages.
newscript	Updates the changes to all currently assigned scripts.
pkgadd	Transfers the contents of a software package from the distribution medium or directory to the voice system.
pkginfo	Displays information about software packages which are installed on the system, or which reside on a particular device or directory.
pkgrm	Removes a software package from the system.
raidconf	Reports the configuration of the RAID subsystem.
raidok	Reports the state of the RAID subsystem.
raidstat	Reports the status of the entire RAID subsystem.
reinitLog	Used when adding custom error messages.
remove	Places a unit in the manual-out-of-service (MANOOS) state.
remove_appl	Removes an application if enhanced file transfer is installed.
remove_sw	Removes an installed package if enhanced file transfer is installed.
4 of 6	

Table 48. Command Synopsis

Command	Function
restore	Restores a unit to the in-service (INSERV) state.
restore_appl	Restores an application if enhanced file transfer is installed.
rmdb	Displays the state of the resource manager and modify debug levels.
rs_appl	Restores the speech and/or transaction component of a Script Builder application.
save_config	Saves the /vs/data/conf_data to floppy disk.
sb_backup	Backs up a Script Builder application.
sb_restore	Restores a Script Builder application.
sb_te	Invokes the 3270 terminal emulator.
sb_trace	Displays trace messages and screens being sent between Script Builder applications and the host mainframe for the specified host channel.
show_config	Displays and prints to a file the valid or incomplete voice system configuration.
show_devices	Displays and prints to a file all devices and their attributes as represented in the /vs/data/device_data .
show_sys	Allows you to retrieve configuration and administration information from customer sites.
soft_disc	Sends a disconnect to a script on a channel or channels.
soft_srz	Starts a script on a channel.
spadc	Collects data on the signal processing resources. Use the spar command to generate reports on the data.
spar	Generates reports on the signal processing data activity collected by the spadc command.
spCtlFlags	Sets and clears flags used to control the behavior on SP executive pack files as they run on an SSP card.
spres	Restores speech from a backup.
spsav	Backs up speech.
spStatus	Displays information about the pack file running on an SSP card.
spVrsion	Prints the version of the SSP driver currently installed on a machine.
start_hi	Starts the 3270 host interface software.
start_vs	Brings the voice system up to a fully operational state.
stop_hi	Stops the 3270 host interface software.
5 of 6	

Table 48. Command Synopsis

Command	Function
stop_vs	Stops the voice system software gracefully.
striphdr	Strips voice or code headers from a speech file.
sysmon	Executes a program that monitors incoming telephone lines and the associated cards to see that they are functional.
tas	Executes the transaction assembler program to assemble script instructions.
trace	Outputs trace messages for the specified processes and channels.
trarpt	Generates the call traffic report file systems.
unassign_permissions	Removes voice system security permissions for the user.
vfyLogMsg	Verifies the information associated with a specific logging message format.
vsdisable	Disables the automatic restarting of the voice system.
vsenable	Enables the automatic starting of the voice system at system reboot.
vusage	Displays the current load on the voice system.
wl_copy	Copies FlexWord vocabularies to disk.
wl_edit	Edits FlexWord wordlists.
wl_gen	Creates data files for a FlexWord vocabulary.
wl_init	Generates an initial FlexWord wordlist from a set of words.
wl_install	Reads FlexWord vocabularies from floppy disk.
xferdip_off	Deactivates the bridging capability.
xferdip_on	Activates the bridging capability.
6 of 6	

3270dip_off

The **3270dip_off** command turns off the 3270 data interface process (DIP).

Synopsis

3270dip_off

Description

The **3270dip_off** command deactivates the 3270 DIP the next time the voice system is started.



CAUTION:

You must stop and start the voice system for this command to take effect.

Files

/vs/data/HOST3270
/etc/inittab

Example

The following example turns off the 3270 DIP:

3270dip_off

See Also

3270dip_on
start_vs
stop_vs

3270dip_on

The **3270dip_on** command turns on the 3270 data interface process (DIP).

Synopsis

3270dip_on

Description

The **3270dip_on** command activates the 3270 DIP the next time the voice system is started.



CAUTION:

You must stop and start the voice system for this command to take effect.

Example

The following example turns on the 3270 DIP.

3270dip_on

See Also

3270dip_off

add

The **add** command adds a phrase to a Unix talkfile.

Synopsis

add phrase *phrase_number* to talkfile *talkfile_number* from *file_name*

Description

The **add** command adds phrases to the specified talkfile that were previously extracted from another talkfile using the **copy** command. The path name for the file may be the full pathname or the relative pathname. If no path is specified, the file is created in the current working directory. If you are not in the directory from which the phrase to be added is stored, give the full path name for the talkfile and the source file. If the phrases already exists, the system displays the following message:

```
Phrase <phrase_number> already exists in talkfile
<talk file number>
Do you want to overwrite existing phrase? (y/n)
```

If an error occurs, system messages are printed on the controller screen. The source file may be a full path name or a relative path name. See Chapter 4, "Alarm and Log Messages," in *CONVERSANT System Version 8.0 System Reference*, 585-313-215, for how to respond to a system message.

Note: The add command adds a phrase to the SPEECHDIR default directory, which is **/home2/vfs/talkfiles**. In order to add a phrase, the conventional naming scheme must be followed.

Files

/speech/talk/*.pl

Examples

The following example adds phrase number 275 to talkfile 25 from the phrase stored in the UNIX file phr275 in the directory **/tmp/junk**.

add phrase 275 to talkfile 25 from /tmp/junk/phr275

The following example adds phrase 104 to talkfile 18 from the phrase stored in the UNIX file phr104 in the directory **/speech/talk**.

add phrase 104 to talkfile 18 from /speech/talk/phr104

See Also

copy
erase
list

addhdr

The **addhdr** command adds a voice or code header to a speech file.

Synopsis

addhdr [voice | pcm64 | adpcm32 | adpcm16 | sbc24 | sbc16 | celp16]
[tag]

Description

The **addhdr** command is a filter that adds a header to a speech file. Two mutually exclusive types of headers are supported: voice and code. A voice header identifies a file as being editable, and includes an optional identifying tag. A code header (which can be PCM64, ADPCM32, ADPCM16, SBC24, SBC16, or CELP16) identifies the way in which the file is encoded. Code headers are required on any file that is to be played on the voice system.

Before converting between voice and code headers, you must strip off any existing headers.

See Also

codetype, **striphdr**

annotate

The **annotate** command annotates the transaction state machine (TSM) trace stream with a message.

Synopsis

annotate [*channel*] "*message*"

Description

The **annotate** command sends a message to TSM requesting that the given message be put into TSM's trace stream. This command is useful for testing and debugging scripts.

If a channel is specified, the message is associated with the channel's trace stream. The message must be fewer than 160 characters.

The **annotate** trace message is displayed in the trace output if a trace is running when the **annotate** command is executed. If no **trace** command is running, the annotate trace message is discarded.

Files

/vs/bin/tools

Example

The following example sends a message to TSM to put the message "This is test 1 for channel 1" in channel one's trace stream.

annotate 1 "This is a test 1 for channel 1"

assign card/channel

The **assign card** command assigns a group number to a card.
The **assign channel** command assigns a group number to a channel.

Synopsis

assign card *card*[*.port*] to [*eqpgrp*] *group_number* [*grpname*]

assign channel *number* to [*eqpgrp*] *group_number* [*grpname*]

Description

The **assign card/channel** command is used when a system is installed, the number of channels or cards changes, scripts are added or deleted, telephone numbers change, or the user wants to reconfigure the system. The system uses the card and channel assignments to route an incoming call to the group.

Parameters for the **assign card/channel command** are:

- *number* — The channel number (a single card or channel number, a range of card or channel numbers specified in the format m–n, or **all** for all card or channel numbers)
- *eqpgrp* — The “eqpgrp” when assigning to an equipment group
- *group_number* — The number of the equipment group or service group
- *grpname* — An optional character string that can be associated with “grp”

Reference to a nonexistent channel or nonexistent group in this command causes it to fail.

Examples

The following example assigns channels 0 through 47 to equipment group 1.

assign chan 0-47 to eqpgrp 1

See Also

assign service/startup

display eqpgrp/group

delete eqpgrp

assign_permissions

The **assign_permissions** command assigns voice system security permissions to a user.

Synopsis

assign_permissions *user_login permissions_level*

Description

The **assign_permissions** command assigns voice system security permissions to a user. Security permissions determine the areas of the voice system that the user may access. See Chapter 2, UNIX Administration, for more information on creating user logins.

Parameters for the **assign_permissions** command are:

- *user_login* — represents the user who is to be assigned security permissions.
- *permissions_level* — Specifies the specific security class permission to be assigned. The security classes are:
 - ~ **administration**
Allows the user full voice system capabilities
 - ~ **applications**
Allows the user Script Builder, configuration management, reports administration, and system monitor capabilities
 - ~ **operations**
Allows configuration management, reports administration, and system monitor capabilities

Example

The following example executes the command to assign voice system security to a user with the user login of brown.

assign_permissions brown operations

See Also

unassign_permissions
display_permissions

assign service/startup

The **assign service/startup** command assigns an installed service to DNIS and ANI numbers or directly to a channel.

Synopsis

assign service *service_name* [startup *startup_name*] to chan *chan_list*

assign service *service_name* to dnis *phone_list* [ani *phone_list*]

assign service *service_name* to ani *phone_list* [dnis *phone_list*]

Description

The **assign service/startup** command is used to assign services to either a set of channels or to a DNIS and ANI numbers. Services should be assigned after the service has been verified and installed, the number of channels changes or the system is reconfigured. Use the **display script** command to see a list of valid service names.

Parameters for the **assignservice/startup** command are:

- *chan_list* — Indicates channel numbers or channel number ranges in the form chan1-chan2. A comma or space is used to separate channel numbers in the list of channel numbers or ranges.
- *phone_list* — Indicates telephone numbers or telephone number ranges in the form phone1:phone2. A comma or space is used to separate the list of telephone numbers or ranges.

Examples

The following example assigns service stdin (standard in as an arbitrary name for a script) to channel 0.

assign service stdin to chan 0

The following example assigns service stdout (standard out as an arbitrary name for a script) to channel 1.

assign service stdout to chan 1

The following example assigns service dnis to all channels.

assign service *DNIS_SVC to chan all

The following example assigns startup service stdout to channels 4 through 7.

assign startup stdout to chan 4-7

The following example assigns the service stdout and startup service stdin to channels 4 through 7.

assign startup stdin service stdout to chan 4-7

The following example assigns the service stdout to DNIS 5000 through 5008 and ANI any.

assign service stdout to dnis 5000:5008

The following example assigns the service stdout to DNIS 5000 through 5008 and ANI 6000.

assign service stdout to dnis 5000:5008 ani 6000

The following example assigns the service stdout to DNIS any and ANI 6000 through 9000.

assign service stdout to ani 6000:9000

The following example assigns the service stdout to DNIS 3000 and ANI 2000-3000.

assign service stdout to dnis 3000 ani 2000:3000

See Also

display eqpggrp/group

delete eqpggrp

attach

The **attach** command attaches a unit (card).

Synopsis

attach *unit number* [-i] [-n]

Description

The **attach** command is used to attach a card that has been “detached.” The unit (card) is logically attached by changing its permanent state from nonexistent (NONEX) to manual-out-of-service (MANOOS). To put the unit into service, use the **restore** command.

Parameters for the **attach** command are:

- *unit* — Identifies the unit; the choices are **channel** or **card**.
- *number* — Specifies the channel or card number, a range of channel or card numbers in the form m–n, or **all** for all channel or card numbers. Card numbers are in the format card#[.port#] where *port#* is a port of the *card#*. If *port#* is not given, all ports of the card specified are attached. If no card number or channel number is given, the system displays a syntax message.
- **-n** — Disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option below) or to terminate the request to **attach**.

- **-i** — Used to enable secondary command registration. If T1 diagnostics are being run, this option allows the “attaching” of another card. If **-i** is used and another maintenance command is being run (**remove**, **detach**, **attach**, **restore**, or **diagnose**), the request to **attach** is blocked and a message is printed to the screen. If **-i** is not used and any maintenance command is being run, the request to **attach** is blocked and a message is printed to the screen.

If the command is permitted to run, it is determined if the command is in conflict with another command. A command is in conflict if the card or card associated with the command meets any of the following conditions:

- ~ T1 card is being diagnosed
- ~ Causes a change in the existing TDM bus master assignment
- ~ An interdependency exists with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **attach** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to **attach**.

To delete out of the command, press **DELETE**. If this does not terminate the command, you may need to press **CONTROL+ ALT + DEL**. If, while running **attach**, you abort the command, a message similar to the following may appear:

```
At the user's request, administration of the following cmd(s)
has been interrupted.
```

```
CARD NUMBERS: <card numbers>
```

```
To assure proper operation of the identified card(s), run
diagnostics at the earliest opportunity.
```

It is recommended when **attach** is aborted, diagnostics be run on all cards being administered to ensure they are returned to a fully functional state.

Examples

The following example attaches a card to channel 2.

```
attach card 2
```

The following example attaches channels 0 through 2 and channel 5.

```
attach channel 0-2,5
```

The following example attaches a card to channel 2, port 1.

```
attach card 2.1
```

See Also

detach
restore
remove

autoreboot

The **autoreboot** command provides a means of changing or displaying the parameters associated with the automatic reboot feature.

Synopsis

autoreboot [**enable** | **disable**] [**reboots** *numbers*] [**window** *minutes*]
[**uptime** *minutes*]

autoreboot [**status** | **s**]

autoreboot [**help** | **h**]

Description

The **autoreboot** command is used to change parameters associated with the auto-reboot feature and to monitor the status of these parameters.

Parameters for the **autoreboot** command are:

- **enable|disable** — Specifies whether to enable or disable the autoreboot feature. The default is enable.
- **reboots** *number* — Specifies the number of unanticipated reboots tolerated within the time period specified by **window**. The default is 5.
- **window** *minutes* — Specifies the time period for the **reboots** parameter. The default is 60 minutes.
- **uptime** *minutes* — Specifies the amount of time that the system must be in service before the autoreboot feature is activated. The default is 5 minutes.
- **status** — Shows the current values of the automatic reboot parameters, plus the number of unanticipated reboots that occurred in the **window** time period preceding the most recent system boot.

When the autoreboot feature is enabled and activated, the system automatically reboots after a UNIX panic. The autoreboot feature is activated as follows:

If there were fewer reboots than unanticipated reboots during the **window** *minutes* prior to the most recent system boot, the automatic reboot feature is activated (if enabled) **uptime** *minutes* after the most recent system boot.

For example, assume the automatic reboot parameters are set to their default values. A system crash occurs. The system reboots at 8:00. If there were fewer than 5 unanticipated reboots between 7:00 and 8:00, the autoreboot feature is activated as 8:05. Otherwise, it is activated at 9:00.

An unanticipated reboot is a system boot that occurs after a system crash. A system crash can be caused (for example) by a UNIX panic, a system restart via **RESET** or a sudden power loss.

Example

The following example enables autoreboot feature and changes the **window** parameter to 2 hours.

autoreboot enable window 120

Caveat

This command must be run from ksh (KORN shell).

backup_appl

The **backup_appl** command backs up an application.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis

backup_appl -n *application_name* [-d *database_file*] [-t *transaction_file*] [-s *speech_file*] [-p *path*]

Description

The **backup_appl** command is used to backup a Script Builder application to files on the local machine. The files in each component (database, speech, transaction) of the application are bundled into one cpio file per component. If the cpio file names and path are not specified, default names and a default path are used and all three components are backed up. The following are the default file names for each component:

database	Dbase
speech	Spch
transaction	Trans

Files

/tmp/sb/BkUpAppl/*application_name*

Return Values

If the **backup_appl** command is successful, a 0 value is returned. If any value other than 0 is returned, the **backup_appl** command failed. The following are the possible reasons for failure for the **backup_appl** command:

- The hard disk is low in space.
- You are not logged in as **root** or a superuser.
- The command syntax is incorrect.
- The backup tables has failed.
- The backup speech has failed.
- The backup transaction has failed.

Example

The following example backs up the “bank_balance” application using the default names for the transaction, database, and speech.

```
backup_appl -n bank_balance
```

See Also

```
install_appl  
remove_appl  
restore_appl
```

bbs

The **bbs** command reports status of the voice system Bulletin Board (BB).

Synopsis

```
bbs [-d] [-h] [-l]
```

Description

The **bbs** command displays the field values of the BB slots. This information is sent to standard out (stdout). Without any options, information is extracted only from the dynamic portion of the BB and printed in short format. Otherwise the information displayed is controlled by following command options:

- **-d** — Prints information about the dynamic portion of the BB (the default).
- **-h** — Prints information about the hardcoded portion of the BB.
- **-l** — Generates a long listing. The system displays all fields.

The column headings and meaning of the columns in the **bbs** listing are given in Table 49. In the table, the letter “l” indicates the **-l** (long) option, which causes the corresponding heading to appear. The **all** option means that the heading always appears.

Table 49. bbs Column Headings

Column Name	Option	Description
SLT	all	The slot number
BBNAME	all	The name associated with process and slot
QKY	all	The message queue key
PID	all	The process ID
INS	all	The process instance
D	all	“YES” if process is a message-sending DIP type; otherwise “NO”
CDATE	l	The last process creation time

1 of 2

Table 49. bbs Column Headings

Column Name	Option	Description
WK	I	The ET work state
SKEY	I	The semaphore key associated with process and slot
QID	I	The message queue ID
RE-SPA	I	The number of respawns from last restart of the voice system
WKCNT	I	The ET work count for process
2 of 2		

Upon successful completion, **bbs** returns an exit status of zero. Otherwise, **bbs** prints an error message on stderr and returns a non-zero exit status if the voice system is not running, or if for some other reason, it can not access the BB.

Example

The following example prints a long listing, displaying all possible fields.

```
bbs -l
```

bk_appl

The **bk_appl** command backs up the speech or transaction component of a Script Builder application.

Synopsis

```
bk_appl [a | s | t] application_name [0 | 1 | 2 | f=filename]
```

Options for the **bk_appl** command are:

- **a** — Used for backing up both the speech and transaction components of an application.
- **s** — Used for backing up the speech component only of an application.
- **t** — Used for backing up the transaction component only of an application.
- **0** — Indicates floppy drive 0 is to be used for backing up.
- **1** — Indicates floppy drive 1 is to be used for backing up.
- **2** — Indicates the tape drive is to be used for backing up.
- **f** — Indicates information is to be backed up to a file; a filename must be designated.

Description

The **bk_appl** command is used to back up a Script Builder application to a type of media on the local machine. This command can be used to back up either a single component (for example, speech or transaction) or both of the components (speech and transaction).

The **bk_appl** command supports backing up on floppy diskettes, magnetic tapes, and to a file. Two separate sets of floppy diskettes or a set of magnetic tapes is required in order to backup both of the components of an application. Only a single component can be backed up to a file.

Note: When a file is used as a backup media, the backed up file is available either in the specified directory (file name is given with the full path name) or in the current working directory (only the filename is given) when this command is invoked.

See Also

rs_appl

ccarpt

The **ccarpt** command generates a call classification data summary report.

Synopsis

ccarpt *date*

ccarpt *start_date end_date*

Description

The **ccarpt** command generates a call classification data summary report. This report is stored in standard out (stdout).

The *date*, *start_date*, and *end_date* arguments can be in the format mm/dd/yy or mm/dd/yyyy.

If a 2-digit year argument is used, the following rules apply:

- If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following two examples generate the call classification data summary report for October 10, 1993, and are equivalent command statements.

ccarpt 10/20/93

ccarpt 10/20/1993

The following two examples generate the call classification data summary report from October 14 through October 20, 1993, and are equivalent command statements.

ccarpt 10/14/93 10/20/93

ccarpt 10/20/1993 10/20/1993

cddrpt

The **cddrpt** command generates a call data detail report.

Synopsis

cddrpt *records service calldata date*

Description

The **cddrpt** command generates the call data detail report. This report is sent to standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

Parameters for the **cddrpt** command are:

- *records* — Represents the number of records to be reported. It can be any number, a range of numbers, or **all**, indicating all records in the system.
- *service* — Represents the script (application) name, or **all** for all applications.
- *calldata* — Represents a flag indicating whether to include call event data or not. The valid options are either **n** for not including event data or **y** for including event data.
- *date* — The date the data was collected in the system. The valid options are a date in either the mm/dd/yy or mm/dd/yyyy format, or **all**, indicating all records in the system.

If a 2-digit year argument is used, the following rules apply:

- ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following examples generate a call data detail report for the first 100 call data collected on date October 20, 2000 for application "balance_chk" and are equivalent command statements. (Call event data if any is also included in the report.)

cddrpt 100 balance_chk y all 10/20/00

cddrpt 100 balance_chk y all 10/20/2000

The following example generates a call data detail report for all call data in the system without including call event data.

cddrpt all all n all

Error Messages

CANNOT FIND /vs/trans/<application>.D OR MALLOC SPACE FOR IT

If you get the above message while running **cddrpt**, take the following remedial steps:

- Make certain the **/vs/trans/application.D** file exists and is current.
- Remove unnecessary files from the **/vs/trans/** directory.

cdsrpt

The **cdsrpt** command generates a call data summary report for a specific date.

Synopsis

cdsrpt hours service event_data date

Description

The **cdsrpt** command generates the call data summary report for a date specified. The report is stored in standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

Parameters for the **cdsrpt** command are:

- *hours* — The hour the call data was collected. It can be any number from 0 to 24 or **all**, indicating all 24 hours.
- *service* — The script (application) name, or **all**, indicating all applications.
- *event_data* — A flag indicating whether to include call event data or not. The valid options are either **n** for not including event data, or **y** to include event data.
- *date* — The date the data was collected in the system, in the format mm/dd/yy or mm/dd/yyyy.

If a 2-digit year argument is used, the following rules apply:

- ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following examples generate call data summary reports for call data collected between 2 p.m. and 4 p.m. on date October 20, 1993 for all applications on the system, and are equivalent command statements. Call event data summary is included in the report.

cdsrpt 14-16 all y 10/20/93

cdsrpt 14-16 all y 10/20/1993

The following example generates call data summary report for all call data collected on date October 20, 1993 for the application "balance_chk." Call event data summary is not included in the report.

cddrpt all balance_chk n 10/20/93

Error Messages

CANNOT FIND /vs/trans/<application>.D OR MALLOC SPACE FOR IT

If you get the above message while running **cdsrpt**, take the following remedial steps:

- Make certain the */vs/trans/application.D* file exists and is current.
- Remove unnecessary files from the */vs/trans/* directory.

checktf

The **checktf** command outputs a list of talkfiles in the voice system.

Synopsis

checktf [all | *talkfile* [*talkfile*...]]

Description

Parameters for the **checktf** command are as follows:

- **all** — Lists all talkfiles on the system
- *talkfile* — Specifies a talkfile by number

The output of the **checktf** command includes:

- The talkfile number
- The name of the application associated with the talkfile
- The status of the talkfile, either recorded or not recorded.

The format of the output is as follows:

Talkfile	Application	Status
100	jst	recorded
101	mgtst	recorded
102	UNKNOWN	recorded
103	cmj_test	recorded
104p	wl	recorded
105	pez	recorded
200	CTC_test1	not recorded

Example

The following command checks talkfile 103:

checktf 103

codetype

The **codetype** command identifies the type of coding header in a speech file.

Synopsis

codetype *file*

Description

The **codetype** command identifies the type of coding header that is present in a speech file. Codetype recognizes PCM64, ADPCM32, ADPCM16, SBC24, SBC16, or CELP16 headers.

See Also

addhdr
striphdr

configure

Note: This command is not used on the UCS1000.

The **configure** command determines allocation of resources for all devices to be included in a system configuration for a given hardware platform.

Synopsis

/vs/bin/util/configure [*new*]

Description

The **configure** command is an interactive command that automatically determines allocation of the following resources within a voice system:

- Slot number
- Interrupt
- Direct memory address (DMA) channel
- Input/output (IO) address
- Random access memory (RAM) address
- Serial port number
- Parallel port number

The program is mainly for use by factory personnel for determining the configuration of a system being built for a customer. It is also useful in the field as a tool for field service personnel who are upgrading (adding new devices to) an existing configuration. All user input is in the form of user friendly prompts or menu selections.

All output from a successful configuration is written to the **/vs/data/confData** file. An unsuccessful or incomplete configuration is written to the **/vs/data/failData** file so that it may be examined to see why the configuration was not successful. Output to these files is in a compressed format. The **/vs/bin/util/show_config** command is used to view the configurations represented by these files.

The Hardware Resource Allocator (HRA) program allows users to choose the hardware platform they are attempting to configure, followed by all devices that could be included in a configuration. The HRA ensures that all required devices for the platform are selected.

The program has built-in rules that prevent users from entering devices that are not supported on the hardware platform they have selected. It also checks hardware feature rules, such as how many of a particular device are supported on the chosen platform. In all cases of device rejection by the program, you are prompted with a message clearly explaining why the device is being rejected.

Upgrading an Existing Configuration

When **configure** is executed with no argument, it checks to see if a **/vs/data/confData** file currently exists. If so, the configuration represented by this file is read and used as the base configuration. This is useful in the case of a field upgrade to an existing voice system. A copy of the **confData** file is saved in **/vs/data/conf_MMDDYY** where *MM*=month, *DD*=day and *YY*=year. The existing **confData** file is saved because, upon determination of a valid configuration that includes the newly specified devices, the current **confData** file is replaced by a new one. It may be useful at times to see what the previous configuration looked like. An option on the **/vs/bin/util/show_config** command allows you to view the configuration represented by the saved **conf_MMDDYY** file.

Note: Only one **conf_MMDDYY** file is saved per day. If the **configure** command is executed repeatedly on a single day, the previous **confData** and **conf_MMDDYY** files are overwritten.

Once the file is read, you are presented a menu of devices they may attempt to add to the current configuration. Once the new devices are specified, the program attempts to allocate resources to the new devices from the pool of resources not currently used by devices already in the configuration.

Specifying a New Configuration

If **configure** is executed with no argument and a **/vs/data/confData** file does not exist, three screens request information about the chassis, backplane and central processing unit (CPU) for the hardware platform you want to configure. These screens are followed by the menu of devices that may be configured with that platform. You select the platform and devices desired, indicating when finished. The program attempts to allocate resources to each device selected. If successful, the program terminates. Otherwise, you are advised of an problems encountered (for example, a missing device).

The **configure** command should be executed with an argument of **new**. This forces a new configuration, as described above, even if a **/vs/data/confData** file exists.

Presetting Device Hardware Resources

Note: This procedure should only be preformed under special circumstances.

You might want to preset certain resources of a single new device being selected for a configuration. For example, you may want to force the Hardware Resource Allocator to select a specific interrupt for a particular device being specified. Whenever a single device is specified, the following prompt is displayed:

```
Do you wish to preset any hardware options of
device_name? [y|(n)]
```

If **y** is specified, you are allowed to preset any of the following hardware attributes of the selected device (where applicable):

- Interrupt
- DMA Channel
- IO Address
- RAM Address

When you finish selecting devices, the Hardware Resource Allocator terminates normally if a valid configuration is determined. If a valid configuration cannot be determined, the system displays a message indicating this, and the program terminates.

Device Data

The devices presented in the menus described above are kept in the **/vs/data/deviceData** file. This file is in compressed format. The **/vs/bin/util/show_devices** command may be used to view its contents. All attributes of each device are stored in this file.

Note: The format of the **/vs/data/deviceData** file is very specific. A user should not edit or alter this file.

Files

/vs/data/deviceData

/vs/data/platData

/vs/data/devSetData

/vs/data/confData

/vs/data/fail_data

Note: The format of the above files is very specific. A user should not edit or alter these files.

The Hardware Resource Allocator should only be run by persons familiar with system configurations and hardware platforms. See Appendix A, "System Configuration," in the appropriate platform maintenance book for slot position and numbering information. See the documentation on each device for the switch or jumper settings that correspond to the hardware resources determined by the Hardware Resource Allocator.

See Also

get_config

save_config

show_config

show_devices

copy

The **copy** command copies a phrase from a UNIX talkfile to a UNIX talkfile.

Synopsis

copy phrase *phrase_number* from talkfile *talkfile_number* to filename

Description

The **copy** phrase command copies a phrase from one UNIX talkfile to another UNIX talkfile. The path name for the file may be the full path name or the relative path name. If no path is specified, the file is created in the current working directory. If you are not in the directory in which the phrase to be added is stored, be sure to give the full path name for the talkfile and source file.

Note: Only the **root** login can copy a phrase to any of the root directories. Users without root permission can copy phrases only to directories for which they have permission, usually under their login id.

Note: The **copy** command copies a phrase from a UNIX talkfile within the SPEECHDIR default directory (**/home2/vfs/talkfiles**) to a UNIX file.

Examples

The following example copies phrase number 2 from talkfile1 to the file **/speech/talk/a.1**.

copy phrase 2 from talkfile 1 to /speech/talk/a.1

The following example copies phrase number 174 from talkfile 25 to the file **/speech/talk/h.4**.

copy phrase 174 from talkfile 25 to /speech/talk/h.4

See Also

add
erase
list

cpuType

The **cpuType** command returns the type of central processing unit (CPU) used in the system.

Synopsis

cpuType

Description

The **cputype** command returns the type of CPU on the system, either a 386 or a 486. If the **cputype** command returns a 3, you are using a 386. If the **cpuType** command returns a 4, you are using a 486. To determine the return value, examine the shell variable \$?.

cvis_mainmenu

The **cvis_mainmenu** command accesses the administration menus.

Synopsis

cvis_mainmenu

Description

The **cvis_mainmenu** program is a menu interface used to access the Administration menu. See the Chapter 3, Voice System Administration, for more information about the administration menus.

See Also

cvis_menu

cvis_menu

The **cvis_menu** command accesses the Voice System Administration menu.

Synopsis

cvis_menu

Description

This command provides access to the Voice System Administration menu.

See Also

cvis_mainmenu

dbcheck

The **dbcheck** command checks the resources available in the database (Version 7 ORACLE).

Synopsis

dbcheck -i

dbcheck r

dbcheck [w n[,m]] [-s] [-e] [-m user[~user...]]

Description

The **dbcheck** command checks spaces, usage, and rollback segment growth. The **dbcheck** command has three different usages.

- The **-i** option installs cron entries (optional) to run **dbcheck** at regular intervals and support for logger/alerter messages. (The **-i** option only needs to run once). The cron job can be placed in either roots cron file or added to the end of the **/vs/bin/utill/croncdh** job that runs once a day. The **-i** option also asks if you want new alerter messages added to the logger/alerter database along with explanations used with the **explain** command. This installation only needs to be run if you want the warnings to show up in the system event log or if you want to schedule automatic checking at regular intervals.
- The **-r** option removes any cron entry set up by the **-i** option.
- The third usage actually checks database space against a user set “water marks.” Three different things are checked:
 - ~ Free space
 - ~ Extents against the user-set threshold *n* (15% default)
 - ~ Rollback segment(s) growth against the user-set threshold *m* (20% default)

When executed, the **dbcheck** command generates the appropriate warnings (see Diagnostics on page 277) if the database falls below *n* percent free or if the rollback segment grows to be more than *m* percent of the total database size.

The **dbcheck** command, by default, sends warning messages to the logger/alerter indicating a threshold has been exceeded (the **-i** option must be run first). The **-e** option disables the entries from going into the log file. The **-s** option prints the warning messages to standard output. The **-m user** option allows for the messages to be mailed to *user*. Multiple users can be sent the mail by separating the user names with ~. Below are sample outputs.

(Output to error log when less than 13% available space/extents or more than 23% used by rollback.)

```
# dbcheck -w13,23
```

```
* Mon Feb 15 16:35:06 1993 dbcheck logTest.c:418
DBC001  -- -- --- Database 10 percent free, 3072 Blocks of 30
          Reason: Low DB Space.
* Mon Feb 15 16:35:06 1993 dbcheck logTest.c:418
DBC002  -- -- --- Extents low, 100 used of 121, on object MY_
          Reason: Low DB Extents
* Mon Feb 15 16:35:06 1883 dbcheck logTest.c:418
DBC003  -- -- --- Rollback segments=7680 blocks, 25 percent
```

Files

```
LOGROOT=${LOGROOT:-"/usr/spool/log"}
${LOGROOT}/head/logDBC.h
${LOGROOT}/formats/DBCmsg
${LOGROOT}/formats/formats.mk
${EXPLAINDR}//translateLst
/vs/bin/util/croncdh
/usr/spool/cron/crontabs/root
/usr/spool/cron/crontabs/root.bu
```

Diagnostics

The **dbcheck** command returns the following values:

- 0 Success, no limits exceeded
- 1 Threshold exceeded
- 2 Processing error
- 3 Database is not running

Caveat

Once **dbcheck** log messages are installed using **dbcheck -i**, the alarm priorities, destinations, and thresholds can not be changed through the System Message Display screen as described in Message Administration on page 28, of Chapter 3, Voice System Administration.

See Also

dbfrag
dbfree
dbused
explain
logCat

dbfrag

The **dbfrag** command lists fragmentation information on the database (Version 7 ORACLE).

Synopsis

dbfrag [-h -b]

Description

The **dbfrag** command is a shell script that reports on database allocation, usage, and fragmentation. The block size reported is in ORACLE blocks (2048 bytes). You can request the information to be reported in Mbytes with the **-b** option. This tool is useful to get a quick check on database usage and provides a shell interface into some key ORACLE statistics.

This tool only reports on information in the 'SYSTEM' tablespace. With the **-h** option, the listing will be printed without a header. This option is useful if you want to parse this output to select a specific field.

The following requests fragmentation information in Mbytes (using the **-b** option).

dbfrag -b

SYSTEM Tablespace, Space is in Mega-Bytes

ALLOCATED	FREE	% FREE	AVG/FRAG	LARGEST	FRAGMENTS	DB_FILES	ROLLBACK
129.00	108.88	84.40	5.44	108.12	20	1	7.91

Examples

The following example gets the largest contiguous ORACLE space available.

```
dbfrag -h | awk 'length>1 {print $5}'
10240
```

Diagnostics

The program returns the following:

- 0 Success
- 1 Processing Error

See Also

dbcheck
dbfree
dbused

dbfree

The **dbfree** command checks the space available in the database by partition (Version 7 ORACLE).

Synopsis

dbfree [-h]

Description

The **dbfree** command is a shell script that lists the amount of free space in the database by free contiguous blocks. The result is a detailed listing of each free memory area followed by the sum of each partition. The free blocks are listed in 2048 bytes/block (ORACLE blocks). There is also a column that lists the same information in Mbytes. The **-h** option removes the column headers. Below is a sample output of the **dbfree** command.

Contiguous extents					
TABLE SPACE NAME	FILE_ID	START_BLOCK	MBYTES FREE	ORACLE BLOCKS FREE	
SYSTEM	1	5142	.02		12
SYSTEM	1	5560	.03		13
SYSTEM	1	4892	.04		18
SYSTEM	1	7892	.04		19
SYSTEM	1	4164	.05		28
:	:	:	:	:	:
:	:	:	:	:	:
SYSTEM	1	5598	.73		375
SYSTEM	1	8946	4.00		2048
SYSTEM	1	12650	4.45		2277
SYSTEM	1	25179	10.00		5120
SYSTEM	1	14939	20.00		10240
sum			47.18		24070

29 rows selected.

Diagnostics

The program returns the following values:

- 0 Success
- 1 Processing Error

Caveats

The **dbfree** command creates a temporary table "dba_fragments" under user system that compresses the adjacent entries provided by the dictionary view "dba_free_space."

See Also

dbfrag
dbcheck
dbused

dbused

The **dbused** command provides database use by oracle user (Version 7 ORACLE).

Synopsis

dbused [**hs**] [**u uid**]*passwd*]

Description

The **dbused** command is a shell script that shows the amount of space used by each object for a given user. Objects are tables, indexes, clusters, rollback, and cache. The default user is **sti/sti**. The **-s** option reports summary information grouped by objects. The special user **all**, reports information for the entire database. The **-h** option skips the header message. This option is useful if you are parsing. The **-u uid/passwd** option allows you to specify the oracle user id and password (the default is **sti/sti**, **all** is used for all users).

Below is an output summary for user **all**.

dbused -su all

Space allocated to objects. Oracle blocks (2048 Bytes/Block)

NAME	TYPE	BLOCKS	MBYTES	EXTENTS	MAX_EXTENTS
C1	INDEX	5	.01	1	99
CCA	TABLE	5	.01	1	99
CCASUM	TABLE	5	.01	1	99
CDH	TABLE	5	.01	1	99
CDHSUM	TABLE	5	.01	1	99
E2	TABLE	5	.01	1	99
EVENTS	TABLE	5	.01	1	99
EVSUM	TABLE	5	.01	1	99
LDBCOLS	TABLE	5	.01	1	99

Below is output for user "sti."

dbused

Space allocated to objects. Oracle blocks (2048 Bytes/Block)

NAME	TYPE	BLOCKS	MBYTES	EXTENTS	MAX_EXTENTS
C1	INDEX	5	.01	1	99
CCA	TABLE	5	.01	1	99
CCASUM	TABLE	5	.01	1	99
CDH	TABLE	5	.01	1	99
CDHSUM	TABLE	5	.01	1	99
E2	TABLE	5	.01	1	99
EVENTS	TABLE	5	.01	1	99
EVSUM	TABLE	5	.01	1	99
LDBCOLS	TABLE	5	.01	1	99

Diagnostics

The program returns the following values:

- 0 Success
- 1 Processing Error

See Also

dbfrag
dbfree
dbcheck

decode

The **decode** command converts adpcm16 or adpcm32 files to pcm64 files.

Synopsis

decode [adpcm32|adpcm16]

Description

Decode is a filter that converts ADPCM16 or ADPCM32 files to PCM64 files.

Warning

Coding headers should be stripped (using the **stripdhr** command) before running **decode**.

See Also

addhdr
codetype
encode
striphdr

defService

The **defService** command defines an IRAPI service.

Synopsis

defService [-h] [-n] [-s *servicename*] [-p *process*] [-t P | T] [-a 0 | 1 | 2 | 3 | 4] [*application*]

Description

The **defService** command is intended to be used by IRAPI application developers to create the registration file for an IRAPI service that is necessary for assigning/deleting service to/from a channel or DNIS and/or ANI. For TSM scripts, the output of the **tas** command serves as the registration file for the script.

If the **defService** command is entered with no options, **defService** prompts you for all of the necessary information. You will need to respond to fewer prompts if you enter the majority of the information from the command line.

The **-h** option allows you to print the usage statement and then exit.

The **-n** option uses the default values for all options not specified on the command line. However, no defaults exist for the *process* and *application* parameters.

When the application is started by the Application Dispatch (AD) process, the **IRP_SERVICE_NAME** is set to the **-s** *servicename* argument if *servicename* is non-NULL. Otherwise, **IRP_SERVICE_NAME** is set to *application*, where the default is NULL.

The **-t** option specifies whether the process that provides the IRAPI application *application* is a permanent (P) or transient (T) process. The default is **P** for permanent.

If the process that provides the IRAPI application *application* is a permanent process, then **-p** *process* must be the name the process uses as an argument to **irRegister(3irAPI)**. If the process that provides the IRAPI application *application* is a transient process, then **-p** *process* must be the full pathname of the process. No default exists for this option.

When the application is executed on a PRI line, the **[-a 0 | 1 | 2 | 3 | 4]** option specifies how the ANI should be supplied to the application. The valid values for this option are as follows:

- 0 (No ANI supplied) — the default
- 1 (ANI type billing number only)
- 2 (ANI type billing number preferred)
- 3 (ANI type calling party (SID) only)
- 4 (ANI type calling party (SID) preferred)

The *application* argument specifies the IRAPI application. No default exists for this argument.

Upon successful completion, the **defService** command creates the *lvs/trans/application.T* file.

Files

lvs/trans/.T*

See Also

assign

delete

tas

iRAPI -AD(4iRAPI-AD)

irRegister(3iRAPI)

delete card/channel

The **delete card/channel** command removes a card or channel from a service or an equipment group.

Synopsis

delete card *card#[.port#]* **from** [*eqpgrp*] *group_number*

delete channel *number from* [*eqpgrp*] *group_number*

Description

The **delete card/channel** command removes the specified card or channel from a service or equipment group. The parameters for the **delete card/channel** command are:

- *card#[.port#]* — Specifies the card/channel number (a single card/channel number from a range of 0–255, a range of card/channel numbers in the form m–n, or **all**, for all card/channel numbers).
- *eqpgrp* — Specifies **svcgrp** when deleting from a service group or **eqpgrp** when deleting from an equipment group. If no group type is given, the **svcgrp** is assumed.
- *group_number* — Identifies the equipment group or service group.

If you want to remove all cards or channels from a equipment group, it may be easier to delete the entire equipment group than to delete channels or cards. To delete an equipment group, use the **delete eqpgrp** command.

Examples

The following example deletes card 4 from service group 1.

delete card 4 from svcgrp 1

The following example deletes channels 10 through 13 from equipment group 3.

delete channel 10-13 from eqpgrp 3

See Also

delete eqpgrp
delete service

delete eqpgrp

The **delete eqpgrp** command removes an equipment group.

Synopsis

delete eqpgrp *group_number*

Description

The **delete eqpgrp** removes an equipment group. The *group_number* argument is the equipment group list. To remove all equipment groups, use **all** as the group number.

Examples

The following example removes equipment group number 3.

delete eqpgrp 3

The following example removes all equipment groups.

delete eqpgrp all

See Also

assign card/channel

delete service/startup

The **delete service/startup** command unassigns the assignment of a service to DNIS and ANI numbers or of a service assigned directly to a channel.

Synopsis

delete service *service_name* [**startup** *startup_name*] from chan *chan_list*

delete startup *startup_name* [**service** *service_name*] from chan *chan_list*

delete service *service_name* from dnis *phone_list* [**ani** *phone_list*]

delete service *service_name* from ani *phone_list* [**dnis** *phone_list*]

Description

The **delete service/startup** removes the specified telephone number or channel from the group to which a script is assigned. The parameters for the **delete service/startup** command are:

- *service_name* — Specifies the name of application.
- *chan/dnis* — Specifies the name of the service group.

- *chan_number/phone_number* — Contains a list of one or more channels or telephone numbers separated by blanks. The words **any** or **all** show that service is removed from all calls regardless of what number was dialed.

The *chan_list* variable indicates channel numbers or channel number ranges in the form chan1-chan2. A comma or space should be used to separate the list of channel numbers or ranges.

The *phone_list* variable indicates telephone numbers or telephone number ranges in the form phone1:phone2. A comma or space should be used to separate the list of telephone numbers or ranges.

Note: Only telephone numbers that have been assigned using the assign service/startup command can be deleted.

Examples

The following example deletes startup service stdout from channels 4 through 7.

delete startup stdout from chan 4-7

The following example deletes the service stdout and startup service stdin from channels 4 through 7.

delete startup stdin service stdout from chan 4-7

The following example deletes the service stdout to DNIS 5000 through 5008 and ANI any.

delete service stdout from dnis 5000:5008 and ANI any

The following example deletes the service stdout from DNIS 5000 through 5008 and ANI 6000.

delete service stdout from dnis 5000:5008 ani 6000

The following example deletes the service stdout from DNIS any and ANI 6000 through 9000.

delete service stdout from DNIS any and ani 6000:9000

The following example deletes the service stdout from DNIS 3000 and ANI 2000-3000.

delete service stdout from dnis 3000 ani 2000:3000

See Also

assign service/startup

display services

display dnis

detach

The **detach** command places a unit in the nonexistent state.

Synopsis

detach *unit number* [-i] [-n]

Description

The **detach** command places a unit currently in the manual-out-of-service (MANOOS) state into the nonexistent (NONEX) state. Before this can be done, the unit must be taken from the in-service (INSERV) or broken (BROKEN) state and put in the MANOOS state using the **remove** command.

The parameters for the **detach** command are:

- *unit* — Identifies the unit. The choices are **channel** or **card**.
- *number* — Specifies the channel or card number, a range of channel or card numbers in the form *m–n*, or **all**, for all the channel or card numbers. Card numbers are in the form *card#[.port#]* where *port#* is the port of the *card#*. If *port#* is not given, all ports of the card specified are detached. If no card number or channel is given, the system displays a syntax message.
- **-n** — This optional parameter disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option below) or to terminate the request to detach.
- **-i** — This optional parameter is used to enable secondary command registration. If T1 diagnostics are being run, this option allows the “detaching” of another card. If **-i** is used and another maintenance command is being run (**remove**, **detach**, **attach**, **restore**, **diagnose**), the request to detach is blocked and a message is printed to the screen. If **-i** is not used and any maintenance command is being run, the request to detach is blocked and a message is printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- ~ Is the T1 card being diagnosed
- ~ Will cause a change in the existing TDM bus master assignment
- ~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, you are asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **detach** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, you are asked whether to wait until the conflict is resolved or to terminate the request to detach.

To delete out of the command, press **DEL**. If this does not stop the command, you may need to press **CTRL** and \ (backslash key) simultaneously. If, while running **detach**, you wish to abort the command, a message similar to the following may appear:

At the user's request, administration of the following cmd(s)
has been interrupted.

CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run
diagnostics at the earliest opportunity.

It is recommended when **detach** is aborted, diagnostics be run on all cards being administered to ensure they are returned to a fully functional state.

Examples

The following example detaches card 4 and places it in the nonexistent state as far as the system is concerned.

detach card 4

The following example detaches channels 1 through 3 and places them in the nonexistent state as far as the system is concerned.

detach channel 1-3

See Also

attach
remove
restore

diagnose bus

The **diagnose bus** command tests a bus while it is in service.

Synopsis

diagnose bus *bus_number* [**immed**]

Description

The **diagnose bus** command tests the bus while it is in service. If the **immed** option is used, any calls currently being processed are dropped immediately.

This command changes the temporary state of a unit to diagnostic (DIAG). If a unit fails the diagnostics, the permanent state is changed to BROKEN; otherwise, the permanent state is unchanged.

This output is saved to a file in **/vs/data/diagnose** called **busDiag.1**.

Example

The following example diagnoses bus 1.

diagnose bus 1

diagnose card

The **diagnose card** command tests a card while it is in service.

Synopsis

diagnose card *card_number* [*option*]...

Description

The **diagnose card** command is done at the card level for any card in the system. The *card_number* is the card number you want to diagnose. To specify all cards, use **all**.

This command changes the temporary state of a unit to diagnostic (DIAG). If a card is stuck in the INSERTV state, use the **diagnose card card_number immedi** command. This temporarily removes the unit from the busy state unconditionally and places it in the manual-out-of-service (MANOOS). Note that any calls on the card when the **immedi** option is used are dropped immediately.

For T1 cards the valid options are:

- **-n** — Prevents prompting from the system during diagnostic tests. The diagnostics assume the default values during the test and the user is informed when the diagnostics are completed.
- **-i** — Enables secondary command registration. See the description of **-i** for tip/ring and SSP cards below.

For tip/ring and SSP cards, the valid options are:

- **-n** — Disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option for SSP cards below) or to terminate the request to diagnose.
- **-i** — Enables secondary command registration. If T1 diagnostics are being run, this option allows the diagnose of another card to be performed. If **-i** is used and another maintenance command is being run (**remove**, **detach**, **attach**, **restore**), the request to diagnose a non-T1 card is blocked and a message printed to the screen. If **-i** is not used and any maintenance command is being run, the request to **diagnose card** is blocked and a message printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- ~ Is the T1 card being diagnosed
- ~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, you are asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **diagnose card** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, you are asked whether to wait until the conflict is resolved or to terminate the request to diagnose.

If a unit fails the diagnostics, the permanent state is changed to BROKEN. If the unit being diagnosed previously was marked BROKEN and it passes diagnostics, it is put in the MANOOS state. Otherwise, the permanent state is unchanged.

When diagnostics are complete, T1 and SSP cards are reinitialized and the appropriate software is downloaded to the cards.

For tip/ring cards, additional diagnostics first check the hardware status of the card specified. Then the system tests for dial tone on the card's channels not in the NONEX state. The result of the dial tone test is one of the following:

- Nonex state — This channel is not checked for dial tone.
- Dial Tone Found — This channel is operational.
- NO Loop Current — The hardware cannot find telephone loop-current from the Central Office, PBX, or ACD. There probably is no telephone line on this port.
- NO Dial Tone — The hardware has found telephone loop-current but could not detect dial tone on this port.

If at least one channel detects dial tone, the entire card detects these frequencies as dial tone. If no channels detect dial tone, the card defaults to 330 and 440 Hz. The outcome of the dial tone tests do not affect the pass or fail results of the diagnostics. If no loop current is detected on a channel and the channel passed diagnostics, and the card is not MANOOS, the channel is placed in FOOS. In this case, the card does not become IDLE regardless of its previous state.

If an tip/ring and/or SSP card passes diagnostics, the system displays a message similar to the following:

```
Diagnose <card> n, Passed.
```

If a T1 card passes diagnostics, the system displays a message similar to the following:

```
All tests passed.
```

You may also receive a message for a tip/ring and/or SSP card saying:

```
Diagnose <card> n, failed <reason>
```

If a T1 card fails diagnostics, a help screen is provided giving you information to help resolve the reason for the failure. If you try to diagnose cards that are not installed in the system or if they are installed but are in the nonexistent state, the system displays an error message.

To delete out of the command, press **DELETE**. If this does not stop the command, you may need to press **CTRL** and **** (backslash key) simultaneously. Be aware, however, that this fixes the console, but does not terminate the diagnostic routine. If, while running diagnose, you wish to abort the command, a message similar to the following may appear:

```
At the user's request, administration of the following  
cmd(s) has been interrupted.
```

```
CARD NUMBERS: <card numbers>
```

To assure proper operation of the identified card(s), run diagnostics at the earliest opportunity.

It is recommended when **diagnose** is aborted, diagnostics be run again on all cards being administered to ensure they are returned to a fully functional state.

Examples

The following example runs diagnostics on card number 3.

diagnose card 3

The following example runs diagnostics on cards 4 through 7.

diagnose card 4-7

The following example runs diagnostics on cards 4 through 7 immediately, dropping all calls currently in progress.

diagnose card 4-7 immed

dip_int

The **dip_int** command sends DIP interrupt to a script on a channel or a range of channels.

Synopsis

dip_int *channel*

dip_int *channelStart-channelEnd*

Description

The **dip_int** command sends a message or messages to TSM requesting that TSM send interrupt messages to the script running on *channel* or the range of channels *channelStart-channelEnd*. If no script is running on the channel or if TSM does not own the channel, no action is taken for the channel. The **dip_int** command does not wait for a response from TSM. Scripts running on the channel receive the EDIPINT event.



CAUTION:

Be careful when you use this command. It may affect other applications running on the system.

Examples

The following example requests that TSM send interrupt messages to channel two.

dip_int 2

The following example requests that TSM send interrupt messages on channels one through 32.

dip_int 1-32

Return Values

If the **dip_int** command is successful, a 0 value is returned. If any value other than 0 is returned, the **dip_int** command completely or partially failed.

If the **dip_int** command returns a value of 2, then **dip_int** failed due to temporary condition. In this case, the user should attempt the **dip_int** command again.

See Also

soft_disc

display assignments

The **display assignments** command displays the services assigned to channels.

Synopsis

disp assignments [*option*] [*option*]

Description

The **display assignments** command is used to display all the services and startup services assigned to channels. The display assignments command options are as follows :

- **all** (default) — Displays information on all services
- *service_name* — Displays channels assigned with a specific service
- **startup** *startup_name* — Displays channels assigned with a specific startup service
- **channel** *chan#* — Displays assignments for channel specified by *chan#*. A range of channels can be specified.

Note: If more than one option is used, the system displays only channels that satisfy all the options given. If an invalid combination of options is given, the system displays an error message.

Examples

The following example displays information for channel 1:

disp assignments channel 1

The following example displays information for all channels that have the service *xxx* assigned:

disp assignments xxx

The following example displays information for all channels that have the startup service *xxx* assigned:

disp assignments startup xxx

display card

The **display card** command displays information about specified cards.

Synopsis

disp[lay] card [*option* [*option*]]

Description

The **display card** command displays data about a specified card or about cards in a specified state. In the output, the physical slot number, the osindex, and the voice system card number are all the same. The output also correctly reflects which card is primary master, which is secondary master, and which cards are slave.

The display card command options are:

- **card# port#** — Displays information on card *card#* and on port *port#* of the specified card. All ports are shown if *port#* is not given. A range of cards may be specified in the form *m–n* without using the *port#* option.
- **all** — Displays information on all cards.
- **mtc** — Displays all cards being used by the maintenance process.
- **tr** — Displays all tip/ring (T/R) cards.
- **manoos** — Displays all cards in the manual out-of-service state.
- **nonex** — Displays all cards in the nonexistent state.
- **broken** — Displays all cards in the broken state.
- **ins[erv]** — Displays all cards that have at least one channel in the in-service state.
- **t1** — Displays all T1 cards.
- **e1** — Displays all E1 cards.
- **sp** — Displays all SSP cards.
- **netoos** — Displays all cards that have at least one channel in the network out-of-service state.
- **hwoos** — Displays all cards that have at least one channel in the hardware out-of-service state.
- **foos** — Displays all cards that have at least one channel in the facility out-of-service state.

If more than one option is used, only cards that satisfy all the options given are displayed. If an invalid combination of options is given, the system displays an error message.

Examples

The following example displays card information on channel 2 port 0.

disp card 2.0

The following example displays information on all cards.

disp card all

Sample output:

```
CARD 4  STATE: Manoos  CLASS: Signal_Processor(SSP)  O.S.INDEX: 4
      NAME: CWB1      OPTIONS: slave,tdm1
      FUNCTION: play+code
```

```
CARD 6  STATE: Manoos  CLASS: Digital(T1)  O.S.INDEX: 6
      NAME: CWB2      OPTIONS: primary_master,tdm1
      FUNCTION: E&M
```

CD.PT	CHN	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
6.0	0	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.1	1	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.2	2	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.3	3	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.4	4	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.5	5	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.6	6	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.7	7	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.8	8	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.9	9	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.10	10	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.11	11	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.12	12	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.13	13	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.14	14	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.15	15	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.16	16	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.17	17	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.18	18	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.19	19	Manoos	Mar 24 11:26:02	feature_tst	-	2	tdm	T1.5
6.20	20	Manoos	Mar 24 11:26:03	feature_tst	-	2	tdm	T1.5
6.21	21	Manoos	Mar 24 11:26:03	feature_tst	-	2	tdm	T1.5
6.22	22	Manoos	Mar 24 11:26:03	feature_tst	-	2	tdm	T1.5
6.23	23	Manoos	Mar 24 11:26:03	feature_tst	-	2	tdm	T1.5

```
CARD 13  STATE: Manoos  CLASS: Signal_Processor(SSP)  O.S.INDEX: 13
      NAME: CWB1      OPTIONS: slave,tdm1
      FUNCTION: play+code
```

```
CARD 15  STATE: Manoos  CLASS: Digital(T1)  O.S.INDEX: 15
      NAME: CWB2      OPTIONS: slave,tdm1
      FUNCTION: E&M
```

CD.PT	CHN	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
15.0	24	Manoos	Mar 24 11:26:15	feature_tst	-	2	tdm	T1.5
15.1	25	Manoos	Mar 24 11:26:15	feature_tst	-	2	tdm	T1.5
15.2	26	Manoos	Mar 24 11:26:15	feature_tst	-	2	tdm	T1.5
15.3	27	Manoos	Mar 24 11:26:15	feature_tst	-	2	tdm	T1.5
15.4	28	Manoos	Mar 24 11:26:15	feature_tst	-	2	tdm	T1.5
15.5	29	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5

A Summary of Commands

display card

15.6	30	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.7	31	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.8	32	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.9	33	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.10	34	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.11	35	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.12	36	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.13	37	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.14	38	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.15	39	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.16	40	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.17	41	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.18	42	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.19	43	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.20	44	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.21	45	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.22	46	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5
15.23	47	Manoos	Mar 24 11:26:16	feature_tst	-	2	tdm	T1.5

CARD 16 STATE: Manoos CLASS: Digital(T1) O.S.INDEX: 16
NAME: CWB2 OPTIONS: secondary_master,tdm1
FUNCTION: E&M

CD.PT	CHN	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
16.0	48	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.1	49	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.2	50	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.3	51	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.4	52	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.5	53	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.6	54	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.7	55	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.8	56	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.9	57	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.10	58	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.11	59	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.12	60	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.13	61	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.14	62	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.15	63	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.16	64	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.17	65	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.18	66	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.19	67	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.20	68	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.21	69	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.22	70	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5
16.23	71	Manoos	Mar 24 11:26:09	feature_tst	-	2	tdm	T1.5

The following example displays information on all e1 cards.

disp card e1

The following example displays information on all cards in the Mtc "state.

disp card mtc

The following example displays information on all T1 cards in the Broken state.

disp card t1 broken

display channel

The **display channel** command displays channel information.

Synopsis

disp[lay] channel *option* [*option*]

disp chan *option* [*option*]

Description

The **display channel** command is used to list information at the channel level. The **display channel** command options are:

- *number* — Displays information on the channel specified by channel number. A range of channels may be specified in the form m–n.
- **all** — Displays information on all channels.
- **mtc** — Displays all channels being used by the maintenance process.
- **telephone** *tel_number* — Displays channels with telephone numbers assigned.
- **tr** — Displays all tip/ring channels.
- **manoos** — Displays all channels in the manual out-of-service state.
- **nonex** — Displays all channels in the nonexistent state.
- **broken** — Displays all channels in the broken state.
- **t1** — This options displays all channels assigned on T1 cards.
- **sp** — This options displays all channels assigned to SSP service.
- **netoos** — This options displays all channels assigned to network service.
- **hwoos** — This options displays all channels assigned to hardware service.
- **foos** — This options displays all channels assigned to facility service.

If more than one option is used, the system displays only channels that satisfy all the options given. If an invalid combination of options is given, the system displays an error message.

Examples

The following example displays information for channel 1.

disp channel 1

The following example displays information all channels being used by the TSM process.

disp channel tsm

The following example displays information on all channels.

disp channel all

display dnis

The **display dnis** command displays the services assigned to DNIS and ANI numbers.

Synopsis

disp dnis

Description

The **display dnis** command is used to display all the services assigned to DNIS and ANI numbers.

Example

The following example displays information for all the services assigned to DNIS and ANI numbers:

disp dnis

display eqpgrp/group

The **display eqpgrp/group** command displays an equipment group report.

Synopsis

disp eqpgrp *group_number*

disp group *group_number*

Description

The **display eqpgrp** command is used to list all the equipment assigned to the specified equipment group. The *group_number* is the number of the equipment group. If the group number is missing, the system displays a syntax message. If you specify "all," the system displays every equipment group.

Examples

The following example lists all the equipment assigned to equipment group 1.

disp eqpgrp 1

The following example lists all the equipment assigned to equipment groups 2 through 20.

disp group 2-20

The following example lists all equipment assigned to all equipment groups.

disp eqpgrp all

See Also

assign card/channel

delete eqpgrp

display messages

The **display messages** command displays system (error) messages.

Synopsis

display messages

[priority <alarms, critical, *'*C'*, major, *'**'*, minor, *'*'*, events, all>] [-c]

[start mm/dd HH:MM:SS]

[stop mm/dd HH:MM:SS]

[card <range,T1,TR,SP,...,all>]

[channel <range,T1,TR,SP,...,all>]

[ID <message ID1,message ID2,all>]

[source <TSM,VROP,SPIP,TRIP,...,all>]

[pattern *regular_expression_search_pattern*]

[number,all]

Description

The **display messages** command displays error and status messages that have been logged by the voice system. Various options are provided so that the display can be limited to specific types of messages. If no arguments are supplied to **display messages**, information is displayed on how to read the messages (the message format) as well as command usage. The messages are written to standard output.

If more messages exist than can be displayed on the screen, you will be prompted with Press the ENTER key to see more, or enter "q" to quit. If you do not wish to be prompted to press **ENTER** (that is, display all of the messages at once), you may use the **-c** option.

The **priority** argument should be used to display messages with specific types of urgencies. Two groups of priorities exist: alarms and events. Alarms are messages that have been reported as *C (critical), ** (major), or * (minor) priorities. Events are all the remaining messages that have no priority (for example, status messages). For example, to display the last 100 alarms, type the following:

display messages priority alarms 100

You can also display specific priorities using the **priority** option. You can specify either the name of the priority or its symbol (for example, critical or *C). To display all of the critical messages, type the following:

display messages priority critical all

Note: You should use the **priority alarm** argument when alarms are needed, otherwise use the **priority events** argument. The priority argument must be used with this command.

Combinations of priorities can also be displayed by listing each priority separated with a comma. For example, to display the last 100 alarms messages, type the following:

display messages priority '*C','','*' all**

where *C, **, and * must be enclosed in quotes.

Display Message Options

If you want to display only specific types of messages, you can precede the number of messages to be displayed with one or more of the following options:

- **start**
- **stop**
- **card**
- **channel**
- **id**
- **source**
- **pattern**
- **number**

If more than one of the options is specified, the system displays only messages that meet all of the specifications.

start

The **start** option allows you to specify a starting time for display of messages. The system displays only messages that were logged on or after the time you specify. The time can be specified by date and/or a time. Using **today** is equivalent to specifying the current date. Examples of specifying the date are:

- "May 1, 2000"
- "05/01/00"
- "05-01-00"

Examples of specifying the time are:

- hh:mm:ss
- hour=hh
- min=mm
- sec=ss

where hh is 0 to 23, and mm and ss can be 0 to 59.

Do not mix the hh:mm:ss format with the item==xx format. If portions of the time are not specified, the time default is 0 hours, 0 minutes, and 0 seconds.

Also, giving only the time of day indicates the current date. For example, if today is January 15, 1993, the command **display messages start "12/31 09:00"** displays all of the messages that were logged starting at 9 am on December 31, 1993. In order to display messages from a previous year, you must specify the year. The entire start date and time must be enclosed in quotes (for example, **display messages start "April 21, 1993 13:00:00"**).

If only the date is specified, the time defaults to the beginning of the day. For example, **display messages start today** displays all of the messages that were logged today (the day in which the command is executed).

stop

The **stop** option allows you to display messages logged up to a specific time. The date and time syntax is the same as that for the **start** option. Therefore, **display messages stop today** displays all messages that were logged before today.

The **start** and **stop** options can be used together to display messages that were logged over a specific period of time. For example, **display messages start "May 1" stop "May 2"** displays all messages logged on May 1 of this year.

If you want the start and stop options to be the same day (for example, May 1), you must specify the hours and minutes for which you want to display messages. Otherwise, the time defaults to 00:00 for both the start and stop options and no messages are displayed.

card

The **card** option allows you to specify messages logged about a specific card or cards. For example, **display messages card 2** displays all messages logged that are associated with card 2. You can display combinations of cards. For example, **display messages card 2,3** displays messages for cards 2 and 3 and **display messages card 0-2** displays messages for cards 0, 1, and 2.

You can also use the **card** option to display messages logged about a specific type of card. For example, **display messages card t1** displays all messages logged about T1 cards.

channel

The **channel** option works like the **card** option. For example, **display messages channel t1** displays all messages logged about T1 channels, whereas **display messages channel 5** displays all messages logged about channel 5.

Note: The **channel** option requires an argument. Typing **display messages channel 100** attempts to display all messages pertaining to channel 100. If you want to display the last 100 messages pertaining to any channel, type **display messages channel all 100.**)

Note that specifying both the **card** option and the **channel** option displays all of the specified card-related messages but, of the channels that are specified, only those that reside on the specified cards are displayed. For example, **display messages card t1 channel all 100** displays the last 100 messages logged for T1 cards and T1 channels, whereas **display messages card t1 channel tr never** displays no messages because it is impossible for a tip/ring channel to reside on a T1 card.

id

The **id** option allows you to display specific message ids that have been logged. For example, **display messages id TWIP004** displays all occurrences of that message. For example, **display messages id TWIP004,TWIP009** displays all occurrences of both messages.

source

The **source** option allows you to display messages logged by a particular system process. Some of the standard system processes are shown in Table 50.

Table 50. Standard System Processes

Process Name	Function	Types of Messages Reported
ASAI	Adjunct/Switch Application Process	ASAI Problems/Status.
1 of 2		

Table 50. Standard System Processes

Process Name	Function	Types of Messages Reported
MTC	System Maintenance Process	Card/Channel status, Diagnostic Results
SPIP	SP Card Interface Process	Speech,TTS,PRI,SR Problems/Status
TSM	Script interpreter/processor	Script Problems
TRIP	Tip/Ring (Analog) Interface Process	TR Problems/Status
TWIP	T1 Interface Process	T1 Problems/Status
VROP	Speech Database Process	Playback/Coding Database Problems
2 of 2		

For example, **display messages source TWIP** displays all messages logged regarding T1 cards and channels.

pattern

The **pattern** option allows you to specify a regular expression as accepted by **logCat** that may appear in any part of a message. (See *logCat* on page 345 for additional information.) The **pattern** must be enclosed in quotes and surrounded by slashes (/). For example, **display messages pattern '/XYZ/'** provides all messages that use the pattern XYZ anywhere in the message.

Note: The **pattern** option is case-sensitive.

number

The **number** option specifies the number of messages you want to display, or you can use the **all** value to display all messages. The command accepts a three-digit number so you can display up to 999 messages.

Note: Although the **number** option only allows up to 3 digits, you may have more than 999 messages logged. Therefore, you can only view up to 999 messages in the message log report with the display messages command. The logCat command with the **-t** option can be used to display all logged messages. See the logCat command later in this book for more information.

Display Format

All messages are displayed with two or three lines of information. Messages are separated by a blank line to ease viewing. Table 51 lists the system message formats along with definitions and examples. Each message displayed conforms to the format shown as follows:

```
PR DAY MON DD HH:MM:SS ZZZ YYYY SOURCE
TTTTTTTT YY UU NUM TEXT...
TEXT (Continuation if necessary.)
blank line
```

Table 51. System Message Formats

Field	Definition	Examples
PR	Priority	*C (Critical), ** (Major), * (Minor), "" (Event)
DAY	Day	Sun - Sat
MON DD	Date	Jan 1 - Dec 31
HH:MM:SS	Time	00:00:00 - 11:59:59
ZZZ	Time Zone	EST, EDT, CST...
YYYY	Year	1992,...
SOURCE	Source	TSM, TWIP, VROP,...
TTTTTTTT	8 char Msg ID (Tag)	TWIP2104,...
YY	FRU Type	TR, T1, SP, or H0 or - - if N/A
UU	Unit Type	CA (Card) or CH (Channel) or - - if N/A
NUM	Unit Number	000 to 999 or - - - if N/A
TEXT	Message Text	Varies with message (See example below); can be more than one line long.

Example

The following example is representative of the output from typing **display messages**:

```

MESSAGE LOG REPORT

Pr Time           Source
-- ----
** Wed Dec 30 15:55:16 1992 TWIP
   TWIP017 T1 CA 0 Facility out of service.
           Reason: Blue alarm
* Wed Jan 6 13:38:21 1993 TRIP
   TRIP002 TR CA 1 Corrupted data detected on TDM bus.
           Timeslot 254. Reason: TDM Parity Error
* Wed Jan 6 13:41:52 1993 TRIP
   TRIP005 TR CH 24 No loop current.
```

display_permissions

The **display_permissions** command displays the current voice system security permissions for a particular user.

Synopsis

display_permissions *user_login*

Description

The **display_permissions** command displays the current voice system security permissions for a particular user if any has been assigned.

The *user_login* argument represents the user for which permissions are to be displayed.

Example

The following example executes the command to display voice system security permissions for a specific user.

display_permissions brown

See Also

unassign_permissions
assign_permissions

display_services

The **display_services** command lists all valid services or scripts.

Synopsis

display_services

disp_services

Description

The **display_services** command lists all valid services, or scripts, on a system.

Example

The following example lists all valid services or scripts currently on the system.

disp_services

edExplain

The **edExplain** command edits the explanation text for one or more message tags.

Synopsis

edExplain {*msgID*} [...]

Description

The **edExplain** command edits the explanation text for one or more message tags.

Environment variables for the **edExplain** command are:

- EDITOR — The program used to edit the explanation text (default: vi).
- EXPLAINDIR — The root directory of the explanation texts (default: **/gendb/data/explain**).
- VERBOSITY — If set to anything, **edExplain** will run verbosely.

An explanation file is basically a clear text file. Its contents are displayed “as is” to the user when this explanation is requested. If it is a primary explanation procedure (an explanation that the end user will want to reference by name), it should begin with a line of the form:

```
<< {tag} [{tag}...] >>
```

This identifies the explanation or procedure and all its alternate names as defined in the translation file, **\$EXPLAINDIR/translateLst**.

The **translateLst** file should be updated to include the msgID, msg string, and file name, in which the explain text can be found (usually just the msgID name). When exiting the **translateLst** file, enter **:w!** followed by **q**.

Two exceptions exist to the rule that the file contains clear text that will be displayed to the user:

- Any line beginning with a pound sign (#) character is considered to be an internal comment and is not displayed.
- Lines beginning with **.explain** are special directives to include at this point another explanation text in place of this line.

Example

In the following example, the first line is the SCCS identification line and is not displayed to the end user. The second line identifies the explanation. Then the text describing the problem follows.

```
#  %W% %T% %H%
<< TWIP007 TWIP_BDERR >>
.... text of explanation describing what a T1 card error
means...
```

encode

The **encode** command converts ADPCM16 or ADPCM32 files to PCM64 files.

Synopsis

encode [adpcm32 | adpcm16]

Description

The **encode** command is a filter that converts PCM64 files to ADPCM16 or ADPCM32 files.

Note: ADPCM16 is easy to code and saves space, but does not provide good quality sound.



CAUTION:

The voice header used by GSE should be stripped (using stripdhr) before running encode.

Appropriate code headers must be added (using addhdr) before the converted file can be played on the voice system.

See Also

addhdr
codetype
decode
striphdr

erase

The **erase** command deletes a phrase from a UNIX talkfile.

Synopsis

erase phrase *phrase_number* from talkfile *talkfile_number*

Description

The **erase** command deletes the phrases identified by the phrase ID from the UNIX file. The phrase number may be any of the following:

- A single phrase (for example, **1**)
- A set of phrases (for example, **1, 2, 5**)
- A range of phrases (for example, **1-5**)
- All phrases (for example, **all**)

After you enter the **erase** command, the system displays the following message, asking you to confirm the command before each phrase is erased:

Do you want to erase phrase <phrase#>? (y/n)

If the **all** option is used for phrases, the system prompts you only once to confirm the command:

```
Are you sure you want to erase ALL phrases from talkfile
<talkfile#>? (y/n)
```

If the specified phases does not exist, the system displays:

```
Phrase <phrase#> does not exist in talkfile <talkfile#>
No action taken.
```

When the system has deleted the phrase(s), the system prompt is displayed.

Note: The **erase** command removes a phrase from the SPEECHDIR default directory, which is **/home2/vfs/talkfiles**.

Example

The following command erases phrase 174 from talkfile 23.

```
erase phrase 174 from talkfile 23
```

The following example erases phrases 218 through 222 and phrase 225 from talkfile 26.

```
erase phrase 218-222, 225 from talkfile 26
```

The following example erases all phrases from talkfile 29.

```
erase phrase all from talkfile 29
```

See Also

add
copy
list

explain

The **explain** command displays on-line error message explanations.

Synopsis

```
explain {msgID} [...]
```

```
explain -l {pattern} [...]
```

```
explain -d {msgID} [...]
```

Description

The **explain** command displays on-line error message explanations. The *{msgID}* is one of the two forms of identification that comes with each message. The primary form is **{CLASS}nnn**, where *{CLASS}* is the class of messages, such as CGEN, TSM, etc., and *nnn* is the index of the message within the class of messages. The second form, available with most messages is the mnemonic form (for example, CGEN_NOMSGQ or CGEN_MSGRCV).

If the explanation of the message fits in 24 lines and only a single explanation has been requested, it is printed without interruption. If the explanation is longer than 24 lines or more than one explanation is requested, the output is paged via the use of a paging program. Use the **-d** option to disable paging. The default paging program is **/bin/pg**.

If the **-I** option is used, **explain** looks up all messages whose *{msgID}* matches the pattern. For example, **explain -I A V** lists the names of explanations available that begin with either "A" or "V," while **explain -I VROP** lists all explanation names available that begin with **VROP**. In other words, the *{pattern}* is anchored at the beginning of the *{msgID}* and assumes a match of anything after the pattern selected.

Variables for Advanced Users

The **explain** command is also affected by certain environment variables. These environment variables are intended for advanced users only.

- **PAGER** — The pager program used if the explanation is longer than 24 lines or more than one explanation is requested. The default is **pg**. If you do not want paging even for long explanations, using **-d** or setting **PAGER=cat** disables paging. A one line form would be:

PAGER=cat explain {msgID} or explain -d {msgID}

- **EXPLAINDIR** — The directory in which the explanation directories are found. The default is **/\${PRODUCTROOT}/gendb/data/explain**.
- **PRODUCTROOT** — This is the installation directory and defaults to **/ (root)**.
- **VERBOSITY** — This is a debugging aid. Setting it to anything causes debugging output to be generated while **explain** performs its job.

The **edExplain** command allows you to add or change explanations. An explanation comes in two parts, a file containing the explanation itself, and a set of synonyms or translations that allow the **explain** command to find the file under more than one tag. To create a new explanation, you must provide both. When modifying an existing explanation, all you need to do is edit the file containing the explanation.

The explanation file itself is almost a clear text file of what you want the user to see when they ask for the explanation. There are two features of the file that are not plain clear text. All lines beginning with the pound sign (#) character are treated as internal comments and are not output. Also lines of the form **explain {msgID}** have special meaning. They cause the inclusion of the explanation text specified by the *{msgID}*. This allows you to have common explanations and reference from more than one explanation.

The recommended format for an explanation procedure is:

Comment and SCCS keywords

```
<< {msgID} [{msgID}...] >>
{text of message}
```

...

When creating a new explanation procedure, you will be asked to edit the synonyms list and be placed in the appropriate **translateLst** file. There are instructions at the top of the file. Each non-comment line is a list of synonyms, with the right most word on the line being the name of the file in which the text is located. For example:

```
ADM001      ADM_SYSERR
ALERT003    AL_INVALID_THRESHOLD  AL_INVALID_T
```

The descriptions for ADM001 and ADM_SYSERR are found in a file named **ADM_SYSERR**. The descriptions for ALERT003 and AL_INVALID_THRESHOLD are found in a file named **AL_INVALID_T**. The second example has a truncated file name, because file names are limited to 14 characters in most UNIX systems and if you want to use source code control, then the file name must not be longer than 12 characters. The recommended way to store an explanation is under a file name related to the mnemonic *{msgID}* rather than the *{CLASS}nnn* name, since the later is meaningless. A file name of the form *{CLASS}nnn* does not provide a sophisticated user with much information about the contents of the file, while the mnemonic form does. If the mnemonic is longer than 12 characters, then you should create a shorter name related to the mnemonic that is unique within 12 characters.

There are some environment variables that affect the behavior of **edExplain**:

- EDITOR — This is the name of your preferred text editor. The default is vi.
- EXPLAINDIR — This is the directory in which the explanation directories are found. The default is **/\${PRODUCTROOT}/gendb/data/explain**.
- PRODUCTROOT — This is the installation directory and defaults to **/ (root)**.
- VERBOSITY — This is a debugging aid. Setting it to anything cause debugging output to be generated while **edExplain** performs its job.

Files

/gendb/data/explain	# directory in which explanation directories are located.
/gendb/data/explain/translateLst	# file containing the synonym list of <i>{msgID}</i> s.

See Also

edExplain

faxit

The **faxit** command allows you to queue or send a fax from the command line.

Synopsis

- To queue a fax:

faxit -q -f *fax_file*

- To send a fax:

faxit -s -n *delivery_number*
[-t *delivery_time_in_hhmm*] [-i *retry interval in minutes*]
[-c *retry_count*] [-T "*TSI_string*"] [-G *Equipment_Group*]

- To queue and send a fax:

faxit -S -f *fax_file* -n *delivery_number*
[-t *delivery_time_in_hhmm*] [-i *retry interval in minutes*]
[-c *retry_count*] [-T "*TSI_string*"] [-G *Equipment_Group*]

Description

The basic parameters for the **faxit** command are as follows:

- **-q** — Queues a fax
- **-s** — Sends a fax that is in queue
- **-S** — Queues and sends a fax

Depending on the action (queue and/or send), the **faxit** command has the following parameters:

- **-f *fax_file*** — Specifies the name of the file you want to be queued for fax transmission. The field has the following requirements:
 - ~ You can specify the entire pathname of the file, or a file name under **/usr/faxdb/FR/WORKFAX**.
 - ~ The file must be either in ASCII text or TIFF Class F format.

Note: A fax loaded through the Loading and Printing Screen is in the TIFF Class F format.

- **-n *delivery_number*** — Enter the telephone number to which the fax will be delivered.

A total of 32 characters can be entered for the delivery number.

The following characters can be used in the FAX Delivery Number: field: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, asterisk (*), pound sign (#), comma (,), and dash (-).

- ~ Using a comma (,) causes a 1-second pause during dialing on lines in all equipment groups, both digital (T1) and analog (tip/ring). For longer pauses, multiple commas can be used.

- ~ For lines in analog equipment groups, using a dash (-) causes a short (0.1-second) pause during dialing.

Note: The dash (-) cannot be used on digital (T1) lines.

The pauses are useful in situations where a delay is required in the dial string, for example, when dialing out through a restricted trunk that requires a pause before input of a PIN (personal identification) number. For example, the following entry includes a 6-second delay between the dial string and the 5-digit PIN (12345): "9-6145551212, , , , , 12345"

- **-t *delivery_time_in_hhmm*** — Enter the time the out-of-call (as opposed to the current call) fax should be delivered. Specify a 2-digit hour (*hh*) and a 2-digit minute (*hhmm*) using a 24-hour clock, or use the string **immediate**.
If the FAX does not require immediate delivery, specify a time outside normal business hours to reduce transmission costs.
- **-i *retry_interval_in_minutes*** — Enter the interval (in minutes) between fax retries for a fax whose delivery has been attempted but has failed.
- **-c *retry_count*** — Enter the number of times the fax delivery should be retried in the case of a failure.
- **-T "*TSL_String*"** — The user-definable "Transmitting Subscriber Identification" for Group 3 faxes. This contents of this field is printed at the top of each received page with the page number, date sent, etc. Use this field to specify the sender's fax telephone number, company name, or other numeric string. The string is also displayed on the receiving fax machine's LED screen. The string must be contained in quotes.
- **-G *Equipment_Group*** — Enter the equipment group number to use for this action.

Conversion Tools

You may require a tool to convert files in other formats to fax files. For information on installing and using the **tif2itf.exe** and **tif2itf** conversion tools provided with the CONVERSANT system see Appendix C, "Format Conversion Tools for Fax Files," in *CONVERSANT System Version 8.0 Administration*, 585-313-510.

faxq

The **faxq** command outputs a report of all Script Builder FAX Actions delivery jobs currently in the system.

Synopsis

faxq

Description

A fax job is any fax waiting in the system for delivery. Completed fax jobs are not reported by the **faxq** command. For information on completed out-of-call fax jobs only, use the **faxrpt** command or the Out of Call Fax Report. See Out of Call Fax Report on page 230 in Chapter 8, Common Administration for more information.

The **faxq** command provides the following information for each fax:

- Job ID — The job ID returned by irAPI or by the FAX_Send action.
- Date/Time Submitted — The date and time that the job was submitted.
- Date/Time Next Attempt — The date and time the job is to be processed. This is the time specified by the application if no attempt has been made, or the subsequent retry due time if an attempt has been made but failed.
- Fs/Snt — The number of files submitted (Fs) and the number of files transmitted (Snt).

Note: If a file has more than 66 lines, it will be printed as more than one page. For example, if an out of call fax job is to print two files with each file of 95 lines, **faxq** displays 2 in this field if the fax job succeeded.

- S — The current status of the job:
 - ~ F — The job failed (final failure).
 - ~ W — The job is waiting to be retried.
 - ~ D — The job is delayed by the user by being scheduled for future delivery.
 - ~ A — The job is awaiting addressing because the destination number is not found.
 - ~ X — The job is being transmitted.
 - ~ P — The job is being processed.
 - ~ S — The job has been sent.
 - ~ f — The job process failed.
- Destination — The telephone number where the fax is to be delivered.

Example

Figure 181 on page 312 shows an example of output from the **faxq** command.

Figure 181. faxq Output

Job Id	Date/Time Submitted	Date/Time Next Attempt	S	Fs/Snt	Destination
=====	=====	=====	=	== ==	=====
jay3-00581	12/02/99 13:30		R	002/000	9,5551212,,,,,,,,

faxremove

The **faxremove** command removes a pending fax job from the fax queue.

Synopsis

faxremove <*job_ID*>

Description

The **faxremove** command removes a pending fax job from the fax queue. The <*job ID*> is the positive return code received from a Script Builder FAX_Send action or the **faxit** command. See "FAX_Send" in Chapter 8, "Using Optional Features," in *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217, for more information.

Example

faxremove 456

faxrpt

The **faxrpt** command prints a report on completed or failed out-of-call faxes. It provides information that identifies each fax, including the date, time, job ID and destination number. It also indicates if transmission was successful, the number of pages transmitted, and the duration of the transmission. If transmission was unsuccessful, the report provides a reason for failure.

The report displays information from the out-of-call fax log, which contains records for the most recent 14 days that faxes were transmitted. Faxes older than 14 days may be displayed if no faxes were transmitted on some days.

Note: The **faxrpt** command does not list incoming faxes or faxes sent when the delivery number is specified as CURRENT for a FAX_Send action. See "FAX_Send" in Chapter 8, "Using Optional Features," in *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217, for more information on CURRENT and out-of-call faxes. The report also does not include active fax jobs. Use the **faxq** command for information on actively queued jobs.

Synopsis

faxrpt *jobID* [start_date] [end_date]

Description

This command provides output from the same out-of-call fax log as the Out of Call Fax Report. See Out of Call Fax Report on page 230 in Chapter 8, Common Administration for more information.

The **faxrpt** command has the following parameters:

- *jobID* — The job ID returned by irAPI or by the FAX_Send action, or **all**. Using **all** causes **faxrpt** to print all fax jobs in the out-of-call fax log for the date specified.
- *start_date* — The start date for which data is to be reported, in the format mm/dd/yy, or mm/dd/yyyy, where mm is the month, dd is the day, and yy or yyyy is the year. If this parameter is omitted, the system uses the date of 0 AD.
- *end_date* — The end date for which data is to be reported, in the format mm/dd/yy or mm/dd/yyyy. If a 2-digit year argument is used, the following rules apply:
 - ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 11/27/99 is interpreted as November 27, 1999.
 - ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 11/27/06 is interpreted as November 27, 2006.

Examples

The following example prints the entire out-of-call fax log.

faxrpt all

The following example prints the entire contents of the out-of-call fax log from November 30, 1999 to the present.

faxrpt all 11/30/99

The following example outputs the entire out-of-call fax log for the month of November 1999.

faxrpt all 11/01/99 11/30/99

The following example prints the out-of-call fax log entry for job falcon2-31658.

faxrpt falcon2-31658

Figure 182 on page 314 shows an example of output from the **faxrpt** command.

Note: If a file has more than 66 lines, it will be printed as more than one page. For example, if an out of call fax job is to print two files with each file of 95 lines, **faxrpt** displays 4 in the PSnt field if the fax job succeeded.

Figure 182. faxrpt Output

OUT OF CALL FAX REPORT					
Date	Time	JobID	PSnt	Dur.	Destination
Status	Cause				

01/31/00	11:47:05	65800	0	00:00	916148603456
Failed	No FAX protocol.				
01/31/00	11:58:32	68440	0	00:00	18753-330
Failed	An error occurred while attempting to access a file.				
01/31/00	12:05:40	69180	1	00:00	105-330
Sent					
02/01/00	09:13:41	2339811	0	00:00	1234
Cancelled					

faxutil

The **faxutil** command merges two files (TIFF or text and TIFF) to create a TIFF files that can be faxed.

Synopsis

faxutil [-wnn] -ooutfile infile1 [infile2]

Description

The **faxutil** command merges two files to create a TIFF file that can be faxed. The files can both be TIFF files or text and TIFF files. The TIFF files must be in the itif format. The *infile1* variable can be either itif or text format. If *infile1* is text, the -w option must be used.

The -w option specifies the number of characters per line for text converted to itif. Valid values for *nn* are 80 or 120. The value -w120 forces the text to be converted at high resolution. When -w option is not used, the system assumes that *infile1* is in itif format.

The -o option specifies the name of the output file to be used.

The optional *infile2* must be itif. When *infile2* is not used, *infile1* must be text and the appropriate -w option must be provided.

When merging corresponding pages in input files, the length of a page will be the longest of the two input file pages. When merging multipage input files, the output file will be the length of the longer input file. The scanline merge will be an inclusive-or of the black and white pixels, with black taking precedence over white.

Example

The following example converts a text file (**file1**) to itif format with high resolution and outputs the results to the file **newfile**.

faxutil -w120 -onewfile file1

findHomes

The **findHomes** command populates your home directory with user files saved as part of assisted upgrade.

Synopsis

findHomes [-?] [-v] [-D *dir*]

Description

The **findHomes** command provides a convenient way to restore your files from the location where they are saved by the Upgrade Assistance Package to the home directory for each user defined in the **/etc/passwd** directory, if the user has the same login ID as they had on the pre-upgrade system.

For each user, the entire directory structure (including all files) preserved from the user home directory on the pre-upgrade machine is moved to the user home directory on the upgraded system. If a saved file has the same name as a file which already exists in a user's home directory on the upgraded system, the saved version is moved to **o.filename** in that directory.

Files for any users whose login ID changes from the pre-upgrade system to the upgraded system must be manually moved from their saved location to their new home directory. This manual intervention will also be required for users who did not use their login ID as the name of their home directory on the pre-upgrade system.

The **findHomes** command should be run after the assisted software upgrade has completed and logins for all users expected to move from the pre-upgrade system to the upgraded system have been administered on the upgraded system.

Parameters for the **findHomes** command are:

- **?** — Displays a help message.
- **-v** — Causes a list of saved files to be printed as they are moved.
- The **-D *dir*** — Specifies an additional directory to be searched for saved user files.

The Upgrade Assistance Package saves user files in **/home/o.homedir**, where *homedir* is the last directory in the full-path-name home directory specified for each user in the **/etc/passwd** file on the pre-upgraded system. Often, *homedir* is the user's login ID. If the file restoration to this directory fails, then the files are restored in a directory with the full pathname of the user's home directory on the pre-upgraded system.

Note: A message is printed indicating any directory for which all the files are not successfully relocated.

Example

The following example causes all files found in **/home/o.homedir** and **/usr/homedir** to be moved to the home directory specified for each non-system user specified in the **/etc/passwd** file on the upgraded system:

```
findHomes -v -D/usr
```

fixLogFile

The **fixLogFile** command upgrades existing logging files after **IComp** is run so that data continues to be readable by **logCat**.

Synopsis

```
fixLogFile [-d] [-s {save-file}] [-r] [-a] [-S] [-o {spec}] [-n {spec}]
file1 [file2...]
```

Description

When classes of logging messages are expanded, contracted, inserted, or removed, **fixLogFile** can change the index assignments of messages. When this happens, messages whose indexes changed and were logged under the previous environment become unexpandable by **logCat**. The **fixLogFile** command, given information about the previous assignments and the new assignments, upgrades logged data so that it remains expandable by **logCat**.

Each message is examined. If the class of messages appears in the new environment and still covers the index assigned to the message, a new index is assigned based on where it appears in the new environment. If the class of messages is no longer part of the message logging environment or if a class is reduced in size so that it no longer covers the index of a message, then it is necessary to do one of three things:

- **-d** — Deletes the message entirely from the logging file.
- **-r** — Demaps the message. This entails expanding the message in the old environment and then creating a new logging message using the **LOG_REMAP_DISCARD** format so that the data is still readable in the log files, but is marked as being part of a discarded message environment. This is the default behavior.
- **-s {save_file}** — Removes the message from the original logging file and saves it in the specified file, thus preserving the unique data for possible later retrieval.

Normally, **fixLogFile** generates a short message about each file that it converts. The **-s** flag suppresses this output.

The **fixLogFile** command requires access to the **old o.systemLog.h** and **o.textLogFmt** files and the new **systemLog.h** file to perform its job. It expects to find these files in **\$LOGROOT/formats**. If alternate sources of these files are to be used, the **-o** and **-n** flags are used. Each of these flags takes a *{spec}* argument, which has the following form:

```
{dir}[,{systemLog.h}][,{textLogFmt}]
```

The default values for these two specifications is:

```
-o ${LOGROOT}/formats,o.systemLog.h,o.textLogFmt  
-n ${LOGROOT}/formats,systemLog.h,textLogFmt
```

The *{dir}* portion specifies an alternate directory in which the **[o.]systemLog.h** and **[o.]textLogFmt** files are to appear. If the remainder of the *{spec}* is missing, the default file names apply. If specified, the **{systemLog.h}** and **{textLogFmt}** portions specify the names of these two files as they appear in the specified *{dir}*. Any section of the specification that is skipped retains its previous or default value.

A list of one or more logging files may be specified. If they are listed, each one is assumed to be a compressed logging file and is converted. The **-a** option automatically converts all of the compressed logging files found in **\${LOGROOT}/data**. No file names can be provided if the **-a** option is specified. When the **-a** option is used, each regular file found in **\${LOGROOT}/data** is examined to see if it is a compressed logging file. If it is not, it is ignored. If it is, it is converted.

After the files are converted, the time stamps are reapplied so they have the same date after conversion as they did before the conversion.

Caveats

The **fixLogFile** command only takes care of changes in classes of logging message. For example, if the class PERM was added, removed, or moved, **fixLogFile** could correctly deal with the changes to the logging files. The **fixLogFile** command does not deal with reorganizations or changes of messages within a class. Do not change the order of appearance messages or the arguments to a logging message if you expect to be able to expand the data in the future or save the previous **textLogFmt** file for the expansions.

If the conversion takes place while the **logdaemon** process is running, be sure to either stop and restart **logdaemon** or reinitialize it using the **reinitLog** command.

See Also

logCat
logdaemon

get_config

Note: This command is not used on the UCS1000.

The **get_config** command gets the **/vs/data/confData** file from floppy disk.

Synopsis

```
/vs/bin/uttl/get_config
```

Description

The **get_config** command is used to retrieve from the CONFIGURATION DATA floppy for a particular machine the **/vs/data/confData** file. That file represents the configuration of the voice system machine as it was shipped from the factory or as determined by the Hardware Resource Allocator (**/vs/bin/util/configure** command) after the last upgrade was performed on the machine.

The **get_config** command should be used as the first step in upgrading an existing voice system machine in the field.

Files

/vs/data/confData

See Also

configure
save_config
show_config
show_devices

hasRAID

The **hasRAID** command reports whether the system has a RAID configuration.

Synopsis

hasRAID

Description

The **hasRAID** command prints one of two responses to standard out:

- yes — This is a RAID system.
- no — This is not a RAID system.

See Also

raidconf
raidok
raidstat

hassign

The **hassign** command assigns host service to host sessions.

Synopsis

hassign [hostsvc] *host_application to session#* [FTSCRT]

Description

The **hassign** command assigns applications to session numbers. It is necessary to use this command to associate an application with host interactions to a given logical unit (LU). One host session corresponds to one LU.

The **FTSCRT** argument is required to assign that session for file transfer. If you are using file transfer, valid session numbers are 0–31 (that is, only sessions on the first host communication card can be used for file transfer).

The **hassign** command automatically executes the host maintenance login sequence on the specified session.

If the application “appl” is currently assigned to a particular session, and a new application “new_app” is assigned to that same session, the old application “appl” is logged out and “new_app” is logged in. In other words, the application currently assigned to the session is replaced by the new application you wish to assign.

If the application “my_appl” is assigned to session 0 and you wish to assign the application “your_appl” to session 0, you must:

- 1 **hlogout** the application “my_appl”
- 2 **hfree** the application “my_appl”
- 3 **hlogin** the application “your_appl”

If the application “my_appl” is already assigned to session 0 but the state is logged out and **hassign** is run on “my_appl” again, nothing happens. You need to run **hlogin** to log the application “my_appl” back in.

Example

In the following examples, the user is assigning the host application “my_appl” to session 0, to session 0–19, and to all sessions (up to 64 total with 2 host communications cards installed), respectively.

```
hassign my_appl to 0  
hassign my_appl to 0-19  
hassign my_appl to all
```

In the following example, the user is assigned in the host application “file_trans” to session 0 for file transfer.

```
hassign file_trans to 0 FTSCRT
```

See Also

hdelete

hcapture

The **hcapture** command saves the unrecognized screen exchanged between a host and the CONVERSANT system.

Synopsis

- **hcapture** [-a *application* | -l *LU_range*]
- **hcapture** -m <on> -a *application* | -l *LU_range*
[-d *directory_name*] [-s *number_of_screens*]
- **hcapture** -m <off> -a *application* | -l <*LU_range_0~28*>

Description

Hcapture saves the unrecognized screen exchanged between a host and CONVERSANT based on a specified range of logical units (LUs) or the LUs of the specified application. The captured screen is saved in a binary format for display by **hdefine** and can be inserted into Script Builder **application.sc** files. The information saved is the screen image, time of capture, application name, LU number, and voice channel number. This information is stored in a file name associated with the Script Builder application and the LU (such as **application.01** for LU1) in the directory specified in the command line or the default directory: **/vs/data/hcapture**.

The number of screens to be saved is established by the command line **-s** option; the default is 100. A subsequent command to turn on **hcapture** will supersede the previous **-s** setting. However the new data will be captured for that LU until the utility is turned on again with the size larger than the current setting or the files will be removed.

You must make sure the system has enough space to store the data; each screen consumes about 2K bytes of disk space.

Hcapture terminates when the hostdip goes down or when the hdefine command is executed. All command line settings are lost.

The **command line** parameters are:

- **-m** — Turns the operation mode of **hcapture** on/off.
- **-a** — Specifies the application name. If this option is used, the application has to be associated with an LU. The command will check against the **/vs/data/hostsvc** file for that. This option is mutually exclusive with the **-l** option.
- **-l** — Specifies the range of LUs. The LU does not have to be associated with an application.
- **-d** — Directory where the screen should be saved if specified. The default directory and file is **/vs/data/hcapture/application.01 ~ 128**.
- **-s** — Number of screens allowed. Default is 100 screens.

See Also

hdefine
hdump

hdefine

The **hdefine** command displays the host screen files created by **hcapture**.

Synopsis

hdefine [-d *directory_name*]

Description

Hdefine displays the host screen information saved with the **hcapture** command in a two-page format. The first page shows the full host screen image. The second page shows related information such as the time the image was captured, the application name, the logical unit (LU) number, the voice channel number, and control instructions such as how to go to the next page, the previous page, how to delete the current screen or how to append the screen to an **application.sc** file for Script Builder applications.

Hdefine causes **hcapture** to be terminated.

The **hdefine** command option is:

- **-d** — Directory where the host screen is stored. The default directory is **/vs/data/hdump**.

Table 52 describes the control options.

Table 52. Control Sequences

Sequence	Description
n RETURN or RETURN by itself	Means go to next page. A beep sounds when you are at the last page.
p RETURN	Means go to previous page. A beep sounds when you are at the first page.
d RETURN	Means delete the current screen and its related information page.
a RETURN	Means the name of the application.sc you want to append the screen to.
q RETURN	Means exit hdefine .

General control sequence information will be shown before the first screen is displayed. A message is displayed if no screen is found in the captured files.

See Also

hcapture
hdump

hdelete

The **hdelete** command removes host service from host sessions.

Synopsis

hdelete [*hostsvc*] *host_application* from [*session_number* | *range* | *all*]

Description

The **hdelete** command executes the logout sequence that is defined in the application's host session maintenance section and automatically removes the host application association from the session number. One host session corresponds to one logical unit (LU).

Note: The **hfree** command works similarly to the **hdelete** command except that does not execute the logout sequence and should be used only when you need to release the session immediately.

Example

In the following examples, the user is unassigning the host application "my_appl" from session 0, from session 0–19, and from all sessions (up to 64 total with 2 host communications cards installed), respectively.

```
hdelete my_appl from 0
hdelete my_appl from 0-19
hdelete my_appl from all
```

See Also

hassign
hfree

hdisplay

The **hdisplay** command shows host applications that have been successfully verified and installed, as well as the application assignments on the host sessions.

Synopsis

hdisplay [*hostsvc*]

Description

The **hdisplay** command displays the host applications that have been verified and installed on the system. The **hdisplay** command also displays the current session assignments for each host application.

Example

The following example displays the host application currently verified and installed on the system, as well as the current session assignments.

hdisplay

hdump

Hdump dumps the screens exchanged between the host and CONVERSANT into two ASCII files.

Synopsis

hdump

hdump -l *LU_range*

**hdump -m *<on>* -l *LU_range* [-d *directory_name*]
[-s *number_of_screens*]**

hdump -m *<off>* -l *LU_range*

Description

Hdump dumps the screens exchanged between the host and CONVERSANT including the OIA line to two ASCII files based on the specified range of logical units (LUs). The two dump files are named for their corresponding LU. **LUa.01** and **LUb.01** are assigned to LU1; **LUa.02** and **LUb.02** are assigned to LU2, and so forth. The maximum number of LUs is 128.

For LU1, **LUa.01** collects the host screens up to the screen limit, then **LUb.01** collects the screens up to the screen limit. When **LUb.01** reaches the screens limit, **LUa.01** is cleared and the process begins again. The output format is similar to the existing **trace chan #** output with the addition of an extra OIA line.

Hdump without argument prints out the current **hdump** status of all LUs, including directory name, number of screens limit, and LU on/off state.

Hdump with the **-l *LU_range*** argument prints out the current **hdump** status of a range of LUs, including directory name, number of screens limit, and LU on/off state.

Subsequent **hdumps** with **-m *on*** option supersede the previous **hdump** setting.

Hdump terminates when the host dip goes down; no information regarding the previous command line settings are saved. The command parameters are as follows:

- **-m** — Turn the operation mode on/off.
- **-l** — Specify the range of LUs.
- **-d** — Directory where the screen should be saved if specified. The default directory is **/vs/data/hdump/**. The default filenames are **LUa.01 - LUa.128** and **LUb.01 - LUb.128**.
- **-s** — Number of screens to be collected. Default is 100.

See Also

hcapture
hdefine

hfree

The **hfree** command unconditionally releases host sessions from Script Builder host application assignments.

Synopsis

hfree [*host_application* | *session_number* | *range* | *all*]

Description

The **hfree** command releases sessions from their Script Builder application assignments. One host session corresponds to one logical unit (LU). It frees the assignment and leaves the host session on the screen it was currently. This command can be helpful in resolving a problem with a particular screen. Normally, the **hdelete** command should be used to make a session available. The **hfree** command is used commonly when problems occur on sessions and troubleshooting is needed.

Note: The **hfree** command does not automatically log out the specified session. Use the **hdelete** command to log out a session and make the specified session available.

See Also

hdelete

hlogin

The **hlogin** command runs the login sequence of a host script.

Synopsis

hlogin [*host_application* | *session_number* | *range* | *all*]

Description

The **hlogin** command invokes the login procedure that is defined in the application's host session maintenance section. This command is often used in the system's cron table to automatically log in the host as soon as it is available each day.

Note: The session must be in the logged out state before you may execute this command.

Example

The following example invokes the login procedures for the host application "my_appl."

hlogin my_appl

The following example invokes the login procedures for the host applications assigned to sessions 0 through 9.

hlogin 0-9

See Also

hassign

hlogout

hlogout

The **hlogout** command runs the log out sequence of the host script.

Synopsis

hlogout [*host_application* | *session_number* | *range* | **all**]

Description

The **hlogout** command invokes the logout procedure that is defined in the application's host session maintenance section. This command is often used in the system's cron table in order to log off the host automatically before it goes down each night. It is a clean, convenient way to log out of the host application.

Note: The session must be in the logged in state before you may execute this command.

This command should be performed once an application has been developed and hassigned to a session to test the logout procedure.

Example

The following example invokes the log out procedure for the host application **my_appl**.

hlogout my_appl

The following example invokes the log out procedure for all session numbers.

hlogout all

See Also

hassign

hlogin

hnewscript

The **hnewscript** command installs a changed host script.

Synopsis

hnewscript *host_application*

Description

The **hnewscript** command updates the system memory with the newest copy of the specified host application. This can cause the host application to be logged out and then logged back in using the newly defined host maintenance. This is required to put the updated version into effect, and Script Builder automatically prompts you when the verify and install have been composed and the host maintenance has changed.

Example

The following example updates the system memory with the most current copy of the host application "my_appl."

```
hnewscript my_appl
```



CAUTION:

The **hnewscript** command may temporarily prevent access to any host sessions that have been modified while they are in the process of logging out and logging back in.

hsend

The **hsend** command sends a file to the host via CVIS_FTS.

Synopsis

hsend *file=cs_file* [*dest=file_destination*] [*opt=option_list*]*n*

Description

The **hsend** command is used to send a file to the host via *cvis_fts*. The arguments for the **hsend** command are:

- **file** — A mandatory argument for the **hsend** command. The *cs_file* parameter is the full path name of the UNIX system file to be sent to the host. See *CONVERSANT System Version 8.0 Communication Development*, 585-313-220, for file name guidelines for file transfer.
- **dest** — An optional argument, where *file_destination* is the final destination of the file at the host. If this parameter is not specified, the DESTINATION parameter value in the file */vs/data/fts_config* is used.

- **opt** —An optional argument, where *option_list*/*n* is the list of option parameters or **n** (for no options). Options must be separated by a space. See *CONVERSANT System Version 8.0 Communications Development*, 585-313-220, for a detailed options list.

If **opt=n**, the PARAM1, PARAM2, and PARAM3 values in the **/vs/data/fts_config** file are not used. If this argument is missing (the default), the PARAM1, PARAM2, and PARAM3 values in the **/vs/data/fts_config** file are used.

Return Values

See *CONVERSANT System Version 8.0 Communication Development*, 585-313-220, for information on CLEO file transfer return codes.

hspy

The **hspy** command displays a screen currently present on a specified host session.

Synopsis

hspy [*session_number* | *range* | **all**]

Description

The **hspy** command shows what screen currently is being presented on that specified session, a range, or all. One host session corresponds to one logical unit (LU). This information helps to isolate what screens might be involved in a problem, should one occur. This tool can help to resolve problems, but should not be the only source of problem isolation.

Example

The following example displays the screen currently be presented on session 0.

hspy 0

Output

A screen of data representing what is currently present on a host session.



CAUTION:

This screen presents what the process that communicates with the host believes is present, but it may not be the actual screen present on that host session.

hstatus

The **hstatus** command shows the current status of the host sessions.

Synopsis

hstatus [*host_application* | *session_number* / *range* / *all*]

Description

The **hstatus** command reports the current status of the host application assigned to the associated host sessions. One host session corresponds to one logical unit (LU). The possible status states are as follows:

- Logging in — This is a temporary state indicating the session is in the process of logging in immediately after a manual **hassign** or **hlogin**.
- Logged in — This state occurs after a successful login. The session is ready to accept a transaction (the transaction base screen is reached).
- Logging out — This is a temporary state indicating the session is in the process of logging out immediately after a manual **hlogout**.
- Logged out — This state indicates that service is still assigned, but the session has been logged out.
- Recovering — This state occurs if the login procedure fails, the transaction ends somewhere other than the transaction base screen, or the recovery procedure ends somewhere other than the transaction base screen.
- Unassigned — This state indicates that service was never assigned to the session or service was assigned and later manually deleted.
- Not available — This state indicates the session is not available for use.
- Free — This state indicates the session was manually freed.
- Transaction — This state indicates the session is currently involved with a transaction.

This command is helpful in debugging problems with host applications and to check on the number of sessions actively involved on a call. See Chapter 8, Common Administration, for information on the Host Monitor screens.

Example

The following example displays the current status of the host applications assigned to sessions 0 through 9.

hstatus 0-9

The following example displays the current status of all session numbers.

hstatus all

iCk, iCkAdmin

The **iCk** process is the daemon process that performs various integrity checks on the system based on rules in a script file.

The **iCkAdmin** command is a related administration command to **iCk**.

Synopsis

iCk [-v *NNN*] [{*envName*}=*{value}*] [{*rule-file*}]

iCk -c [-i | -f *{file}*] | *cmd...*

iCkCmd [-i | -f *{file}*] | *cmd...*

iCkAdmin [-c] [-a *{on/off}*] [s *{entryType* [:-*{ID}*]]]
[-e *{entryType* [:-*{ID}*]] [*iCk.rules-file*]

Description

The **iCk** process performs various jobs that fall into the category of integrity checks. It is driven by an ASCII file containing rules describing the checks desired to be performed. Its primary job is to run as a daemon process, started by **init**, and to perform the specified jobs at the intervals specified by the rules. **iCk**'s secondary job is to serve as a command interface to a human user and convey commands to the **iCk** process, which is running as a daemon process.

As a daemon process, **iCk** accepts one flag, **-v**, which initializes the internal verbosity flags according to the value *NNN* provided. This value can be in decimal, hexadecimal, or octal. None of the symbolic flag names apply in this mode. Table 53 describes the bit meanings.

Table 53. Verbosity Flag Values

Bit	Name	Description
0x0001	V_RESCANBB	Log messages whenever the Bulletin Board is rescanned
0x0002	V_TIMINGMSG	Log messages when timing messages are sent
0x0004	V_HUNGPROCESS	Log messages when hung process checking is performed
0x0008	V_AUTOREBOOT	Log messages when autoreboot processing is performed
0x0010	V_FILEMAX	Log messages when maximum file checks are performed
0x0020	V_FILECHECK	Log messages when file ownership/modes are checked
0x0040	V_PIPECMDS	Log messages when pipe commands are received
1 of 2		

Table 53. Verbosity Flag Values

Bit	Name	Description
0x0080	V_TRACE	Log messages about all major routines in iCk
0x0100	V_SERVICE	Log messages whenever a service is queued or performed
2 of 2		

Environment Variables

The **iCk** command also accepts environment variables from the command line of the form:

{variable-name}={value}

These can be used to set the following environment variables that also affect **iCk**'s behavior:

- **VERBOSITY** — This is an alternative way to set the internal verbosity flags. The meanings of the bits are the same as for the value supplied to the **-v** flag.
- **SHELL** — This specifies the name of the shell to be used when executing commands. The default is **/bin/sh**.
- **UTMP** — This specifies where the “utmp” file associated with the system is located. Currently, this value is not used except for debugging purposes.
- **PATH** — This indicates where **iCk** finds executable programs. The default is **/bin:/etc:/usr/bin:/vs/bin:/vs/bin/util:/vs/bin/tools**.

When running as a daemon process, **iCk** accepts a file name, which is the name of the rules file from which it is supposed to operate. If not specified, the default rules file is **/vs/etc/iCk.rules**.

When **iCk** is executed with the **-c** flag or by the alternate name **iCkCmd**, is run as the command interface to the **iCk** daemon process.

- **-i** — This option specifies that **iCk** to run in interactive mode. This causes it to generate prompts as it requests information from its standard input. Without the **-i** flag, **iCk** silently accepts input from its standard input. This might be useful if used in a shell script.
- **-f {file}** — This value causes **iCk** to read a series of commands from the specified file or device instead of from its standard input.
- **{cmd}...** — This field causes **iCk** to use the remaining arguments on the command line as the commands to be sent to the **iCk** daemon process.

See Commands on page 336 for details about commands to which **iCk** responds.

Administers Rules File

The **iCkAdmin** command administers the **iCk** rules file. It has no direct communication with the **iCk** daemon process. Changes it might make to the rules file do not take effect until the **iCk** daemon process is requested to read the modified rules file.

- **-c** — Causes **iCkAdmin** to verbosely check out the rules file and report complaints.
- **a {on/off}** — Causes the rules file to be read, the **autoReboot** entry set the specified state, and written back out again.
- **-s {entryType[:{ID}]}** — Causes the rules for the specified entries to be shown.
- **-e {entryType[:{ID}]}** — Allows interactive editing of the specified entries.

Note: This feature is not yet complete.

For both the **-s** and **-e** options, the **entryType** is the name of a type of entry minus the “\$” character, that is, **rescanBB**, **timingMsg**, etc. The optional **{ID}** field means the name of the process for **timingMsg** and **hungProcess** entries and the name of the file for **fileMax** and **fileCheck** entries.

Rules File

Comments begin with a pound sign (#) character and continue to the end of the line. All blank lines are ignored. Activity requests are indicated by keywords, all of which begin with the “\$” character.

In the descriptions of the activities, the following definitions apply:

- **{process}** — This is the ASCII name of a process appearing in the Bulletin Board, that is, TSM or MTC.
- **{runlevels}** — This is specification of which run levels at which to perform the activity. The syntax is the same as used by init, that is, 4 = run level 4, 234 = run levels 2, 3, or 4.
- **{checkPeriod/Time}** — This indicates the activities performed repetitively will have a specification of either how often to perform the activity or at what times of the day or week to perform the activity. One of three forms is used:

~ —

Perform the activity once when the rules are first read and then do not perform it again.

~ checkPeriod

A period of time is specified as the sum of a number of different time elements: [NNd] [NNh] [NNm] [NNs]. For example, 5m means “every 5 minutes,” and 5h 30m means “every five and a half hours.” Each element is a number followed by the type of specifier, d, days, h, hours, m, minutes, s, seconds. The order is irrelevant. 5h 30m is the same as 30m 5h.

~ Time

If it is more important that an activity be performed at a specific time of day or week, then the “time” format should be used. It has the following form: **X {monthday} {weekday} {hour} {min} {sec}**

All five elements are required for the specification to be accepted. Each element can be:

- * — All items in class (days of the month, hours in the day, etc.).
- N — The specific item.
- N-M — The items between N and M inclusive.
- N,M — The individual items N and M in the class.

The items within each class are:

- {monthday} — 1-31
- {weekday} — ASCII day of the week (sun, mon,...)
- {hour} — 0-23
- {min} — 0-59
- {sec} — 0-59

For example: “* * * 0 0” means perform each hour on the hour.

“13 fri 12 0 0” means perform the activity at noon on any Friday the 13th.

- {cmd} — This specific command is executed if the activity so dictates. Within the command itself, there are four meta-words that can be used to generate flexible commands. Not all four meta-words have meaning in all cases.
 - ~ %f The full file name.
 - ~ %d The directory portion of the file name.
 - ~ %b The base name of the file name.
 - ~ %p The process identification (PID) of the process.

Activities

- **\$timingMsg {process} {runlevels} {checkPeriod/Time}**

This activity causes a timing message to be sent to a specified process at regular intervals whenever the system is at one of a specified run levels. Currently, the TSM and the VROP processes expect to receive timing messages, once every 2 seconds.

- **\$hungProcess {process} {runlevels} {checkdPeriod/Time} {timeout{fill}report|exec cmd}}**

This activity causes a specific process, whose name appears in the Bulletin Board, to be evaluated to see if it is hung in regard to reading its messages. Processing only takes place when the system is at one of the specified run levels. *{timeout}* is the length of time the process can stay in the “working” state before being declared hung. Once a process is determined to be hung, one of three responses are possible:

~ kill

The process is killed by sending it first a **SIGUSR1** signal, followed by a **SIGKILL** signal if it does not voluntarily exit.

~ report

A message is logged to the effect that the process is hung. No other action is taken.

~ exec

The specified command is executed. The %p meta-word has the value of the PID of the process associated with the rule.

- **\$autoReboot {off/on} {u-reboots} {ubPeriod} {runlevels} {setPeriod}**

This activity controls the feature that automatically sets the UNIX kernel auto-reboot flag. If the entry is marked “off,” then the auto-reboot flag is not automatically turned on. It can still be manually set with an **iCk** command. If the entry is marked “on,” then the automatic setting is enabled. The remaining parameters control when the flag is set. The algorithm that controls the setting of the flag is as follows:

- ~ The number of unanticipated reboots of the kernel is determined by examining the **/etc/wtmp** file (the history file of **init** actions) for “change of run level” entries and “boot time” entries. Any entry falling within the *{ubPeriod}* of time prior to the most recent system boot time are considered. If a “boot time” entry is preceded by a “change of run level” to levels 0, 5, or 6, the boot is considered anticipated, since someone deliberately entered the command to reboot the system. If a “boot time” entry is NOT preceded by such a “change of run level” entry, then the reboot is considered unanticipated. This includes power failures, reset button pushes, and panics of the UNIX kernel.
- ~ If the number of unanticipated reboots is LESS than *{u-reboots}*, the auto-reboot flag is set *{setPeriod}* amount of time AFTER the system comes up to one of the run levels specified by *{runlevels}*.
- ~ If the number of unanticipated reboots is GREATER THAN OR EQUAL to *{u-reboots}*, setting of the auto-reboot flag is inhibited and is not set until the system has been up at one of the run levels specified by *{runlevels}* for a *{ubPeriod}* of time.

For example: typing **\$autoReboot on 5 60m 4 5m**, which is the standard default setting specifies that if LESS THAN 5 unanticipated reboots have occurred in the past 60 minutes, the auto-reboot flag is set in the UNIX kernel 5 minutes after reaching run level 4. If 5 or more unanticipated reboots have occurred in the past 60 minutes, then the auto-reboot flag is not set until 60 minutes after reaching run level 4.

- **\$fileMax {file} {maxSize} {checkPeriod/Time} reduce {minSize}**
\$fileMax {file} {maxSize} {checkPeriod/Time} remove
\$fileMax {file} {maxSize} {checkPeriod/Time} exec {cmd}

This activity checks one or more files to insure that they have not grown too large. *{file}* is the name of a file or a pattern specifying a set of files. *{maxSize}* is the maximum size in bytes that a file to grow to before it triggers a response from iCk. A check on the size of the file or files is made as specified by *{checkPeriod/Time}*. One of three responses to a file becoming too large can occur:

~ reduce

The offending file is reduced in size by saving the last *{minSize}* bytes of the file and discarding the rest.

~ remove

The offending file is removed entirely.

~ exec

The command specified is executed. In this case the meta-words %f, %d, and %b are defined as the various parts of the file name and can be used in the command.

- **\$fileCheck {file} {runlevels} {checkPeriod/Time} {type} {owner}**
{groups} {modemask} {modes} [cmd]

This activity can be used to insure that a specific file or files exist and have the proper ownership and modes. *{file}* specifies the file or a pattern that selects a set of patterns. *{runlevels}* specify at which run levels the checks are made. *{checkPeriod/Time}* specifies the frequency of checks. *{type}* specifies the type of file. It can take one of seven values:

- ~ - The type does not matter.
- ~ **f** The file is a "regular" file.
- ~ **d** The file is a directory.
- ~ **p** The file is a named pipe.
- ~ **c** The file is a character special device.
- ~ **b** The file is a block special device.
- ~ **l** On SVR5.4 systems, the file is a symbolic link.

The *{owner}* variable specifies who owns the file. If this value is - then who owns the files is not of interest. *{group}* specifies which group owns the file. If this value is - then which group owns the files is not of interest. *{modeMask}* specifies which bits of the mode are of interest while *{modes}* is the state of the bits desired. For example, if both *{modeMask}* and *{modes}* were 0444, then the check would be to insure that the file was readable by anyone, but whether it was writable or executable is not of interest. If on the other hand *{modeMask}* was 0777, while *{modes}* was 0444, then the check would be to insure that the file was only readable and must not be writable or executable by anyone. If a file fails to pass a \$fileCheck test, it is always reported. If the optional *[cmd]* is specified, then this command is executed. The meta-words %f, %d, and %b are set to the various parts of the file name for use in the command.

- **\$EOF**

This special mark indicates the end of the rules. Anything beyond this mark in the rules file is ignored.

Example Rules

\$fileMax /etc/wtmp 360000 ~* * * 0 0~ reduce 36000

If the file **/etc/wtmp** exceeds 360,000 bytes, reduce it to 36,000 bytes. Check the size of the file on the hour. (The structures in this file are 36 bytes in length and it must be an integral number of structures, hence the chosen sizes.)

\$fileCheck /etc/passwd - - f root - 0777 0444

Check only once. The **/etc/passwd** file should be owned by **root** and be read-only to everyone.

\$fileCheck /etc/shadow - - f root - 0777 0400

Check only once. The **/etc/shadow** file should be owned by **root** and be read-only to **root**.

\$fileMax /tmp/*.lst 10000 - remove

Remove all the files in **/tmp** ending with an extension of **.lst** if they are bigger than 10,000 bytes. Do this only once.

\$fileMax /tmp/*.hist 0 - exex ~/bin/mv %f %d/o.%b~

For any non-zero length files in **/tmp** with an extension of **.hist**, save them as **/tmp/o.*.hist**

Commands

In command mode, **iCk** responds to the following commands. Each command sends a message to the **iCk** daemon process except for the first command. All commands can be abbreviated to the shortest unique string, hence **au** is sufficient to identify the **autoreboot** function and **ac** the **activate** function. For most commands one letter is sufficient.

- **x** “ | “ **exit** “ | “ **^D**

This command exits from the interactive command mode. This does not affect the **iCk** daemon process.

- **bootCnts** [*period*]

This command computes the UNIX reboot information from the **/etc/wtmp** file. If *period* is supplied, this length of time is used. If it is not supplied, then the window period of time for the **\$autoReboot** rule is used. This command generates three numbers, the total number of reboots in the specified period of time prior to and including the current boot of the system, the number that were anticipated (or deliberate) and the number of unanticipated reboots. This request does not communicate with the **iCk** daemon process.

- **autoReboot** {*set* | *clear*}

This command forces the kernel auto-reboot flag into the specified state.

- **readRules** [*rule-file*]

This command rereads the rules file. If a new file name is provided, then it is read instead of the previous file. Before using this command, the new rules should be checked with the **iCkAdmin** command to insure syntactic correctness.

- **wakeup**

This command makes the **iCk** daemon wakeup immediately and check its state.

- **rescanBB**

This command makes the **iCk** daemon wakeup and reexamine the Bulletin Board for new instances of known process types.

- **quit**

This command causes the **iCk** daemon to exit gracefully. (Since **iCk** is normally run from the **/etc/inittab** file, **init** immediately respawns the daemon.) In interactive mode, the command requires confirmation.

- **verbosity** {*value*}

This command sets the **iCk** daemon's verbosity flags to the specified values. In this case the symbolic names are accepted as well as octal, decimal, or hexadecimal values. Combined values can be produced by separating values with the **'|'** character.

- **activate {spec}**

This object, in conjunction with the V_TRACE flag, causes the activities specified by {spec} to be logged whenever they execute.

- **inhibit {spec}**

This object, in conjunction with the V_TRACE flag, causes the activities specified by {spec} to not be logged whenever they execute.

- **print {spec}**

This object logs the status of the activities specified by {spec}. The status information logged as a result of the **print** command varies based on the activity. The common information printed is the activity index, which may be used in future {spec}'s, the rule index, which should correspond to the position of the rule in the rules file, and the type of the activity. In addition, there is the *a_clockID*, which is non-zero if an alarm is running for the current activity and the **a_nextAlarm**, which indicates at what time the next alarm is set to expire. At the end of the entry is the **a_flags**, 0, meaning no flags are set, AF_SUPPRESS_TIMING, meaning that timing is deliberately suppressed for the time being, AF_CHECK_NEW_RUNLEVEL, meaning that when the run levels change, this activity is checked to see if it should reactivate, and AF_DEBUG_OFF, which is set for any activity that has been inhibited by the **inhibit** command. There is also the **a_state**, which indicates the current state of the activity. Its values are:

- ~ AS_INACTIVE — This value is currently not being processed.
- ~ AS_TIMER_RUNNING — There is currently an alarm outstanding for this activity.
- ~ AS_SERVICE_QUEUED — An alarm has expired for this activity, but has not yet been processed.
- ~ AS_IN_PROGRESS — An activity is currently being processed.

The above-mentioned commands, **activate**, **inhibit**, and **print**, require an activities specification. Such a specification is defined from the following list of objects. More than one object can be combined with the | character:

- **rescanBB** — This object is the \$rescanBB activity.
- **timingMsg** — This object is all the \$timingMsg activities.
- **hungProcess** — This object is all the \$hungProcess activities.
- **autoReboot** — This object is the \$autoReboot activity.
- **fileMax** — This object is all the \$fileMax activities.
- **fileCheck** — This object is all the \$fileCheck activities.
- **miscellaneous** — This object applies to the **print** command only. It causes a report of whether the autoreboot flag has been automatically set or not, the state of the UNIX kernel autoreboot flag, the current run level, the number of rules read, and the number activities currently in force to be logged.

- **all/ALL** — This object specifies all activities.
- **NNN** — This object, where *NNN* are digits, specifies an explicit activity by its index in the array of all activities.

All remaining information is activity specific. By activity, the information logged is:

- **\$timingMsg** — The name of the process, the Bulletin Board slot, and instance.
- **\$hungProcess** — The name of the process, the PID, the Bulletin Board state, work count, time, flag, slot, and instance. The flag can have values of HP_STUCK, meaning that it does not seem to be reading its message queue, HP_SIGUSR1, meaning it has been sent a SIGUSR1 signal to request it to die, and HP_SIGKILL, meaning that it has been killed with the uncatchable SIGKILL signal.
- **\$autoReboot** — The computed unanticipated reboot count at the time the system was last rebooted plus the length of the period over which the computation is made.
- **\$fileMax** — The name of the file.
- **\$fileCheck** — The name of the file.
- **core** — This command is available for debugging purposes. It causes **iCk** to produce a core file in **/tmp/iCk.core** via a core dump operation in a spawned child process. In other words, **iCk** itself does not stop, but you do get a reliable core of **iCk** for debugging evaluation.

Default File

The **iCk** process responds to default parameters placed in **/vs/etc/default/iCk**. Initially there are two values, which set specific internal parameters:

- **RUNLEVELTIMEOUT** — Specifies how long to wait after changing run levels before accepting the value from **/etc/utmp** without confirmation from **iCkCmd**. The default is 3 minutes.
- **RECHECKTIMEOUT** — Specifies how long to wait after changing run levels before rechecking for new processes in the Bulletin Board. The default is 30 seconds.

Also any environment variables desired can be set in the default file.

Files

/vs/etc/iCk.rules	# the default rules file
/tmp/iCkPipe	# the named pipe used to speak to iCk
/vs/etc/default/iCk	# default parameters

Caveats

The **iCk** process is a daemon process running as **root**. Since the rules support the concept of executing an arbitrary command, the **/vs** and the **/vs/etc** directories need to be protected against tampering and the **iCk.rules** file should only be writable by authorized users.

See Also

logCat

install_appl

The **install_appl** command installs an application.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis

install_appl -n [o] *application_name*

Description

The **install_appl** command is used to install a verified application received from the host, bundled using the **backup_appl** command. It requires the name of the application. The **o** option overwrites the existing application.

Note: You must use the **restore_appl** command before using the **install_appl** command.

Return Values

If the **install_appl** command is successful, a 0 value is returned. If any value other than 0 is returned, the **install_appl** command failed. The following are the possible reasons for failure for the **install_appl** command:

- The hard disk is low in space.
- The command syntax is incorrect.
- The application already exists.
- The application has not been verified.
- Unrecorded phrases exist.
- An inconsistency is found in the transaction.

Example

The following example installs the application "bank_balance" received from the host.

install_appl -n bank_balance

See Also

backup_appl
remove_appl
restore_appl

install_sw

The **install_sw** command installs a software package.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis

install_sw [-p *path*] [-n *cpio_file_name*]

Description

The **install_sw** command is used to install a software package received from the host. The package is a file in cpio format. If the path and the cpio file name are not specified, the default path (**/tmp/stag**) and the default file name (**h_install**) is used.

Use the following command to view the contents of a floppy to determine if it is an installable package and that it does not use full path names, like **/etc/profile**.

cpio -iBcvtl /dev/rdisk/f0

The following files are needed to perform the **pkgadd** command: **Size**, **Name**, **Files**, **Install**, **Remove**, and **package_name**.

The following steps creates a sample “bundled” cpio file called **fts** from an installable UNIX package:

- 1 Insert the first floppy of the package to be bundled in the floppy disk drive.
- 2 Enter **mkdir mydir**
- 3 Enter **cd mydir**
- 4 Enter **cpio -iBacvdl /dev/rdisk/f0**
- 5 Enter **find . -print | cpio -ocd > fts**
- 6 Transfer this binary file to the target system using file transfer or enhanced file transfer.
- 7 Enter **install_sw** on the target system.

Return Values

If the **install_sw** command is successful, a 0 value is returned. If any value other than 0 is returned, the **install_sw** command failed. The following are the possible reasons for failure for the **install_sw** command:

- The hard disk is low in space.
- The user is not root or a super user.
- The command cannot read *pathname*.
- The package already exists.
- The command syntax is incorrect.
- The package is missing the necessary installation programs.

Example

The following example installs the **sbpkg** cpio file that contains the CONVERSANT Script Builder Version 8.0 package.

```
install_sw -n sbpkg
```

See Also

remove_sw

lan_chk

The **lan_chk** command displays or changes certain configuration options on the different versions of the Ethernet LAN circuit card.

Synopsis

```
/mtce/bin/lan_chk [-i] [-p] [-P [brd#]:[AMD | BNC | AUI | UTP-Link | UTPFD | STP100 | UTP100FD | UTP10Link | 10MBLink]]
```

Description

The **lan_chk** command allow you to check or change the following options on the Ethernet LAN interfaces:

- **-i** — Display and/or change the setup of the ISA LAN.
- **-p** — Display the setup of the PCI LAN.
- **-P** — Change the media type specified on the PCI LAN:

```
-P [brd#]:[AMD | BNC | AUI | UTP-Link | UTPFD | STP100 | UTP100FD | UTP10Link | 10MBLink]
```

 - ~ **brd#** — Circuit card number.
 - ~ **AMD** — Sets the card for SMC8432, operating in the auto media detect mode.
 - ~ **BNC** — Sets the card for SMC8432, operating in the BNC mode.
 - ~ **AUI** — Sets the card for SMC8432, operating in the AUI mode.

- ~ **UTP-Link** — Sets the card for SMC8432, unshielded twister pair mode with link integrity set to “on”.
- ~ **UTPFD** — Sets the card for SMC8432, unshielded twisted pair mode with full duplex.
- ~ **STP100** — Sets the card for SMC9332, shielded or unshielded twisted pair mode, at 100 mbps.
- ~ **UTP100FD** — Sets the card for SMC9332, unshielded twisted pair mode at 100 mbps with full duplex.
- ~ **UTP10Link** — Sets the card for SMC9332, unshielded twisted pair mode at 10 mbps with link integrity set to “on”.
- ~ **10MB-Link** — Sets the card for SMC9332, at 10 mbps with link integrity set to “on”.

Example

/mtce/bin/lan_chk -P 1:UTP-Link

This command configures the PCI LAN interface number 1 for use by an SMC8432 circuit card, in the unshielded twisted pair mode, with link integrity set to “on”.

Files

/mtce/bin/lan_chk

/etc/conf/pack.d/smpw0/space.c

/etc/conf/sdevice.d/smpw0

Caveats

If the system is using multiple PCI LAN circuit cards, they must all be the same type (either all SMC9332 or all SMC8432).

If the **lan_chk** command is used with the **-P** option to change the media type for a particular interface, the command does not check to see if all of the interfaces maintain matching circuit cards. It will allow you to set one interface for SMC8432, and another interface for SMC9332. However, the circuit cards will not operate correctly until they are the same type, and match the operation modes set for the interfaces.

See Also

See the **ezsetup** utility associated with the LAN circuit card.

IComp

The **IComp** command combines a series of message files and produces a file of compressed format files and an expansion format file.

Synopsis

IComp [-s *name*] [-c *name*] [-t *name*] [-d *name*] [-m *name*]
file1 [*file2*...]

Description

IComp compiles logging format files. The input files are in the form:

```
XXX...NNN... message.....%fff[<<SQL spec>>]....
%fff[<<SQL spec>>]....%fff[<<SQL spec>>]...
```

In other words, the input files contain standard C format statements, with optional SQL field definitions included. Long lines may be broken up with backslash, newline sequences. Such lines are concatenated, discarding the backslash and newline characters, by **IComp** and treated as one long line during compilation.

IComp produces five files, a header file, a compressed format file, an expansion format file, a data dictionary file, and a data dictionary mapping file. The default names are: **systemLog.h**, **cmpLogFmt**, **textLogFmt**, **dataDictLog**, and **ddMapLog**.

- **-s** *name* — Changes the **systemLog.h** file to *name*
- **-c** *name* — Changes the **cmpLogFmt** file to *name*
- **-t** *name* — Changes the **textLogFmt** file to *name*
- **-d** *name* — Changes the **dataDictLog** file to *name*
- **-m** *name* — Changes the **ddMapLog** file to *name*

The **systemLog.h** file contains a series of defines of the form:

```
#define _{FILE}_START NN
```

where *{FILE}* is the all uppercase form of the input file name. This header file allows applications to refer to errors of a specific class relative to the beginning of the class of errors and so avoid having to edit code as the various classes of errors codes grow or shrink.

The **cmpLogFmt** file contains the compressed formats, which the log subroutine uses to produce compressed logging messages.

The **textLogFmt** file contains two sections. The first section is a series of offsets to each expansion format and its length. The second section contains the expansion formats, which **expandLog** uses to convert a compressed logging file into a human readable statement.

The **dataDictLog** file contains SQL names for the variable fields in each message. They are of the form:

```
abs_index <FS>fld-name,type[,length[,precision]]<FS>...<GS>
```

The *abs_index* is the index number of the message within the universe of all messages compiled by **IComp**. If the optional SQL specification does not appear after the format, **IComp** generates one of the form:

CLASSNNN_M,type[,len[,precision]]

based on the format. *CLASS* is the uppercase name of the file the message came from, *NNN* is the index of the message within the file, and *M* is the field within the message, starting at 1.

The **ddMapLog** file contains structures describing where to find each data dictionary entry for each message. It also contains an array with the class names.

See Also

logCat

list

The **list** command lists the directory entries for specific phrases in the UNIX file.

Synopsis

list -l [*phrase phrase_list*] [*in*] [*talkfile talkfile_list*]

Description

The **list** command displays the phrases stored in the specified talkfile. The valid arguments for the **list** command are:

- *phrase_list* — Specifies the number (or range) of phrase(s) to be listed. If you want to list all phrases in a particular talkfile, enter **all** for *phrase_number*.

The following example displays all phrases in talkfile 104:

list phrase all in talkfile 104

- *talkfile_list* — Specifies the number (or range) of talkfile(s) containing phrase(s) to be listed. If you want to list a particular phrase number in all talkfiles, enter **all** for *talkfile_number*.

The following example displays phrase 1010 in all talkfiles:

list phrase 1010 in talkfile all

The listed entries are sorted by talkfile number and phrase. The information printed for each phrase consists of talkfile number, phrase number, phrase size in bytes, phrase size in blocks, the phrase length in seconds, and the speech coding type.

Note: The **list** command lists the directory entries for specific phrases in the **SPEECHDIR** default directory, which is **/home2/vfs/talkfiles**.

Examples

The following example displays phrase 174 as stored in talkfile **25**.

list phrase 174 in talkfile 25

The following example displays phrase 12 as stored in talkfile **1**.

list phrase 12 in talkfile 1

The following example displays all phrases stored in all talkfiles:

list phrase all in talkfile all

See Also

add
copy
erase

logCat

The **logCat** command reads the compressed logging files and outputs human readable messages.

Synopsis

```
logCat [-{t|b} lines] [-a locant] [-z locant] [-v] [-c] [-m] [-r root]  

[-s locant] [-q locant] [-w width] [-p continuation-prefix]  

[-d data -l log-prefix | file] [-f format] [-V]
```

Description

The **logCat** command reads in a file of compressed logging messages generated by **log** and expands them to a readable format.

The default action, with no arguments, is to list all log files of the type specified first in the Config file. For example, **logCat -d\${LOGROOT}/data -l{primary-log-prefix}**. The options are as follows:

- **-t *lines*** — Tails the last “lines” of *file*.
- **-b *lines*** — Shows beginning “lines” of *file*.
- **-v** — Specifies the verbose mode (that is, report the names of the files examined).
- **-c** — Continuously displays the last lines of file. If the **logdaemon** switches to a new file, follow it.
- **-m** — This option is the meticulous time check. Normally, the log file name and the creation date are used to determine the date of the file. If the creation dates have been messed up, the **-m** flag causes the time stamp of the first message in each log file to be used instead of the name and modification date. This is slower but more reliable.

- **-r root** — Specifies an alternate root directory for **textLogFmt** file. The default is **/usr/spool/log**. Also, the **data** directory containing the compressed logging data files is expected to be in the root directory if not overridden by the **-d** flag or the LOGDATA environment variable.
- **-a locant** — Specifies the place to start printing.
- **-z locant** — Specifies the place to stop printing.
- **-s locant** — Searches for specific patterns or times.
- **-q locant** — Searches for specific patterns or times. This is the same as **-s** if the locant is a time locant. If the locant is a search pattern, the search is applied to the raw compressed log data instead of the expanded log data. This means that the pattern can only include variable portions of the logged messages. It is much faster than the **-s** option when properly applied.

A locant is one of two things, either a date/time stamp or a search pattern.

Dates can be any of the standard readable formats: mmm dd, yyyy, mm/dd/yy, mm-dd-yy, etc. The time is hh:mm:ss. It is also possible to specify the separate elements as: sec=nn min=nn hour=nn mday=mm mon=nn or mon=mmm year=nn[nn] wday=n or wday=ddd yday=nnn. Portions left out default to this date, 0 hours, 0 minutes, and 0 seconds, that is, giving only the time of day indicates today's date. If the form "item=xxx" form is used, all elements not specified default to '*', hence "wday=Sun" means all messages on any Sunday. Do not mix standard format with the "item=xxx" format. The results are not predictable.

Spaces should be enclosed in quotes, for example, **-a"7/14/87 05:08:30"**. Search patterns are enclosed in '/' characters, with an optional repetition count following, for example, **-z/GEN006/2** means the second message containing GEN006. The repetition count has no meaning with the **-s** or **-q** locants, but does for the **-a** and **-z** locants.

The search capability supports the following meta-search constructs:

- ^ Beginning of message
- \$ End of message
- * Any number of unspecified characters
- ? A single unspecified character
- [xxx] Any character in the list "xxx"
- [!xxx] Any character not in the list "xxx"
- \{chr} Normal C backslash conventions, \n \t \b \f \r \NNN \\ \V \[
- **-w width** — If lines are to be wrapped, this is the width at which the wrapping should take place. 0 means no wrapping and is the default. The width can also be supplied via the environment variable LOGCOLUMN.

- **-p** *continuation-prefix* — This is the string to be appended to each continuation line. The default is no continuation prefix. The continuation prefix can also be provided via the environment variable LOGCONTPREFIX data.
- **-d** *data* — This option is the name of the directory to find the log files in. The data directory can be provided in the environment variable: LOGDATA. The default is ***\$(LOGROOT)/data***. The **-d** argument takes precedence over the environment variable.
- **-l** *log-prefix* — Prefix of the log files to examine. The default is the first log file in the **Config** file. The log-prefix can also be provided via the environment variable LOGFILEPREFIX file.
- *file* — Explicit file to be displayed. If “-”, use standard input. The use of a file name overrides the **-d** and **-l** options.
- **-f** *format* — Format specification for printing messages. The default is **%P %T %N %S:%L\n%M**

The format specifier uses the following notations:

%P(...) Priority level format: %d or %s

%T(...) Time level format: all options supported by “date” command

%N Name of process specified by the **loginit** call of the process

%S Source file name

%L Line number

%M Message text

%% The % character

\{chr} Standard C backslash conventions

... All other characters are printed as is. The format can be provided via the environment variable LOGFORMAT

- **-V** — This option makes the control characters visible. They are printed as \X if they have a special C notation, otherwise as **NNN**, where **NNN** is the octal value.

Environment Variables

Environment variables are checked whenever the related command argument is missing from the command line. If both the command argument and the environment variable are missing, the specified default is used.

- LOGROOT — The directory in which the **textLogFmt** is found, containing the expansion formats. Also, the directory in which the **data** directory is found if LOGDATA is not specified.
- LOGDATA — This variable is the directory in which the log data files are to be found. The default is ***\$(LOGROOT) /data***.
- LOGFORMAT — This variable is the format in which to print the log messages. The default is **%P %T %N %S:%L n%M**.

- LOGCOLUMN — This variable is the column at which to wrap long expansions. The default is 0, meaning do not wrap long messages.
- LOGCONTPREFIX — This variable is the string to be prepended to continuation lines when long lines are being wrapped. The default is no prefix.
- LOGFILEPREFIX — This variable is the logfile prefix to be examined in no **-l** argument is specified. If neither a **-l** argument is specified nor LOGFILEPREFIX set, then the first log destination in the Config file of the type 'L' is used.

See Also**lComp**

logDstPri

The **logDstPri** command creates the shared memory containing the dynamic destinations and priorities of logging messages using the **logMsg()** interface.

Synopsis

logDstPri [-H {dir}] [-c] [-v] [-d] [-x {cnt}] [rules]

Description

The **logDstPri** command reads an ASCII rules file, described in **msgDst**, and then sets up a shared memory segment using the information in the rules file so that any process in the system using the **logMsg ()**, **vlogMsg ()**, or **logSysError ()** library calls can determine the appropriate priority and logging destinations for each message they send.

By default, the rules files are expected to appear in **`\${LOGROOT}/msgDst.rules**, where **`\${LOGROOT}** is **/usr/spool/log**. By default, the header files used to translate ASCII names of message indices into numbers are expected to appear in the directory **`\${LOGROOT}/head**. An alternate directory for the header files can be specified via the **-H** option on the command line. An alternate rules file can be specified as a file name on the command line.

After changing the rules file, it is recommended that the rules be checked before they are put into service. The **-c** flag causes **logDstPri** to read the rules file and report any rules that are misformatted or not understood. The return value from **logDstPri** is the number of errors detected.

To see the error complaints and install the rules all at once, specify the **-v** flag. This causes the verbose complaints to be generated. The **-c** flag implies the **-v** flag.

When **logDstPri** is resetting the values in shared memory, as opposed to creating the shared memory for the first time, it can be requested to delete the old shared memory and create a new segment by specifying the **-d** flag. Do not use the **-d** flag on a running system because any process that is already using the old shared memory continues to use it even after it is “deleted.” This means that two different rules files might be in force at the same time. It may be necessary to specify the **-d** flag if a large number of new messages have been added to the rules file. Currently, **logDstPri** creates the shared memory 200 entries larger than the highest logging message index found in its rule file. This means that as long as the new rules file does not go beyond 200 entries higher than the current highest entry, everything is okay. The number of extra entries can be altered by specifying the **-x** option.

Files

\${LOGROOT}	Default is /usr/spool/log
\${LOGROOT}/msgDst.rules	The message priority and destination file
\${LOGROOT}/head/*.h	Header files used by the logging system

Shared Memory Segment

The shared memory segment is keyed off the inode of the rules file and the define symbol **LDP_KEY**, defined in **log/head/logDstPri.h**. The library routine **ftok({file},LDP_KEY)** is used to generate the shared memory key.

See Also

logCat
logMsg
logDstPri
msgDst

logEvent/logMsg

The **logEvent/logMsg** command allows shell scripts to log a specific message.

Synopsis

```
logEvent [script] [msg] [dst] [pri] [srcFile] [srcLine] arg1 ...
logMsg [script] [msg] [srcFile] [srcLine] arg1 ...
```

Description

The **logEvent/logMsg** command allows shell procedures to log messages using specific messages. This is as opposed to the **logit** command, which generates messages within the logging system, but which always uses **SYSMSG** as the message format for the messages it generates. The **logEvent** command emulates the **logEvent()** library routine, while the **logMsg** command emulates the **logMsg()** library routine.

The **logEvent** command requires a destination and a priority when it is called, and messages logged via this interface are explicitly logged to the specified destinations and at the specific priority.

The **logMsg** command does not take a destination mask or a priority. It gets these pieces of information from the logging destination and a priority shared memory maintained by the **logDstPri** command via the **/usr/spool/log/msgDst.rules** file.

Both **logEvent** and **logMsg** require that the proper number of arguments be supplied for the specified message and that numeric arguments in the message format match pure numbers from the argument list. For example:

GEN012 OUT_OF_RANGE %D<<value,D>> is out of range \ for %s<<arg,S>> in %s<<routine,S>>.

This format requires that the first argument be a number, therefore,

logMsg XXX LG_OUT_OF_RANGE -- yes var compute

would fail because “yes” is not a number, while

logMsg XXX LG_OUT_OF_RANGE -- 10 var compute

would work.

The command line arguments are as follows:

- *script* — Name of the shell script for which the message is being logged. Normally, this would either be **basename\$0** or in ksh **\${##*}**
- *msg* — The symbolic name of the message, for example:

LG_OUT_OF_RANGE

- *dst* — This is only used with the **logEvent** command. It is the bit mask specification of where the message will be sent. It may be a number or symbolic destinations, as specified in *msgDst.rules*. If more than one symbolic destination is specified, they should be concatenated with ‘+,’ for example, **stderr+log**
- *pri* — The priority of the message. This is only used with the **logEvent** command. It may be any of the following:

0, - or NONE, 1, M or MANUAL, 2, * or MINOR, 3, ** or MAJOR, 4, *C or CRITICAL

- *srcFile Q* — The name of the file from which the **logEvent** or **logMsg** command is being issued. If you do not care, you may use “-.” Supplying the correct value is of value for debugging purposes, particularly if a script might generate at the same message from more than one place. If there are many individual functions within your script, you might find it advantageous to use the name of the function instead of the file.
- *srcLine* — The line within the file from which the **logEvent** or **logMsg** command is being issued. If you do not care, you may use “-.” You might use **\$LINENO** from the ksh environment, which is the line with the script or within a function.

- *arg1* — For each argument required by a specific message format, one argument is required. Neither too many or not enough is acceptable. Also, the size and type of the argument must be appropriate:
 - ~ **%s** (takes any kind of argument)
 - ~ **%d %u %o %x %X** (argument must be a pure integer type number, for example, **-10, 5, 0177, 0x8e**)
 - ~ **%f %e %g %E %G** (argument will be interpreted as a pure floating point number, for example, **15, 15.3, 1.56E3**)
 - ~ **%c** (argument must be a single character, for example, **x, 5, %**)

See Also**logCat****logit****logDstPri****log**

logFmt

The **logFmt** command displays and changes the parameters used to display messages and explanation texts, specifically the messages mnemonics and screen width.

Synopsis

logFmt [global] {display | interactive | {opt}={value}}

Description

Each logging message has a class name and a mnemonic name associated with it. A class name, for example ICK001, is the combination of the name of the class, for example, ICK, and the index of the message within the class, for example, 001. The mnemonic name is a short composite string of characters that identifies the type of logging message. The mnemonic name for ICK001 is ICK_BAD_CMD. By default the mnemonic names of messages are not displayed when **display messages** is used to examine the logging files. If you want the mnemonic message names to appear, then **logFmt** allows you to alter the system so that they either appear for everyone by default or appear for you specifically.

You can also adjust the width of the screen display. By default the screen width is set to 75 characters. If you have a wider screen, you may wish to specify that more of the screen be used to display messages.

The **logFmt** command line arguments are as follows:

- **global** — This modifier causes the action specified to operate on the “global” (system wide) parameters that control the behavior of **display message**. You must be **root** if you want to change the global parameters. You can examine the global parameters without being **root**.
- **display** — This verb causes **logFmt** to display the current parameters. If **global** is specified, then the system-wide parameters are displayed, otherwise your personal parameters are displayed.
- **defaults** — Specifying **defaults** without the **global** option causes your personal preferences about mnemonics and screen width to be removed. You then get the system-wide settings. Specifying **defaults** with the **global** option causes the system-wide settings to be reset so that mnemonics are off and the default screen width is 75 characters.
- **interactive** — This option interactively prompts for the parameters controlled by **logFmt**. Pressing **ENTER** in response to any query causes the current value to be retained. The current value appears within square braces ([]).
- **mnemonics=enable** — This option causes mnemonics to be displayed when logging messages are examined with **display messages**.
- **mnemonics=disable** — This option causes mnemonics to not be displayed when logging messages are examined with **display messages**.
- **width=NN** — This option causes the screen width to be set, where *NN* is between 40 and 199 columns. The default setting is 75. Do not attempt to set the screen width to a value wider than your screen can actually handle or the display will be unpleasant when using **display messages**.

When mnemonics are enabled, they also show up when **explain** is used to examine the description of a message. Whether mnemonics are enabled or not, the mnemonic name can always be used to select an explanation using **explain**.

Files

/vs/data/logFmtParms	# Global parameters file
\${HOME}/.logFmtParms	# User's parameter file
/usr/spool/log/textLogFmt	# Current default expansion format file
/usr/spool/log/textLogFmt.Mne	# Expansion file with mnemonics
/usr/spool/log/textLogFmt.NoM	# Expansion file without mnemonics

Examples

The following example enables the mnemonics. This affects only you and overrides the system-wide setting.

```
logFmt mnemonics=enable
```

The following example sets the system wide default so that mnemonics are not displayed. Any user wishing to see mnemonics has to personally enable mnemonics. You need to be **root** to execute this command.

logFmt global mnemonics=disable

The following example displays the system wide settings for mnemonics and screen width.

logFmt global display

The following example sets your personal screen width to 130 characters when displaying messages using **display messages**.

logFmt width=130

logit

The logit command logs the specified message in the logging files.

Synopsis

logit [-p *priority*] [-d *destinations*] message

Description

The parameters for the **logit** command are as follows:

- **-p *priority*** — Specifies the priority of the message being logged. Options are:
 - ~ **none** (default)
 - ~ **manual**
 - ~ **minor**
 - ~ **major**
 - ~ **critical**
- **-d *destinations*** — specifies the destinations to which the message is to be sent. By default MASTER_LOG is always included. The destination can be specified as either a number (for example, 0x11) or as a series of symbolic names separated by a plus sign (+), using the following list:
 - ~ MASTER_LOG
 - ~ SYSBG
 - ~ SCREEN
 - ~ SYSCONS
 - ~ ALERTERMSGs

See the **/vs/spool/log/head/log.h** file for definitions. The symbolic names can be abbreviated to the shortest string that uniquely identifies one of the symbolic names.

Example

logit -d MASTER_LOG+ALERTERMSGs+0x40

logTest

The **logTest** command reads a script of logging messages to be sent to the logdaemon and sends the messages at the specified times and as the specified process.

Synopsis

logTest [-s *dir*] [-v] [-x] [*file...*]

Description

This command allows a repeatable sequence of messages to be sent through the logging and alerting system for test purposes.

Parameters for this command are:

- **-s *dir*** — Specifies the directory in which the **systemLog.h** file resides.
- **-v** — Increases verbosity when processing messages.
- **-x** — Suppresses transmission to the logdaemon. This parameter automatically implies **-v** so that something happens.

The format of the messages to **logTest** is:

interval dst priority process index [arg arg...]

where:

- *interval* is the number of seconds since the last message was logged.
- *dst* is the destination flag based on possible destinations specified by the **Config** and **log.h** files.
- *priority* is the priority of the message. Values range from 0 (NONE) to 4 (CRITICAL).
- *process* is the name of the process to be listed as sender.
- *index* is the index of log message. This can be:
 - ~ An absolute numeric value.
 - ~ A symbolic value of the form **logMODULE(index)**, for example logGEN(20).
 - ~ A symbolic form such as the symbolic names found in the **logCLASS.h** header files, for example SYSMSG.

To use symbolic values, **logTest** must have access to the **systemLog.h** file.

- *arg arg...* are arguments associated with the message. The number of arguments must match the number required by the specific log message or the resulting information in the logging data file will not be expandable.

mkAlerter

The **mkAlerter** command reads an alerter description and generates C or C++ code that implements the description.

Synopsis

```
mkAlerter [-M] [-o {executable}] [-p {templ-path}] [-t [-f]] [-q]
[-v] [-l] [X=Y...] [{alerterfile}.A...]
```

Description

The **mkAlerter** command is a program that reads an alerter description and translates it, with the help of code template files, into compilable C or C++ code. It also produces a make file for compiling the code. Alerter description files always have a **.A** extension. By default **mkAlerter** produces a single source file, with an extension of **.c**. It also produces a header file (extension **.h**) and a make file (extension **.mk**). If the make file already exists, **mkAlerter** does not overwrite the existing file. This allows you to modify the make file as desired without fear of it being destroyed the next time **mkAlerter** is used, but does take advantage of the knowledge contained in the make file template used by **mkAlerter** when it does create a make file. The source file and the header are always overwritten each time **mkAlerter** is run. No modifications should ever be made to these intermediate source files, since the changes are lost the next time **mkAlerter** is run. If the **-M** flag is specified at execution time, **mkAlerter** splits the source file produced into two pieces, one containing **main()** and the other containing everything else. The source file containing **main()** ends in **Main.c** with truncation as necessary. Once produced, this file, like the make file, is be overwritten. If you wish to produce your own initialization, you can use the **-M** option and then make your changes to the ***Main.c** file.

Normally, the make file specifies that the executable to be produced by this alerter description is the same as the name of the alerter description minus the **.A** extension. The **-o** option allows you to specify an alternate executable name. This is used when the make file is generated.

The code template files are normally expected to exist either in the current directory or in **/usr/lib/alerter**. If the templates are not found in either of these places, **mkAlerter** uses its own internal copies, but also reports the fact. If the templates exist elsewhere, an alternate path can be specified with the **-p** option. Each directory that should be searched is separated by colon characters (**:**) characters, the same as a normal UNIX PATH description.

To get the initial template files, the user can specify the **-t** option. This causes **mkAlerter** to create each of the required template files using its internal copies. At this point each site may, if desired, alter these templates to produce alerter code appropriate for its needs. By itself the **-t** flag does overwrite existing template files. The **-f** flag causes the new templates to overwrite existing ones.

The current list of template files and their contents follows:

AlertInc.t	Description of include files.
AlertCopyR.t	Copyright notice.
AlertHead.t	Template of the header file.
AlertMain.t	Description of main() function.
Alerter.t	Primary template describing the alerter program.
AlertTest.t	Description of the code to respond to timeouts for alerting.
AlertMsg.t	Template describing a subroutine to process messages for a particular logging destination.
AlertDir.t	Template describing the subroutine to handle logging messages sent directly to the alerter process.
AlertMk.t	Template for the makefile.
AlertObj.t	Template for each *.o file in the makefile.

The **-q** option is not currently implemented. It is meant to check the templates for completeness. The **-v** flag increases the verbosity of **mkAlerter** while it performs some of its activities.

Normally **mkAlerter** produces *#line* directives, which are used by the C compiler to report where errors are detected during compilation. While these are good during the compiling phase, they mislead most debuggers and make debugging difficult. The **-I** option suppresses the *#line* directives and is recommended when the debugging phase includes the use of a process debugger, such as **sdb** or **pi**.

It is also possible to specify variable assignments that appears in the make file via the X=Y syntax. Of particular interest is CC=CC, which also causes **mkAlerter** to generate C++ code rather than C code.

See Also

readAlerterDesc

mkheader

The **mkheader** command allocates user memory for script variables.

Synopsis

mkheader *application_name*

Description

The **mkheader** program creates an address in user memory for each script variable. This information is stored in an ***application_namedef.h*** header file and is used in naming both the output file and the allocation program. The joint usage of the same header file enables the script to interact with the transaction state machine (TSM). The **-e** option specifies exact string matches.

The **mkheader** program prompts an operator to enter three types of information at the system console. The information may be entered interactively or batched together in a single file. Interactive entries are ended by entering **CTRL + D**. The system prompts for:

- Variable names
- Header file names in order of dependency
- Structure names with header file locations

When **mkheader** is entered with an argument (limited to 7 characters) for *application-name*, an ***application_namedef.h*** header file is created for the output information. The **mkheader** program then prompts for three types of information that it uses in producing the output file.

- 1 It prompts the operator for the name of one of the variables - char, int, or short. Char is the only variable that requires a length (default = 1).

It then allocates space for the variables at the beginning of the allowable user memory and places this information in the newly created header file.

- 2 Mkheader prompts the operator to enter header files that are needed in order to make the files covered in the third section compile. They should be named in the order of dependence. For example, if information in the header file **b.h** is needed by the header file **a.h**, header file **b.h** must be entered first and then header file **a.h**.

Full pathnames must be given. The file **msg.h** and the structure **mbhdr** are common to all scripts and are entered automatically.

The header files can be stored in a batch file. The batch file could contain the following header files:

```
#include "/att/msgipc/dbcom.h"  
#include "/att/include/shmemtab.h"  
#include "/att/msgipc/tsm stop.h"  
#include "/att/msgipc/cdata.h"
```

- 3 The last prompt is used for allocating the space for each structure. The operator is prompted to enter each header file name and its structure names. For each header file, the operator enters **all** (if all structures are needed) or specific structure names.

Mkheader recursively allocates memory and produces ***application_namedef.h*** defines for structure members that are themselves structures (except for struct **mbhdr**).

As a shortcut, the input for the three prompts may be stored in another file (data file) and read in each time. For example:

mkheader *application_name* < data file

Once the header files have been entered, mkheader writes a program called ***application_name_aloc.c*** to allocate the rest of user memory. The resulting source code is automatically compiled, using **mkheader.a** library functions, and then executed. This adds the remaining structure definitions to the ***application_namedef.h*** header file. TSM does not allow a script to use more than 50,000 bytes of user memory. Scripts that exceed this limit are not run when data beyond the limit are accessed.

Files

/vs/bin/vs/mkheader
/vs/bin/vrs/mkheader.a

Examples

The following are examples of the prompts and the output for the mkheader program. This example shows a user who needs some space for 20 characters, 2 integers, and a short variable. The user also needs to have space declared for a structure called dowj, which is used by the script. The header file is found in **/att/msgipc/tsmdipappl.h**.

In the example, the structure size of SZDOWJ is 16, which is automatically supplied by mkheader.

console input: **mkheader *application_name***

FIRST PROMPT: Type in the variables you need space for according to the following format:

```
type name [length]
Example 1: int yn
Example 2: char dg 20
(End input with CTRL-D)
Variable?: char dg 20
Variable?: int yn
Variable?: short cid
Variable?: int iom
Variable?: (CTRL-D)
```

SECOND PROMPT: Please enter any dependency files that the header files in the next section will need in order to compile. Use full path names. (End input with CTRL-D)

```
File name? /u/factory/file.h
File name? (CTRL-D)
```

THIRD PROMPT: Enter the header file name and structure names needed to create the def.h file. Use full path names. (End input with CTRL-D)

```
Header file?: /att/msgipc/tsmdipappl.h
Structures or all?: dowj
Header file?: (CTRL-D)
Compiling: application-name_aloc.c
Running: application-name_aloc
Output is called: application-name_def.h
```

This is the final ***application_namedef.h*** file produced by this example.

```

/*****PRE-ALLOCATION OF USER SPACE *****/
#define DG:0
#define YN:20
#define CID:24
#define IOM:26
/***** DOWJ STRUCTURE *****/
#define DOWJ:30
#define RCODE:30
    #define TIMEDATE:31
#define CATNUM:42
#define MKTSTAT:43
    #define DOWHOUR:44
#define SZDOWJ:16

```

In this second example, the command line includes a data file from which the system gets the information usually entered by the users in response to system prompts.

The data file, called **data** in this example, contains the following information:

```

char name 20
int answer
short reply
^D
/att/include/shmemtab.h
^D
/att/msgipc/cdata.h
Day_pntr cdata
^D

```

The following appears on the screen:

```

Conversant% mkheader test6 < data
Type in the variables you need space for according to the
following format:
    type name [length]
    Example 1: int yn
    Example 2: char dg 20
(End input with CTRL-D)
Variable?:
Variable?:
Variable?:
Variable?:
Please enter any dependency files that the header files in the
next section will need in order to compile.
Use full path names.
(End input with CTRL-D)
File name?: File name?:
Enter the header file names and structure names needed to create
the def.h file. Use full path names.
(End input with CTRL-D)
Header file?: List of structures or all?:Header file?:
Compiling /usr/has/another/test6_alloc.c
Running /usr/has/another/test6_alloc
Output is called /usr/has/another/test6def.h
I am now checking for any duplicate defines that will cause
problems
The following is the contents of the test6def.h file:
/***** PRE-ALLOCATION OF USER SPACE *****/

```

```

#define NAME:0
#define ANSWER:20
#define REPLY:24
/***** DAY_PNTR STRUCTURE *****/
#define DAY_PNTR      26
#define FILE_FIRST    26
#define REC_FIRST     28
#define FILE_LAST     30
#define REC_LAST      32
#define SZDAY_PNTR    8
/***** CDATE STRUCTURE *****/
#define CDATE         34
#define SCRIPT        34
#define CHAN          50
#define EQUIP         52
#define STARTTIME     54
#define STOPTIME      58
#define EV0           62
#define EV1           66
#define EV2           70
#define EV3           74
-:
-:
-:
#define EV96          446
#define EV97          450
#define EV98          454
#define EV99          458
#define SZCDATA       428

```

Note: Make sure that all variable names are unique without respect to case as lower case letters are changed to upper case for the final output.

mkimage

The **mkimage** command performs a complete system backup of all the contents of the root disk file system.

Note: Mkimage performs only complete backups. The option to perform a partial backup of the root disk file system is no longer available.

Synopsis

mkimage

Description

The **mkimage** command performs a complete system backup by copying the UNIX files in the **root** and **usr** file systems to cartridge tape.

Note: This command can only be run from the **root** directory.

When specifying the **mkimage** command, the voice system requests to place the system into single-user mode. The **mkimage** command aborts if you do not give the system permission. Once in single-user mode, you must relogin and re-execute the **mkimage** command to continue the **mkimage** process. The **mkimage** unmounts all mountable file systems and then mounts **/usr**, **/var**, **/home**, and **/home2** file systems, which are the only file systems beside the root file system and **/stand** that appear on the root disk in a standard voice system. The system then creates a list of files to archive to tape and prompts you to insert a tape.

**CAUTION:**

Do not rename the file systems mentioned above as the newly named file system would not be included in the image tape.

Once the image creation has finished, the tape is verified by reading the table of contents from the tape and comparing it with the original list of files used to create the tape. If any errors are found, you see the following message that directs you to check for specific files for further information about the failure:

```
ERROR: Verification failed. Wait for the light on the tape
unit to go off before removing the tape.
```

```
Three files have been written to the /tmp directory which
show the results of the backup and verification. $DISK_FILES
contains a list of all the files which were to be backed up.
$TAPE_TOC contains a list of all files which were actually
written to the tape. $DIFFOUT contains the difference between
these two files.
```

Analysis of these files may help in understanding the nature of the failure.

Also, be sure you are using the supported cartridge type and that your tape drive is being cleaned regularly. Execute the **-init 6-** command to return to multi-user mode.

The **mkimage** command then returns the voice system to multi-user mode by rebooting. If no errors are found, you are prompted to make a note of the file system partition sizes after the voice system returns to multi-user mode.

Note: You do not get a warning from the voice system before it reboots to return to multi-user mode.

Note: The **mkimage** command can run anywhere from 45 minutes to a couple of hours creating the image tape. Several tapes could be required depending on the amount of space used in the root disk file systems.

Note: The complete system image tape should only be used to restore a system root disk that has been severely damaged and needing file-system reconstruction at the lowest level. Use the **backup** and **restore** commands to recover from minor file damage or corruption.

Example

The following example backs up the **root** and **usr** file system to cartridge tape:

mkimage

msgadm

The **msgadm** command provides an interface to the CONVERSANT logger and alterer administrative files.

Synopsis

msgadm [-e] [-f [*command_file* | -]]*command*

Description

Commands to **msgadm** can be specified individually on the command line using **msgadm *command*** or can be multiply specified as input from a file or standard input using the **-f** flag and a file name argument, as in **msgadm -f *filename*** or **msgadm -f -** for file input and standard input respectively. The **-e** flag forces **msgadm** to write \$EOT after completing each operation resulting in command output to standard out.

Each command may require one or more of the following arguments:

- *message_ID* — A member of the set of system message IDs that includes all those whose message class is indexed through the **systemLog.h** file and whose mnemonics appear in a configured **logXXX.h** file.
- *priority* — A priority tag as defined with the \$priority operator in the **/vs/data/msgDst.rules** file. To see the list of priority tags configured with the system, enter **msgadm priorities**
- *time* — A non-zero positive integer with unit suffix indicating time in seconds if suffixed by "s", minutes if suffixed by "m" or hours if suffixed by "h".
- *dst* — The set of destination tags defined in the **/usr/spool/log/msgDst.rules** file through the \$destination operator. To see the list of destination tags, enter **msgadm destination**. Note that only the latest destination specified in the **/usr/spool/log/msgDst.rules** file is recognized.
- *threshold* — A non-zero positive integer indicating a threshold value.

The following form sets the priority of *message_ID* to *priority* if *message_ID* is already in the **msgDst.rules** file. If *message_ID* does not exist, an entry is created with the indicated priority and the default destinations.

msgadm set *message_ID* priority *priority*

In the following form, if **add** is specified and **message_ID** exists in the **msgDst.rules** file, a new destination entry is added to the file. If the entry does not exist, a new entry is created with the default destination plus the specified destination. The priority is set to the default priority. If **delete** is specified, **dst** is removed from the destination set for **message_ID**. The log or MASTER_LOG destination cannot be removed from a message.

msgadm [add|delete] message_ID destination dst

The following form sets the threshold window time of threshold **message_ID** to **time**. If no threshold structure has yet been created for **message_ID**, one is created with a threshold of 100 and threshold message set to THR01.

msgadm set message_ID window time

The following form adds a **threshold/thresh_message_ID** pair to the **thresh.rules** file. If no entry for **message_ID** exists, an entry is created with a threshold window of 1 hour.

msgadm add message_ID threshold threshold message thresh_message_ID

In the following form, the threshold associated with **message_ID** of threshold value **threshold** is deleted. If delete is specified and **threshold** is the last threshold for **message_ID**, then the entire threshold structure is removed for that message.

msgadm delete message_ID threshold threshold

The following form lists all administrative parameters associated with **message_ID** or all system messages if **all** is specified.

msgadm display [message_ID|all]

The following form outputs the default list of message priorities.

msgadm priorities

The following form outputs the default list of message destinations (since all messages are sent to the log destination, it is omitted from the list).

msgadm destinations

The following form outputs the set of thresholding messages.

msgadm thresholds

The following form makes all changes made through previous calls to **msgadm** take effect in the live logger/alert system. If **sync** is not used, a system reboot is required to make changes take effect.

msgadm sync

The following form forces **msgadm** to read from **input_file**, or standard in if **-** is specified. The expected input is msgadm command line arguments as defined above. One complete set of command line arguments is expected per line. Errors in the input result in no changes to the logger/alert configuration files regardless of where the error occurred in the input.

msgadm -f [input_file|-]

Examples

The following example sets the priority of message VROP003 to critical. The string *C is quoted to protect it from the shell.

msgadm set VROP003 priority '*C'

The following example adds a threshold of 10 with a threshold message of THR001 to the thresholding structure for the VROP003 message. It is assumed that THR001 is a valid message ID.

msgadm add VROP003 threshold 10 message THR001

The following example displays the message administration parameters associated with message SPIP001:

msgadm display SPIP001

```

Message Id:          SPIP001 (SPIP_SBRK)
Message Priority:     *
Message Destinations: log|alarm
Threshold Period:    1h
Message Thresholds:
    Threshold        Threshold Message Id
    -----
    1000              THR003 (THRESH_MAJOR)

```

```

Message Text:
SPIP001 SP CA %s (SPIP_SBRK) Speechbreak detected on channel %s

```

The following example shows the use of the file input mechanism. It sets VROP003 to priority "-" (None), changes its destination from the alarm to the event, and removes its thresholding structures (if any exist). It then sets the priority of TSM002 to "*C" (Critical), assuming "*C" is defined in the **msgDst.rules** file, and makes the changes take effect in the current environment through the **sync** directive.

```

message -f - <<!
set VROP003 priority -
delete VROP003 destination alarm
add VROP003 destination event
delete VROP003 threshold 10|
delete VROP003 threshold 100
set TSM002 priority '*C'
sync
!

```

See Also

explain
display

newscript

The **newscript** command updates the changes to all currently assigned scripts.

Synopsis

newscript

Description

The **newscript** command notifies the TSM and CDH processes that an existing script in the **/vs/trans** directory has been changed. After **newscript** is run, TSM reloads all scripts from disk the next time it is run instead of using a copy in the system memory.

Files

/vs/bin/util/newscript

Example

The following example notifies the TSM and CDH processes that an existing application in the directory **/vs/trans** has changed.

```
newscript
```

pkgadd

The **pkgadd** command transfers a software package to the voice system.

Synopsis

```
pkgadd [-n] [-a admin] [-d device] [-R rootpath] [-r response]  
[pkginst1 [pkginst2 ...]
```

```
pkgadd -s spool [ -d device ] [ pkginst1 [ pkginst2 ] ... ]]
```

Description

The **pkgadd** command transfers the contents of a software package from the distribution medium or directory to the system. Used without the **-d** option, **pkgadd** looks in the default spool directory for the package (**/var/spool/pkg**). Used with the **-s** option, it reads the package to a spool directory instead of installing it.

The **pkgadd** command has the following parameters:

Note: When executed without options, **pkgadd** uses **/var/spool/pkg** (the default spool directory).

When transferring a package to a spool directory, the **-r**, **-n**, and **-a** options cannot be used.

- **-a** — Define an installation administration file, *admin*, to be used in place of the default administration file. The token *none* overrides the use of any *admin* file, and thus forces interaction with the user. Unless a full path name is given, **pkgadd** looks in the */var/sadm/install/admin* directory for the file.
- **-d** — Install or copy a package from device. Device can be a full path name to a directory or the identifiers for tape, floppy disk or removable disk (for example, */var/tmp* or */floppy/floppyname*). It can also be a device alias (for example, */floppy/floppy0*).
- **-n** — Installation occurs in non-interactive mode. The default mode is interactive.

Note: The **-n** option causes the installation to halt if any interaction is needed to complete it.

- *pkginst* — Specify the package instance or list of instances to be installed. The token *all* may be used to refer to all packages available on the source medium. The format *pkginst.** can be used to indicate all instances of a package.
- **-r** — Identify a file or directory that contains output from a previous *pkgask* session. This file supplies the interaction responses that would be requested by the package in interactive mode. Response must be a full pathname.

Note: The **-r** option can be used to indicate a directory name as well as a filename. The directory can contain numerous response files, each sharing the name of the package with which it should be associated. This would be used, for example, when adding multiple interactive packages with one invocation of **pkgadd**.

Each package would need a response file. If you create response files with the same name as the package (that is, *pkinst1* and *pkinst2*), then name the directory in which these files reside after the **-r**.

- **-R** — Define the full path name of a subdirectory to use as the rootpath. All files, including package system information files, are relocated to a directory tree starting in the specified rootpath.
- **-s** — Reads the package into the directory spool instead of installing it.

Examples

The following example installs a package from a floppy diskette. The system prompts you for the name of the package you want to install.

pkgadd -d diskette1

See also

pkginfo
pkgrm

pkginfo

The **pkginfo** command displays software package information.

Synopsis

```
pkginfo [-q | -x | -l] [-p | -i] [-r] [-a arch] [-v version] [-c category1,  
[ category2 [ , ... ]]] [pkginst [ , pkginst [ , ... ]]]
```

```
pkginfo [-d device] [-R rootpath] [-q | -x | -l] [-a arch] [-v version] [-c category1, [ category2 [ , ... ]]] [pkginst [ , pkginst [ , ... ]]]
```

Description

The **pkginfo** command displays information about software packages installed on the system (with the first synopsis), or which reside on a particular device or directory (with the second synopsis).

pkginst designates a package by its instance. An instance can be the package abbreviation or a specific instance (for example, inst.1 or inst.beta). All instances of package can be requested by inst.*.

Without options, **pkginfo** lists the primary category, package instance, and the names of all completely installed and partially installed packages. It displays one line for each package selected.

The parameters for the **pkginfo** command are:

Note: The **-p** and **-i** options are meaningless if used in conjunction with the **-d** option.

The options **-q**, **-x**, and **-l** are mutually exclusive.

- **-a** — Specify the architecture of the package as *arch*.
- **-c** — Display packages that match the category. Categories are defined in the category field of the **pkginfo** file. If more than one category is supplied, the package needs to match only one category in the list. The match is not case specific.
- **-d** — Defines a device on which the software resides. Device can be an absolute directory pathname or the identifiers for tape, floppy disk, removable disk, and so forth. The special token *spool* may be used to indicate the default installation spool directory (*/var/spool/pkg*).
- **-i** — Display information for fully installed packages only.
- **-l** — Specify long format, which includes all available information about the designated package(s).
- **-p** — Display information for partially installed packages only.
- *pkginst* — Specify the package instance or list of instances to be installed. The token *all* may be used to refer to all packages available on the source medium. The format *pkginst.** can be used to indicate all instances of a package.

- **-q** — Do not list any information. Used from a program to check whether or not a package has been installed.
- **-r** — List the installation base for relocatable packages.
- **-R** — Define the full path name of a subdirectory to use as the root path. All files, including package system information files, are relocated to a directory tree starting in the specified root path.
- **-v** — Specify the version of the package as version. All compatible versions can be requested by preceding the version name with a tilde (~). Multiple white spaces are replaced with a single white space during version comparison.
- **-x** — Designate an extracted listing of package information. The listing contains the package abbreviation, package name, package architecture (if available) and package version (if available).

See Also

pkgadd
pkgrm

pkgrm

The **pkgrm** command removes a software package from the voice system.

Synopsis

```
pkgrm [ -n ] [ -R root_dir ] [ -a admin ] [ pkginst1 [ pkginst2 ] ...]  
pkgrm -s spool [ pkginst ]
```

Description

pkgrm will remove a previously installed or partially installed package from the system. A check is made to determine if any other packages depend on the one being removed. If a dependency exists, the action taken is defined in the **admin** file.

The default state for the command is in interactive mode, meaning that prompt messages are given during processing to allow the administrator to confirm the actions being taken. Non-interactive mode can be requested with the **-n** option.

The **-s** option can be used to specify the directory from which spooled packages are to be removed.

Options

The **pkgrm** command has the following parameters:

- **-n** — Non-interactive mode. If there is a need for interaction, the command will exit. Using this option requires that at least one package instance be named when the command is invoked.

- **-R** — Define the full path name of a subdirectory to use as the root path. All files, including package system information files, are relocated to a directory tree starting in the specified root path.
- **-a** — Use the installation administration file, **admin**, in place of the default **admin** file.
- **-s** — Removes the specified package(s) from the directory spool.
- *pkginst* — Specifies the package to be removed. The format *pkginst.** can be used to remove all instances of a package.

See also**pkgadd****pkginfo**

raidconf

The **raidconf** command reports the configuration of the RAID subsystem.

Synopsis**raidconf****Description**

The **raidconf** command prints the following information to standard out:

- The number, size, and state of all logical system drives
- The number, size, and state of all physical SCSI devices attached to the RAID controller. In this list, target (tgt) 7 is the RAID controller itself.

This command reports a subset of the information reported by the **raidstat -v** command.

Examples

The following information is an example of **raidconf** output:

Logical System Drives Installed

ctl	dev	raid	blocksize	(blocks)	SIZE(MB)	state
0	0	5	512	9216000	4500	ONLINE
0	1	5	512	35399680	17285	ONLINE

Physical SCSI Devices on RAID Controller

ctl	ch	tgt	lun	blksize	(blocks)	SIZE(MB)	devstate	devtype
0	0	0	0	512	8925000	4357	ONLINE	00 : Disk
0	0	1	0	512	8925000	4357	ONLINE	00 : Disk
0	0	2	0	512	8925000	4357	ONLINE	00 : Disk
0	0	3	0	512	8925000	4357	ONLINE	00 : Disk
0	0	4	0	512	8925000	4357	ONLINE	00 : Disk
0	0	5	0	512	8925000	4357	ONLINE	00 : Disk
0	0	7	0	512	0	0	ONLINE	C7 : Host

See Also
hasRAID
raidok
raidstat

raidok

The **raidok** command reports the state of the RAID subsystem.

Synopsis
raidok

Description

The **raidok** command prints one of three responses to standard out:

- Normal — This response indicates that the RAID subsystem is in the normal mode with all system drives online.
- Critical — This response indicates that all system drives are in the critical (degraded) mode. A physical drive is in the offline (dead) state.
- Rebuild — This response indicates that all system drives are in the critical mode. The offline physical drive is in the process of being rebuilt. When the rebuild completes, the system will return to normal mode.

See Also
hasRAID
raidconf
raidstat

raidstat

The **raidstat** command reports the status of the entire RAID subsystem to standard out.

Synopsis
raidstat [-v]

Description

The information provided by the **raidstat** command includes the state of the system and physical drives.

When entered without the **-v** option, **raidstat** returns a quick summary of the status of the RAID subsystem.

When entered with the **-v** option, more details on individual logical drives and physical SCSI drives are provided.

- The command output displays the number, size, and state of all logical system drives. The logical drive state can be one of the following:
 - ~ ONLINE
 - ~ CRITICAL (degraded)
- The command output displays the number, size, and state of all physical SCSI devices attached to the RAID controller. The physical drive state can be one of the following:
 - ~ ONLINE
 - ~ OFFLINE
 - ~ REBUILD

When a SCSI drive fails, **raidstat -v** reports all logical system drives as being in the critical state. The failed SCSI drive is reported as being the offline state before it is replaced. After it is replaced and while it is being rebuilt, it is reported as being in the rebuild state.

Note: In the physical device listing, target (tgt) 7 is the RAID controller itself.

Example

The following example shows output when the RAID subsystem is normal:

raidstat

The status of the RAID sub-system is normal.

There are 2 logical system drives
All System Drives are on-line

There are 6 Physical Devices
All drives are on-line

The following example also shows output when the RAID subsystem is normal, but the **-v** option provides more detail:

raidstat -v

The status of the RAID sub-system is normal.

There are 2 logical system drives
All System Drives are on-line

ctl	dev	raid	blocksize	(blocks)	SIZE(MB)	state
0	0	5	512	9216000	4500	ONLINE
0	1	5	512	35399680	17285	ONLINE

There are 6 Physical Devices
All drives are on-line

ctl	ch	tgt	lun	blksize	(blocks)	SIZE(MB)	devstate	devtype
0	0	0	0	512	8925000	4357	ONLINE	00 : Disk
0	0	1	0	512	8925000	4357	ONLINE	00 : Disk
0	0	2	0	512	8925000	4357	ONLINE	00 : Disk
0	0	3	0	512	8925000	4357	ONLINE	00 : Disk

```

0 0 4 0 512 8925000 4357 ONLINE 00 : Disk
0 0 5 0 512 8925000 4357 ONLINE 00 : Disk
0 0 7 0 512 0 0 ONLINE C7 : Host

```

In the following example, the RAID subsystem is in critical (degraded) mode with the failed SCSI drive in the process of being rebuilt:

raidstat -v

The status of the RAID sub-system is degraded.

There are 2 logical system drives
All System Drives are critical

```

ctl dev raid blocksize (blocks)SIZE(MB) state
0 0 5 512 9216000 4500 CRITICAL
0 1 5 512 80363520 39240 CRITICAL

```

There are 6 Physical Devices
At least one physical drive is off-line

```

ctl ch tgt lun blksize (blocks)SIZE(MB) devstate devtype
0 0 0 0 512 17916240 8748 REBUILD 00 : Disk

```

```

ctl ch tgt lun blksize (blocks)SIZE(MB) devstate devtype
0 0 0 0 512 17916240 8748 REBUILD 00 : Disk
0 0 1 0 512 17916240 8748 ONLINE 00 : Disk
0 0 2 0 512 17916240 8748 ONLINE 00 : Disk
0 0 3 0 512 17916240 8748 ONLINE 00 : Disk
0 0 4 0 512 17916240 8748 ONLINE 00 : Disk
0 0 5 0 512 17916240 8748 ONLINE 00 : Disk
0 0 7 0 512 0 0 ONLINE C7 : Host

```

See Also

hasRAID
raidconf
raidok

reinitLog

The **reinitlog** command is the control program and is used to inform **logdaemon** that a new config file is to be used.

Synopsis

reinitLog

Description

The **reinitlog** command is used during the procedure of creating a new logger message destination, as it sends a message to the **logdaemon** that informs the logdaemon that a new config file is to be used. The **reinitlog** command causes the **logdaemon** to reread the configuration file and reopen the various logging files.

Files

\$LOGROOT/Config	The configuration file that defines destinations.
\$LOGROOT/data	The directory in which logging files are created.
\$LOGROOT/logpipe	The FIFO which logdaemon reads.

See Also

ckConfig
logCat
logit

remove

The **remove** command places a unit in the manual-out-of-service state.

Synopsis

remove *unit number* **immed** *min_delay* **[-i] [-n]**

rem *unit number* **immed** *min_delay* **[-i] [-n]**

Description

The **remove** command is used to remove a unit from service when its temporary state is idle. It changes the permanent state of the unit to manual-out-of-service (MANOOS). It does not remove a unit that has a temporary state of busy. If a unit must be interrupted immediately or appears to be stuck busy, use the **rem** *unit number* **immed** command.

The parameters for the **remove** command are:

- *unit* — Identifies the unit. The choices are **channel** or **card**.
- *number* — Specifies the channel or card number, a range of channel or card numbers in the form *m n*, or **all**, for all the channel or card numbers. Card numbers are in the form *card#[.port#]*, where *port#* is a port of *card#*. If *port#* is not given, all ports of the card specified are removed. If no card number or channel number is given, the system displays a syntax message.
- **-n** — Disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option below) or to terminate the request to remove.
- **-i** — Enables secondary command registration. If T1 diagnostics are being run, this option allows the removing of another card. If **-i** is used and another maintenance command is being run (**remove**, **detach**, **attach**, **restore**, **diagnose**), the request to **remove** card is blocked and a message is printed to the screen. If **-i** is not used and any maintenance command is being run, the request to **remove** card is blocked and a message is printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- ~ Is the T1 card being diagnosed
- ~ Will cause a change in the existing TDM bus master assignment
- ~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **remove card** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to remove.

- **immed** — Removes a card or channel even if it is in use. Active calls are likely to be dropped when this option is specified. This option is necessary when the card or channel must be removed from service as soon as possible, and you are willing to terminate any active calls. You may also want to use this option to get control of a channel that is hung and not providing useful service.
- **min_delay** — Used to avoid waiting for channels to be granted. This option applies to **remove chan** and **remove card** requests that are removing network interface channels (for example, T1 and tip/ring). This option specifies to minimize the delay in removing channels from service by not waiting for the channel to be granted. This option speeds up execution of the **remove** command, especially when a large number of channels are currently active.

When using this option, you must display the status of the channels with the **display card** command to determine when they are in the MANOOS state. This option can be used with or without the **immed** option and improves the response time in either case.

CAUTION:

Removing a large number of channels from service with the **min_delay** option may cause momentary load problems on the switch.

To delete out of the command, press **DELETE**. If this does not stop the command, you may need to press **CTRL** and backslash simultaneously. If, while running **remove**, you wish to abort the command, a message similar to the following may appear:

```
At the user's request, administration of the following cmd(s)
has been interrupted.
```

```
CARD NUMBERS: <card numbers>
```

```
To assure proper operation of the identified card(s), run
diagnostics at the earliest opportunity.
```

When **remove** is aborted, you should run diagnostics on all cards being administered to ensure they are returned to a fully functional state.

Example

The following example removes card 0 from service.

rem card 0

The following example removes channels 0 through 2 and channel 4 from service.

rem channel 0-2,4

The following example removes all cards from service.

rem card all

See Also

attach

detach

restore

remove_appl

The **remove_appl** command removes an application.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis

remove_appl [-d | s | t | f] -n *application_name*

Description

The **remove_appl** command is used to remove an application. Only one of the following options is allowed at one time:

- **-d** — Removes the database tables.
- **-s** — Removes the speech.
- **-t** — Removes the transaction.
- **-f** — Removes the installed files.

If no option is specified, the whole application is removed.

Return Values

If the **remove_appl** command is successful, a 0 value is returned. If any value other than 0 is returned, the **remove_appl** command failed. The following are the possible reasons for failure for the **remove_appl** command:

- The hard disk is low in space.
- The command syntax is incorrect.
- The voice system is not running.
- The command to remove the database tables failed.

- The command to remove the installed files failed.
- The command to remove the speech failed.
- The command to remove the transaction failed.

Example

The following example removes the application “bank_balance.”

```
remove_appl -n bank_balance
```

See Also

backup_appl

install_appl

restore_appl

remove_sw

The **remove_sw** command removes an installed package.

Note: This command is valid only if the Enhanced File Transfer package is installed.

Synopsis

```
remove_sw package_name
```

Description

The **remove_sw** command is used to remove any of the installed software package.

The *package_name* argument is the name that appears when the **pkginfo** command is executed and should be enclosed in double quotes (“”).

Return Value

If the **remove_sw** command is successful, a 0 value is returned. If any value other than 0 is returned, the **remove_sw** command failed. The following are the possible reasons for failure of the **remove_sw** command:

- The hard disk is low in space.
- You are not logged in as root or super user.
- The package name is not specified.
- The package does not exist.
- The command can not find the removal script for the package.

Example

The following example removes the Script Builder software package.

```
remove_sw “Intuity CONVERSANT Script Builder Version 7.0”
```

See Also

install_sw

restore

The **restore** command restores a unit to the in-service state.

Synopsis

restore *unit number* [-i] [-n]

Description

The **restore** command is used to change the permanent state of a unit from manual-out-of-service (MANOOS) to in service (INSERT). The specified unit is placed in the INSERT state unconditionally, unless its current state is not MANOOS.

The parameters for the **restore** command are:

- *unit* — Identifies the unit. The choices are **channel** or **card**.
- *number* — Specifies the channel or card number, a range of channel or card numbers in the form m n, or **all**, for all the channel or card numbers. Card numbers are in the form card#[.port#] where *port#* is a port of *card#*. If *port#* is not given, all ports of the card specified are restored. If no card number or channel number is given, the system displays a syntax message.
- **-n** — Disables prompting from the system whether to wait until a conflict has been resolved (see the **-i** option below) or to terminate the request to restore.
- **-i** — Enables secondary command registration. If T1 diagnostics are being run, this option allows “restoring” of another card to be performed. If **-i** is used and another maintenance command is being run (**remove**, **detach**, **attach**, **restore**, **diagnose**), the request to **restore** card is blocked and a message is printed to the screen. If **-i** is not used and any maintenance command is being run, the request to **restore** card is blocked and a message is printed to the screen.

If the command is permitted to run, a check is made to see if the command is in conflict with another. A command is in conflict if the card or card associated with it:

- ~ Is the T1 card being diagnosed
- ~ Will cause a change in the existing TDM bus master assignment
- ~ Has an interdependency with the T1 card being diagnosed (for example, PRI)

If one of the above conflicts exist and **-n** is not used, the user is asked whether to wait until the conflict is resolved or to terminate the request. If T1 diagnostics are executing on-line tests and a conflict is detected, the **restore** command is blocked. If T1 diagnostics are executing off-line tests and a conflict is detected, the user is asked whether to wait until the conflict is resolved or to terminate the request to restore.

To delete out of the command, press **DELETE**. If this does not stop the command, you may need to press **CTRL** and backslash simultaneously. If, while running restore, you wish to abort the command, a message similar to the following may appear:

At the user's request, administration of the following cmd(s)
has been interrupted.

CARD NUMBERS: <card numbers>

To assure proper operation of the identified card(s), run
diagnostics at the earliest opportunity.

It is recommended when **restore** is aborted, diagnostics be run on all cards
being administered to ensure they are returned to a fully functional state.

Example

The following example restores card 0 to service.

restore card 0

The following example restores channels 0, 1 and 5 to service.

restore channel 0-1,5

The following example restores all cards to service.

restore card all

See Also

attach

detach

remove

restore_appl

The **restore_appl** command restores an application.

Note: This command is valid only if the Enhanced File Transfer package
is installed.

Synopsis

**restore_appl -n *application_name* [-d *database_file*] [-t *transaction_file*]
[-s *speech_file*] [-p *path*]**

Description

The **restore_appl** command is used to restore an application from backed up files existing on the same machine or from backed up files sent from the host. The files are cpio files. If the file names are not specified, default file names are used and all three components (database tables, speech, transaction) are restored. The following are the default file names for each component:

database	Dbase
speech	Spch
transaction	Trans

The default path to restore all three components is:

/tmp/sb/BkUpAppl/application_name

Note: You must use the **restore_appl** command before using the **install_appl** command.

Return Values

If the **restore_appl** command is successful, a 0 value is returned. If any value other than 0 is returned, the **restore_appl** command failed. The following are the possible reasons for failure of the **restore_appl** command:

- The hard disk is low on space.
- You are not logged in as root or super user.
- The command syntax is incorrect.
- The command to restore the database tables failed.
- The command to restore the speech failed.
- The command to restore the transaction failed.

Example

The following example restores the application "bank_balance" from backed up files.

```
restore_appl -n bank_balance
```

See Also

backup_appl
install_appl
remove_appl

rmdb

The **rmdb** command displays the state of the resource manager (RM) and modifies the debug levels.

Synopsis

```
rmdb [-l] [-s] [-u] [-d [range]] [-g [range]] [-f [range]] [-p [range]]
[-C [range]] [-T [range]] [-P [range]] [-i [interval]]
[-tL [levelMask]] [-tA [levelMask]] [-tc channel] [-tC channel]
```

Description

The **rmdb** displays the state of the resource manager and modifies the debug levels. The valid syntax for ranges is as follows:

value [-value] [, value] | [value-value]*

Specifying a value and odd number of times indicates it will be displayed. Specifying a value an even number of times indicates it will not be displayed. For example, **7-10,9** will display the items associated with values 7,8, and 10. The 9th entry would be excluded since it was specified two times.

The **rmdb** command accepts the following arguments:

- **-l** — Takes the rmLOCK while sampling data structures. This ensures that the sample is internally consistent. However, if the RM data structures are left in a locked state, this causes the rmdb to block until they are unlocked. (Leaving the rm data structures locked is a system fault). Also, other processes that attempt to use the RM data structures are temporarily blocked until rmdb completes its query.
- **-s** — Prints the values of the RM parameters and debug variables.
- **-u** — Prints function's usage statistics.
- **-d** — Prints device table entries by device number.
- **-g** — Prints out group lists (by index in the group table).
- **-f** — Prints out the function table (by index in the function table).
- **-p** — Prints out the packfile table (by index in the packfile table).
- **-c** — Prints out the card table (by card # in the card table).
- **-C** — Prints out the channel table (by channel number).
- **-T** — Prints out the channel touch-tone queues (by channel #).
- **-P** — Prints out channel profiles (by channel #).
- **-i** — Repeats the display, with a sleep interval of the specified number of seconds between samples.

The **-tL *levelMask*** sets the trace level mask. Supported masks are shown in Table 54

Table 54. Rmdb Trace Level Masks

Mask	Value
RM_TL_ERROR	0x1
RM_TL_GENERAL	0x2
RM_TL_ENTEREXIT	0x4

The **-tA *levelMask*** sets the trace area mask. Supported masks are shown in Table 55.

Table 55. Rmdb Trace Area Mask

Mask	Value
RM_TA_TIMER	0x1
RM_TA_RESOURCE	0x2
RM_TA_INPUT	0x4
RM_TA_PROFILE	0x8
RM_TA_MTC	0x10
RM_TA_MSG	0x20
RM_TA_INTERNAL	0x40

The **-tc *channel*** sets the trace channel low end.

The **-tC *channel*** sets the trace channel high end.

rs_appl

The **rs_appl** command restores the speech or transaction component of a Script Builder application.

Synopsis

rs_appl [[a] [s] [t]] *application_name* [[0] [1 | 2 | f=filename]

The **rs_appl** command arguments are:

- **a** — Used for restoring both the speech and transaction component of an application.
- **s** — Used for restoring the speech component of an application.
- **t** — Used for restoring the transaction component of an application.
- **0** — Indicates floppy drive 0 is to be used for restoring.
- **1** — Indicates floppy drive 1 is to be used for restoring.

- **2** — Indicates tape drive is to be used for restoring.
- **f** — Indicates information is to be restored to a file; a filename must be designated.

Description

The **rs_appl** command is restore a Script Builder application from a type of media on the local machine. This command can be used to restore either a single component (for example, speech or transaction) or both of the components (speech and transaction).

The **rs_appl** command supports restoring from floppy diskettes, magnetic tapes, and to a file. Two separate sets of floppy diskettes or a set of magnetic tapes is required in order to restore both of the components of an application. Only a single component can be restored from a file.

Note: When a file is used as a restore media, the file must be available either in the specified directory (file name is given with the full path name) or in the current working directory (only the filename is given) when this command is invoked.

See Also

bk_appl

save_config

Note: This command is not used on the UCS1000.

The **save_config** command saves the **/vs/data/confData** to floppy disk.

Synopsis

/vs/bin/util/save_config

Description

The **save_config** command is used to save the **/vs/data/confData** file to floppy disk. The **/vs/data/confData** file represents the configuration of a voice system machine as determined by the Hardware Resource Allocator program (**/vs/bin/util/configure** command).

The **save_config** command should be used after upgrading a voice system machine in the field to store the newly determined configuration file to the CONFIGURATION DATA floppy for that particular machine.

Files

/vs/data/confData

See Also

configure
get_config
show_config
show_devices

sb_backup

The **sb_backup** command backs up a Script Builder application.

Synopsis

sb_backup [**a** | **d** | **s** | **t**] *application_name* [*table1 table2...tablen*]

Description

The **sb_backup** command is used to back up a Script Builder application to a media on the local machine. This command can be used to backup either a single component (for example, database, speech, or transaction) or all three components. This command supports backing up on either floppy diskettes or magnetic tapes.

Note: If floppy diskettes are used for backup, a separate set of floppy diskettes will be needed for each component of an application when you select a component or all components of an application. However, a single set of tape cartridge is enough to back up all components of an application.

The **sb_backup** command arguments are:

- **a** — Used for backing up all components of an application.
- **d** — Used for backing up an application database only.
- **s** — Used for backing up speech only.
- **t** — Used for backing up an application transaction only.

See Also

sb_restore

sb_restore

The **sb_restore** command restores a Script Builder application.

Synopsis

sb_restore [**a** | **d** | **s** | **t**] *application_name*

Description

The **sb_restore** command is used to restore a Script Builder application from a media on the local machine. This command can be used to restore either a single component (for example, database, speech, or transaction) or all three components. This command supports restoring either from floppy diskettes or from magnetic tapes.

Note: This command allows you to restore applications from any previous release.

The **sb_restore** command arguments are:

- **a** — Used for restoring all components of an application.
- **d** — Used for restoring an application database only.
- **s** — Used for restoring speech only.
- **t** — Used for restoring an application transaction only.

See Also

sb_backup

sb_te

The **sb_te** command invokes the 3270 Terminal Emulator.

Synopsis

sb_te *session_number*

Description

The **sb_te** command is used to invoke the 3270 terminal emulator and interact as a terminal to a host. This is used to first prove that a host communications link has been established. It can also be helpful in verifying that there have not been any changes to the host application screens. Sometimes changes can occur on the host end that are not passed down to the voice system end. The *session_number* chosen must be released from the host interface process before invoking **sb_te**. This can be accomplished by stopping the custom data interface process (DIP) for non-Script Builder applications or by using the **hdelete** command for Script Builder applications.

Sessions are mapped to logical unit (LU) numbers, with sessions numbered from 0 to 127 mapped to LUs that are numbered from 2 to 128. For example, session number 0 corresponds to the first LU number specified in the Configure Host Link screen for Link 0, while session number 1 corresponds to the second LU number in the Host Configure Link screen. LUs are configured dynamically. However, it is possible that LU's on a single connection may be non-contiguous.

A range of session numbers (for example, 5–38) can be specified to sequentially emulate each session in turn. Press **CTRL+Y** to emulate the next session in the specified range. The **CTRL + Y** command may only be used for multiple sessions.

If a session is not specified, the system assumes the value **all** for sessions 0–63 for both cards in a two card installation. If the first session the first card is not configured, **sb_te** automatically proceeds to the first session on the next card. For example, if session 0 on card 0 is specified and that session is not configured, the system displays a failure message and the **sb_te** command proceeds to the first session on card 1.

Example

The following example invokes the 3270 terminal emulator for card 0 and session 0.

sb_te 0

The next example invokes the 3270 terminal emulator for sessions 35–40 for card 1.

sb_te 35-40

sb_trace

The **sb_trace** command displays the trace messages and the screens being sent between Script Builder applications and the 3270 host mainframe for the specified channel.

Synopsis

sb_trace all

sb_trace voice_channel_number

Description

The **sb_trace** command displays on its stdout (usually the terminal screen) messages about what actions the Script Builder applications are executing on specified channels or sessions. It also captures screens sent between the 3270 host mainframe and Script Builder applications assigned to voice channels on the voice cards (tip/ring and T1) and/or sessions on the host interface card.

Once it starts running, **sb_trace** outputs the screens and trace messages that are generated from that time until the user terminates **sb_trace** by pressing **DELETE**. The **sb_trace** command outputs messages and screens when the specified voice channels or sessions are executing their Script Builder actions and/or sending or getting screens while logging-in, recovering, or in-transaction. The **sb_trace** command invokes the **trace** command when it is run.

The **sb_trace** command displays high level trace messages from the DIP and TSM on its stdout. The following is an example of the possible messages that appears:

```
Tracing started on channel 0
DIP0: CH 0 get screen form
DIP0: CH 0 save_bal =
TSM: CH 0 STEP: 0. VALUE: 10
TSM: CH 0 STEP: 1.
DB: Read Table
DB: index 0
```

The “step” refers to the corresponding action step in the transaction definition outline. “Value” refers to whatever value is given with the indicated action step.

Certain Script Builder external actions and functions may generate trace messages when they are passed invalid data or when they encounter other failures. These messages are recognizable by the fact that the “step” number is out of the range of normal action numbers that appear in the transaction definition.

If the buffer (storage area) where information is stored gets reused before the information is completely shown on the screen, trace information may not get reported by **sb_trace**. The information you see may be incomplete. To see any missing information, place a “play message” action in the transaction to play a long silence. Insert it before the critical action whose trace you are interested in.

The **sb_trace** command accepts a voice channel as argument to output only messages and screens that relate to the specified voice channel and associated session number. For example, **sb_trace 15** limits its output to the following:

- The actions being executed from the Script Builder application on channel 15.
- If channel 15 is handling a call that interacts with the host, **sb_trace** also outputs the screen's name, fields being sent and received, and the entire screen's contents (24x80 bytes) for the “in-transaction” session associated with channel 15 to the file **/vs/trans/hostdata/chan#**.
- If channel 15 is not handling a call that interacts with the host, **sb_trace** treats the channel number directly as a session number, and outputs the actions being executed and the screens sent and received by session number 15. Session 15 must be assigned to an application via **hassign** before **sb_trace** is invoked or else **sb_trace** quits without tracing. Also **sb_trace** only outputs the actions and screens while session 15 is “logging-in” or “recovering.”

Note that the voice channel must exist in the system or **sb_trace** quits without tracing.

The **sb_trace** command also accepts the keyword **all** to mean that all channels and sessions will generate output. However to trace sessions that are “logging-in” or “recovering” the corresponding session numbers must fall in the range of existent voice channels. For example, a system with 25 voice channels can only trace the first 25 sessions if they’re “logging-in” or “recovering”. Sessions 26, 27, and so on can only be traced when “in-transaction” and associated with a voice channel.

The screen dumps are useful for debugging Script Builder applications while they interact with the 3270 host. A file with screen dumps is created for each voice channel or session number being traced. Screens appear in chunks of 24 text lines, appended to the files in the order that they are sent or received along with their name and time of transmission or reception. They can be viewed using the standard **cat** or **pg** commands.

The files are stored in **/vs/trans/hostdata** and are named as **chanX** or **chanXX**, where X or XX is a one-digit or two-digit channel or session number.

If they exist, **sb_trace** moves these files to **chanX.old** or **chanXX.old** before starting the trace.

Note: These files tend to be voluminous requiring lots of disk space. If it is necessary to remove these files, it is recommended that they be removed after stopping the voice system. Otherwise if they are removed while the voice system is running **sb_trace** stops dumping the screens until the voice system is restarted.

See Also

db_pr
db_put
trace

show_config

Note: This command is not used on the UCS1000.

The **show_config** command prints to file the valid CONVERSANT system configuration represented by the **/vs/data/confData** file or the incomplete configuration represented by the **/vs/data/failData** file.

Synopsis

/vs/bin/util/show_config [fail | filename]

Description

The output of the **/vs/bin/util/configure** program is either the **/vs/data/confData** file or the **/vs/data/failData** file depending respectively on whether the program arrives at a complete and valid configuration, or an incomplete configuration based on the user's input. In either case, the data in these files is compressed and cannot be easily understood. The **/vs/bin/util/show_config** command formats the data in these files and writes it in tabular form to a file in the current directory.

If the **configure** program was successful, executing **show_config** with no argument creates a **./configuration** file, by expanding the contents of **/vs/data/confData**. This file can then be printed for hard copy of the successful configuration.

If the **configure** program was unsuccessful at determining a configuration, executing **show_config fail** creates a **/vs/data/failed_config** file by expanding the contents of **/vs/data/fail_conf**. The **/vs/data/failed_config** file may be examined or printed.

The **show_config** command always checks for the presence of **./configuration** or **/vs/data/failed_config** and asks the user whether it is acceptable to overwrite the current file by that name if it exists.

When the **configure** program is used to upgrade an existing machine, the current **/vs/data/confData** file is saved in **/vs/data/conf_MMDDYY**, where **MM** = month, **DD** = day and **YY** = year. It may be desirable at times to see what configuration is represented by these saved configuration files. The **show_config** command may be used to expand the contents of a saved configuration file by specifying the filename as the first argument. The user is prompted for an output file name whenever the first argument is an input configuration filename.

Files**/vs/data/confData****/configuration** (show sample output, describe each HEADING)**/vs/data/failData****/vs/data/failed_config****See Also****configure****get_config****save_config****show_devices**

Note: The **show_config** command takes zero or one argument. The **fail** and **filename** arguments are mutually exclusive.

show_devices

Note: This command is not used on the UCS1000.

The **show_devices** command displays and prints to file all devices and their attributes as represented in the **/vs/data/deviceData** file.

Synopsis**/vs/bin/util/show_devices****Description**

The **/vs/bin/util/show_devices** command uncompresses the database of devices and their attributes contained in the **/vs/data/deviceData** file and displays the information to the screen. At the same time, a **./devices** file is created so that hard copy of this information may be generated. If a **./devices** file already exists, the user is prompted as to whether it is acceptable to overwrite the file.

Files**/vs/data/deviceData****./devices** (show sample output)

See Also

configure
get_config
save_config
show_config

show_sys

The **show_sys** command allows you to retrieve configuration and administration information from customer sites.

Synopsis

/vs/bin/tools/show_sys [-l]

Description

The following information can be retrieved with the **show_sys** command:

- UNIX version machine type
- Installed software
- Memory
- Configuration of hard disk(s)
- Free space in UNIX file system
- Tunable parameter changes
- Free space in swap
- Free space in speech file system
- Free space in Oracle database
- Oracle database tables
- Directory files in **/oracle/dbs**
- Cron information for root
- Local/remote database information
- ASP driver (speech card) version
- DNIS information (if T1s are present)
- T1 card information (if T1s are present)
- Device Information
- SAR Snapshot
- Parallel Printer Information
- UUCP information
- Devices file
- Permissions file

- Systems file
- Analog transfer parameters
- Installed cards
- Parameter file(s) for assigned applications
- Databases used in each application
- Status of Host LU's
- CCA report for the previous week
- Call data report for a specific day of the previous week
- Traffic report for a specific day of the previous week

The **-I** option prints details about each of the information that can be retrieved with the **show_sys** command.

Example

show_sys

soft_disc

The **soft_disc** command sends a disconnect to a script on a channel or channels.

Synopsis

soft_disc *channel*

soft_disc *channelStart-channelEnd*

Description

The **soft_disc** command sends a message or messages to TSM requesting that the script running on *channel* or the range of channels *channelStart-channelEnd* be sent interrupt messages. If no script is running on the channel or if TSM does not own the channel, no action is taken for the channel.

The **soft_disc** command waits for a response from TSM. When it exits, TSM has acted on all the requests for all the channels by sending disconnects to the scripts or rejecting the requests. Scripts running on the channel receive the ESOFTDISC event.

Return Values

If the **soft_disc** is successful, a 0 value is returned. If any other value than 0 is returned, the **soft_disc** command completely or partially failed. If **soft_disc** returns a value of 2, then **dip_int** command failed due to temporary condition. In this case, the user should attempt the **dip_int** command again.

Example

The following example requests that TSM send interrupt messages to channel 2.

soft_disc 2

The following example requests that TSM send interrupt messages to channels 1 through 32.

soft_disc 1-32

See Also

dip_int

soft_srz

The **soft_srz** command starts a script on a channel.

Synopsis

soft_srz *channelStart-channelEnd script*

Description

The **soft_srz** command can be used to start a script on a channel. The **soft_srz** command sends a message to TSM requesting that a script be started on a channel. If the channel is in use, the script is not started. **Soft_srz** waits for a response from TSM. When **soft_srz** exits, TSM has either accepted the request and started the script or rejected the request.

There are two arguments to the **soft_srz** command: *channel* and *script*. The *channel* argument specifies the channel or range of channels on which you want to start the script. The *script* argument specifies the script to be started. The script does not have to be in the table of assigned scripts.

The channel numbers must be valid and the channels must not be busy, and the channels must be in the inserv state. If you specify a channel that is busy, the command fails. If you specify a range of channels and one or more of the channels is busy, the command seizes the idle channels but fails for the busy channels.

Example

The following example starts the script "sodapop" on channels 0 through 4.

soft_srz 0-4 sodapop

The following example starts the script "test1" on channel 10.

soft_srz 10 test1

Return Values

If the **soft_srz** is successful, a 0 value is returned. If any value other than 0 is returned, the **soft_srz** command completely or partially failed. If **soft_srz** returns a value of 2, then **soft_srz** command failed due to temporary condition. In this case, the user should attempt the **dip_int** command again.

spadc

The **spadc** command collects data on the signal processing resources.

Synopsis

spadc [-m *min*] [-s *sec*] [-D *dir*]

Description

The **spadc** command executes a program that collects data on the voice system signal processing resource utilization. Data is sampled every **-s** seconds, and average and peak measurements are written to a file called **mm-dd-yyyy** for the day of the month and year on which the command was executed (for example, 09-12-2000). The file is written in the **-D** directory every **-m** minutes.

The **spadc** command uses the following options:

- **-m** — minutes; used to specify how many minutes of data are represented in each output line of the **mm-dd-yyyy** file.
- **-s** — seconds; used to specify how many seconds pass between each data collection. Valid entries are from 5 to 60. The default is 60.
- **-D** — directory; used to specify the directory for the output. The default is **/var/adm/spa**.

Example

spadc -m 20 -s 10

This command collects the signal processing resource data in 10 second increments for a total of 20 minutes.

See Also

spar

spar

The **spar** command is the signal processing resource reporter.

Synopsis

spar [-ablmp] [-t *min*] [-f *file*]

Description

The **spar** command executes a program that reports on the signal processing data activity collected by the **spadc** command.

The **spar** command options determine the report format:

- **-b** — board (circuit card)
- **-a** — algorithm
- **-l** — feature licensing
- **-m** — mean (average) data
- **-p** — peak data
- **-t** — time; used to specify how many minutes of data are summarized in each report line. The value must be 5-60, in increments of 5 (for example, 5, 10, or 15, and so on). The default is 20. To ensure valid data, the value for -t should be equal to or greater than the time increment specified for data collection by the **spadc** command.
- **-f** — file; used to specify an input data file. If no **-f** argument is given, the **/var/adm/spa/mm-dd-yyyy** file is used for the current day. If the data file is not in **/var/adm/spa**, you must provide a full pathname to the input data file.

Examples

Note that values of "NA" in a report indicate that data was not available for that period (for example, if **spadc** data collection was not active, or if the system had to be rebooted). A value of zero indicates data collection was activated but no activity occurred.

spar -ap

This command creates a report showing peak percent usage for the entire board and for each of the different algorithms allocated to the board. A partial sample output is shown below.

Signal Processing Activity Report(Peak Percent Usage By Algorithm) 10/20/1997

CARD 5 STATE: Inserv CLASS: Signal_Processor(SP) O.S.INDEX: 0
 NAME: AYC2 OPTIONS: slave,tdm1
 FUNCTION: play+code

	brd	wwr	fwr	echo	cca	tts	dpr	play	code	celp	fax
00:20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
00:40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
01:00	0	0	0	0	0	0	0	0	0	0	0
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.
08:20	16	5	0	8	1	2	0	0	0	0	0
08:40	22	13	0	5	3	2	0	0	0	0	0
09:00	32	15	0	9	5	3	0	0	0	0	0
09:20	47	26	0	10	5	6	0	0	0	0	0
09:40	55	33	0	12	4	6	0	0	0	0	0
10:00	57	28	0	9	11	10	0	0	0	0	0
10:20	68	37	0	11	13	8	0	0	0	0	0
10:40	69	42	0	10	9	8	0	0	0	0	0
11:00	71	44	0	11	10	9	0	0	0	0	0
11:20	66	42	0	4	10	11	0	0	0	0	0
11:40	91	58	0	15	8	10	0	0	0	0	0
12:00	80	47	0	12	16	5	0	0	0	0	0
12:20	77	39	0	10	15	13	0	0	0	0	0

Column headings reflect percent usage for the following:

- brd — All algorithms allocated to the board; note that in a given row, the peak percentage for the board may be slightly different than the sum of the algorithm percentages because the peaks may not have occurred during the same interval. For example, if the **spadc** command collects data at 5-minute intervals, and the **spar** report displays the peak percentages for 20-minute periods, the peak percentage for the board and for each of the algorithms may have occurred during any of the four different 5-minute **spadc** periods that provide data for the 20-minute **spar** interval.
- wwr — WholeWord Recognition
- fwr — FlexWord Recognition
- echo — Echo Cancellation
- cca — Call Classification Analysis
- tts — Text to Speech
- dpr — Dial Pulse Recognition
- play — Play speech
- code — Record speech

- celp — Record speech with CELP algorithm
- fax — FAX

spar -l

This command creates a report showing average percent usage of licenses for each algorithm. A partial sample output is shown below.

RTU Report (Average Percent License Utilization Across System)
10/23/1997

tts	dpr	flex	whole	swtts	fax	
00:20	0	0	0	0	0	0
00:40	0	0	0	0	0	0
01:00	0	0	0	0	0	0
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.
07:00	23	0	0	0	0	2
07:20	23	0	0	0	0	2
07:40	26	0	0	0	0	3
08:00	12	0	21	0	0	0
08:20	NA	NA	NA	NA	NA	NA
08:40	NA	NA	NA	NA	NA	NA
09:00	31	0	14	0	0	0
09:20	32	0	14	0	0	1
09:40	19	0	15	0	0	0
10:00	18	0	12	0	0	3
10:20	13	0	19	0	0	3
10:40	13	0	22	0	0	3

Column headings reflect percent usage for the following:

- tts — Text to Speech
- dpr — Dial Pulse Recognition
- flex — FlexWord recognition
- whole — Whole Word recognition
- swtts — Software Text to Speech
- fax — FAX

See Also**spadc**

spCtlFlags

The **spCtlFlags** command sets and clears flags used to control the behavior on SP Executive pack files as they run on an SSP card.

Synopsis

spCtlFlags [-b *SP-index*] [-t] [[+ | -]*flag*]

Description

The CTL flags provide a means to alter the behavior of code running on the SP from the PC without distracting it from the job at hand. At the current time the CTL flags integer is divided into three parts, the upper 16 bits, which are general purpose flags to be used to turn on and off code and **printfs**, the bottom 8 bits, which are reserved for the SP Executive functions, and bits 8 15, which are currently not used by anyone officially. There is an unofficial use of these bits to prime the verbosity level for layer 3 of PRI.

The following are the options that can be used with the **spCtlFlags** command:

- **-b** *SP-index* — Index of the SP card to be examined.
- **-t** — (terse) Only output hex value of flag.

Note: The **spCtlFlags** command only works with SP executive applications (currently, the PRI and CCA pack files).

With no flag argument, **spCtlFlags** just prints the current value. With a flag argument, it either resets the value (no + or -), logically ORs in the flag (+), or logically and compliments out the flag (-). A flag can either be a number or use one of the following symbolic names:

- **printf** — Controls whether printf's from within an SP card actually generate output or not.
- **letters** — Contains executive trace flag of letters arriving from the PC.
- **terminations** — Generates reports on all process and action terminations.
- **dbgpanics** — If this flag is set, panics by SP executive go to debugging monitor. If not set, panics go immediately to ROM for reloading.
- **timefcns** — Enables timing of TDM and DSP functions.
- **checkmem** — Enables checking of the "malloc" arenas to insure that they have not been corrupted. (This is fairly expensive in terms of CPU cycles expended per allocation reference.)
- **enabledbg** — Enables various general purpose debugging code if it is compiled into the executive.
- **dbg{1-16}** — A general purpose flag that can be used for debugging.

Symbolic and numerical flags can be combined with the + sign between them, that is, **+dbg1+printf** or **-0x20+printf**.

The current value of the flags is printed if no other arguments are specified and starting the flags with **+** causes them to be added to those already in place rather than just replacing the current flags with the new ones. Table 56 on page 397 provides additional information for each of the symbolic names.

Table 56. Symbolic Name Description for spCtlFlags

Name	Description
printf	If this flag is not set, all printf() operations from within the SP Executive are essentially NOPs. This flag must be set for any print information to be sent to the PC and logged.
letters	If this flag is on, the SP Executive attempts to report, via printf() the arrival of each letter that it is processing from the PC.
terminations	If this flag is on, the SP Executive sends a termination letter to the SP whenever a process or an action completes. This, in turn, is logged.
dbgpanics	If this flag is set and the SP Executive calls the panic() routine, it stops and waits for a debugger to examine what has happened. If this flag is not set and panic() is called, the SP Executive returns immediately to the ROM for reloading.
timefcns	If this flag is set, the SP Executive starts timing operations on each of the following four things, TDM interrupt servicing, the length of time between TDM interrupts, the length of time DSP loading is taking, and the length of time DSP servicing is taking. This information is requestable in the future via a letter from the PC. Currently it must be examined via a debugger.
checkmem	If this flag is set, each attempt to malloc() , realloc() , or free() memory causes the malloc arena to be checked for consistency. If the define symbol SM_FULLCHECK is set when the spaceMngr.c file is compiled, this check is very complete (though more time consuming) and detects problems sooner. If it is compiled without SM_FULLCHECK , the check is more cursory in nature.
enabledbg	Much of the special history keeping code is conditional upon this flag being set. If it is not set, the overhead of saving and timing is avoided. If it is set, then whatever history mechanism has been compiled in, saves its form of history information for debugging purposes.
1 of 2	

Table 56. Symbolic Name Description for spCtlFlags

Name	Description
dbg[1-16]	The use of these flags is up to each task. It is assumed that they will be used during debugging phases, but not be in use for final distribution. Code using them does tests of the following form: if (spcon->status[SPS_CTL_FLAGS] & SPCF_DBGnn) to determine whether a certain section of code or not should be executed.
2 of 2	

spres

The **spres** command restores speech from a backup.

Synopsis

spres -l file [-v] -t [talkfile *list*] [phrase *list*] [listfile *list*]

Description

The **spres** command restores the specified talkfile number, phrase number, listfile, or phrase and talkfile of the speech. Only speech that is backed up using the **spsav** command can be restored with the **spres** command.

The parameters for the **spres** command are as follows:

- **-l file** — This parameter specifies the input device. Typically, this is cartridge tape (**/dev/rmt/c0s0**).
- **-v** — This parameter is the verbose flag that gives a running commentary of the **restore** procedure.
- **-t** — This parameter is the tape flag. This is required for restore from cartridge tape.
- **talkfile *list*** — This parameter specifies the list of talkfiles to be restored, specified as a single digit, a range m-n, or **all**. If no value is given, the default is **all**.
- **phrase *list*** — This parameter specifies the list of phrases to be restored, specified as a single digit, a range m-n, or **all**. If no value is given, the default is **all**.
- **listfile *list*** — This parameter specifies the list of listfiles and associated speech to be restored (for example, **listfile list.cabnt**)

The **spres** command invokes an interactive program asking you to insert and remove cartridge tapes periodically. If the **-v** option is used, the system displays information about each step of the recovery.

Example

The following example restores listfile **list.cabnt** verbosely from cartridge tape:

```
spres -l /dev/rmt/c0s0 -v -t listfile list.cabnt
```

spsav

The **spsav** command backs up speech.

Synopsis

```
spsav -O file [-v] -t [talkfile list] [phrase list] [listfile list]
```

Description

The **spsav** command backs up the specified talkfile number, phrase number, listfile, or phrase and talkfile of the speech. Only speech in the speech file system can be backed up using the **spsav** command.

The parameters for the **spsav** command are as follows:

- **-O file** — This parameter specifies the output device. Typically, this is cartridge tape (**/dev/rmt/c0s0**).
- **-v** — This parameter is the verbose flag that gives a running commentary of speech being saved.
- **-t** — This parameter is the tape flag. This is required for back up to cartridge tape.
- **talkfile list** — This parameter specifies the list of talkfiles to be backed up, specified as a single digit, a range m-n, or **all**. If no value is given, the default is **all**.
- **phrase list** — This parameter specifies the list of phrases to be backed up, specified as a single digit, a range m-n, or **all**. If no value is given, the default is **all**.
- **listfile list** — This parameter specifies the list of listfiles and associated speech to be backed up (for example, **listfile list.cabnt**).

The **spsav** command invokes an interactive program asking you to insert and remove cartridge tapes periodically. If the **-v** option is used, the system displays information about each step of the backup.

Example

The following example saves listfile **list.cabnt** from cartridge tape:

```
spsav -O /dev/rmt/c0s0 -v -t listfile list.cabnt
```

spStatus

The **spStatus** command displays information about the pack file running on an SP card.

Synopsis

spStatus [-b *SP-index*] [-i *interval*] [-c *count*] [-r] [-B]

Description

A substantial amount of information about the state of an SP Executive pack (PRI and CCA pack files) is available via shared memory and the program **spStatus**, which displays the information. The information is defined in **include/spStatus.h**.

The following options can be used with the **spStatus** command:

- **-b** *SP-index* — Index of the SP card to be examined.
- **-i** *interval* — Interval between examinations of SP status. Minimum: 2 seconds. Default: 60 seconds.
- **-c** *count* — Number of times SP status is to be examined. Default: 1.
- **-r** — Reset the executive and task counts before starting.
- **-B** — No bell when running in iterative mode.

The **spStatus** command can be run in a one-shot mode, which is the default, or an iterative mode. In the iterative mode, it prints the changes between each successive examination of the values stored in the **spcon** structure in shared memory.

Sample Format

The following is an example of the sample output if **spStatus** is against the CCA pack.

```

Fri Dec 7 13:06:03 1990
Romstate: 0x0 Romcmd: 0x0 Romargs: 0x0 0x0
Ramstate: 0x245 Pack Features: C      Pack Type: SP executive
Bootcnt: 0x0 SPtime: 0x6a5 SPusage: 0x0
Debug ID: 0 spFreeMemory: 1,164,152
<< Status Information >>
      Free Actions: 46
      Busy Actions: 4
      Active Letters: 4
      Free DSPs: 2
      Broken DSPs: 0
      Busy DSPs: 0
      Run Queue Length: 0
      Sleep Queue Length: 4
      Running Process ID: 5
      Running Action Index: 3
      DSP Requests: 4
      RPC Requests Done: 0
      RPC Requests Queued: 0
      RPC Requests Discard: 0
      Exception #: 0x0 0-Reset

```

```

Exception Adr: 0x0
Routine: 0x0
PC at last TDM Intr: 0x99f05b62
PC at last DSP Intr: 0x99f05b46
DSP Count: 2247
CTL Flags: 0x0
Timer Requests: 0
Active Timers: 0
Completed Timers: 0
Killed Timers: 0
Work Search Loops * 1000: 53
TDM Overruns: 0
TDM Servicings Deferred: 0
Letters Received: 8
Letters Sent: 0
Letters Deferred: 0
Letters Discarded: 0
Executive Time: 57
Idle Time: 489
Task[6]: 1156
<< Mailbox Information >>
Index 1st Empty 1st Full
0 -> PC 00
1 <- PC 00
2 <- PC 4040
3 <- PC 00
4 <- PC 00
5 <- PC 00
6 <- PC 00
7 <- PC 00
8 -> PC 00
=====
1 Fri Dec 7 13:06:09 1990
Bootcnt: 0x0 SPtime: 0x7df SPusage: 0x0
<< Status Information >>
Run Queue Length: 1(+1)
Sleep Queue Length: 3(-1)
Running Process ID: 4(-1)
Running Action Index: 2(-1)
PC at last TDM Intr: 0x99f14024
PC at last DSP Intr: 0x99f08154
DSP Count: 2710(+463)
Work Search Loops * 1000: 57(+4)
Executive Time: 58(+1)
Idle Time: 537(+48)
Task[6]: 1421

```

The following is a brief description of each element of the display:

- Romstate, Romcmd, Romargs — These three values are active if either the ROM is in control of the SP card or a debugger is in charge.
- Ramstate, Pack Features, Pack Type — If a packfile is running or being debugged Ramstate contains the ID of the pack. If the pack is an SP Executive type pack, the Pack Features indicate which tasks are available in this pack. The Pack Type is either “SP executive” or “Original.”

- **Bootcnt, Sptime, SPusage** — **Bootcnt** is incremented each time the ROM restarts. Only diagnostics currently alter it in any other way. **Sptime** is the time in 16 msec increments since the pack started. If **spStatus** is running in recursive mode, this value is not changing, and the debugger is not active, the following warning is generated:

"No Clock! Check TDM master,"

One of two things is happening, either there is no TDM master and hence no TDM interrupts, or the pack file is stuck at priority level 6 or 7 and so all interrupts are blocked. In the former situation, check your T1 or tip/ring cards and make sure that one of them is the TDM master. In the latter case, you have a bug. Use **msdb** and examine the pack file. **SPusage** is the current load factor on the SSP card. This is the last value of meaning if the pack is an original-style pack. The remaining information applies only to SSP Executive packs.

- **Debug ID, spFreeMemory** — **Debug ID** is set to the pid of the UNIX process currently debugging this SP card. It is used to avoid collisions between people attempting to debug code running on a card. **spFreeMemory** is the amount of memory free in the memory allocation arenas, which are managed by **malloc()**, **realloc()**, and **free()**.
- **Free Actions** — The number of Action structures not currently assigned to a time slot. This value is initially 50.
- **Busy Actions** — The number of Action structures currently assigned to time slots.
- **Active Letters** — The number of letters being carried in Chainmail structures for long time processing via Action structures.
- **Free DSPs, Broken DSPs, Busy DSPs** — The number of DSP processors available to do work, broken, and assigned to work.
- **Run Queue Length, Sleep Queue Length** — The number of processes waiting to run and the number waiting for some event to wake them up.
- **Running Process ID, Running Action Index** — The process ID of the SP Executive process currently running and the index of the Action structure currently active.
- **DSP Requests** — The number of DspRequest structures active.
- **RPC Requests Done, RPC Requests Queued, RPC Requests Discard** — The number of remote procedure call requests that have been performed, the number that are waiting to be done, and the number of requests that had to be discarded before the backlog was too large.
- **Exception #, Exception Adr** — The 680X0 hardware exception number and the name of the exception that has stopped the 680X0 processor and either sent it to the ROM or to the debugger and the address where the exception took place. These can be very valuable in case of a fatal error.
- **Routine** — Currently not used.

- **PC at last TDM Intr, PC at last DSP Intr** — Addresses at which the TDM and DSP last interrupted.
- **Info Flags** — Currently there are two pieces of information conveyed by these flags, whether the processor is currently within a DSP interrupt and whether it is within a TDM interrupt. Both, neither, or any combination could be true.
- **DSP Count** — The number of DSP interrupts processed.
- **CTL Flags** — The current value of the CTL flags. These are used to control optional code within a pack. See **spCtlFlags** for further information.
- **Timer Requests** — The number of timer requests that have been made.
- **Active Timers, Completed Timers, Killed Timers** — The number of timer requests currently outstanding, the total number of timer requests that have run to completion, the number of timer requests that were removed prior to execution. If these values do not total up properly, there is also a warning indicating that there is trouble.
- **Work Search Loops** — The number of times divided by 1000 that the SP Executive has gone through its base level work search loop, trying to find something productive to do. The change in the number goes down as the SP Executive becomes busier and busier doing productive work.
- **TDM Overruns** — This number should always be zero. If it is not, it indicates that some activity is taking too long and blocking the processing of a TDM interrupt before it rolls over and starts overwriting data. This is serious.
- **TDM Servicing Deferred** — The number of times that a TDM servicing was deferred because the TDM interrupt came in on top of a DSP interrupt for a time slot. It is not serious. It just indicates that the hardware is busy and conflicts are being resolved. It can be a potential area of difficulty if the DSP routine is too slow and the TDM overruns while it is waiting to be serviced.
- **Letters Received, Letters Sent, Letters Deferred, Letters Discarded** — The number of letters received from the PC, the number of letters sent to the PC, the number of letters going to the PC that had to be temporarily stored in the overflow area because the PC was not keeping up, and the number of letters that even the overflow area could not handle and had to be discarded. Going into the overflow area is an indication of potential trouble, but is not bad if the duration is short. If the SP code continues to generate too many letters in too short of a period of time, then it is real trouble. The same thing can happen if the PC gets bogged down and cannot keep up.

- **Executive Time, Idle Time, Task[]** — These counts indicate the load being placed on each portion of the system. The executive time is the number of times the TDM interrupted some activity of the SP Executive that was what is considered to be the idle look-for-work activity. The idle time is the number of times the TDM interrupted the look-for-work activity. When tasks are active, a line appears for each task. The index of the task is its position in the **tasks[]** array found in the associated **sp/config/taskTbl*.c** file.
- **Mailbox Information - Index, Empty, Full** — Rudimentary information about activity within each mailbox. It does not tell you how many letters have been sent via each mailbox, though that may come eventually, but it does tell you whether the mailbox is empty (1st Empty == 1st Full) and if the values are changing from one display to the next, you know mail is passing through that mailbox. Keep in mind that mailbox 1, from the PC, is now reserved by the kernel and is used by the **ioctl()** form of mail sending for all processes other than the limited number of processes that directly own mailboxes.

In iterative mode, only those lines whose values have changed since the list display are listed. On decimal entries, the delta value since the last time is also printed.

spVrsion

The **spVrsion** command prints the version of the SSP driver currently installed on a machine.

Synopsis

spVrsion

Description

The **spVrsion** command prints which version of the SP driver has been installed. The two versions that can be installed are the 12-MB version and the 44-MB version.

start_hi

The **start_hi** command starts the 3270 host interface software.

Synopsis

start_hi

Description

The **start_hi** command starts the 3270 host interface software appropriately for voice system use.

Example

The following example starts the 3270 host interface software:

start_hi

See Also

stop_hi

start_vs

The **start_vs** command brings the system up to a fully operational state.

Synopsis

start_vs

Description

The **start_vs** command returns the voice system software to fully operational state. If you use the **stop_vs** command to stop the system, you should use the **start_vs** command to start it again. The **start_vs** also should be used if the system was rebooted or powered down after **stop_vs** was used.

The **start_vs** command checks to see if the user stopped the system with the **stop_vs** command. The **start_vs** command places all cards placed in the manual-out-of-service (MANOOS) state with the **stop_vs** command in the in-service (INSERV) state.

You must be logged on to the system console as **root** to use the **start_vs** command.

Since the **/vs/data/spchconfig** file cannot be edited while the voice system processes are running, it is a good idea to check the value of nbufs in the **/vs/data/spchconfig** file before executing the **start_vs** command. The value of nbufs defines the number of speech buffers. In order for the voice system to operate properly, nbufs must be set to 2.5 times the number of active channels.

Example

The following example starts the voice system software:

start_vs

See Also

stop_vs

stop_hi

The **stop_hi** command stops the 3270 host interface software.

Synopsis

stop_hi

Description

The **stop_hi** command stops the 3270 host interface software.

Example

The following example stops the 3270 host interface software:

```
stop_hi
```

See Also

start_hi

stop_vs

The **stop_vs** command gracefully stops the voice system software.

Synopsis

stop_vs [*time_out*] [-n]

Description

The **stop_vs** command gracefully stops the voice system software. If the system is receiving calls, **stop_vs** waits for approximately 3 minutes before it unconditionally stops the software. By waiting, the system allows callers to finish their transactions. The **stop_vs** command disables incoming call recognition on all cards to prevent them from being reactivated by an incoming call.

The *time_out* option is the time to wait before the voice system is stopped. The default value for this option is 180 seconds. The **-n** option prompts you with a message that another maintenance command (**restore**, **remove**, **attach**, **detach**, **diagnose**) is being performed. It asks if you wish to continue or to terminate the **stop_vs** command. The **stop_vs** command terminates another maintenance command in progress when initiated. The default value for this option is Yes.

If you use **stop_vs** to stop the system, you should use **start_vs** to reactivate it. If you use **stop_vs** to stop the software and then reboot the machine, be sure to execute **start_vs** after logging in as **root**. This ensures that the system is returned to the state it was in before it was rebooted.

If an active host link is established, the **stop_vs** command checks the LUs and logs out the application(s). The command waits up to 60 seconds (6 series of 10 seconds each), then continues stopping the voice system.

Example

The following example stops the voice system software:

stop_vs

See Also

start_vs

striphdr

The **striphdr** command strips voice or code headers from a speech file.

Synopsis

striphdr [*voice* | *code*]

Description

Striphdr is a filter that removes either the voice or code headers from a speech file. Voice headers are required for files being edited by the GSE, and code headers are required for speech that is to be used with the voice system.

See Also

addhdr

sysmon

The **sysmon** command executes a program that monitors incoming telephone lines and the associated cards to see that they are functional.

Synopsis

sysmon *page_number*

Description

The **sysmon** command verifies that each incoming telephone line and its associated card are functional. Before initializing the test, locate a touch-tone telephone close to the system controller and get a telephone number to be used for dialing into the system. Use the **assign channel** command to assign to a group any channels you want to test. Then, use the **assign service/startup** command to assign a script to the same group.

Once the channels and service are assigned, enter the **sysmon** command followed by the number of pages, or screens, you want to see. Each page displays 120 to 140 channels.

The resulting display shows all channels and their current states. Note that only equipped channels can be in the IDLE or MOOS state, while unequipped channels are followed by dashes (--).

Enter the telephone number for the touch-tone phone. Watch the display on the monitor and note the channels that receives the call. Follow the instructions provided by the voice system. Enter **0000** to end the test.

Example

The following example shows page four of the system monitor display.

sysmon 4

tas

The **tas** command executes the transaction assembler (tas) program to assemble script instructions.

Synopsis

tas [-e] [-Iinclude_directory -Ttalk_directory -Uname -Dname -Dname_def -Ydir -H] -ooutput_file application_name.t

Description

The **tas** command is used to assemble script instructions recorded in an **application-name.t** file. It produces an executable file designated **application-name.T**, which is stored in a table as a list of executable script instructions.

The **-e** option requires exact string matches for speech phrases.

The arguments must be in the order given above for the command to work properly. The directory search specified by the arguments are: **I** (include file) and **T** (listfile).

Note: No space is allowed between the **-I** and **-T** flags and their pathnames, but space is allowed after the **-e** flag. Note that the **-I** option to **tas** is interpreted by **cpp(1)**.

The remaining arguments are:

- **-U name** — Remove any initial definition of name, where name is a reserved symbol that is predefined by the particular preprocessor (this option is interpreted by **cpp(1)**).
- **-D name** and **-D name_def** — Define *name* with value *def* as if by a **#define**. If no *-def* is given, *name* is defined with value 1. The **-D** option has lower precedence than the **-U** option. That is, if the same name is used in both a **-U** option and a **-D** option, the name is undefined regardless of the order of the options (this option is interpreted by **cpp(1)**).
- **-Y dir** — Use directory *dir* in place of the standard list of directories when searching for **#include** files (this option is interpreted by **cpp(1)**).
- **-H** — Print, one per line on standard error, the path names of included files (this option is interpreted by **cpp(1)**).
- **-o output_file** — The name of the output file. The default is **out.T**.

Note that the maximum number of literals per script allowed by the **tas** command is 450. If there are more than 450 literals in a script, the system displays the error message `literal table overflow`. Additional limitations enforced by the **tas** command are (whichever occurs first in a list file):

- 1,000 phrases
- 4,000 words
- 40,000 characters

If more phrases are needed by an application, use multiple list files and `tfile` instructions within the script.

Note: If your script contains a large number of define statements, **tas** may report messages such as the following during compilation:

```
script.t: 1068: too much defining
```

where *script.t* is the script source file and *1068* is the line in which the define appears. The limit to the number of define statements that a script may have depends on the number of defined macros and their size. If this type of message appears, reduce the number of define statements in your script.

Files

/vs/bin/tas

Example

tas example.t

The program includes applicable header files and replaces literal definitions with corresponding numbers to produce an assembled version of the script. The assembled code is stored on disk under the label **example.T**. The unassembled instructions are found in the file **/var/appln/trans/example.t**.

tas example.t -I/var/include -T/var/speech

In addition to performing the same functions described for the previous example, **tas** checks the files in **/var/include** when processing include statements and the file in **/var/speech** when processing T-file statements.

tif2itif

The **tif2itif** command converts a Tag Image File Format (TIFF) file to the TIFF Class F format used by the CONVERSANT FAX Actions Package. The conversion does not handle files that contain color information. The input TIFF file must have the `BitsPerSample` and `SamplesPerPixel` fields set to 1 in the directory header.

Note: For detailed information on using this command, see Appendix C, Format Conversion Tools for Fax Files.

Synopsis**tif2itf [-f|n] [-h +|-num] [-v +|-num] infile outfile****Description**

The parameters for the **tif2itf** command are:

- **-f** — Forces the output to fine resolution. A file converted to fine resolution has twice as many horizontal data lines as the original. The image should look identical to the original.
- **-n** — Forces the output to normal (not fine) resolution. Converting a fine resolution file to normal resolution removes every other horizontal data line from the file. The resulting image is not as sharp as the original.

Note: If you do not specify either the **-f** or the **-n** option, the converted file retains the resolution of the original file.

- **-h+num** or **-h -num** — Creates a horizontal offset where **+** (plus sign) indicates right, **-** (minus sign) indicates left, and *num* specifies the number of units in inches or centimeters. Use **c** to indicate centimeters and **i** or no unit (blank) to indicate inches. For example, to specify 1.5 inches, use **1.5** or **1.5i**; to specify 1 centimeter use **1c**.
- **-v +num** or **-v -num** — Creates a vertical offset where **+** (plus sign) indicates down, **-** (minus sign) indicates up, and *num* specifies the number of inches or centimeters. Use **c** to indicate centimeters and **i** or no unit (blank) to indicate inches. For example, to specify 1.5 inches, use **1.5** or **1.5i**; to specify 1 centimeter, use **1c**.
- **infile** — The name of the file to be converted.
- **outfile** — The name you select for the converted file.

Note: You may want to assign a .tif suffix to the input file and a .itf suffix to the output file to distinguish them. No particular suffix is required, however.

Example

The following examples remove an existing fax banner from a TIFF file by creating a vertical offset of a quarter inch.

tif2itf -v -.25 infile.tif outfile.itf**tif2itf -v -.25i infile.tif outfile.itf****Equivalent Command for Windows Environment**

The CONVERSANT system provides a **tif2itf.exe** tool with the same functionality as the **tif2itf** command for UnixWare systems for use on Windows systems. The command syntax, parameters and use of the **tif2itf.exe** tool are identical to those for the **tif2itf** command. For more information about converting files to TIFF format on Windows systems, see Appendix C, Format Conversion Tools for Fax Files.

See Also**tif2itf.exe**

tif2itf.exe

The **tif2itf.exe** command has the same functionality, syntax, and parameters as the **tif2itf** command. Both commands convert files to the TIFF Class F format used by the CONVERSANT FAX Actions Package. The CONVERSANT system provides the **tif2itf** command for use on UnixWare systems, and the **tif2itf.exe** command for use on systems running the Windows 95, 98, or NT operating system.

See **tif2itf** on page 409 for information on the command syntax and parameters. See Appendix C, Format Conversion Tools for Fax Files, for information on installing and using the **tif2itf.exe** command on a Windows system.

See Also

tif2itf

trace

The **trace** command outputs trace messages to standard output, while the system is taking calls, for specified processes and channels.

Note: This information may be useful for debugging applications and dips.

Synopsis

```
trace [name]...[chan ,range]...[card <card#[. port#>]]...[area [,area...]...]
[level [,level...]...][date] [tracelog | startlog]...[sleep sleeptime]
```

Description

The **trace** command prints trace messages to the standard output device (stdout) according to specified options. Executing **trace** also causes trace output to be logged to the trace shared memory buffer or to the trace log.

When **trace** is specified with *name*, all process-specific trace messages from process *name*, are printed. Process-specific trace messages are printed regardless of which channels that process may own or on which are operating.

When **trace** is specified with **chan** or **card** options, all channel-specific messages, from any process are printed. The **card** option is applicable only to network interface cards (that is, cards that have channels). The **card** option is a special case of the channel option.

A combination of the *name* variable and **chan** options prints trace messages from both the *name* variable and **chan** options. These options act collectively rather than selectively.

If **area** is specified, only the process or channel messages associated with **area** are printed. The **area** option is, therefore, selective. Areas may be integers ranging from 1 to 32. Areas 1 through 16 are available for user applications. The voice system reserves areas 17 through 32.

The trace area arguments are as follows:

Argument	Description
AS (area 17)	Trace advanced service operations such as TTS and speech recognition.
EM (area 18)	Trace event management operations.
IN (area 19)	Trace caller input operations including touchtone and speech recognition.
PM (area 20)	Trace parameter management operations.
RM (area 21)	Trace resource management operations.
SE (area 22)	Trace script execution. This includes trace entries made implicitly by Script Builder applications and through tas(1) scripts via the trace(3TSM) command.
ST (area 23)	Trace call and application initialization and completion operations.
TS (area 24)	Trace telephony service operations.
VS (area 25)	Trace voice code and play operations.
ER (area 26)	Trace error processing operations.
IL (area 27)	Trace internal library operations.
SI (area 28)	Trace script instructions. Every TSM script instruction displays a trace message.
AD (area 29)	Trace administration operations.
BM (area 30)	Trace bus management operations.
OT (area 32)	Trace old trace instructions. All old trace messages are placed in this area.
ALL (area 1-32)	Trace all areas.

The default, if **area** is omitted, is **all** areas except **SI** (area 28). Trace areas may also be specified numerically with lists and ranges. For example, the following is legal:

trace chan 5 area 1-7,10,TS

A **level** argument may also be specified. Levels range from 1 through 32, where level 1 indicates the least amount of detail and level 32 indicates the greatest level of detail. Levels may be specified as a single number, comma-separated list, or ranges. The current internal voice system levels in use (levels 17 through 32) may be identified through mnemonics. A complete list of area and level mnemonics can be displayed by executing the **trace** command with no arguments. The current voice system levels (areas 1 through 32) are as follows.

Argument	Description
U (levels 1-16)	Trace all user levels.
AE (level 17)	Trace internal application error messages.
AG (level 18)	Trace internal application general messages.
AX (level 19)	Trace internal application enter/exit messages.
A (levels 17-19)	Trace all internal application levels.
FE (level 20)	Trace user-callable function error messages.
FG (level 21)	Trace user-callable function general messages.
FX (level 22)	Trace user-callable function enter/exit messages.
F (levels 20-22)	Trace all user-callable function levels.
PE (level 23)	Trace process interface function error messages.
PG (level 24)	Trace process interface function general messages.
PX (level 25)	Trace process interface function enter/exit messages.
P (levels 23-25)	Trace all process interface function levels.
IE (level 26)	Trace error processing operations.
IG (level 27)	Trace internal library operations.
IX (level 28)	Trace script instructions. Every TSM script instruction displays a trace message.
I (levels 26-28)	Trace script instructions. Every TSM script instruction displays.
RH (level 29)	Trace RM Helper function enter/exit messages.
RE (level 30)	Trace RM Helper function error messages.
RG (level 31)	Trace RM Helper function general messages.
RX (level 32)	Trace RM function enter/exit messages.
R (levels 29-32)	Trace all RM Helper and RM function messages.
S (level 17-32)	Trace all irAPI system levels.
ALL (levels 1-32)	Trace all levels.

The default, if level is omitted, is levels **U**, **A**, **AE**, **FE**, **PE**, **IE**, and **RE**. Trace levels may also be specified numerically with lists and ranges.

If the **tracelog** option is specified, all trace messages are logged to the trace log file and sent to stdout. If **startlog** is specified, tracing is done to the trace log but no trace output is sent to *stdout*. The trace log file may be queried for data deposited from prior executions of the **trace** command by using the **display** command with the **tracelog** option.

Trace messages may be printed with or without the date and time when they are generated. If **date** is specified, the date and time are printed with each trace message. The date and time are always printed for messages in the trace log file.

If the **sleep** argument is specified, trace will sleep *sleeptime* milliseconds between reading the trace buffer. The default is 200 milliseconds.

The **trace stop** command clears any active trace settings, ensuring that no trace output is generated to the trace log.

By default, all trace messages are saved in a trace shared memory buffer. The trace buffer is a circular buffer. If trace messages are written to the trace buffer faster than the trace command can read them, eventually the trace buffer will overflow and trace messages will be lost. When this happens, trace will print the message **TRACE: ***** LOST XXX RECORDS**, where *XXX* is the number of trace messages lost. Two ways to minimize the number of trace messages lost exists:

- Use the **sleep** argument of the trace command to decrease the time that trace sleeps between reading the buffer (default *sleeptime* = 200 ms).
- Increase the size of the trace buffer by adding or modifying the line **TRACE_BUFFER_SIZE=X** in the */vs/data/irAPI.rc* file, where *X* is the number of messages that the trace buffer can hold (default = 256). Increasing the value of *X* should reduce the chance of losing trace messages.

**CAUTION:**

If you change the size of the trace buffer, you must stop and restart the voice system (**stop_vs** and **start_vs**). Otherwise, you will not be able to run trace.

Examples

The following are examples of valid level lists and ranges:

1,2 Trace levels at 1 and 2

1-4,FE Trace at levels 1, 2, 3, 4, and 20

all Trace at levels 1-32.

Note: Levels are not hierarchically inclusive. That is, level 3 does not imply that tracing at levels 1 and 2 also occurs, which could be achieved by using a range starting from 1. For example, **1-3** for levels 1, 2, and 3.

Note that a user input (touchtone and speech recognition) log can be implemented by the following trace command:

trace chan all area IN level F

Files

/usr/spool/log/data/trace*
/vs/data/irAPI.rc

trarpt

The **trarpt** command generates a call traffic report.

Synopsis

trarpt *hours summarize date*

Description

The **trarpt** command generates a call traffic report. Information in this traffic report includes the number of calls coming in to the system during a specified time period, average holding time, and the percentage of time the channel was occupied for a certain hour. This report is sent to standard out (stdout). Before this can be done, the database system must be up and running, but the voice system does not need to be up.

The parameters for the **trarpt** command are:

- *hours* — Specifies the hours in which the traffic data was collected. The valid options can be a range between 0 to 23 (with 0 representing midnight and 23 representing 11 p.m.), or **all**.
- *summarize* — Indicates a traffic report or a traffic summary report to be generated. If the option is **n**, the report provides information on the total traffic volume for each channel in one-hour increments. If the option is **y**, the report is a summary report that provides information on the total traffic volume for each channel for the whole period specified in the *hours* parameter.
- *date* — Specifies the date the data was collected in the system. This parameter can be in the format mm/dd/yy or mm/dd/yyyy.

If a 2-digit year argument is used, the following rules apply:

- ~ If the year argument is 70 or greater, the 20th century is assumed; for example, 5/27/99 is interpreted as May 27, 1999.
- ~ If the year argument is 00 through 69, the 21st century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following two examples generate a traffic summary report for data collected on date August 24, 1998 between 8 a.m. and 5 p.m. on multiple entries per channel, and are equivalent command statements.

trarpt 8-17 y 08/24/98

trarpt 8-17 y 08/24/1998

The following two examples generate a traffic report for data collected on date August 24, 1993, one entry per channel, and are equivalent command statements.

trarpt all n 08/24/98

trarpt all n 08/24/1998

unassign_permissions

The **unassign_permissions** command removes voice system security permissions for a specific user.

Synopsis

unassign_permissions *user_login*

Description

The **unassign_permissions** command removes voice system security permissions for a specific user.

The *user_login* argument represents the user for which voice system permissions are to be removed. The user login will still exist; however, the user will not be able to access the voice system.

Example

The following example executes the command to remove voice system security permissions.

unassign_permissions brown

See Also

display_permissions
assign_permissions

vfyLogMsg

The **vfyLogMsg** command verifies the information associated with a specific logging message format.

Synopsis

IComp *msgnum*

Description

The **vfyLogMsg** command, given a message number or symbolic message name, recomposes the message format from the information stored in the **cmpLogFmt** files generated by the **IComp** command.

Note: You cannot use the **vfyLogMsg** command to look up a message format for a message class that you have just created, but not yet installed.

The *msgnum* argument can be in any of the following formats:

- Absolute message number — The absolute message number would be if you were examining compressed logging files with an editor, for example, **238**
- Symbolic name — The symbolic name is found in the associated **log{CLASS}.h** header file, for example, **SYSMSG**
- Message class/relative index in class pair
- **logGEN(2)** or **GEN.2**

This last format can be specified in two ways: **logGEN(2)** or **GEN.2**. Two forms exist because the log{CLASS}(index) form must be enclosed in quotes when used from the command line because '(' and ')' are shell meta-characters, and this is difficult to type.

The output of the **vfyLogMsg** command contains up to five different types of information about the message format:

- Interpretations of the message number — The first block of information contains the three interpretations of the message number.
- Restored message format — The second block of information includes the restored message format without any SQL field names that might have been specified in the original format.
- SQL field name information — This information is the SQL field name information either as specified in the original format or as generated by **IComp** for those fields that did not have specifications in the input description. One description line exists for each argument on the machine.

- Current message priority — The fourth block of information describes the current priority assigned to this message in that shared memory and the destination bit mask. This block of information is available only if the logging destination/priority shared memory exists on the machine.
- Description of each destination bit — The fifth block of information describes each destination bit specified in the destination bit mask, starting with the lowest order bit.

Example**IComp****See Also****logCat****logDstPri**

vsdisable

The **vsdisable** command disables the automatic restarting of the voice system.

Synopsis**vsdisable****Description**

The **vsdisable** command is used to prevent the voice system from being started when the system is rebooted. Running **vsdisable** allows you to log in to the system before the voice system is started. The voice system may be started manually at any time with the **start_vs** command.

Example**vsdisable****See Also****vsenable**

vsenable

The **vsenable** command enables the automatic starting of the voice system at system reboot.

Synopsis

vsenable

Description

When the **vsenable** command is run, UNIX system files are modified to allow the voice system to be automatically started when the system is rebooted. By default, the voice system is installed with the automatic startup enabled. If there were any non-fatal problems during installation, the voice system is still installed but it has not enabled for automatic startup at system reboot. After the installation problems have been cleared, use **vsenable** to enable automatic voice system startup at reboot.

Example

vsenable

See Also

vsdisable

vusage

The **vusage** command displays the current load on the voice system.

Synopsis

vusage

Description

The **vusage** command enables the voice system administrator to determine the load on the voice system. It queries the voice system and prints the response on the screen, indicating the maximum number of channels in the system and the number of channels playing or coding, and the maximum number of buffers and the number in use.

Example

The following is an example of the **vusage** command and sample output.

```
$ vusage
      Max (Current) Speech Buffers used:   0   (0)
      Max (Current) Chans playing/coding:  0   (0)
$
```

**CAUTION:**

The voice system must be running to execute this command.

See Also

display chan
sysmon

wl_copy

The **wl_copy** command copies FlexWord wordlists to disk.

Synopsis

wl_copy *wordlist_file*

Description

The **wl_copy** command copies the wordlist files or directories given by names out to a floppy disk. Names should be relative pathnames, not absolute pathnames, since they will be used to load the vocabularies onto a FlexWord system.

Note: Make sure change to the directory where your FlexWord wordlists are located, usually **/att/asr/wordlists/active**

If any of the names are directory names, the contents of the directories and any subdirectories are also copied to floppy disk.

Example

wl_copy database

wl_edit

The **wl_edit** command edits FlexWord wordlists.

Synopsis

wl_edit [-l *chan#*] [-s *ssp#*] [-L *language*] [-D *directory*] [-O] [-I] [-?]

Description

The **wl_edit** command invokes a Motif-based phoneme editor for wordlists. Wordlists are opened using a standard Motif interface, and then words can be added, changed, or deleted.

Audible playback is provided with Text-to-Speech so that you can hear the pronunciation of any word. You must dial into the channel specified with the **-l** option in order to hear the pronunciations.

Error messages are written to a small window at the bottom of the screen. Error messages are also logged to the file **/usr/tmp/wledit.output**.

The tip/ring **-I chan#** argument is used to specify which tip/ring channel to use for speech playback. If this argument is not specified, then playback will default to channel 0. See Appendix C, "Calculating the O.S. Index," of *CONVERSANT System Version 8.0 Speech Development, Processing, and Recognition*, 585-313-218, for information about computing channel numbers.

Note: Be sure to validate the tip/ring channel number before executing the **wl_edit** command.

The command arguments are as follows:

- **-s ssp#** — Specifies which SSP circuit card to use for speech playback. Circuit cards are referenced by O.S. index displayed in the **display card** command.
- **-L language** — Specifies the language output that appears on the screen.
- **-D directory** — Specifies directory the program will start in.
- **-O** — Used for debugging purposes and causes certain events to be recorded in the output window.
- **-I** — Inhibits forced initialization of the SSP circuit cards. The **wl_edit** command usually determines if the cards need to be reset and provides a forced initialization. The advantage of using this option is that the FlexWord Editor comes up faster. The disadvantage is that in some unusual situations you may not be able to hear the pronunciation of your words. If this happens, run **wl_edit** again without specifying the **-I** option.



CAUTION:

If the voice system is running, **wl_edit** will prompt you to stop the voice system before continuing.

Example

To dial into tip/ring channel 0 and use the SSP with O.S. index 5, enter the following command: **wl_edit -I0 -s5 -D /att/asr/wordlists/active -O -I**

See Also

wl_init

wl_gen

The **wl_gen** command creates data files for a FlexWord vocabulary.

Synopsis

wl_gen -L language

Description

The **wl_gen** command uses the wordlists in **/att/asr/wordlists/active** and the models in **/att/asr/models/seg.yy21** to create all of the data files needed for FlexWord recognition. In particular, **wl_gen** creates the following files:

- **/att/asr/grammar_hs/sw_grammar.h** — A header file for FlexWord recognition scripts
- **/att/asr/sr_files/sr_file.sw** — Reformatted active wordlists
- **/vs/pack/cmp.seg.sw** — Vocabulary and model information for companion card DSPs.
- **/vs/pack/resource.sw** — Wordlist resource information for the resource manager.

The **wl_gen** command should be called whenever there is a change to an active wordlist or when a wordlist has been activated or deactivated. You need to diagnose the FlexWord SSP circuit card after using the **wl_gen** command.

The [-L language] argument is used to specify the language output that appears on the screen, that is, Brazilian, English, French, German, Japanese, or Spanish.

If more than 38 phonemes, including the underscore character (`_`), are found with any word or phrase within a wordlist by the **wl_gen** command, you receive an error message. Once **wl_gen** finds an error within a wordlist, it quits looking at that wordlist, and the wordlist containing that word or phrase is not used when generating the FlexWord data files. Therefore, if you receive an error, you may have to run **wl_gen** several times to iteratively locate each error.

An example of the error message you would receive regarding the filename **ACCT_NUM** is as follows:

```
Generating the FlexWord data files ...
'ACCT_NUM' ignored: it contains a word with more than 38
phonemes
(Six_Six_Six_Six_Six_Six_Six_Six_Six_)
```

The **wl_gen** command retains the wordlist numbers of any active wordlist. This means that scripts do not have to be recompiled unless they use a wordlist that was not active on the previous invocation of **wl_gen**.

Example

wl_gen

See Also

wl_edit

diagnose card

wl_init

The **wl_init** command generates an initial wordlist from a set of words.

Synopsis

wl_init *file*

Description

The **wl_init** command takes a file consisting of words and/or phrases and adds a phonetic pronunciation for each word or phrase. The pronunciation is determined by a dictionary lookup, and uses the phonetic alphabet "cecilbet." The input file should consist of one word or phrase per line, with an underscore character (_) instead of white space between words of a phrase. For example, "call Rachel" should be written "call_Rachel." Words are case insensitive. Each line of the file will be augmented with a tab followed by the cecilbet phonetic transcription of the line.

Example

wl_init database

See Also

wl_edit

wl_install

The **wl_install** command reads FlexWord vocabularies from floppy disk.

Synopsis

wl_install

Description

The **wl_install** command reads FlexWord vocabularies from a floppy disk, and copies them into **att/asr/wordlists/inactive**. It then asks whether any wordlists are to be activated, and if necessary, whether **wl_gen** should be run.

Example

wl_install

xferdip_off

The **xferdip_off** command deactivates the bridging capability.

Synopsis

xferdip_off

Description

The **xferdip_off** command deactivates the bridging capability. If the xferdip is running, this command stops it.

Example

xferdip_off

xferdip_on

The **xferdip_on** command activates the bridging capability.

Synopsis

xferdip_on

Description

The **xferdip_on** command activates the bridging capability. If the voice system is running, this command starts the xferdip.

Example

xferdip_on

B Country Switch Packages

Overview

Note: The information in this chapter does not apply to the UCS 1000 platform as it is a digital-only offer.

This appendix provides reference material on country-specific switch packages and related parameters.

It lists the switch package for every country where the CONVERSANT system is currently sold for both the DEFINITY private branch exchange (or switch) and public switched telephone networks (PSTN) where applicable. That list is present in alphabetical order by country name.

This appendix also includes a list of tunable circuit card/line parameters.

Tunable Analog Circuit Card/Line Parameters

A component of analog switch integration is tunable analog circuit card/line parameters. These parameters are set in country-specific packages through a **trParms** file. The parameters that are adjustable are:

- Touch-tone_generation

To meet DTMF generation requirements in various countries, parameters are available to adjust:

- ~ The power level of the high and low group frequency components of DTMF digits
- ~ DTMF on and off duration (in milliseconds) of dialed digits

- Speech_Clipping.

To limit maximum output speech energy levels of outgoing speech, parameters are available to adjust:

- ~ The energy level at which clipping will start
- ~ The energy level to clip back to upon violation
- ~ The time(msec) that energy levels can be violated before clipping starts

- CPT_detection

To meet power level detection requirements for some target countries, there are parameters associated with the Call Progress Tone (CPT) detection algorithm.

- Touch-tone_detection

To meet power level detection requirements for some target countries, there are parameters associated with the DTMF detection algorithm.

- **Speech_energy_detection**
Parameters are available to enhance the speech energy detection.
- **Ring_duration/Answer_Delay**
In-coming AC ring detection is adjustable to meet country specifications.
- **Post_On/Off_Hook_delays**
Parameters associated with delays between the time an On/Off hook request is serviced and the time the acknowledgment is sent back to the requesting process. It can be used to limit the time between successive call attempts, and network required billing delays.
- **Dial-Pulse_Generation**
Parameters are available to adjust the MAKE/BREAK and interdigit durations of out-dialed dial-pulse digits.
- **DTMF_Muting**
A parameter is available to allow DTMF muting on a bridged call to be disabled. DTMF muting is a feature that is currently always enabled. When enabled, the DTMF detection accuracy is increased because outgoing speech is muted when the presence of a DTMF tone is initially detected (early detect). By disabling the outgoing speech, the DTMF detector increases its accuracy by eliminating false detections and broken touch-tones caused by reflected speech.

When muting is disabled, outgoing speech will continue to play when a DTMF tone is detected. Muting may be disabled in application where call bridging is used. This allows DTMF tones to be passed on bridged calls without the receiving end cutting out speech, or tones.
- **Polarity_Reversal**
Note: This parameter applies only to the NGTR (AYC30).

Timer values are available to adjust the steady state timer and minimum reversal duration.
- **CODEC_Filter_Coefficients**
Note: This parameter applies only to the NGTR (AYC30).

Filter coefficients for the CODEC are settable to adjust line impedance, gain, echo return loss, and trans-hybrid loss. Calculation of these coefficients comes from a modeling tool from the component manufacture.
- **AC_Ring_detector**
Note: This parameter applies only to the NGTR (AYC30).

Card-level parameters are available to support incoming AC ring frequency discrimination. This is required for countries with very specific requirements on must detect and must not detect ranges, such as Germany.

- Companding

Note: This parameter applies only to the NGTR (AYC30).

Both Mu-Law and A-Law companding are supported at five different companding points. A bit mapped (0 ~ 31) card level parameter controls which companding to do at which point. A header file (**tr_compand.h**) defines each of these areas. The areas are:

- ~ TDM bus side of the Scotch NPE
- ~ Concentration Highway side of the Scotch NPE
- ~ DSP complex input convert (from CODEC)
- ~ DSP complex output convert (to CODEC)
- ~ The CODEC (one setting both directions)

- Country_Code

Note: This parameter applies only to the NGTR (AYC30).

A country code parameter is available to set various relays on a per-card basis. This parameter controls card behavior in the following ways:

- ~ Relay state while on-hook
- ~ Relay state while off-hook
- ~ Relay state while dial-pulsing
- ~ Method used to do dial-pulsing (Use switch-hook or use Dial-pulse relay)
- ~ Dial-pulse signalling digit to pulse mapping (n or n+1)

Country-Specific Switch Packages

This section lists the switch package parameters for every country where the CONVERSANT system is currently sold for both the DEFINITY PBX and PSTNs. Table 57 through Table 82 on page 475 are presented in alphabetical order by country name.

Table 57. DEFINITY Switch Package Parameters for Argentina

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
1 of 3			

Table 57. DEFINITY Switch Package Parameters for Argentina

Parameter	Value	Units	Specification, Notes
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING_LIMIT	-12.0	dBm	
TR_CLIPPING_DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	200	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-29	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POST_ONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
2 of 3			

Table 57. DEFINITY Switch Package Parameters for Argentina

Parameter	Value	Units	Specification, Notes
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
3 of 3			

Table 58. DEFINITY Switch Package Parameters for Australia

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	50 < digit duration
TR_DTMF-OFFTIME	60	msec	70 < interdigit pause < 3000
TR_DTMF_H_LEVEL	-8	dBm	-22dbm < hlev < -5
TR_DTMF_L_LEVEL	-10	dBm	-22dbm < hlev < -5
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN468B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	2	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	1		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

1 of 2

Table 58. DEFINITY Switch Package Parameters for Australia

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-3	dB	
Switch Hook Flash Duration	300	msec	Register recall
Wink Disconnect Interval	350	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	No		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 59. PSTN Switch Package Parameters for Australia

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	50 < digit duration
TR_DTMF-OFFTIME	60	msec	70 < interdigit pause < 3000
TR_DTMF_H_LEVEL	-8	dBm	-22dbm < hlev < -5
TR_DTMF_L_LEVEL	-10	dBm	-22dbm < hlev < -5
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN468B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	1	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6200	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	1		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

1 of 2

Table 59. PSTN Switch Package Parameters for Australia

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-9	dB	
Switch Hook Flash Duration	300	msec	Register recall
Wink Disconnect Interval	350	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 60. DEFINITY Switch Package Parameters for Belgium

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	40000	ohms	TN2149, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		

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Table 60. DEFINITY Switch Package Parameters for Belgium

Parameter	Value	Units	Specification, Notes
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
2 of 2			

Table 61. DEFINITY Switch Package Parameters for Brazil

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	200	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		

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Table 61. DEFINITY Switch Package Parameters for Brazil

Parameter	Value	Units	Specification, Notes
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	6	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	2		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 62. Switch Package Parameters for Canada

Parameter	Value	Units	Specification, Notes
Same as US built-in defaults			

Table 63. DEFINITY Switch Package Parameters for France

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	30000	ohms	TN2183 DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	

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Table 63. DEFINITY Switch Package Parameters for France

Parameter	Value	Units	Specification, Notes
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	3		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	Loss added during bridging
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		

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Table 63. DEFINITY Switch Package Parameters for France

Parameter	Value	Units	Specification, Notes
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
3 of 3			

Table 64. DEFINITY Switch Package Parameters for Germany

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	42000	ohms	Based on in-country testing
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	200	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-32	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
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Table 64. DEFINITY Switch Package Parameters for Germany

Parameter	Value	Units	Specification, Notes
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	4		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-6	dB	Add 6 dB of loss on TR bridged calls
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)

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Table 64. DEFINITY Switch Package Parameters for Germany

Parameter	Value	Units	Specification, Notes
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 65. Switch Pkg. Parameters (Germany: PSTN)

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	42000	ohms	
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	10000	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	600	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDetect_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
1 of 3			

Table 65. Switch Pkg. Parameters (Germany: PSTN)

Parameter	Value	Units	Specification, Notes
TR_DTMF_DETECT_MIN	-32	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	4		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-6	dB	Add 6 dB of loss on TR bridged calls
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling

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Table 65. Switch Pkg. Parameters (Germany: PSTN)

Parameter	Value	Units	Specification, Notes
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 66. DEFINITY Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	50 < digit duration < 200
TR_DTMF-OFFTIME	60	msec	50 < digit duration < 200
TR_DTMF_H_LEVEL	-7	dBm	
TR_DTMF_L_LEVEL	-9	dBm	
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	720	msec	
TR_CLIPPING LIMIT	-9.0	dBm	Speech limit < -10 dBm
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-9.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN746B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	300	msec	
1 of 3			

Table 66. DEFINITY Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_DUR	5000	msec	
TR_EDetect_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	default(0)	dB	
Switch Hook Flash Duration	500	msec	Register recall

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Table 66. DEFINITY Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	Fpf		
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Table 67. PSTN Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	50 < digit duration < 200
TR_DTMF-OFFTIME	60	msec	50 < digit duration < 200
TR_DTMF_H_LEVEL	-7	dBm	
TR_DTMF_L_LEVEL	-9	dBm	
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	720	msec	
TR_CLIPPING LIMIT	-9.0	dBm	Speech limit < -10 dBm
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-9.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN746B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
1 of 3			

Table 67. PSTN Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	300	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
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Table 67. PSTN Switch Package Parameters for Hong Kong

Parameter	Value	Units	Specification, Notes
ANALOG_LOSS_COMP	default(0)	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 68. DEFINITY Switch Package Parameters for Ireland

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	
TR_DTMF-OFFTIME	80	msec	
TR_DTMF_H_LEVEL	-11	dBm	
TR_DTMF_L_LEVEL	-13	dBm	
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN468B, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
1 of 3			

Table 68. DEFINITY Switch Package Parameters for Ireland

Parameter	Value	Units	Specification, Notes
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	300	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDetect_MIN	-43	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	6		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
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Table 68. DEFINITY Switch Package Parameters for Ireland

Parameter	Value	Units	Specification, Notes
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-3	dB	Loss added during bridging
Switch Hook Flash Duration	200	msec	Register recall
Wink Disconnect Interval	80	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 69. DEFINITY Switch Package Parameters for Italy

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-6	dBm	CRT21 -9.0 dBm, +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-8	dBm	CRT21 -11 dBm, +2.5/-2.0 dB
TR_PULSE_ON	60	msec	61.5 +/- 10 msec
TR_PULSE_OFF	40	msec	38.5 +/- 7.5 msec
TR_PULSE_INTERDIGIT	750	msec	interdigit pause > 700 msec
TR_CLIPPING LIMIT	-12.0	dBm	Speech limit < -10 dBm
TR_CLIPPING DUR	1000	msec	
1 of 3			

Table 69. DEFINITY Switch Package Parameters for Italy

Parameter	Value	Units	Specification, Notes
TR_CLIPPING_THRESH	-12.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN2135 DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	200	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDetect_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-28	dBm	
TR_DTMF_DETECT_MIN	-32	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	4		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
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Table 69. DEFINITY Switch Package Parameters for Italy

Parameter	Value	Units	Specification, Notes
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	No		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 70. DEFINITY Switch Package Parameters for Japan

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	
TR_DTMF-OFFTIME	80	msec	
TR_DTMF_H_LEVEL	-10.2	dBm	
TR_DTMF_L_LEVEL	-11.2	dBm	
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	700	msec	
TR_CLIPPING LIMIT	-16.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-16.0	dBm	
TR_TRANSHYBRID_LOSS	3000 0	ohms	TN46B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	140	msec	
TR_MAX_RING_DUR	5000	msec	Ignore constant ring
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	3000	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
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Table 70. DEFINITY Switch Package Parameters for Japan

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	2		Disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	No		Interrupted dial tone
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 71. PSTN Switch Package Parameters for Japan

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	
TR_DTMF-OFFTIME	80	msec	
TR_DTMF_H_LEVEL	-10.2	dBm	
TR_DTMF_L_LEVEL	-11.2	dBm	
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	700	msec	
TR_CLIPPING LIMIT	-16.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-16.0	dBm	
TR_TRANSHYBRID_LOSS	30000	ohms	
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	140	msec	
TR_MAX_RING_DUR	5000	msec	Ignore constant ring
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	3000	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		

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Table 71. PSTN Switch Package Parameters for Japan

Parameter	Value	Units	Specification, Notes
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	2		Disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 72. DEFINITY Switch Package Parameters for Luxembourg

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	40000	ohms	TN2149, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

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Table 72. DEFINITY Switch Package Parameters for Luxembourg

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	0	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 73. DEFINITY Switch Package Parameters for Mexico

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	> 40 ms duration of digit
TR_DTMF-OFFTIME	80	msec	> 40 ms interdigit pause
TR_DTMF_H_LEVEL	-6	dBm	~ -6dbm, high band 2 +/- 1 above low band
TR_DTMF_L_LEVEL	-8	dBm	~ -8dbm, high band 2 +/- 1 above low band
TR_PULSE_ON	66	msec	10 +/- 1 pulses/sec, 67ms +/- 3%
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	600	msec	300 < interdigit pause < ?
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN746B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDetect_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-35	dBm	
TR_POST_OFFHK_DELAY	1500		
TR_POSTONHK_DELAY	2000		
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		

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Table 73. DEFINITY Switch Package Parameters for Mexico

Parameter	Value	Units	Specification, Notes
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	default	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 74. PSTN Switch Package Parameters for Mexico

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	> 40 ms duration of digit
TR_DTMF-OFFTIME	80	msec	> 40 ms interdigit pause
TR_DTMF_H_LEVEL	-6	dBm	~ -6dbm, high band 2 +- 1 above low band
TR_DTMF_L_LEVEL	-8	dBm	~ -8dbm, high band 2 +- 1 above low band
TR_PULSE_ON	66	msec	10 +- 1 pulses/sec, 67ms +- 3%
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	600	msec	300 < interdigit pause < ?
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN746B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-35	dBm	
TR_POST_OFFHK_DELAY	1500		
TR_POSTONHK_DELAY	2000		
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		

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Table 74. PSTN Switch Package Parameters for Mexico

Parameter	Value	Units	Specification, Notes
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	default	dB	
Switch Hook Flash Duration	100	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 75. DEFINITY Switch Package Parameters for the Netherlands

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	60	msec	61.5 +/- 10 msec
TR_PULSE_OFF	40	msec	38.5 +/- 7.5 msec
TR_PULSE_INTERDIGIT	750	msec	Interdigit pause > 700 msec
TR_CLIPPING LIMIT	-12	dBm	Speech limit < -10 dBm
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	27000	ohms	TN2144, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	600	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		

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Table 75. DEFINITY Switch Package Parameters for the Netherlands

Parameter	Value	Units	Specification, Notes
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	default	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 76. DEFINITY Switch Package Parameters for New Zealand

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	50 < digit duration
TR_DTMF-OFFTIME	60	msec	70 < interdigit pause < 3000
TR_DTMF_H_LEVEL	-8	dBm	-22dbm < hlevel < -5
TR_DTMF_L_LEVEL	-10	dBm	-22dbm < hlevel < -5
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	800	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-12.0	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN468B, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	1	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6200	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	Ignore constant ring
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	1		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
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Table 76. DEFINITY Switch Package Parameters for New Zealand

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-9	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	350	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 77. DEFINITY Switch Package Parameters for Spain

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	35000	ohms	TN2180, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	140	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-25	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	2		

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Table 77. DEFINITY Switch Package Parameters for Spain

Parameter	Value	Units	Specification, Notes
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	2		Disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-3	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 78. PSTN Switch Package Parameters for Spain

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	160	msec	CTR21 > 65 msec
TR_DTMF-OFFTIME	80	msec	CTR21 > 65 msec
TR_DTMF_H_LEVEL	-5	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-7	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	
TR_CLIPPING LIMIT	-12.0	dBm	
TR_CLIPPING DUR	1000	msec	
TR_CLIPPING_THRESH	-12	dBm	
TR_TRANSHYBRID_LOSS	45000	ohms	TN2180, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	740	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-35	dBm	
TR_DTMF_DETECT_MIN	-30	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	2		
TR_COMPANDING	0		

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Table 78. PSTN Switch Package Parameters for Spain

Parameter	Value	Units	Specification, Notes
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	2		Disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	2		Disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	default	dB	
Switch Hook Flash Duration	100	msec	Register recall
Wink Disconnect Interval	100	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

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Table 79. Switch Pkg. Parameters (Thailand)

Parameter	Value	Units
Same as US built-in defaults		

Table 80. DEFINITY Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	Not less than 68ms, duty cycle < 52%
TR_DTMF-OFFTIME	80	msec	Not less than 68ms, duty cycle < 52%
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	10 +- 1 pulses/sec, 67 +5,-4% break ratio
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	720 < interdigit pause < 920
TR_CLIPPING LIMIT	-12.0	dBm	CTR21 <-9.7dBm over 1 minute
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-12.0	dBm	CTR21 <-9.7dBm over 1 minute
TR_TRANSHYBRID_LOSS	18000	ohms	TN468B, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
TR_MAX_RING_DUR	5000	msec	Ignore constant ring
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	

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Table 80. DEFINITY Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-12	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	80	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
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Table 80. DEFINITY Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
3 of 3			

Table 81. PSTN Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	80	msec	Not less than 68 ms, duty cycle < 52%
TR_DTMF-OFFTIME	80	msec	Not less than 68 ms, duty cycle < 52%
TR_DTMF_H_LEVEL	-9	dBm	CTR21 -9.0dBm +2.0/-2.5 dB
TR_DTMF_L_LEVEL	-11	dBm	CTR21 -11.0dBm +2.0/-2.5 dB
TR_PULSE_ON	66	msec	10 +- 1 pulses/sec, 67 +-5, -4% break ratio
TR_PULSE_OFF	33	msec	
TR_PULSE_INTERDIGIT	750	msec	720 < interdigit pause < 920
TR_CLIPPING LIMIT	-12.0	dBm	CTR21 <-9.7dBm over 1 minute
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-12.0	dBm	CTR21 <-9.7dBm over 1 minute
TR_TRANSHYBRID_LOSS	18000	ohms	TN468B, TN2183 DEFINITY Circuit Packs
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	100	msec	
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Table 81. PSTN Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_DUR	5000	msec	Ignore constant ring
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-30	dBm	
TR_DTMF_DETECT_MIN	-25	dBm	
TR_POST_OFFHK_DELAY	1500	msec	
TR_POSTONHK_DELAY	2000	msec	
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	0		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
ANALOG_LOSS_COMP	-12	dB	
Switch Hook Flash Duration	80	msec	Register recall

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Table 81. PSTN Switch Package Parameters for the United Kingdom

Parameter	Value	Units	Specification, Notes
Wink Disconnect Interval	80	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Table 82. DEFINITY Switch Package Parameters for the United States

Parameter	Value	Units	Specification, Notes
TR_DTMF_ONTIME	100	msec	
TR_DTMF-OFFTIME	60	msec	
TR_DTMF_H_LEVEL	-7	dBm	
TR_DTMF_L_LEVEL	-7	dBm	
TR_PULSE_ON	60	msec	
TR_PULSE_OFF	40	msec	
TR_PULSE_INTERDIGIT	600	msec	
TR_CLIPPING LIMIT	-11.0	dBm	Speech limit < -10 dBm
TR_CLIPPING DUR	500	msec	
TR_CLIPPING_THRESH	-8.8	dBm	
TR_TRANSHYBRID_LOSS	25000	ohms	TN746B DEFINITY Circuit Pack
TR_RECALL_TYPE	0		No earth recall
TR_ANSWER_DELAY	0	rings	Number of rings before answering
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Table 82. DEFINITY Switch Package Parameters for the United States

Parameter	Value	Units	Specification, Notes
TR_MAX_RING_INTERVAL	6400	msec	Time between start of ring voltage signals
TR_MIN_RING_DUR	80	msec	
TR_MAX_RING_DUR	5000	msec	
TR_EDETECT_MIN	-38	dBm	
TR_CPT_DETECT_MIN	-28	dBm	
TR_DTMF_DETECT_MIN	-35	dBm	
TR_POST_OFFHK_DELAY	1500		
TR_POSTONHK_DELAY	2000		
TR_DTMF_MUTE	1		
TR_CALLER_ID	0		
TR_POLARITY_SS_TMR	500	msec	
TR_POLARITY_MIN_DUR	200	msec	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	1		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	
TR_V27_48GAIN	-4.7	dBm	
TR_V29_72GAIN	-7.1	dBm	
TR_V29_96GAIN	-3.1	dBm	
TR_FAX_RECV_GAIN	0	dB	
TR_D_RINGTONE_DISCONNECT	0		Do NOT disconnect on ring tone
TR_D_BUSYTONE_DISCONNECT	0		Do NOT disconnect on busy tone
TR_D_REORDERTONE_DISCONNECT	0		Do NOT disconnect on reorder tone
TR_D_DIALTONE_DISCONNECT	2		Disconnect on dial tone
TR_D_STUTTERDT_DISCONNECT	2		Disconnect on stutter dial tone
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Table 82. DEFINITY Switch Package Parameters for the United States

Parameter	Value	Units	Specification, Notes
ANALOG_LOSS_COMP	default (0)	dB	
Switch Hook Flash Duration	500	msec	Register recall
Wink Disconnect Interval	300	msec	Minimum time to declare disconnect
Type of Signaling	TT		Network address signaling
Incoming Speech Volume	4000		+ 12 dB gain
Outgoing Speech Volume	1000		Unity gain
Outgoing Text Volume	4000		+ 12 dB gain (TTS)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Initiate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		
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Country Switch Package Supported Call Progress Tones

Table 83 lists the supported call progress tone parameters for every country where the CONVERSANT system is currently being sold for both the DEFINITY PBX and, where applicable, for public switched telephone networks (PSTNs) in alphabetic order by country name.

Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)				
Australia	PSTN	Dial Tone	425 or	+/- 3	-30 - +1	Steady (2.3 sec min)				
		Ring Back	400 or 400+450			400/200/400/2000				
		Busy	425 400			375/375				
		Reorder/# Unobtainable	425 or 400			2500/500				
		FAX cng	1100			+/-12	-25 - +1	500/3000		
	DEFINITY	Stutter Dial Tone	404 + 450	+/- 3	-20 - +1	150/150 150/150 150/150 steady				
		Ring Back	425			400/200/400/2000				
		Busy/Reorder				400/400				
		Intercept				2500/500				
		FAX cng	1100	+/-12	-25 - + 1	500/3000				
		Argentina	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.0 sec min)		
	Stutter Dial Tone			150/150 150/150 150/steady						
Ring Back	440 + 480			1000/4000						
Busy	480+620 or 425			500/500						
	Reorder			425 or 480+620	250/250					
FAX cng	1100			+/- 12	-25 - +1			500/3000		
Belgium	DEFINITY			Dial Tone	425			+/- 3	-20 - +1	Steady (1.2 Sec min)
				Stutter Dial Tone	NA					Not used in default configuration
		Ring Back	425	+/- 3	-20 - +1	1000/3000				
		Busy				500/500				
		Reorder				200-250/ 200-250				
		FAX cng	1100	+/- 12	-25 - +1	500/3000				

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Brasil	DEFINITY	Dial Tone	425 or	+/- 3	-20 - +1	Steady (1.2 Sec min)
			425			
		Stutter Dial Tone	425			100/100
						100/100
	PSTN	Ring Back		+/- 12	-25 - +1	100/steady
		Busy/				1000/4000
		Reorder				250/250
		FAX cng	1100			500/3000
		Dial Tone	350+440		-30 - +1	Steady (1.2 sec min)
		Ring Back	440 + 480			1000/4000
		Busy	480+620			500/500
		Reorder				250/250
		FAX cng	1100	+/- 12	-25 - +1	500/3000
Canada	DEFINITY	Dial Tone	350+440	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone				150/150
						150/150
						150/steady
		Ring Back	440 + 480			1000/4000
		Busy	480+620			500/500
		Reorder				250/250
Columbia	DEFINITY	FAX cng	1100	+/- 12	-25 - +1	500/3000
		Dial Tone	425	+/- 3	-20 - +1	Steady (1.3 sec min)
		Stutter Dial Tone				100/100
						100/100
						100/steady
		Ring Back				1000/4000
		Busy				500/500
		Reorder				250/250
		FAX cng	1100	+/- 12	-25 - +1	500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
France	PSTN	Dial Tone	425 or	+/- 3	-30 - +1	Steady (2 sec min)
			450 or			
			400 + 425 or			
			425 or			
			450			
		Ring Back	425 or			1000/4000
			450 or			
			425 or			1000/5000
			450 or			1000/9000
			425			960/3840
		Busy	425 or			500/500
			425 or			310/310
			425 or			250/250
			450 or			150/475
			425			150/475
		Reorder	425 or			310/310
			425 or			250/250
			450			150/475
		FAX cng	1100	+/- 12	-25 - +1	500/3000
France	DEFINITY	Dial Tone	330	+/- 5	-30 - +1	Steady (2 sec min)
		Stutter Dial Tone	and/or 440			
		Ring Back	440			1500/3500
		Busy				500/500
		Reorder				200/200
		FAX cng	1100	+/- 12	-25 - +1	500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Germany	PSTN	Dial Tone	425 or	+/- 3	-30 - +1	Steady (1.3 sec min)
			450 or			
			400+425 or			
			425 or			
			450			
		Ring Back	425 or 450 or			750/750/250/250
			425 or			700/800/200/300
			450 or			1000/4000
			425			1000/5000
		Busy	425 or			1000/9000
			425 or			960/3840
			450 or			500/500
			425			310/310
		Reorder	425 or			250/250
			425 or			150/475
			450			150/475
			1100			500/3000
Germany	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.3 sec min)
		Stutter Dial Tone	425			150/150
		Ring Back	425			150/150
		Busy	425			150/steady
		Re-order	425			1000/4000
		FAX cng	1100			150/475
						250/250
Hong Kong	PSTN	Dial Tone	350 + 440	+/- 3	-30 - +1	Steady (1.2 sec min)
		Ring Back	440 + 480			400/200/400/3200
		Busy	480 + 620			500/500
		Reorder				250/250
		FAX cng	1100			500/3000
	DEFINITY	Dial Tone	350 + 440	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone				150/150
		Ring Back	440 + 480			150/150
		Busy	480 + 620			150/steady
		Reorder				400/200/400/3200
		FAX cng	1100			500/500
						250/250
						500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Ireland	DEFINITY	Dial Tone	350 + 440	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone				100/100 100/100 100/steady
		Ring Back	404 + 450			400/200 400/2000
		Busy	404			350/400
		Reorder				400/350 200/550
		FAX cng	1100	+/- 12	-25 - +1	500/3000
Italy	DEFINITY	Dial Tone	350 + 425	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone	425			100/100 100/100 100/steady
		Ring Back	425			1000/4000
		Busy				500/500
		Reorder				200/200
		FAX cng	1100	+/- 12	-25 - +1	500/3000
Japan	PSTN	Dial Tone	400	+/- 3	-30 - +1	Steady (1.8 sec min)
		Ring Back				800-1500/1600-3000
		Busy				500/500
		FAX cng	1100	+/- 12	-25 - +1	500/3000
	DEFINITY	Dial Tone	404	+/- 3	-30 - +1	Steady (1.8 sec min) or 250/250
		Stutter Dial Tone				100/100 100/100 100/250/250
		Ring/Special Ring Back				375+425
		Busy	404			500/500
FAX cng	1100	+/- 12	-25 - +1	500/3000		
Luxembourg	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone	NA			Not used in default configuration
		Ring Back	425			1000/3000
		Busy				500/500
		Reorder				200-250/ 200-250
		FAX cng	1100	+/- 12	-25 - +1	500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Mexico	PSTN	Dial Tone	350 + 425	+/- 3	-30 - +1	Steady (1.3 sec min)
		Ring Back	425			1000/4000
		Busy	350 + 425			250/250
		FAX cng	1100	+/- 12	-25 - +1	500/3000
	DEFINITY	Dial Tone	350 + 425	+/- 3	-20 - +1	Steady (1.3 sec min)
		Stutter Dial Tone	425			100/100 100/100 100/steady
		Ring Back				1000/4000
		Busy/Reorder	350 + 425 or 425			200-250/ 200-250
		FAX cng	1100	+/- 12	-25 - +1	500/3000
Netherlands	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.2 Sec min)
		Stutter Dial Tone	NA			Not used in default configuration
		Ring Back	425	+/- 3	-20 - +1	1000/ 3000-4000
		Busy				400-600/ 400-600
		Reorder				200-250/ 200-250 repeat
		FAX cng	1100	+/- 12	-25 - +1	500/3000
New Zealand	DEFINITY	Dial Tone	404 + 450	+/- 3	-20 - +1	Steady (1.2 Sec min)
		Stutter Dial Tone				150/150 150/150 150/steady
		Ring Back	404 + 425			400/200/400/2000
		Busy/Reorder Intercept	425			400/400 2500/500
		FAX cng	1100	+/- 12	-25 - +1	500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Spain	PSTN	Dial Tone	425	+/- 3	-30 - +1	Steady (1.2 sec min)
		Intl Dial Tone	600			Steady (1.2 sec min)
		Ring Back	425			1500/3000
		Busy				200/200
		Reorder				200/200/200/ 200/200/600
		FAX cng	1100	+/- 12	-25 - +1	500/3000
	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.2 Sec min)
		Stutter Dial Tone				150/150 150/150 150/ steady
		Ring Back				1500/3000
		Busy				200/200
		Reorder				200/200/200/ 200/200/600
		Intercept				200/200/200/600
		FAX cng	1100	+/- 12	-25 - +1	500/3000
Thailand	DEFINITY	Dial Tone	350 + 440	+/- 3	-20 - +1	Steady (1.2 Sec min)
		Stutter Dial Tone				150/150 150/150 150/steady
		Ring Back	440 + 480			1000/4000
		Busy	480 + 620			500/500
		Reorder				250/250
		FAX cng	1100	+/- 12	-25 - +1	500/3000
United Kingdom	PSTN	Dial Tone	350 + 440	+/- 3	-30 - +1	Steady (1.2 sec min)
		Ring Back	400 + 450			400/200/400/2000
		Busy	400			375/375
		Reorder				400/350/225/525
		FAX cng	1100	+/- 12	-25 - +1	500/3000
	DEFINITY	Dial Tone	350 + 440	+/- 3	-20 - +1	Steady (1.2 sec min)
		Stutter Dial Tone				100/100 100/100 100/steady
		Ring Back	404 + 450			400/200/400/2000
		Busy	404			375/375
		Reorder			-30 - +1	400/350/225/525
		FAX cng	1100	+/- 12	-25 - +1	500/3000

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Table 83. Switch Package Supported Call Progress Tones

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
United States	DEFINITY	Dial Tone	350 + 440	+/- 3	-20 - +1	Steady (1.0 sec min)
		Stutter Dial Tone				150/150 150/150 150/steady
		Ring Back	440 + 480			1000/4000
		Busy	480 + 620			500/500
		Reorder				250/250
		FAX cng	1100	+/- 12	-25 - +1	500/3000
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C Format Conversion Tools for Fax Files

Overview

The CONVERSANT system provides a tool to convert files in tag image file format (TIFF) or FTF format to the TIFF Class F format compatible with the CONVERSANT V8 FAX Actions feature.

Note: Files in the format suitable for faxing on the CONVERSANT system are referred to as *fax files* to distinguish them from files in ASCII text format that can also be faxed on the system.

The fax files resulting from the conversion can be used with:

- The **faxit** command

See Appendix A, Summary of Commands for information on **faxit**.

- The Fax_Queue or Fax_Send actions

For Script Builder applications, see "Fax_Queue" and "Fax_Send" in Chapter 8 "Using Optional Features," in *CONVERSANT System Version 8.0 Application Development with Script Builder*, 585-313-217; for Voice@Work applications, see the chapter on external functions in *Using Voice@Work*, 585-313-207.

- The irFAXPrint or irFAXEnd irAPI functions

The tool can crop TIFF files to remove fax banners (headers) that appear at the top of faxes recorded by the CONVERSANT system. It can also change the horizontal offset and the resolution of the file.

Two versions of the tool are available, one for use on the CONVERSANT system and one for use on a personal computer (PC).

- The **tif2tif** tool runs on the UnixWare operating system on the CONVERSANT system.
- The **tif2tif.exe** tool runs on personal computers running the Microsoft Windows 95, Windows 98, or Windows NT operating system. Fax files created on a PC can be copied to the CONVERSANT system for faxing.

File Inputs

Both tools can convert the following types of files:

- Graphics interface format (GIF) image files converted to FTF format with the IMSI Hijaak Pro 4.01 software
- Files produced by scanning documents with the Hewlett-Packard Deskscan II, Version 2.3.1a software

For these conversions, you must manually run the **tif2itf** or **tif2itf.exe** tool on the appropriate computer.

Note: Other files may be successfully converted by these two tools, but the tools are not certified to convert all TIFF formats. Avaya welcomes reports of incompatibilities with specific TIFF formats, but cannot guarantee that the problem can always be corrected. You may be advised to choose another source for TIFF files for your image and document needs.

tif2itf.exe as a Post-Processor for the TiffWorks Driver

Besides being able to convert the file types listed in File Inputs on page 487, the **tif2itf.exe** tool for Windows systems is also designed to work as a post-processor for documents converted to TIFF format with the Informatik, Inc. TiffWorks driver. This driver is compatible with virtually any Microsoft Windows application that has a print option. When the **tif2itf.exe** tool and the TiffWorks driver are both installed on a Windows PC, you can save a file to CONVERSANT fax file format without the need to manually run the **tif2itf.exe** tool.

Task Overview

Table 84 lists the tasks necessary to use the **tif2itf** and **tif2itf.exe** tools.

Table 84. Task Overview for Fax File Conversion Tools

Tool	Runs On	Tasks
tif2itf	CONVERSANT system (UnixWare operating system)	1 Ensure that the tif2itf tool is installed on the CONVERSANT system. See Requirements on page 489. 2 Create a file with either of the following procedures: ~ Converting a Hijaak Pro 4.01 Image File on page 493 ~ Converting an HP Deskscan II Image File on page 494 3 Perform the procedure in Converting TIFF and FTF Files to CONVERSANT Fax Files on page 495.
tif2itf.exe (except as a post-processor for the TiffWorks driver)	Windows 95, 98, or NT PCs	1 Install the tif2itf.exe tool on the PC. See Installing the tif2itf.exe Tool for Windows Systems on page 490. 2 Create a file with either of the following procedures: ~ Converting a Hijaak Pro 4.01 Image File on page 493 ~ Converting an HP Deskscan II Image File on page 494 3 Perform the procedure in Converting TIFF and FTF Files to CONVERSANT Fax Files on page 495.
tif2itf.exe as a post-processor for the TiffWorks driver		1 Install the tif2itf.exe tool on the PC. See Installing the tif2itf.exe Tool for Windows Systems on page 490. 2 Install the TiffWorks driver on the PC. See Installing the TiffWorks Driver for the tif2itf.exe Post-Processor on page 492. 3 Perform the procedure in Converting TIFF and FTF Files to CONVERSANT Fax Files on page 495.

Requirements

The **tif2itf** tool for UnixWare and the **tif2itf.exe** tool for Windows are both part of the CONVERSANT Script Builder Fax Actions package. This package must be installed on your system to use these tools.

- To use the **tif2itf.exe** PC version of the conversion tool, you must also perform the procedure in Installing the tif2itf.exe Tool for Windows Systems on page 490.
- To use the **tif2itf.exe** tool on a PC as a post-processor for the TiffWorks driver, you must install the driver. See Installing the TiffWorks Driver for the tif2itf.exe Post-Processor on page 492. For Windows NT systems, you must have NT4SETUP to install the driver.

Installing the tif2itf.exe Tool for Windows Systems

Installing the **tif2itf.exe** tool on a Windows PC includes the following procedures:

- Creating an Installation Diskette on page 490
- Installing the Software on page 491

Note: Once the **tif2itf.exe** tool is installed, you can uninstall it with the following procedure:

- Uninstalling the Software on page 491

Creating an Installation Diskette

The installation diskette for **tif2itf.exe** is created on the CONVERSANT system. To complete this procedure, you must have one of the following:

- A diskette formatted for the Windows operating system that has at least 220 kB of free space
- An unformatted diskette
- A diskette formatted for any operating system that you can reformat

CAUTION:

Reformatting a diskette destroys any data stored on it.

On the CONVERSANT system, use the following procedure to create a **tif2itf.exe** installation diskette:

- 1 At the console prompt, enter **mktifdisk**

The system displays the following prompt:

Insert Diskette into Floppy Drive and press ENTER.

- 2 Insert a diskette into the diskette drive on the CONVERSANT system and press **Enter**.

Note: If the diskette is not formatted for the Windows operating system, the system displays the following message:

```
Diskette is not formatted for DOS/Windows.  
OK to reformat? (n)
```

Enter **y**

The system displays the following message:

```
Insert new diskette for /dev/rdisk/f03ht and press  
<RETURN> when ready.
```

Press **Enter**.

The system displays the following message followed by a listing of the byte count on the diskette:

```
Formatting... Format complete.
```


The system displays the following message:

Copy tif2itf files to Diskette...Done.

Files successfully copied. Insert diskette in Windows PC and using Notepad read instructions in *.readme.txt.

- 3 Remove the diskette from the diskette drive, label it "tif2itf Installation Diskette," and store it according to local practice.

Installing the Software Use the following procedure to install the **tif2itf.exe** tool on a PC:

- 1 Insert the **tif2itf** installation diskette you made in the procedure Creating an Installation Diskette on page 490 in the diskette drive on the PC.
- 2 Click the **Start** button on the Windows task bar.
- 3 Click **Run**
- 4 In the open: field on the Run window, enter **a:setup**
- 5 Click **OK**

The PC displays the following messages:

```
A:\> rem Install Script for tif2itf
A:\> rem Installing tif2itf
A:\> mkdir c:\tif2itf
A:\> copy a:tif2itf.* ca;\tif2itf
      1 file(s) copied.
A:\> notepad a:readme.txt
A:\> rem Installation Completed
A:\> Press any key to continue.
```

- 6 Press any key.
- 7 Remove the **tif2itf** installation diskette from the diskette drive and store it according to local practice.

Uninstalling the Software

The **tif2itf** executable, **tif2itf.exe**, is installed on the PC in the directory **C:\tif2itf**. To uninstall the software, remove the **C:\tif2itf** directory. See the Windows documentation for your PC for the procedure to remove a directory.

Installing the TiffWorks Driver for the tif2itf.exe Post-Processor

To use the **tif2itf.exe** tool on a PC as a post-processor for the TiffWorks driver, you must first install the driver on the PC.

Use the following procedure to procure the TiffWorks driver and install it on a Windows PC.

Note: For Windows NT systems, you also need NT4SETUP.

- 1 Use a web browser to access the Informatik, Inc. web site at <http://www.informatik.com/>
- 2 Either download an evaluation copy of the TiffWorks driver or purchase a copy by following the instructions on the website.
- 3 Use the vendor procedures to install the TiffWorks driver on the PC.

Note: The recommended setting for the resolution option is 200x192.

- 4 Customize the configuration file as follows.

Note: You must already have installed the **tif2itf.exe** tool on the PC to complete this step. See Installing the tif2itf.exe Tool for Windows Systems on page 490.)

- ~ If you are using an evaluation copy of TiffWorks V5.81, (or equivalent), you can use the configuration file installed from the tif2itf installation diskette. To do so, enter the following command:

copy c:\tif2itf\tif2itf.ini c:\tiffwk32\tiffwk32.ini

- ~ If you are using a registered copy of the TiffWorks driver, edit the Settings parameters in the file **C:\tiffwk32\tiffwk32.ini** by using the following information as a guide:

```
[Settings]
Compression =14
Singlestrip=1
Fillorder=
Defaultdir=c:\
FileName=c:\tif2itf\temp\tif
Serialization=0
PoseEXE=c:\tif2itf\tif2itf.exe C:\tif2itf\temp.tif
Status=
Save=
Resolution=
Pages=1
```

Note: This configuration supports only one file conversion at a time.

Converting Documents With the TiffWorks Driver and tif2itf.exe Tool

Use the following procedure on a PC to convert a document to a CONVERSANT fax file by using the TiffWorks driver with the **tif2itf.exe** tool as a post-processor. The **tif2itf.exe** tool and the TiffWorks driver must both be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 490 and Installing the TiffWorks Driver for the tif2itf.exe Post-Processor on page 492).

The **tif2itf.exe** tool is automatically invoked as a post-processor when you print a document and select the TiffWorks driver. Only one document can be converted at a time. The converted file can be used directly with the FAX Actions feature.

- 1 On the PC, open a document in any Windows application with a print capability.
- 2 On the **File** menu, click **Print** to access the Print window.
- 3 In the printer Name: box, select **TIFFWORKS32**
- 4 Click **OK**

The system displays a window titled Save Document in Intuity TIF Format?. This is the window for the **tif2itf.exe** post-processor.

- 5 Enter a filename for the CONVERSANT fax file.
- 6 Click **Save**.
- 7 Copy the converted file to an CONVERSANT V8 system for use with the FAX Actions feature.

Converting a Hijaak Pro 4.01 Image File

Use the following procedure to convert a Hijaak Pro 4.01 image file to an CONVERSANT fax file. This procedure has two stages.

- On a PC, the image file is first saved in FTE format with the Hijaak Pro 4.01 software.
- Once the file is in FTE format, you can use either the **tif2itf.exe** or **tif2itif** tool to convert it to a CONVERSANT fax file.

Note: To complete the conversion on the PC, the **tif2itf.exe** tool must be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 490). To complete the conversion on the CONVERSANT system, the **tif2itif** tool must be installed on the system (see Requirements on page 489).

- 1 On the PC, open the image file with Hijaak Pro 4.01 software.
- 2 On the **File** menu, click **Save As**
- 3 Enter a filename for the FTE-converted file.

4 In the Save as type: box, select **FTF - Faxable TIF**

5 Click **Options** and select the following FTF options:

Scaling:	Fit in Width
Units:	Inches
Maximum Width:	(your choice in inches)
Distort aspect:	12
Horizontal offset:	(leave blank)
Vertical offset:	(leave blank)

6 Click **OK**

7 Click **Save**

8 Do one of the following:

- ~ On the PC, use the **tif2itf.exe** tool to convert the FTF file to a CONVERSANT fax file. Then copy the file to the CONVERSANT system.
- ~ Copy the file to the CONVERSANT system, and use **tif2itif** tool to convert the FTF file to an CONVERSANT fax file.

The file can now be used with the FAX Actions feature.

Converting an HP Deskscan II Image File

Use the following procedure on a PC to convert an HP Deskscan II, Version 2.3.1a image file to a CONVERSANT fax file. This procedure has two stages.

- The image file is first converted to TIFF5 format with the Deskscan software.
- Once the file is in TIFF5 format, you can use either the **tif2itf.exe** tool or **tif2itif** tool to convert it to a CONVERSANT fax file.

Note: To complete the conversion on the PC, the **tif2itf.exe** tool must be installed on the PC (see Installing the tif2itf.exe Tool for Windows Systems on page 490). To complete the conversion on the CONVERSANT system, the **tif2itif** tool must be installed on the system (see Requirements on page 489).

1 Scan the image using the procedures provided by the vendor.

- ~ Select the high resolution black and white option.
- ~ Save the file in TIFF5 format.

2 Do one of the following:

- ~ On the PC, use the **tif2itf.exe** tool to convert the TIFF5 file to a CONVERSANT fax file. Then copy the file to the CONVERSANT system.
- ~ Copy the file to the CONVERSANT system, and use **tif2itif** tool to convert the TIFF5 file to a CONVERSANT fax file.

The file can now be used with the FAX Actions feature.

Converting TIFF and FTF Files to CONVERSANT Fax Files

Use this procedure to convert TIFF and FTF files to CONVERSANT fax files with the **tif2tif** tool on the CONVERSANT system or the **tif2tif.exe** tool on a PC. Both tools use the same arguments and options.

Note: To perform the conversion on the PC, the **tif2tif.exe** tool must be installed on the PC (see Installing the tif2tif.exe Tool for Windows Systems on page 490). To perform the conversion on the CONVERSANT system, the **tif2tif** tool must be installed on the system (see Requirements on page 489).

1 If you are using the UnixWare version of the tool (**tif2tif**), copy the file to be converted to the CONVERSANT system.

2 Enter:

```
~ (on a PC)
  tif2tif.exe [options] infile outfile
~ (on the CONVERSANT system)
  tif2tif [options] infile outfile
```

where

```
~ infile is the name of the file to be converted.
~ outfile is a name you select for the converted file.
```

Note: You may want to assign a **.tif** suffix to the infile and a **.itf** suffix to the outfile to distinguish them. No particular suffix is required, however.

```
~ [options] indicates the optional parameters (see Optional Parameters
on page 495).
```

3 If you created the fax file on a PC, copy the file to the CONVERSANT system.

Optional Parameters

You can adjust the position of the image and the resolution in the converted file by using the following parameters:

- **-f** or **-n** — Forces the output to fine (**-f**) or normal (**-n**) resolution

The converted file by default maintains the same resolution as the input file. Converting a normal resolution file to fine resolution creates a file with twice as many horizontal data lines. The resulting image looks identical to the original. Converting a fine resolution file to normal resolution removes every other horizontal data line. The resulting image does not look as sharp as the original.

- **-h +num** or **-h -num** — Horizontal offset in inches (+ for left, - for right)
- **-v +num** or **-v -num** — Vertical offset in inches (+ for down, - up)

The vertical offset is commonly used to crop the top of a file to remove a fax banner.

Note: The default unit (blank) for offsets is inches. Use **i** to specify inches. Use **c** to specify centimeters.

Examples

The following examples create a fax file in normal resolution with the image moved to the right 5 centimeters and the top 0.25 inches cropped:

(on a PC)

tif2itf.exe -n -h 5c -v -.25 infile.tif outfile.itf

(on the CONVERSANT system)

tif2itf -n -h 5c -v -.25 infile.tif outfile.itf

Cautions

- Neither the **tif2itf** nor the **tif2itf.exe** tool can convert TIFF files that contain color information.
- The **tif2itf.exe** configuration with the TiffWorks driver described in this appendix supports only one file conversion at a time. This type of restriction normally does not apply on a Windows platform.
- Customers are responsible for evaluating the performance impact of using the **tif2itf** tool on a production CONVERSANT system. For this reason, it is strongly recommended that for CONVERSANT systems with medium to large capacity, TIFF conversions be performed on another system, either a UnixWare system such as another CONVERSANT system or a Windows system.
- The input TIFF file must have the BitsPerSample and SamplesPerPixel fields set to 1 in the directory header. These fields are set correctly in the conversion types described in this appendix. If conversions of other file types are attempted, these fields may need to be reset.

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

I**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, such 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 XYZ 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-to-Speech 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_srz** 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

VRDP

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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