Lucent Technologies
Bell Labs Innovations

INTUITY™ CONVERSANT® System

Version 6.0
Administration

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Comcode 108037854
Issue 3.0
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- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

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Acknowledgment
This document was prepared by the Product Documentation, Lucent Technologies, Columbus, OH.

RECYCLED PAPER

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About This Book

Purpose

The purpose of this document, *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591, is to describe the procedures needed to perform full system administration for 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 Audiences

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 choose to administer their own systems
- Personnel from the Technical Service Organization (TSO) who support the on-site technician or customer

Release History

This is the third release of this book to support the INTUITY™ CONVERSANT® System Version 6.0 product.

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How to Use This Book

This document 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

See Chapter 1, “Administration Overview”, to familiarize you with the INTUITY CONVERSANT user interface and the system administration process including the user interface and the INTUITY CONVERSANT menus.

See Chapter 2, “UNIX Administration”, for information about how to access the SYSADM menu, as well as the procedures to perform basic UnixWare-level administration.

See Chapter 3, “Voice System Administration”, for 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.

See Chapter 4, “Feature Package Administration”, for information about administering Fax Actions and ASAI for use with the voice system.

See Chapter 5, “Switch Interface Administration”, for the procedural information and reference information for administering the supported analog and digital switch interfaces.

See Chapter 6, “Database Administration”, for the information and procedures about how to administer databases for use with the voice system.

See Chapter 7, “Peripheral Administration”, for information and procedures about how to configure and administer the peripheral equipment connected to your voice system, namely modems, printers, and remote terminals.

See Chapter 8, “Daily Administration”, for quick reference information about some of the more common, or daily, administrative tasks. Daily administration includes running system reports, common procedures such as system monitoring, media formatting, and back ups, and administering the date and time.

Reference Material

See Appendix A, “Summary of Commands”, for an alphabetical list of every command in the INTUITY CONVERSANT system command language.

See Appendix B, “Country Switch Packages”, for an alphabetical list of every 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.

See the “Glossary” section to help identify and define commonly used terms and acronyms.

To Locate Specific Topics

This book includes an alphabetical index at the end for quick access to specific topics.

Conventions Used in This Book

This section describes the conventions used in this book.

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 ENTER. 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 INTUITY CONVERSANT system displays *windows, screens,* and *menus*. Windows and screens both show and request system information (Figure 1 through Figure 4). Menus (Figure 5) present options from which you can choose to view another menu, or a screen or window.

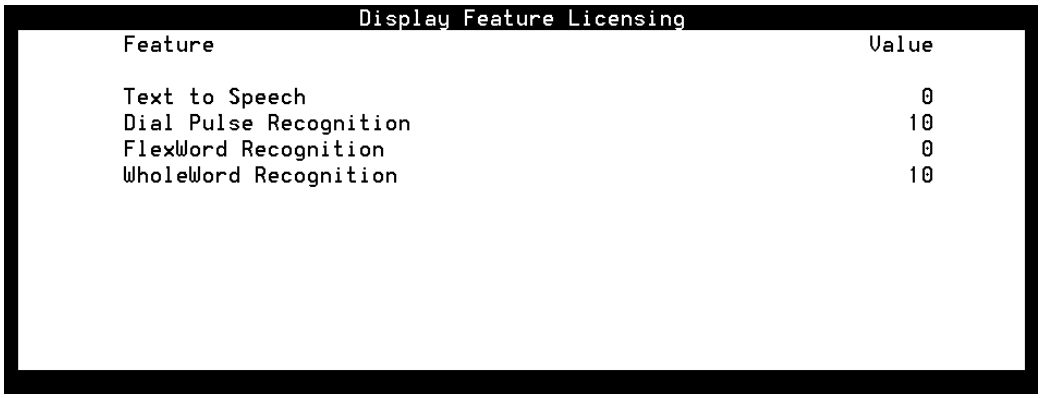


Figure 1. Example of an INTUITY CONVERSANT Window Showing Information

```
In order to install UnixWare, you must reserve a partition (a
portion of your hard disk's space) on your primary hard disk for
the UNIX System.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 partition(s).

The UNIX System partition that you intend to use on the primary
hard disk must be at least 120 MBs and labeled 'ACTIVE.'
```

Figure 2. Example of an INTUITY CONVERSANT Screen Showing Information

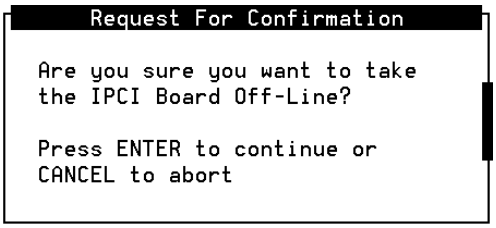


Figure 3. Example of an INTUITY CONVERSANT Window Requesting Information

```
You may use a partition of your secondary hard disk.  If you
choose to use a partition of your secondary hard disk you will be
shown a screen that will allow you to partition your secondary
hard disk.

WARNING: All files in any partition(s) you delete will be
destroyed.

If you choose to create a UNIX System partition on your secondary
hard disk, it must be at least 40 MBs.

Your Options are:

1.  Do not use a partition of the secondary hard disk for
    the UNIX System.
2.  Use a partition of the secondary hard disk for the
    UNIX System.

Press ‘1’ or ‘2’ followed by ‘ENTER’.
```

Figure 4. Example of an INTUITY CONVERSANT Screen Requesting Information

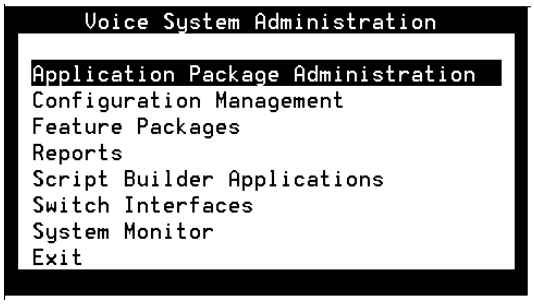


Figure 5. Example of an INTUITY CONVERSANT Menu

Terminal Keys

- Keys that you press on your terminal or PC are represented as rounded boxes. For example, an instruction to press the enter key is shown as

  Press ENTER.

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

  Press ALT D.

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

  Press F3 (Choices).

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

  Press 1 to record a message.

Screen Displays

- Values, system messages, field names, and prompts that appear on the screen are shown in typewriter-style `constant-width` type, as shown in the following examples:

  Example 1:

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

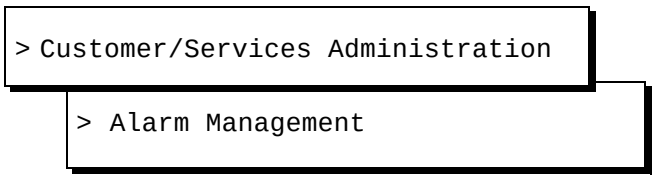
  Example 2:

  ```
  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 INTUITY CONVERSANT Main Menu and select



  In this example, you would access the INTUITY CONVERSANT Main Menu and select the Customer/Service Administration menu. From the Customer/Service Administration menu, you would then select the Alarm Management screen.

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

Other Typography

- Commands and text you type in or enter appear in **bold type**, as in the following examples:

  Example 1:

  Enter **change-switch-time-zone** at the `enter command:` prompt.

  Example 2:

  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 *regular italic* type when they are not, for example

  Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.

Safety and Security Alert Labels

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

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

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

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

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

Related Resources

This section describes additional documentation and training available for you to learn more about the INTUITY CONVERSANT product.

Documentation

The *INTUITY CONVERSANT System Version 6.0 System Description*, 585-310-241, contains a detailed description of all books included in V6.0 INTUITY CONVERSANT documentation library. Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an INTUITY CONVERSANT system.

Required for System Administration

To complete the administration of a V6.0 system, you must have a copy of this book.

You may also need to refer to the following books:

- an installation book specific to your platform:
  - *INTUITY CONVERSANT System Version 6.0 MAP/40 New System Installation*, 585-3150-178
  - *INTUITY CONVERSANT System Version 6.0 MAP/100C New System Installation*, 585-310-177
  - *INTUITY CONVERSANT System Version 6.0 MAP/100 New System Installation*, 585-310-176
- a maintenance book specific to your platform:
  - *INTUITY CONVERSANT System Version 6.0 MAP/40 Maintenance*, 585-3150-181
  - *INTUITY CONVERSANT System Version 6.0 MAP/100C Maintenance*, 585-310-180
  - *INTUITY CONVERSANT System Version 6.0 MAP/100 Maintenance*, 585-310-179
- *INTUITY CONVERSANT System Version 6.0 Systems Alarms and Log Messages*, 585-310-182
- *INTUITY CONVERSANT System Version 6.0 Upgrade*, 585-310-183

You may also need to refer to the following books for information about the Veritas system:

- *INTUITY™ CONVERSANT® System Version 6.0 Veritas Documentation*, 585-350-906
- *INTUITY™ CONVERSANT® System Version 6.0 Veritas Volume Manager*, 585-350-907

Additional Suggested Documentation

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

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

See the inside front cover for information on how to order INTUITY CONVERSANT documentation.

Electronic Updates to This Book

The ACCESS Electronic News online bulletin board is available to provide you with additional information about the INTUITY CONVERSANT product, including updates and supplements to the information in this book. This free service is available 24 hours a day, 7 days a week. To register and receive a special offer on ACCESS Plus software, call 1-800-242-6005 and ask for Department 186.

Training

For information on INTUITY CONVERSANT training, call the BCS Education and Training Center at one of the following numbers:

- Organizations within Lucent Technologies: (904) 636-3261
- Lucent Technologies customers and all others: (800) 255-8988

How to Comment on This Book

We are interested in your suggestions for improving this book. Please complete and return the reader comment card that is located behind the title page.

If the reader comment card has been removed, send your comments to:

Lucent Technologies
Product Documentation
Room 22-2H15
11900 North Pecos Street
Denver, Colorado 80234

You may also fax your comments to the attention of the Lucent Technologies INTUITY CONVERSANT writing team at (303) 538-1741.

Please mention the name and order number of this book, *INTUITY™ CONVERSANT® System V6.0 Administration*, 585-310-591.

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Administration Overview

1

Overview

This chapter provides an overview of system administration for the INTUITY™ CONVERSANT® system.

Purpose

The purpose of this chapter is to familiarize you with the INTUITY CONVERSANT user interface and the system administration process including:

- User interface overview
- User interface components
- The INTUITY CONVERSANT menus

User Interface Overview

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

The INTUITY 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.

INTUITY CONVERSANT User Interface

Many different kinds of activities are involved in administering the voice system, and they 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 often changes, the way the information is arranged does not change. The typical screen contents is as follows (Figure 1-1):

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

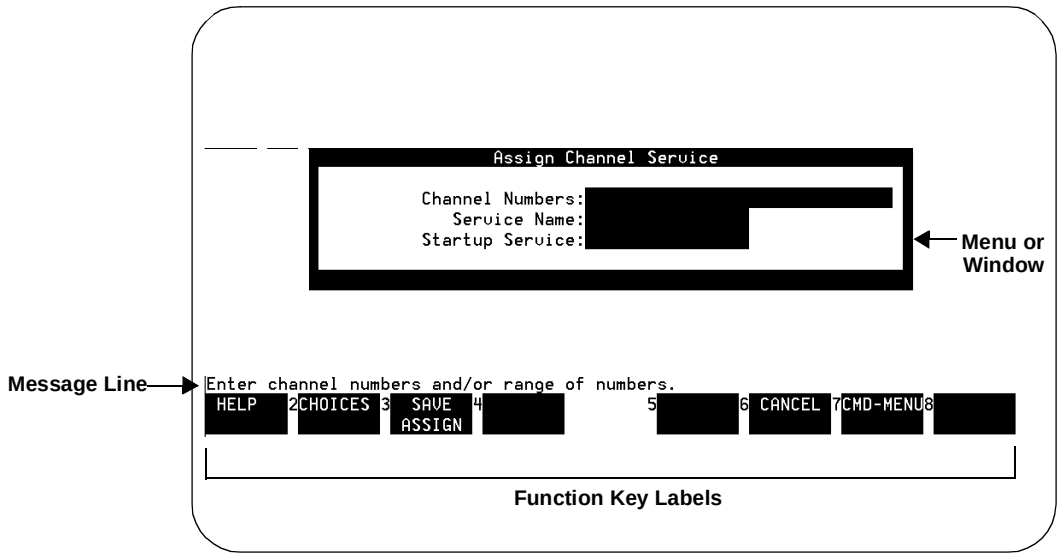


Figure 1-1. Sample INTUITY CONVERSANT System Screen

Cursor Movement Keys

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

Table 1-1. 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"	PgDn
Move up one "screenful"	PgUp
Move to beginning of menu, text, or list	HOME
Move to end of menu, text, or list	END
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 1-2).

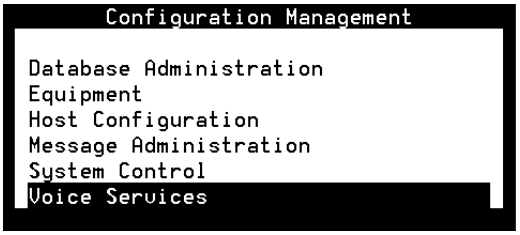


Figure 1-2. Sample Menu

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 1-2, type **S** to select `System Control`. 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 1-3 and Figure 1-4.

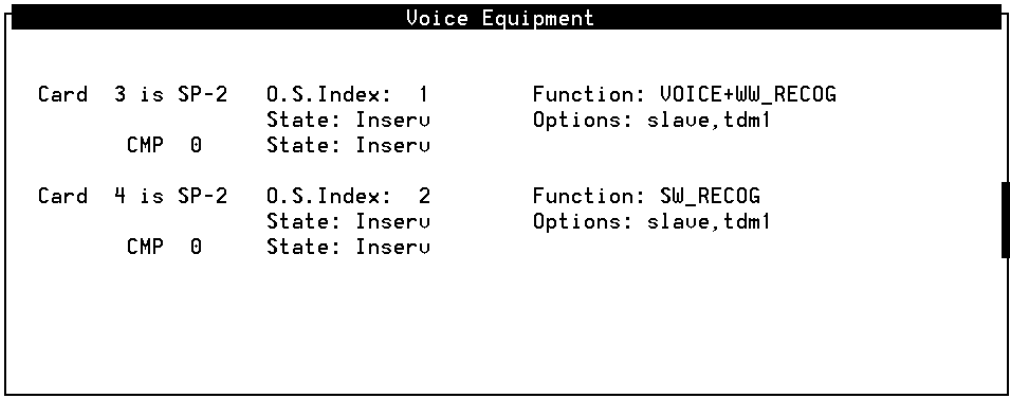


Figure 1-3. Sample Window

Figure 1-4. 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 1-1 the fields are `Channel Numbers`, `Service Name`, and `Startup Service`. Menus do not have fields.

Populating Fields

There are three ways to enter information in a field, as described below.

- 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 1-5, 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."

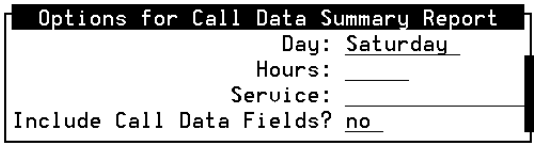


Figure 1-5. Fields in the Call Data Summary Report Window

- 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 1-6 for an example window with function key labels.

In Figure 1-6 you would press F1 to access the Help screen for the System Monitor window. Also in Figure 1-6, 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/window.

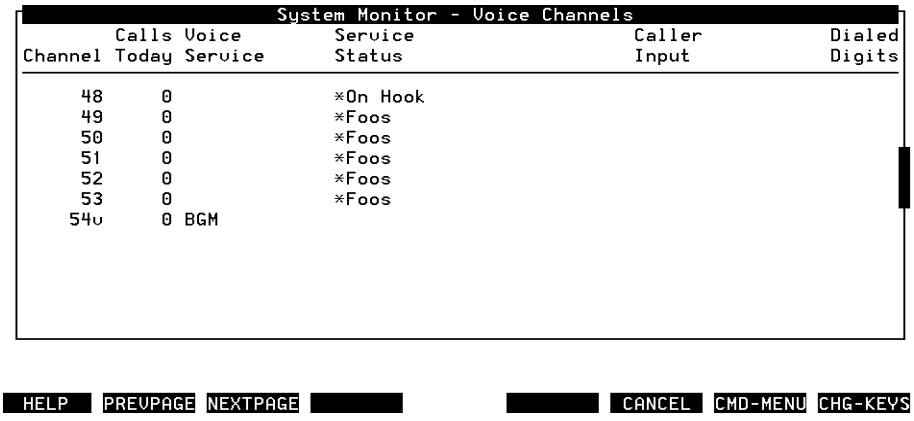


Figure 1-6. Function Key Labels — System Monitor Window

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/window in the system. See Table 1-2 for a description of standard function key labels.

Table 1-2. Standard Function Key Labels

Key	Description
F1 Help	Opens an online help window. See “Online Help” below 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” in Chapter 3, “Voice System 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 1-3 for a description of optional function key labels.

Table 1-3. 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 1-6 orders the system to move to the next page, while pressing F3 in Figure 1-7 sounds a beep, but does nothing else because that key is “empty.”
F3 (Save)	Preserves all changes made in the screen.

Continued on next page

Table 1-3. Optional Function Key Labels

Function Key Label	Description
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” in Chapter 3, “Voice System 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 1-6 and Figure 1-7 show the System Monitor window. Figure 1-7 displays the optional function key labels through the use of F8 (Chg-Keys) to switch between the standard (Figure 1-6) and optional (Figure 1-7) labels.

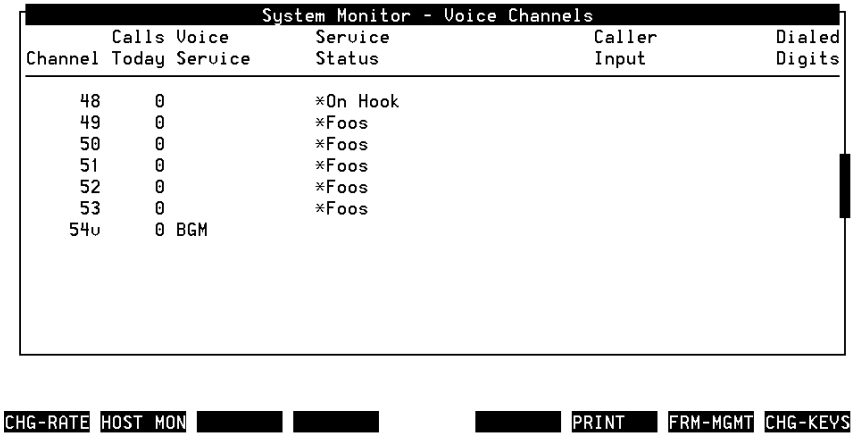


Figure 1-7. Change Keys — System Monitor Screen

NOTE:
In Figure 1-7, the `Host Mon` function key selection does not appear if host software is not installed.

Online Help

Most screens and windows have a companion text window that contains helpful reference information. Figure 1-8 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.

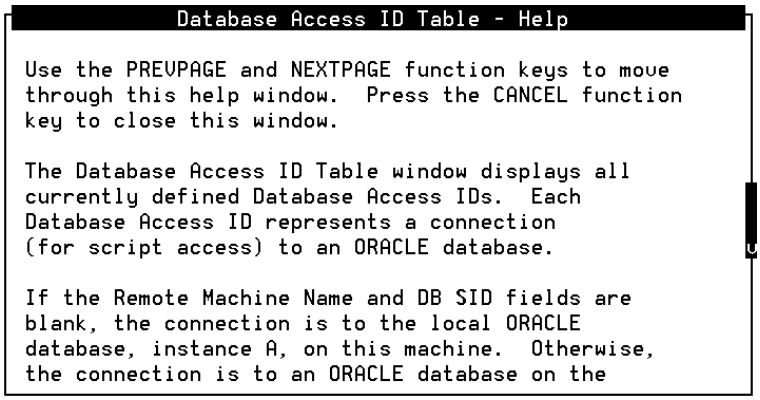


Figure 1-8. Sample Online Help Screen, Database Access ID Table

Access the INTUITY CONVERSANT Administration Menus

Use the procedure below to access the INTUITY CONVERSANT administration menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, enter **root**

   The system prompts you for a password.

2. Enter your root password.

   The system displays the system prompt #.

3. Enter one of the following commands at the prompt:

   - **cvis_mainmenu**

     The system displays the INTUITY CONVERSANT V6.0 menu (Figure 1-9).

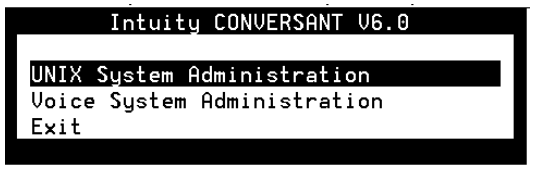


Figure 1-9. INTUITY CONVERSANT V6.0 Menu

   - **cvis_menu**

     The system displays the Voice System Administration menu (Figure 1-10). See Chapter 3, “Voice System Administration”, for more information and procedures on voice system administration.

CAUTION:

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

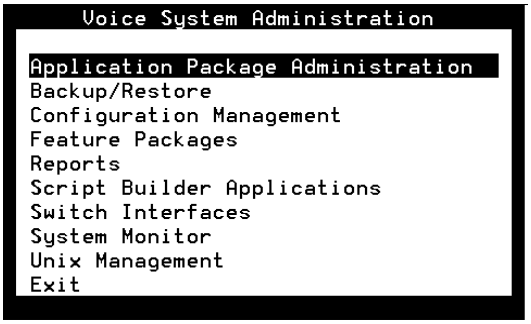


Figure 1-10. Voice System Administration Menu

INTUITY CONVERSANT Administration Menu Options

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

UNIX System Administration

The UNIX System Administration menu allows you to set up a variety of generic software operations including backups, printer operations, and peripheral setup. 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 INTUITY CONVERSANT administration menus and returns you to the UNIX system prompt.

Press F6 (CANCEL) from almost any place in the INTUITY 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 "Exit UNIX System Administration Menu" in Chapter 2, "UNIX Administration", for the procedure to exit from the UNIX System Administration menus.

UNIX Administration

2

Overview

This chapter describes the UnixWare™ system administration (SYSADM) user interface and the procedures needed to perform UnixWare-level administration.

Purpose

The purpose of this chapter is to provide the procedures needed to access the SYSADM menu, as well as the procedures to perform basic UnixWare-level administration.

The sections in this chapter are arranged in the same order as the administration services in the SYSADM main menu.

Novell® UnixWare™ Documentation

For additional information on SYSADM, including the command line interface, see the *Novell UnixWare Documentation Set*, 585-350-908.

Start with the *Introduction to System Administration* for a comprehensive overview of the UnixWare system administration books (Pages 3–4), and for an introduction to administration concepts and procedures.

Many of the procedures in this chapter reference various UnixWare system administration books. Follow the referenced procedures for additional information.

UNIX System Administration Access

Use the procedure below to access SYSADM (the OA&M menu interface of UnixWare):

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 INTUITY™ CONVERSANT® V6.0 menu (Figure 2-1).

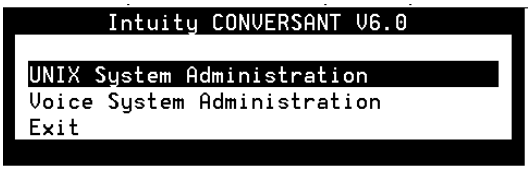


Figure 2-1. INTUITY CONVERSANT V6.0 Menu

4. Select `UNIX System Administration`.

   The system displays the UNIX System V Administration menu (Figure 2-2).

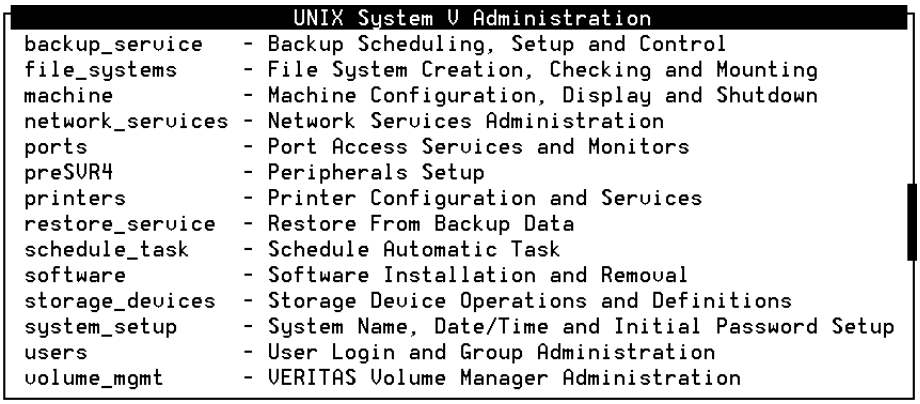


Figure 2-2. UNIX System V Administration Menu

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

Backup Scheduling, Setup, and Control

The Backup Service Management menu provides two backup options: basic and extended. Back-up files can be stored on either tape or diskettes.

NOTE:
Diskettes must be UNIX formatted when you begin this procedure; tapes may be unformatted.

See “Backing Up the INTUITY CONVERSANT System” in Chapter 3, “Common System Procedures”, in the maintenance book for your platform for information on when to conduct backups.

The basic back-up services allow you to:

- Display the date and time of the last system and incremental backup.
- Conduct a backup of all files or only selected files in your HOME directory.
- Add, change, delete, or display back-up requests.
- Back up all system and user files that have been modified or created since your voice system was installed.

The extended back-up services allow you to:

- Determine the backup rotation period.

- Specify how backups are to be done for file systems and data partitions.
- Display the back-up history and back-up status logs.
- Establish lists of files that should not be backed up.
- Respond to system prompts during back-up jobs.
- Schedule backups and the reminder messages that backups should be done.

NOTE:
If you want to backup and restore speech files, see the **spsav** command in Appendix A, ''Summary of Commands''.

Use the procedure below to access back-up services:

1. Start at the UNIX System V Administration menu (Figure 2-2) and select

```
> backup_service
```

   The system displays the Backup Service Management menu (Figure 2-3).

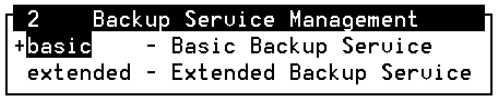


Figure 2-3. Backup Service Management Menu

Basic Backup

Use the procedure below to perform a basic backup:

1. Start at the Backup Service Management menu (Figure 2-3) and select

```
> basic
```

The system displays the Backup to Removable Media menu (Figure 2-4).

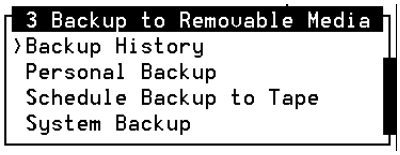


Figure 2-4. Backup to Removable Media Menu

Use the procedures below to access the different menu options of the Backup to Removable Media menu.

Back-up History

The Backup History menu option displays the date and time of the last system and incremental backup.

Use the procedure below to view the backup history:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select

```
> Backup History
```

   The system displays the Backup History window (Figure 2-5).

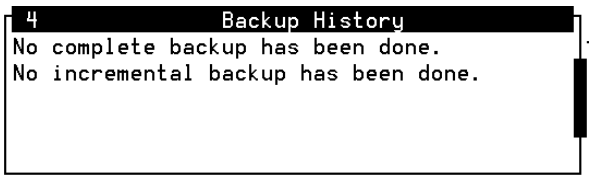


Figure 2-5. Backup History Window

2. Press F3 (CONT) to return to the Backup to Removable Media menu (Figure 2-4).

Backup of All Personal Files

A personal backup copies all the files in your HOME (or personal) directory to either tape or formatted diskettes.

Use the procedure below to backup *all* files in your personal directory:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select

```
> Personal Backup
    > Backup Files under /
```

The system displays the Select Removable Media menu (Figure 2-6).

```
 5        Select Removable Media
+Tape Drive 1
 Floppy Drive 1
 3.5 inch 1.44 Mbyte (High Density)
 3.5 inch 720 Kbyte (Low Density)
 3.5 inch 1.2 Mbyte (512 bytes/sector)
 3.5 inch 1.2 Mbyte (1024 bytes/sector)
```

Figure 2-6. Select Removable Media Menu

2. Select the removable media type.

   The system displays a message showing the approximate number of diskettes or tapes, as well as the time required to backup the HOME directory.

   The system prompts you to insert the first diskette or tape. The system will periodically prompt you to insert more diskettes/tapes, if needed, until the backup is complete.

3. Press ENTER when the backup is complete.

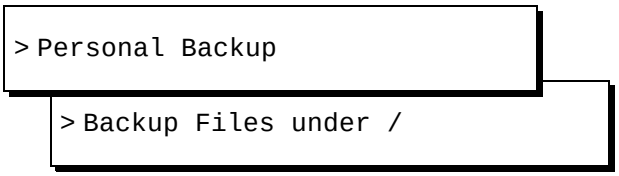
   The system redisplays the Backup to Removable Media menu (Figure 2-4).

Backup of Selected Personal Files

This procedure backs up selected files and directories in your HOME directory to either tape or formatted diskette.

Use the procedure below to backup selected personal files or directories:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select



The system displays the Select Removable Media menu (Figure 2-6).

2. Select the removable media type.

   The system displays the Selective Backup of Files under / window (Figure 2-7).

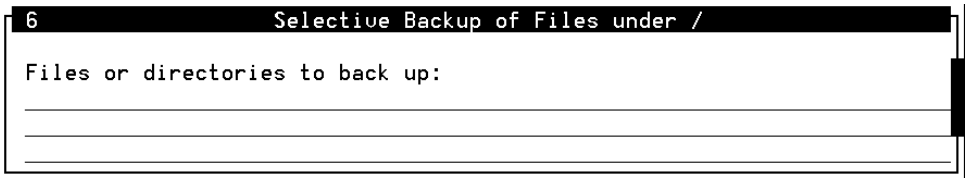


Figure 2-7. Selective Backup of Files under / Window

3. Enter the file names and directory names to be backed up separated by a space between each entry in the `Files or directories to back up:` field.

   NOTE:
   All files and directories must be in the HOME directory or in a subdirectory of HOME.

4. Press F3 (SAVE).

   The system displays a message showing the approximate number of diskettes or tapes, as well as the time required to backup the HOME directory.

   The system prompts you to insert the first diskette or tape. The system will periodically prompt you to insert more diskettes/tapes, if needed, until the backup is complete.

5. Press ENTER when the backup is complete.

   The system redisplays the Backup to Removable Media menu (Figure 2-4).

Schedule a Backup to Tape

The Schedule Backup to Tape menu option allows you to:

- Add a system or incremental backup.

- Change a previously scheduled backup request.
- Delete a previously scheduled backup request.
- Display the scheduled backup list.

NOTE:
You need either root or system administration privileges to add, change, or delete a scheduled backup. You do not need those privileges to display a list of scheduled backups.

Add a Backup

Use the procedure below to schedule a new backup to tape:

1. Start at the Backup to Removable Media Menu (Figure 2-4) and select

```
> Schedule Backup to Tape
    > Add
```

The system displays the Schedule a System Backup window (Figure 2-8).

```
5                Schedule a System Backup

Type of Backup: System Backup

Month(s) of the Year: all

Day(s) of the Month: all

Day(s) of the Week: all

Time of the Day: 02:00
```

Figure 2-8. Schedule a System Backup Window

2. Press F2 (CHOICES) to toggle between System Backup and Incremental System Backup in the `Type of Backup:` field. A system backup (field default) performs a back up all system and user files installed or modified since the voice system was first installed. An incremental backup performs a back up all system and user files since the last backup.
3. Enter a value in the `Month(s) of the Year:` field:

- Type a number from 1 to 12 where January is 1 and December is 12 to indicate a single month.
- Type two numbers separated by a hyphen to indicate a range of months. For example, type **1–8** to instruct the system to perform backups of January through August.
- Press F2 (CHOICES) and press F2 (MARK) to select one or more months. Press F3 (ENTER) to save the selected month(s) and return to the `Month(s) of the Year:` field.

The default value is "all," to backup all months.

4. Enter a value in the `Day(s) of the Month:` field:
   - Type a number from 1 to 31 corresponding to the day of the month to indicate a single day.
   - Type two numbers separated by a hyphen to indicate a range of days. For example, type **14–20** to instruct the system to perform a backup every day from the 14th through the 20th day of the month.
   - Press F2 (CHOICES) and press F2 (MARK) to select one or more days. Press F3 (ENTER) to save the selected day(s) and return to the `Day(s) of the Month:` field.

   The default is "all," to backup all days of the month.
5. Enter a value in the `Day(s) of the Week:` field:
   - Type the first letter of the day to indicate a single day of the week, or Press F2 (CHOICES) to select a single day from a menu.

     NOTE:
     Sunday is "Su" and Thursday is "Th." Every other day of the week is indicated by its first letter.

   - Type two days, separated by a hyphen to indicate a range of days. For example, type **M–Th** to instruct the system to perform a backup every Monday, Tuesday, Wednesday, and Thursday.
   - Press F2 (CHOICES) and press F2 (MARK) to select one or more days. Press F3 (ENTER) to save the selected day(s) of the week and return to the `Day(s) of the Week:` field.

   The default is "all," to backup all days of the week.
6. Set the `Time of Day:` field:
   a. Type a number in the `Hours` portion of the field to indicate the hour, where 00 is midnight and 23 is 11:00 p.m. Or, press F2 (CHOICES) to select from a menu.
   b. Press ▼.

      The system places the cursor in the minutes portion of the `field.`
   c. Type a number from 0 to 59 to indicate the minutes past the hour.

The default time is 02:00, to start the backup at 2:00 A.M.

7. Press F3 (SAVE).

   The system displays a confirmation window that asks whether you want to continue to schedule the backup.

8. To confirm the backup schedule, press F3 (CONT).

   The system returns to the Schedule Backup to Tape menu.

   OR

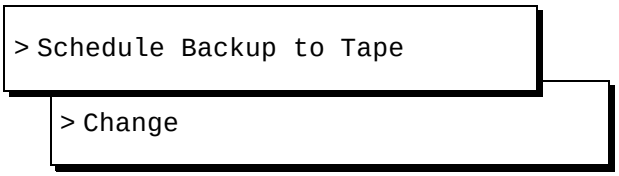
   To cancel the backup schedule, press F6 (CANCEL).

   The system returns to the Schedule Backup to Tape menu.

Change Scheduled Backup Settings

Use the procedure below to change scheduled backup settings:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select



   The system displays the Change Scheduled Backup window (Figure 2-9).

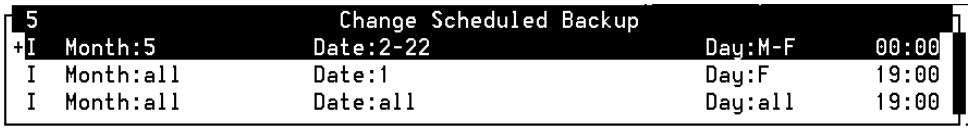


Figure 2-9. Change Scheduled Backup Window

2. Select the schedule backup to be changed and press F2 (MARK).
3. Press F3 (ENTER).

   The system displays the Change Scheduled Backup Information window (Figure 2-10).

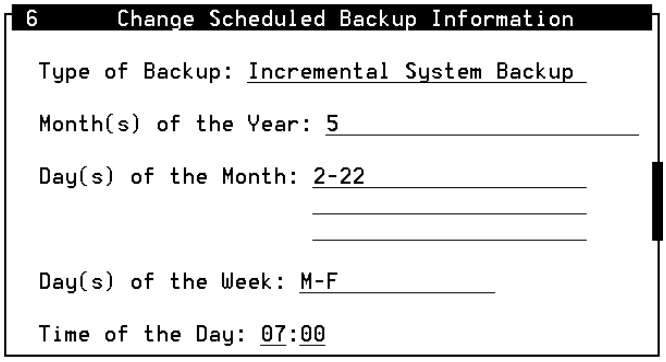


Figure 2-10. Change Scheduled Backup Information Window

4. Change the information as appropriate. See Step 2 through Step 6 in ''Add a Backup'' above for information on how to add data to the fields in this window.
5. Press F3 (SAVE).

   The system displays a confirmation window that asks whether you want to continue to schedule the backup.
6. To confirm the backup schedule, press F3 (CONT).

   The system returns to the Schedule Backup to Tape menu.

   OR

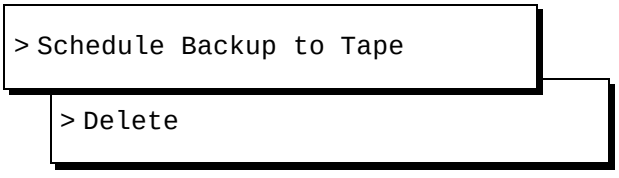
   To cancel the backup schedule, press F6 (CANCEL).

   The system returns to the Schedule Backup to Tape menu.

Delete a Scheduled Backup

Use the procedure below to delete scheduled backups:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select



   The system displays the Delete Scheduled Backups window (Figure 2-11).

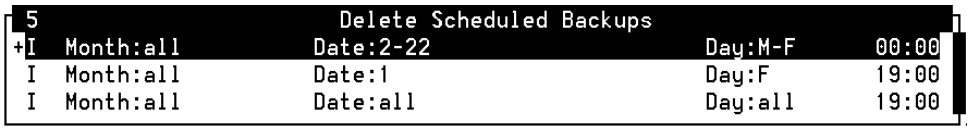


Figure 2-11. Delete Scheduled Backups Window

2. Select the scheduled backup to be deleted and press F2 (MARK). Select as many of the entries as necessary.
3. Press F3 (ENTER).

   The system displays a confirmation window to confirm the marked backups for deletion.
4. To confirm the backup deletion, press F3 (CONT).

   The system returns to the Schedule Backup to Tape menu.

   OR

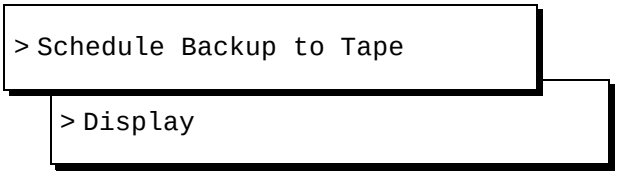
   To cancel the backup deletion, press F6 (CANCEL).

   The system returns to the Schedule Backup to Tape menu.

Display Scheduled Backups

Use the procedure below to display a list of scheduled backups:

1. Start at the Backup to Removable Media menu (Figure 2-4) and select



   The system displays the Display Scheduled Backup window (Figure 2-12).

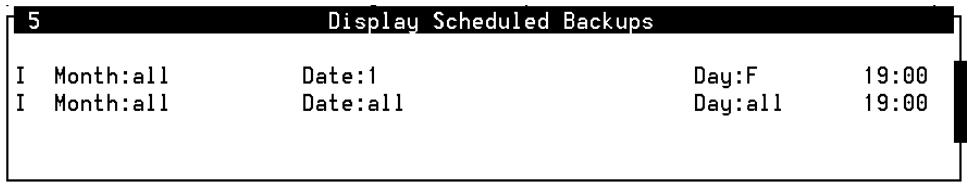


Figure 2-12. Display Scheduled Backups Window

2. Press F3 (CONT) or F6 (CANCEL) to return to the Schedule Backup to Tape menu (Figure 2-4).

Performing Extended Backup Services

See "Backing Up the INTUITY CONVERSANT System" in Chapter 3, "Common System Procedures", in the maintenance book for your platform for information on when and how to conduct extended backups.

File System Creation, Checking, and Mounting

File Systems administration allows you to:

- Check for and repair errors on a file system.
- Set file system defaults.
- Monitor disk usage for all file systems.
- Display a list of installed file system types.
- List files by age or size.
- Identify the file system type.
- Create a new file system.
- Mount or unmount a file system.

Figure 2-13 displays the options available for file system administration. See *UnixWare System Administration: File System Administration* for additional information about each of these options.

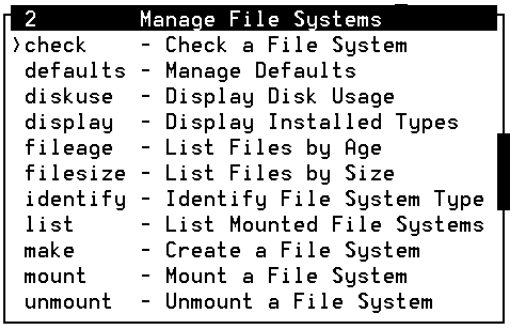


Figure 2-13. Manage File Systems Menu

Machine Configuration, Display, and Shutdown

Machine administration allows you to:

- Display system configuration information.
- Shut down the machine.
- Reboot the machine.
- Display a list of users who are logged on.

Figure 2-14 displays the options available for machine administration. See *UnixWare System Administration: File System Administration* for additional information about each of these options.

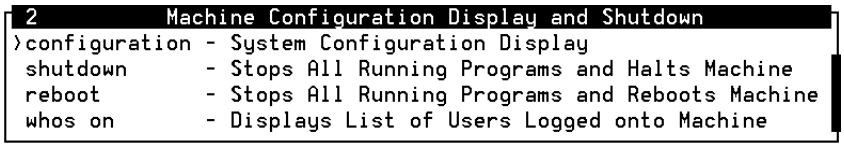


Figure 2-14. Machine Configuration Display and Shutdown Menu

Memory Size Disparity

The system may show that available memory is different than the amount that is actually available. See “Setting Up the UnixWare Environment”, in Chapter 9, “Installing Base System Software”, in the maintenance book for your platform for information about this inequality.

Network Services Administration

Network Services administration allows you to:

- Make network selections.
- Manage distributed file systems.
- Perform name to address translations.
- Manage basic networking.

Figure 2-15 displays the options available for network services administration. See *UnixWare System Administration NFS/RPC/NIS Administration* for additional information about each of these options.

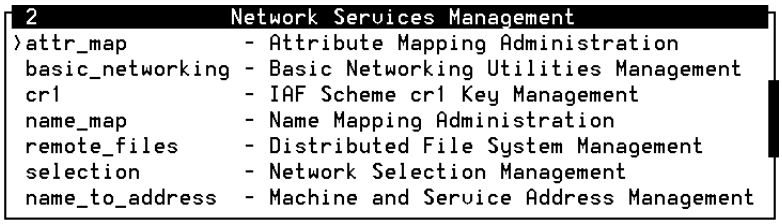


Figure 2-15. Network Services Management Menu

Port Access Services and Monitors

Ports administration allows you to monitor and service ports, set up quick terminal, and manage terminal line (tty) settings.

Figure 2-16 displays the options available for ports administration. See *UnixWare System Administration System: Setup and Configuration* for additional information about each of these options.

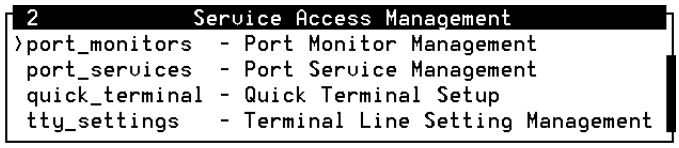


Figure 2-16. Service Access Management Menu

Peripherals Setup

preSVR4 administration is a placeholder for administering pre UNIX System V options. These options are not provided for INTUITY CONVERSANT Systems.

Peripheral administration for devices such as printers and modem for use with the voice system can be found in Chapter 7, “Peripheral Administration”.

Printer Configuration and Services

See Chapter 7, “Peripheral Administration”, for the procedures needed to configure a printer for use with the voice system.

Restore From Backup Data

Restore service administration allows you to perform basic and extended restore services.

NOTE:
If you want to backup and restore speech files, see the **spsav** command in Appendix A, ''Summary of Commands''.

Figure 2-17 displays the options available for restore service administration. See *UnixWare System Administration Backup and Restore Services* for additional information about each of these options.

Figure 2-17. Restore Service Management Menu

NOTE:
Both the backup and the restore options available through SYSADM use the **cpio** command, as does UNIX 3.2 FACE. The cpio parameters used in SYSADM and UNIX 3.2 FACE are not compatible. Use the options described here to back up and restore files and directories on the same system, not between systems. When copying from one system to another, use the **cpio** command directly, rather than through SYSADM or FACE.

Performing Basic Restore Services

Basic restore services allow you to perform a personal restore or a system restore. Figure 2-18 displays the options available for the Basic Restore Service.

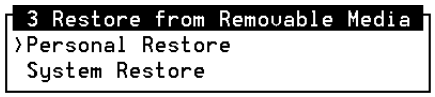


Figure 2-18. Restore from Removable Media Menu

Performing Extended Restore Services

Extended restore services allow you to:

- Specify the login of the operator who should be notified when a request that requires operation intervention is queued.
- Respond to restore requests.
- Restore files, directories, file system, or a data partition from a backup archive.
- Display or modify the status of pending restore requests.

Figure 2-19 displays the options available for the Extended Restore Service.

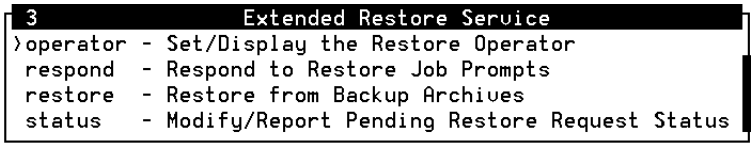


Figure 2-19. Extended Restore Service Menu

Schedule Automatic Task

Schedule task administration allows you to add, change, delete, and display a task scheduled through cron.

Figure 2-20 displays the options available for schedule task administration. See *UnixWare System Administration Introduction to System Administration* for additional information about each of these options.

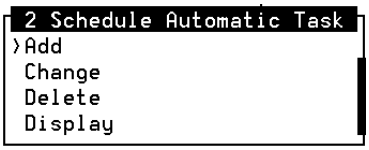


Figure 2-20. Schedule Automatic Task Menu

Software Installation and Removal

Software administration allows you to install software, display information about software packages, store software without installing it, and remove software.

Figure 2-21 displays the options available for software administration. See *UnixWare System Administration File System Administration* for additional information about each of these options.

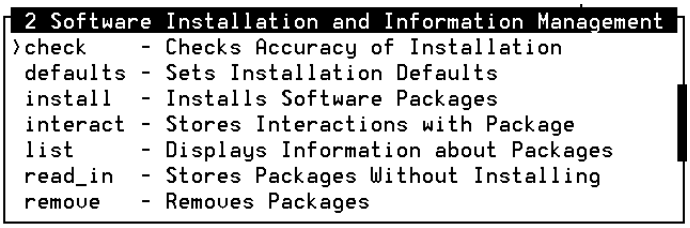


Figure 2-21. Software Installation and Information Management Menu

CAUTION:

All the necessary software installation procedures for the INTUITY CONVERSANT system are described Chapters 9–11 in the maintenance book for your platform.

Storage Device Operations and Definition

Storage devices administration allows you to:

- Copy information from one volume to another.
- Display storage device information.
- Erase the contents of a volume.
- Configure a storage device on the system.
- Reconfigure a storage device on the system.

A storage device may be integral disks, floppy diskettes, SCSI data storage devices, 9-track tapes, and other devices configured on the system. The INTUITY CONVERSANT system uses integral disks (hard disks), floppy diskettes, and tapes as storage devices.

Figure 2-22 displays the options available for storage administration. See Chapter 1, "Managing Storage Devices," of *UnixWare System Administration File System Administration* for additional information about each of these options.

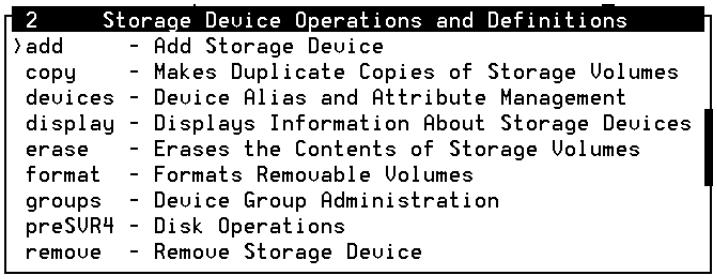


Figure 2-22. Storage Device Operations and Definitions Menu

System Name, Date/Time, and Initial Password Setup

System setup administration allows you to administer the following system characteristics:

- Environment (date, time, time zone)
- Passwords
- Machine name
- Network node name
- Initial user logins

CAUTION:

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.

Figure 2-23 displays the options available for system setup administration. See *UnixWare System Administration System Setup and Configuration* for additional information about each of these options.

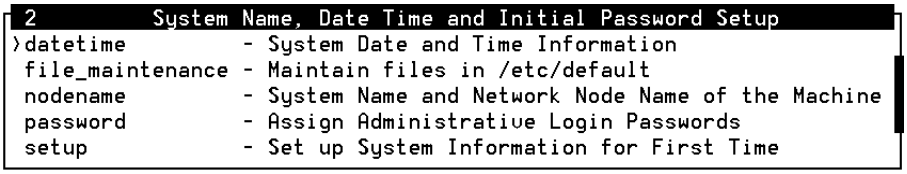


Figure 2-23. System Name, Date, Time and Initial Password Setup Menu

User Login and Group Administration

Users administration allows you to manage logins and groups on your system, including:

- Adding users or groups
- Defining defaults for adding users
- Listing users or groups
- Modifying attributes of users or groups
- Redefining user password information
- Removing users or groups

Figure 2-24 displays the options available for users administration. See *UnixWare System Administration User and Group Management* for additional information about each of these options.

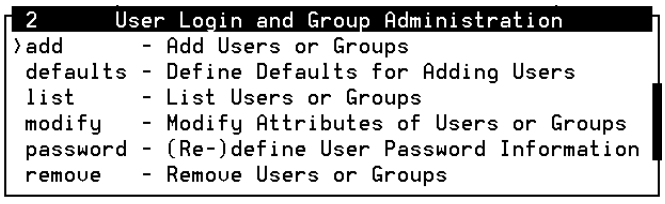


Figure 2-24. User Login and Group Administration Menu

VERITAS Volume Manager Administration

Volume management allows you to use the VERITAS Volume Manager disk management tool to maximize data availability and optimize disk performance by:

- Protecting against data loss due to hardware malfunction by creating a mirror (duplicate) image of important file systems and databases
- Administering the volume manager configuration without rebooting or otherwise interrupting the system

Figure 2-25 displays the options available for volume management. See *VERITAS Volume Manager*, 585-350-987, for additional information about each of these options.

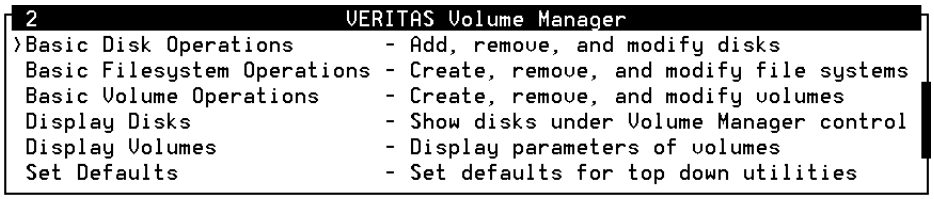


Figure 2-25. VERITAS Volume Manager Menu

Exit UNIX System Administration Menu

To exit Unix System Administration:

1. Press F7 (Cmd-Menu).

   The system displays the Command Menu (Figure 2-26).

Figure 2-26. Command Menu

2. Select

   > Exit

   The system returns you to the system prompt #.

Voice System Administration

3

Overview

This chapter describes the procedures needed to perform voice system administration through the Voice System Administration user interface.

Purpose

The Voice System Administration menu provides access to many administrative options. This chapter describes 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.

Access the Voice System Administration Menu

Use the procedure below to access the Voice System Administration menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 3-1).

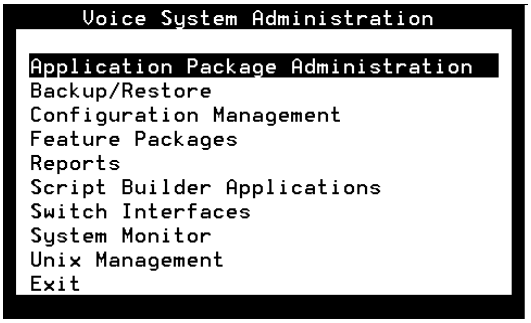


Figure 3-1. Voice System Administration Menu

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 Chapter 3, “Common System Procedures”, in the maintenance book for your platform 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” below 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 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, “Daily 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 *INTUITY CONVERSANT System Version 6.0 Application Development with Script Builder*, 585-310-760, 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 more 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, etc.), call states, and caller input.

See Chapter 8, “Daily Administration”, for more 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 more information on administering printers, modems, and terminals.

Configuration Management

Use the procedure below to access the Configuration Management menu:

1. Start at the Voice System Administration menu (Figure 3-1) and select

```
> Configuration Management
```

   The system displays the Configuration Management Menu (Figure 3-2).

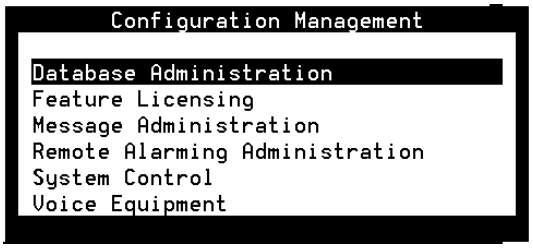


Figure 3-2. Configuration Management Menu

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

- Feature licensing
- 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 the Remote Maintenance Center activates and changes 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.

Use the procedure below to access the Feature Licensing window and display the current feature licenses.

1. Start at the Configuration Management menu (Figure 3-2) and select

```
> Feature Licensing
```

The system displays the Display Feature Licensing window (Figure 3-3).

NOTE:
Figure 3-3 is a sample window. Your Display Feature Licensing window may look different depending on the feature packages you have purchased.

```
                    Display Feature Licensing
Feature                                                    Value

Text to Speech                                                 0
Dial Pulse Recognition                                         0
FlexWord Recognition                                           0
WholeWord Recognition                                          0
```

Figure 3-3. Display Feature Licensing Window

Print a Feature License Report

Use the procedure below to print a report of the current system feature licenses:

1. Start at the Display Feature Licensing window (Figure 3-3) and press F8 (ACTIONS).

   The system displays the Actions menu (Figure 3-4).

Figure 3-4. Actions Menu

2. Select

```
> Print
```

   The system prints a copy of the Display Feature Licensing window (Figure 3-3).

   NOTE:
   This report does not print if a printer is not configured for use with the voice system. See "Printer Administration" 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, and to define SDLC and Token Ring protocol information.

Use the procedure below to access the Host Configuration menu:

1. Start at the Configuration Management menu (Figure 3-2) and select

```
> Host Configuration
```

   The system displays the Host Configuration menu (Figure 3-5).

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

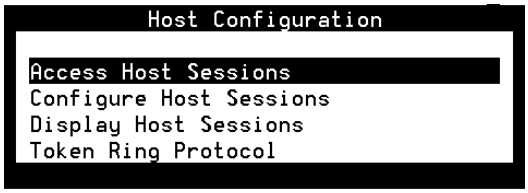


Figure 3-5. Host Configuration menu

Access Host Sessions

Use the procedure below to access the Access Host Sessions menu:

1. Start at the Host Configuration menu (Figure 3-5) and select

```
> Access Host Sessions
```

The system displays the Access Host Sessions menu (Figure 3-6).

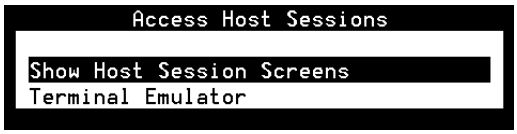


Figure 3-6. Access Host Sessions Menu

Show Host Session Screens Window

Use the procedure below to display the image that is currently connected to a Logical Unit (LU):

1. Start at the Access Host Sessions menu (Figure 3-6) and select

```
> Show Host Sessions Screens
```

The system displays the Show Host Sessions Screens window (Figure 3-7).

Figure 3-7. 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 the word "all" to indicate all sessions.
3. Press F3 (SAVE).

   The system displays the selected host session information.

Specify a 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 3-6) and select

```
> Terminal Emulator
```

   The system displays the Terminal Emulator window (Figure 3-8).

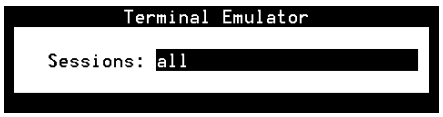


Figure 3-8. Terminal Emulator Window

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 the word "all" to indicate 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.

Configure 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

Use the procedure below to access the Configure Host Sessions menu:

1. Start at the Host Configuration menu (Figure 3-2) and select

```
> Configure Host Sessions
```

   The system displays the Configure Host Sessions menu (Figure 3-9).

Figure 3-9. Configure Host Sessions Menu

Assign 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 3-9) and select

```
> Assign
```

   The system displays the Assign Service to Host Sessions window (Figure 3-10).

Figure 3-10. 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 the word "all" to assign the service to all channels, not just the channels that have no current service assignment.
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.

Free a Host Sessions

Use the Free Host Sessions window 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 3-9) and select

```
> Free
```

   The system displays the Free Host Sessions window (Figure 3-11).

Figure 3-11. Free Host Sessions Window

2. 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.

   OR

   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 the word “all” to indicate all sessions.

3. Press F3 (SAVE).

   The system frees the specified host session.

Login Host Sessions

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

1. Start at the Configure Host Sessions menu (Figure 3-9) and select

```
> Login
```

   The system displays the Login Host Sessions window (Figure 3-12).

Figure 3-12. Login Host Sessions Window

2. 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.

   OR

   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 word "all" to indicate all sessions.

3. Press F3 (SAVE).

   The system logs in to the specified host session.

Logout Host Sessions

Use the Logout Host Sessions window 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 3-9) and select

```
> Logout
```

   The system displays the Logout Host Sessions window (Figure 3-13).

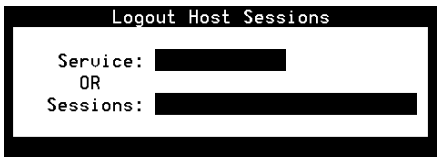


Figure 3-13. Logout Host Sessions Window

2. 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.

   OR

   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 the word "all" to indicate all sessions.

3. Press F3 (SAVE).

   The system logs out of the host session.

Renumber Host Sessions

Use the procedure below to renumber Host Sessions:

1. Complete the procedure "Stop the Voice System" below.
2. Start at the Configure Host Sessions menu (Figure 3-9) and select

```
> Renumber
```

   The system displays a message indicating that renumbering has begun.

Unassign 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.

Use the procedure below to unassign host sessions:

1. Start at the Configure Host Sessions menu (Figure 3-9) and select

```
> Unassign
```

   The system displays the Unassign Service from Host Sessions window (Figure 3-14).

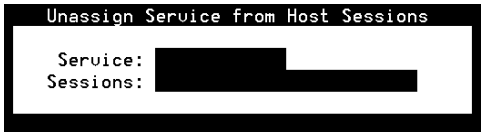


Figure 3-14. Unassign Service from Host Sessions Window

2. 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.

   OR

   Enter the session number(s) 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 the word "all" to indicate all sessions.

3. Press F3 (SAVE).

   The system unassigns the selected host session(s).

Display 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.

Use the procedure below to display host sessions:

1. Start at the Configure Host Sessions menu (Figure 3-9) and select

   ```
   > Display Host Sessions
   ```

   The system displays the Display Host Sessions window (Figure 3-15).

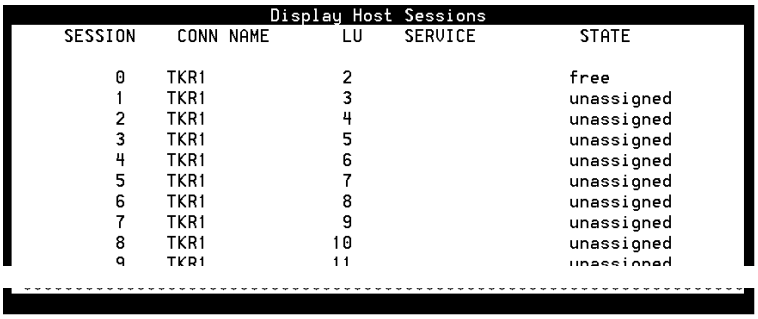


Figure 3-15. Display Host Sessions Window

Table 3-1 describes the columns in this window.

Table 3-1. 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.
CONN NAME	Identifies a logical connection to a host.
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.

Continued on next page

Table 3-1. Field Descriptions for Display Host Sessions Window — *Continued*

Column Name	Description
SERVICE	Application assigned to the system. This must be an application that is installed on the system.
STATE	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 login to 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; alternated 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 ■ **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

Host Sessions: Actions Menu

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

Use the procedure below to access the Host Sessions: Actions menu:

1. Start at the Display Host Sessions window (Figure 3-15) and press F8 (ACTIONS).

The system displays the Host Sessions: Actions Menu (Figure 3-16).

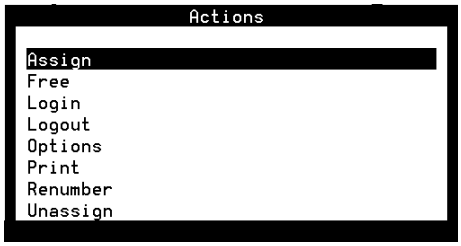


Figure 3-16. Host Sessions: Actions Menu

See “Configure Host Sessions” above for information on how to perform these assign, free, login, logout, renumber, and unassign actions.

See below for information on the options and print actions.

Change Options for 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.

Use the procedure below to define the Display Host Sessions window options:

1. Start at the Host Sessions: Actions Menu (Figure 3-16) and select

```
> Options
```

The system displays the Display Host Sessions Options window (Figure 3-17).

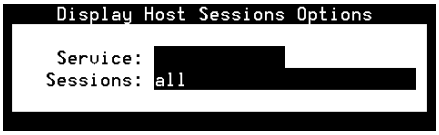


Figure 3-17. Display Host Sessions Options Window

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.

Print a Host Sessions Report

Use the procedure below to print a report showing all host sessions currently defined:

1. Start at the Host Sessions: Actions Menu (Figure 3-16) and select

```
> Print
```

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

   NOTE:
   This report will not print if a printer has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration", for more information about printer administration.

Access the SDLC Protocol Menu

Use the SDLC Protocol menu to:

- Add an SDLC protocol
- Change an SDCL protocol
- Delete an SDLC protocol
- Diagnose an SDLC protocol
- Display SDLC protocols
- View SDLC protocol information
- Rename an SDLC protocol

Use the procedure below to access the SDLC protocol menu:

1. Start at the Host Configuration menu (Figure 3-5) and select

```
> SDLC Protocol
```

The system displays the SDLC Protocol menu (Figure 3-18).

Figure 3-18. SDLC Protocol Menu

Add an SDLC Protocol

Use the procedure below to add an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

```
> Add
```

The system displays the Add SDLC Protocol window (Figure 3-19).

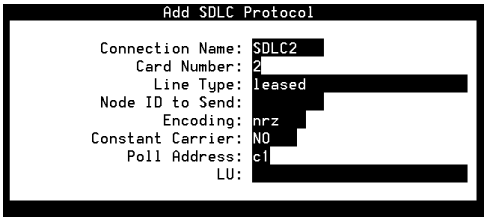


Figure 3-19. Add SDLC Protocol Window

Table 3-2 describes the fields on this window.

Table 3-2. Field Descriptions for SDLC Protocols

Field Name	Description
Connection Name:	Identifies a logical connection to a host. The default value is **SDLC*n***, where *n* is the circuit card number.
Card Number:	Indicates which communications adapter circuit card this connection uses. The default value is 1 unless circuit card number 1 is in use; then the default is 2.
Line Type:	Specifies the type of physical line being used. The default value is leased.
Node ID to Send:	An 8-digit hexadecimal number that specifies the ID that is sent to the remote computer. The number is divided into a 3-digit block number and a 5-digit node number. Values 000 and FFF cannot be used for the block number, and 00000 cannot be used for the node number. Valid values range from 00100001 to FFEFFFFF. The default value is blank (no node ID to send).
Encoding:	Specifies the encoding scheme of the modem for transmitting and receiving data. Valid values are nrz and nrzi. The default value is nrz.
Constant Carrier:	Specifies whether the system will keep the RTS signal high. If Yes, the modem must support constant carrier. The default value is No.
Poll Address:	Specifies the polling address of the system. The poll address is a hexadecimal value that ranges from 00 to FF. The default value is C1.
LU:	Identifies the logical unit number. Valid values range from 2 to the maximum LU number allowed by the system. You can enter multiple LUs separated by commas, and a range of LUs using a dash, for example 2, 4–8, 10.

2. Enter the information described in Table 3-2.
3. Press F3 (SAVE).

   The system adds the SDLC Protocol with the selected parameters.

Change an SDLC Protocol

Use the procedure below to change SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

```
> Change
```

The system displays the Change SDLC Protocol window (Figure 3-20).

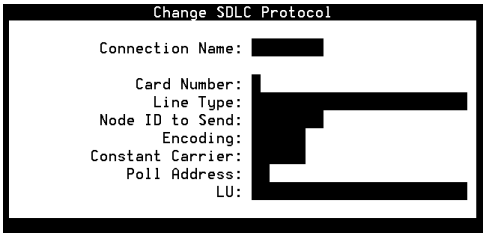


Figure 3-20. Change SDLC Protocol Window

2. Enter the name of the connection you want to change in the `Connection Name` field, or press F2 (CHOICES) to select from a menu.
3. Modify any of the fields as desired using Table 3-2 as a guide.
4. Press F3 (SAVE).

   The system overwrites the host connection with new SDLC information.

Deleting an SDLC Protocol

Use the procedure below to delete SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

   ```
   > Delete
   ```

   The system displays the Delete SDLC Protocol window (Figure 3-21).

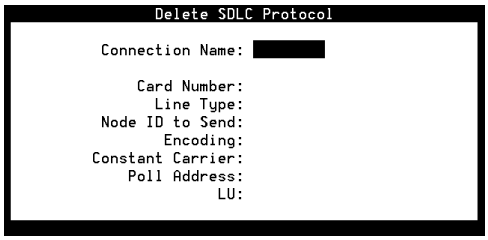


Figure 3-21. Delete SDLC Protocol Window

2. Enter the name of the connection you want to delete in the `Connection Name:` field, or press F2 (CHOICES) to select from a menu.
3. Press F3 (DELETE).

   The system deletes the specified connection.

Diagnose the SDLC Connection

Use the procedure below to diagnose one SDLC connection or all SDLC connections:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

```
> Diagnose
```

   The system displays the Diagnose SDLC Connection window (Figure 3-22).

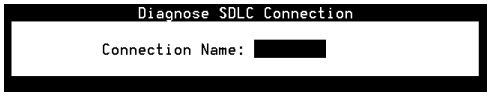


Figure 3-22. Diagnose SDLC Connection Window

2. Enter the connection name or **all** in the `Connection Name` field, or press F2 (CHOICES) to select from a menu.
3. Press F3 (DIAGNOSE).

   The system diagnoses the selected SDLC connection and displays the results.

Display an SDLC Protocol

Use the procedure below to display an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

```
> Display
```

   The system displays the Display SDLC Protocol window (Figure 3-23).

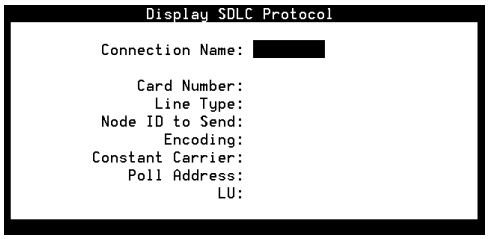


Figure 3-23. Display SDLC Protocol Window

2. Enter the name of the connection in the `Connection Name:` field, or press F2 (CHOICES) to select from a menu.

   The system fills in the remaining fields.

3. Press F3 (DISPLAY).

   The system displays information about the selected SDLC protocol.

View SDLC Connection Information

Use the procedure below to view information about an SDLC connection that could be helpful when troubleshooting the connection to a host machine.

1. Start at the SDLC Protocol menu (Figure 3-5) and select

```
> Information
```

   The system displays the SDLC Connection Information window (Figure 3-24).

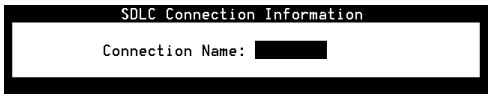


Figure 3-24. SDLC Connection Information Window

2. Enter the connection name or **all** in the `Connection Name:` field, or press F2 (CHOICES) to select from a menu.
3. Press F3 (SAVE–INFORM).

   The system displays information about the SDLC connection.

Rename an SDLC Protocol

Use the procedure below to rename an SDLC protocol:

1. Start at the SDLC Protocol menu (Figure 3-5) and select

   ```
   > Rename
   ```

   The system displays the Rename SDLC Protocol window (Figure 3-25).

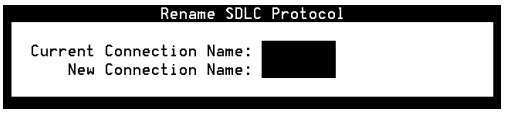


Figure 3-25. Rename SDLC Protocol Window

2. Enter the alphanumeric string that identifies a logical connection to a host you want to rename in the `Current Connection Name:` field, or press F2 (CHOICES) to select from a menu.
3. Enter the alphanumeric string that identifies the connection that replaces the current connection name in the `New Connection Name:` field.
4. Press F3 (SAVE–RENAME).

   The system renames the SDLC protocol.

Access the Token Ring Protocol Menu

Use the Token Ring Protocol menu to:

- Add a token ring protocol
- Change a token ring protocol
- Delete a token ring protocol
- Display token ring protocols
- Rename a token ring protocol

Use the procedure below to access the Token Ring Protocol menu:

1. Start at the Host Configuration menu (Figure 3-5) and select

```
> Token Ring Protocol
```

   The system displays the Token Ring Protocol menu (Figure 3-26).

Figure 3-26. Token Ring Protocol Menu

Add Token Ring Protocol

Use the procedure below to add token ring protocol to a host connection:

1. Start at the Token Ring Protocol menu (Figure 3-26) and select

```
> Add
```

   The system displays the Add Token Ring Protocol window (Figure 3-27).

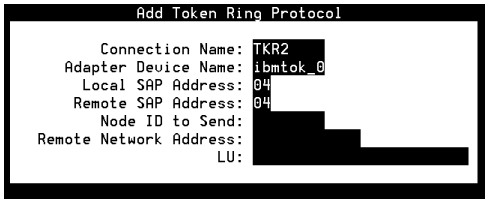


Figure 3-27. Add Token Ring Protocol Window

Table 3-3 describes the fields on this window.

Table 3-3. Field Descriptions for Token Ring Protocols

Field Name	Description
Connection Name:	Alphanumeric string that identifies a logical connection to a host. Default value is TKRn, where *n* is the first unused number starting from 1. For example, if the current connection names are TKR1 and TKR3, TKR2 would be the default.
Adapter Device Name:	Specifies the particular adapter used by this connection. Default is ibmtok_0.
Local SAP Address:	2-digit hexadecimal number ranging from 04 to EC that specifies the SAP (Service Access Point) address that remote nodes must specify to contact the system. Must be a multiple of 4. Default is 04.
Remote SAP Address:	2-digit hexadecimal number ranging from 04 to ED that specifies the address of the remote system SAP. Must be a multiple of 4. Default is 04.
Node ID to Send:	8-digit hexadecimal number that specifies the ID that is to be sent to the remote computer. The number is divided into a 3-digit block number and a 5-digit node number. Values 000 and FFF cannot be used for the block number, and 00000 cannot be used for the node number. Valid values range from 00100001 to FFEFFFFF. The default value is blank (no node ID to send).
Remote Network Address:	12-digit hexadecimal number ranging from 000000000000 to FFFFFFFFFFFF that specifies the address of the remote token ring node to which the system is connecting. There is no default.
LU:	Logical unit number ranging from 2 to the maximum LU number allowed by the system. Enter multiple LU numbers separated by commas, or specify a range of LUs using a dash, for example, 2, 4–6, 8. There is no default.

2. Enter the information as described in Table 3-3.
3. Press F3 (SAVE–ADD).

   The system adds Token Ring protocol to the selected connection.

Changing a Token Ring Protocol

Use the procedure below to change a token ring protocol:

1. Start at the Token Ring Protocol menu (Figure 3-26) and select

```
> Change
```

   The system displays the Change Token Ring Protocol window (Figure 3-28).

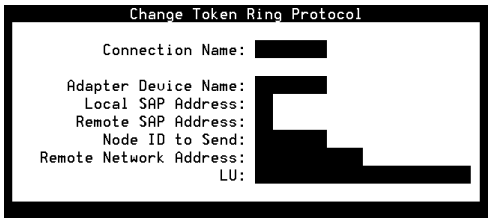


Figure 3-28. Change Token Ring Protocol Window

   Table 3-3 describes the fields on this window.

2. Enter the name of the connection you want to change in the `Connection Name:` field or press F2 (CHOICES) to select from a menu.

   The system fills in the remaining fields.

3. Change any of the remaining fields using Table 3-3 as a guide.
4. Press F3 (SAVE–CHANGE).

   The systems replaces the old configuration information with the new information.

Delete a Token Ring Protocol

Use the procedure below to delete a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 3-26) and select

```
> Delete
```

The system displays the Delete Token Ring Protocol window (Figure 3-29).

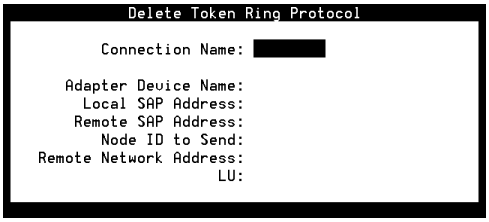


Figure 3-29. Delete Token Ring Protocol Window

2. Enter the connection you want to delete in the `Connection Name:` field or press F2 (CHOICES) to select from a menu.

   The system fills in the remaining fields.

3. Press F3 (DELETE).

   The system deletes the selected Token Ring.

Display a Token Ring Protocol

Use the procedure below to display a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 3-26) and select

```
> Display
```

   The system displays the Display Token Ring Protocol window (Figure 3-30).

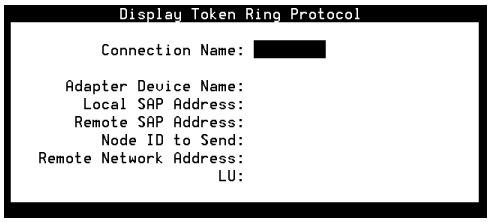


Figure 3-30. Display Token Ring Protocol Window

2. Enter the name of the connection in the `Connection Name:` field, or press F2 (CHOICES) to select from a menu.

   The system fills in the remaining fields.

3. Press F4 (DISPLAY).

   The system displays information about the Token Ring protocol.

Rename a Token Ring Protocol

Use the procedure below to rename a Token Ring protocol:

1. Start at the Token Ring Protocol menu (Figure 3-26) and select

   ```
   > Rename
   ```

   The system displays the Rename Token Ring Protocol window (Figure 3-31).

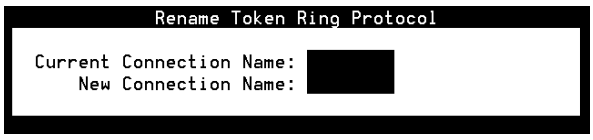


Figure 3-31. Rename Token Ring Protocol Window

2. Enter the name of the Token Ring protocol you want to rename in the `Current Connection Name:` field, or press F2 (CHOICES) to select from a menu.

NOTE:
This is an alphanumeric string that identifies a logical connection to a host.

3. Enter the new connection name in the `New Connection Name:` field.

NOTE:
This is an alphanumeric string that replaces the current connection name.

4. Press F3 (SAVE–RENAME).

   The system renames the Token Ring protocol.

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/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.

Access Message Administration

1. Start at the Configuration Management menu (Figure 3-2) and select

```
> Message Administration
```

   The system displays the System Message Administration window (Figure 3-32).

Figure 3-32. System Message Administration Window

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 3-33).

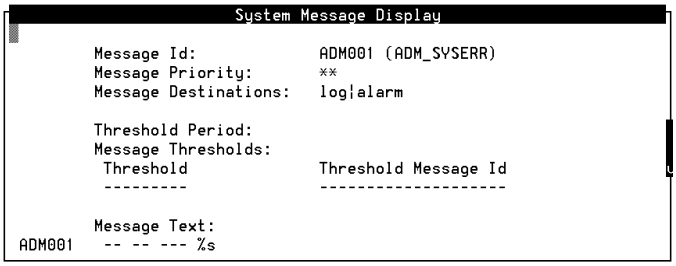


Figure 3-33. System Message Display Window

Table 3-4 describes the fields in this window.

Table 3-4. 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).

Continued on next page

Table 3-4. Field Description for System Message Display Window — *Continued*

Field	Description
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.
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.

Add 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.

Use the procedure below to add a destination to a message:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F1 (ADD–DEST).

   The system displays the Add Message Destination window (Figure 3-34).

Figure 3-34. Add Message Destination Window

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 redisplays the System Message Display window (Figure 3-33) showing the new message destination.

5. Complete "Save Changes and Exit Message Administration" below.

   The system installs the changes on the voice system.

Remove Message Destinations

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

Use the procedure below to remove a message destination:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F2 (REM–DEST).

   The system displays the Remove Message Destination window (Figure 3-35).

Figure 3-35. 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 redisplays the System Message Display window (Figure 3-33) showing the removed message destination.

5. Complete "Save Changes and Exit Message Administration" below.

   The system installs the changes on the voice system.

Add 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.

Use the procedure below to add a message threshold:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F3 (ADD–THSH).

   The system displays the Add Threshold window (Figure 3-36).

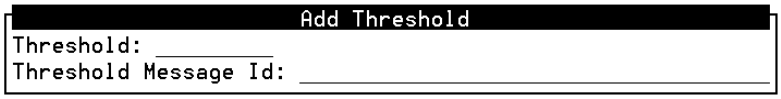


Figure 3-36. Add Threshold Window

3. Enter a non–negative 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 redisplays the System Message Display window (Figure 3-33) showing the new message threshold.
6. Complete “Save Changes and Exit Message Administration” below.

   The system installs the changes on the voice system.

Remove 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.

Use the procedure below to remove a message threshold:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F4 (REM–THSH).

   The system displays the Remove Threshold window (Figure 3-37).

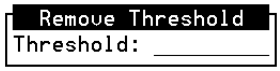


Figure 3-37. Remove Threshold Window

3. Enter a non–negative integer message threshold value in the `Threshold:` field.
4. Press F3 (SAVE).

   The system redisplays the System Message Display window (Figure 3-33) showing the message threshold removed.
5. Complete "Save Changes and Exit Message Administration" below.

   The system installs the changes on the voice system.

Modify 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).

Use the procedure below to modify a message priority:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F5 (MSG–PRIO).

The system displays the System Message Priority window (Figure 3-38).

Figure 3-38. System Message Priority Window

3. Enter a priority in the `Message Priority:` field or press F2 (CHOICES) to select from a menu.
4. Press F3 (SAVE).

   The system redisplays the System Message Display window (Figure 3-33) showing the message threshold removed.
5. Complete "Save Changes and Exit Message Administration" below.

   The system installs the changes on the voice system.

Modify 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.

Use the procedure below to modify a threshold period:

1. Start at the System Message Display window (Figure 3-33) for a given message, and press F8 (CHG-KEYS).
2. Press F6 (THSH–PER).

   The system displays the System Message Threshold Period window (Figure 3-39).

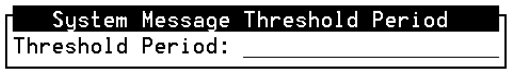


Figure 3-39. System Message Threshold Period Window

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, or s for seconds. Table 3-5 provides examples of threshold periods and the required syntax.

Table 3-5. 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 3-33) showing the new threshold period.

5. Complete "Save Changes and Exit Message Administration" below.

   The system installs the changes on the voice system.

Save Changes and Exit Message Administration

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

Use the procedure below 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 3-32).
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 3-2).

Remote Alarming Administration

Remote Alarming allows the Technical Support Organization (TSO) to receive notice when your system is experiencing difficulty. Alarms levels are categorized by their severity: critical, major and minor. See "Prioritizing System Messages" in Chapter 1, "Getting Started", in *INTUITY CONVERSANT System Version 6.0, System Alarms and Log Messages,* 585–310–182, for more information about remote alarming.

Access Remote Alarming Administration

Use the procedure below to access the Alarm Management window:

1. Start at the Configuration Management menu (Figure 3-1) and select

```
> Remote Alarming Administration
```

The system displays the Alarm Management window (Figure 3-40).

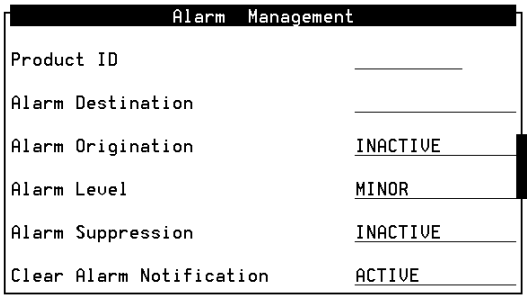


Figure 3-40. Alarm Management Window

Table 3-6 describes the fields on this window.

Table 3-6. 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. Must be either 0 through 9, a = to wait for dialtone, or a – to pause.
`Alarm Origination:`	ACTIVE: enabled. INACTIVE: disabled (default).
`Alarm Level:`	MAJOR: only major alarms can be sent to the destination. MINOR: both major AND minor alarms can be sent to the destination (default).
`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:`	ACTIVE: send a call to destination after all recognized alarms have been resolved (default). INACTIVE: does not send a call to the destination after all recognized alarms have been resolved.

System Control

Use the System Control menu to:

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

Use the procedure below to access the System Control menu:

1. Start at the Configuration Management menu (Figure 3-2) and select

```
> System Control
```

The system displays the System Control menu (Figure 3-41).

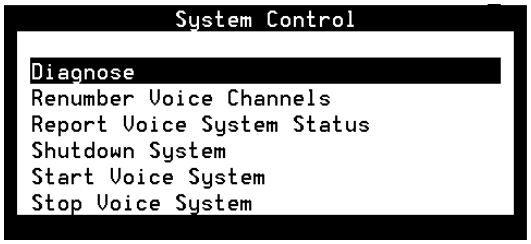


Figure 3-41. System Control Menu

Diagnose 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 "Modify the Display Voice Equipment Window Parameters" below 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 SP/SSP circuit cards or the TDM bus. Diagnosing an SP circuit card also diagnoses its associated companion circuit cards (CMPs) if FlexWord™ or WholeWord speech recognition is assigned to the SP. Run diagnostics whenever the system displays a message indicating circuit card failure.

Use the procedure below to diagnose equipment:

1. Start at the System Control menu (Figure 3-41) and select

```
> Diagnose
```

```
> Diagnose Equipment
```

The system displays the Diagnose Equipment window (Figure 3-42).

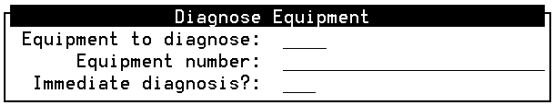


Figure 3-42. Diagnose Equipment Window

Table 3-7 describes the fields in this window.

Table 3-7. 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 SP/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 3-47). 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 3-7.
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.

Renumber Voice Channels

The Renumber Voice Channels option removes all nonexistent (NONEX) circuit cards from the voice equipment table, then reorders all existing equipment with E1/T1 circuit cards first, followed by Tip/Ring circuit cards, then SP/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 SP/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.

Use the procedure below to renumber voice channels:

1. Start at the System Control menu (Figure 3-41) and select

```
> Renumber Voice Channels
```

   The system displays the Renumber Voice Channels window (Figure 3-43).

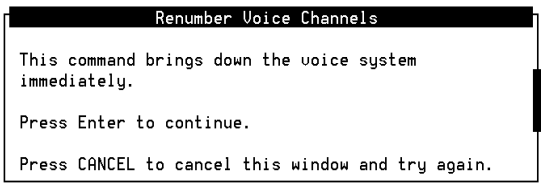


Figure 3-43. Renumber Voice Channels Window

2. Press ENTER.

   The system renumbers voice channels.

Report Voice System Status

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

1. Start at the System Control menu (Figure 3-41) and select

```
> Report Voice System Status
```

The system displays the Status of Voice System window (Figure 3-44).

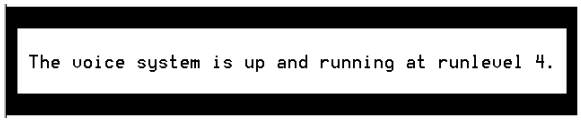


Figure 3-44. Status of Voice System Window

2. Press F1 (ACKNOWLEDGE MESSAGE).

   The system returns to the System Control menu (Figure 3-41).

Stop 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.

Use the procedure below to stop the voice system:

1. Start at the System Control menu (Figure 3-41) and select

   ```
   > Stop Voice System
   ```

   The system displays the Wait Time window (Figure 3-45).

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.

Shut 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.*

Use the procedure below to shut down the system:

1. Start at the System Control menu (Figure 3-41) and select

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

   The system displays the Wait Time window (Figure 3-45).

Figure 3-45. 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 3-41).

Start 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.

Use the procedure below to start the voice system:

1. Start at the System Control menu (Figure 3-41) 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 (TI/EI and Tip/Ring, respectively), and the speech processing circuit cards (SP/CMP and SSP).

Use the procedure below to access the Voice Equipment menu:

1. Start at the Configuration Management menu (Figure 3-2) and select

```
> Voice Equipment
```

   The system displays the Voice Equipment menu (Figure 3-46).

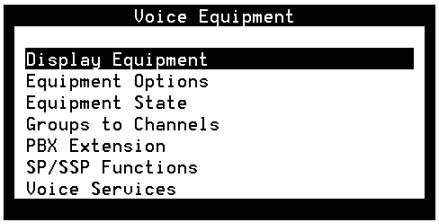


Figure 3-46. Voice Equipment Menu

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

Display the Voice Equipment Window

Use the procedure below to access the Display Voice Equipment window:

1. Start at the Voice Equipment menu (Figure 3-46) and select

```
> Display Equipment
```

The system displays the Display Equipment window (Figure 3-47).

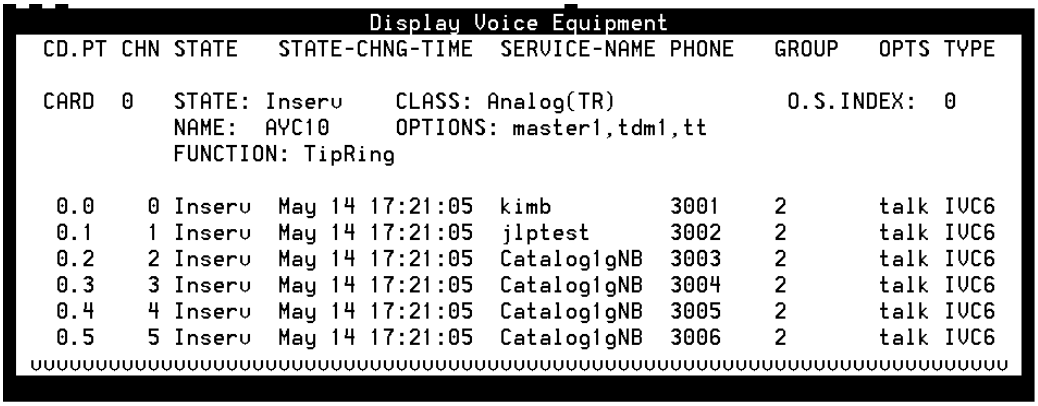


Figure 3-47. Display Voice Equipment Window

The Display Voice Equipment window (Figure 3-47), 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 procedure below to modify the default display parameters for the Display Voice Equipment window.

Modify 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.

Use the procedure below to change the display parameters:

1. Start at the Display Voice Equipment window (Figure 3-47) and press F8 (ACTIONS).

   The system displays the Actions menu (Figure 3-48).

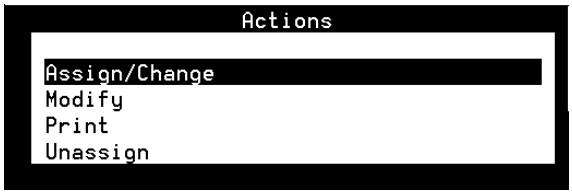


Figure 3-48. Actions Menu

2. Select

```
> Modify
```

   The system displays the Modify Display Voice Equipment window (Figure 3-49).

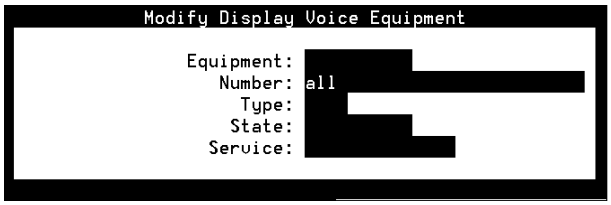


Figure 3-49. Modify Display Voice Equipment Window

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.
  - — SP circuit cards: Information on SP circuit cards and their associated companion circuit cards (CMPs) is displayed with the card option only. SP 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 **SP**, **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 “Change Equipment State” below 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*).

Use the procedure below to change voice equipment options for analog and digital circuit cards:

1. Start at the Voice Equipment menu (Figure 3-46) and select

   ```
   > Equipment Options
   ```

   The system displays the Change Options of Voice Equipment window (Figure 3-50).

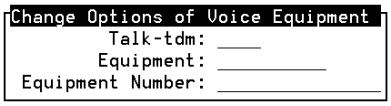


Figure 3-50. Change Options of Voice Equipment Window

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.

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

   For E1/T1 circuit cards, the only valid option is tdm. For IVP4 and IVP6 Tip/Ring circuit cards, the option can be either talk or tdm.

   Table 3-8 shows the valid equipment option settings.

Table 3-8. Valid Equipment Option Settings for Circuit Card Types

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

Change 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, etc. — 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. See the list below for a complete description of the maintenance state 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 SP circuit card to the manoos state only when there are no active calls on the system. The manoos state disrupts voice playback on all SP circuit card channels (if only one SP circuit card is installed) or negatively affects voice playback performance on all channels (if more than one SP 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.
- 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 a B-channel on the 24-B channel circuit card is out-of-service while the D-channel is in service, or that a D-channel is out-of-service.

As indicated in the list above, 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 3-9 for a description of the valid administrator changes.

Table 3-9. 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

Use the procedure below to change the maintenance state of a circuit card or channel:

1. Start at the Voice Equipment menu (Figure 3-46) and select

```
> Equipment State
```

   The system displays the Change State of Voice Equipment window (Figure 3-51).

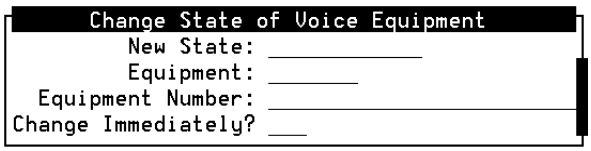


Figure 3-51. Change State of Voice Equipment Window

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 T1 Channels Using E&M Protocol

The following suggestions apply only to individual manoos T1 channels using the *E&M protocol*. Other 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 T1 channels from service. Removing 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 (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.

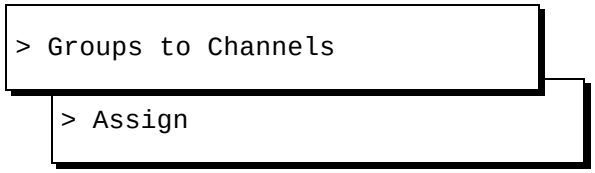
Groups to Channels

The Group to Channel menu option allows 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.

Assign Groups to Channels

Use the procedure below to assign an equipment group to channels:

1. Start at the Voice Equipment menu (Figure 3-46) and select



The system displays the Assign Channels to Groups window (Figure 3-52).

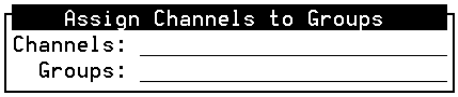


Figure 3-52. Assign Channels to Groups Window

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**. "All" 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_szr**) 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.

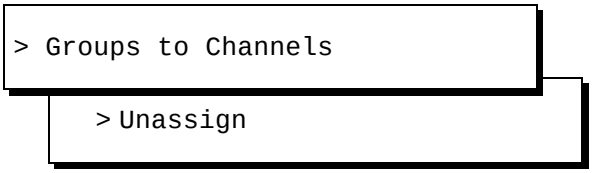
4. Press F3 (SAVE).

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

Unassign Groups to Channels

Use the procedure below to unassign an equipment group to channels:

1. Start at the Voice Equipment menu (Figure 3-46) and select



   The system displays the Unassign Channels From Groups window (Figure 3-53).

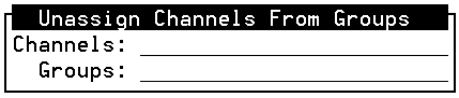


Figure 3-53. Unassign Channels From Groups Window

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 or a range of channel numbers, separated by commas or spaces, or **all**. **All** 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

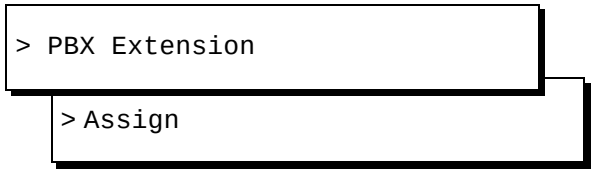
The PBX Extension menu option allows you to assign an ASAI channel (only) to a PBX extension telephone number.

⚠ 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.

Assign PBX Extension

Use the procedure below to assign a PBX extension telephone number to an ASAI channel:

1. Start at the Voice Equipment menu (Figure 3-46) and select



The system displays the Assign PBX Extension to a Channel window (Figure 3-54).

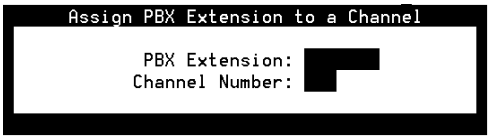


Figure 3-54. Assign PBX Extension to a Channel Window

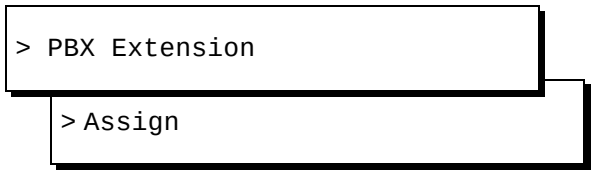
2. Enter the extension telephone number for the channel, up to 7 digits, in the `PBX Extension:` field.
3. Enter a single channel number in the `Channel Number:` field.
4. Press F3 (SAVE).

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

Unassigning PBX Extensions from Channels

Use the procedure below to unassign PBX extensions from channels:

1. Start at the Voice Equipment menu (Figure 3-46) and select



   The system displays the Unassign PBX Extension from a Channel window (Figure 3-55).

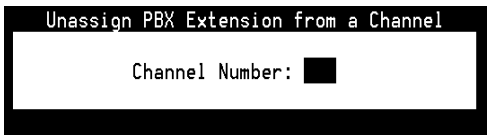


Figure 3-55. Unassign PBX Extension from a Channel Window

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.

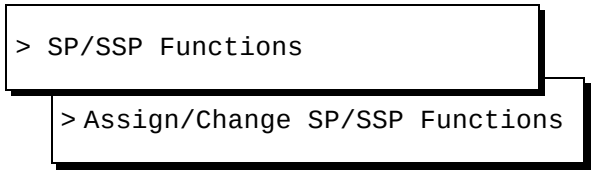
SP/SSP Functions

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

Assign SP/SSP Functions

Use the procedure below to assign functions to SP/SSP circuit cards:

1. Start at the Voice Equipment menu (Figure 3-46) and select



   The system displays the Assign/Change Functions to SP/SSP Cards window (Figure 3-56).

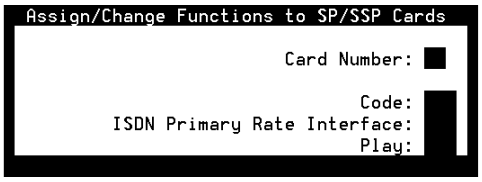


Figure 3-56. Assign/Change Functions to SP/SSP Cards Window

CAUTION:

The SP/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 "Change Equipment State" above for more 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. describes the valid functionality combinations.

Table 3-10. Valid SP/SSP Function Combinations

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

NOTE:

In order to assign a function, the software package supplying that function must be installed on the voice system.

Display SP/SSP Functions

Use the procedure below to view the current assignments for the SP/SSP cards in your system:

1. Start at the Voice Equipment menu (Figure 3-46) and select

```
> SP/SSP Functions
    > Display SP/SSP Functions
```

The system displays the Display SP/SSP Functions window (Figure 3-57).

```
Display SP/SSP Functions

                        Card Number:

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

Figure 3-57. Display SP/SSP Functions Window

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 3-46).

Voice Services

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

Use the procedure below to access the Voice Services menu:

1. Start at the Voice Equipment menu (Figure 3-46) and select

```
> Voice Services
```

The system displays the Voice Services menu (Figure 3-58):

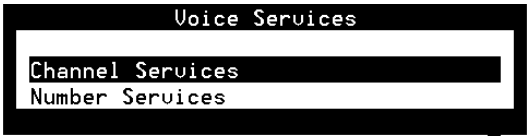


Figure 3-58. Voice Services Menu

Channel Services

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

Use the procedure below to access the Channel Services menu:

1. Start at the Voice Services menu (Figure 3-58) and select

```
> Channel Services
```

The system displays the Channel Services menu (Figure 3-59).

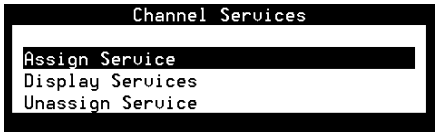


Figure 3-59. Channel Services Menu

Assign 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.

Use the procedure below to assign services to channels:

1. Start at the Channel Services menu (Figure 3-59) and select

```
> Assign Service
```

The system displays the Assign Services to Channels window (Figure 3-60).

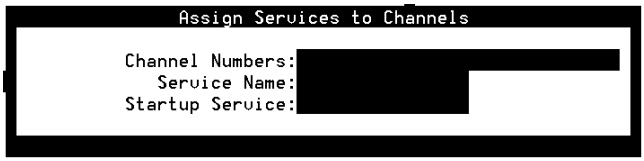


Figure 3-60. Assign Services to Channels Window

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 T1 (E&M), E1 (CAS), and PRI. DNIS is also available when ASAI 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.

Display Channel Services

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

Use the procedure below to display channel services:

1. Start at the Channel Services menu (Figure 3-59) and select

```
> Display Services
```

The system displays the Display Channel Services window (Figure 3-61).

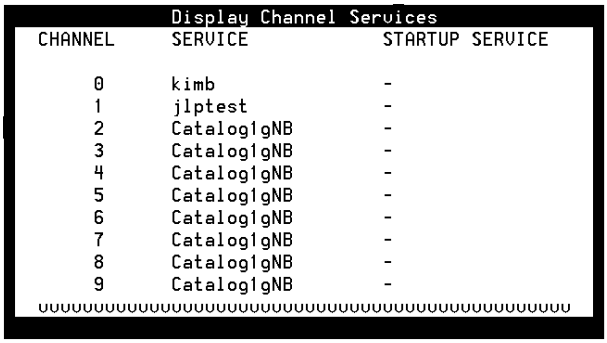


Figure 3-61. Display Channel Services Window

Table 3-11 describes the columns in this window.

Table 3-11. 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

Unassign Channel Service

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

Use the procedure below to unassign channel service:

1. Start at the Channel Services menu (Figure 3-59) and select

```
> Unassign Service
```

   The system displays the Unassign Services from Channels window (Figure 3-62).

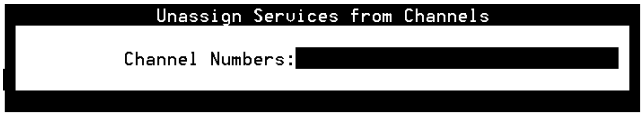


Figure 3-62. Unassign Services From Channels Window

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.

Use the procedure below to access the Number Services menu:

1. Start at the Voice Services menu (Figure 3-58) and select

```
> Number Services
```

   The system displays the Number Services menu (Figure 3-63).

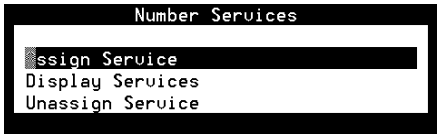


Figure 3-63. Number Services Menu

Assign 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.

Use the procedure below to assign number service:

1. Start at the Number Services menu (Figure 3-46) and select

```
> Assign Service
```

   The system displays the Assign Number Service window (Figure 3-64).

Figure 3-64. Assign Number Service Window

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.

Display Number Services

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

Use the procedure below to display number services:

1. Start at the Number Services menu (Figure 3-63) and select

```
> Display Services
```

   The system displays the Display Number Services window (Figure 3-65).

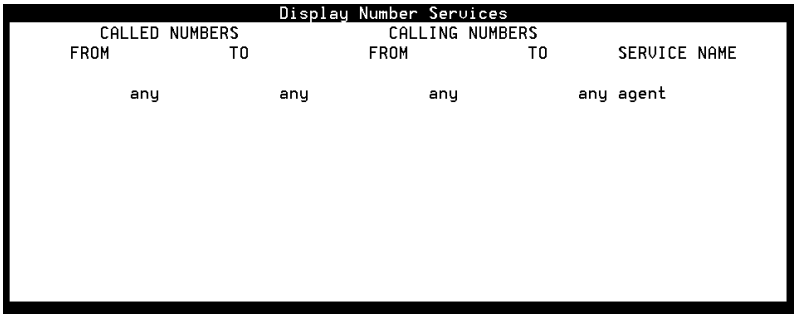


Figure 3-65. Display Number Services Window

Table 3-12 describes the columns in this window.

Table 3-12. Description for Display Number Services Window

Column Name	Description
CALLED NUMBERS	Displays the called number corresponding to the service.
CALLING NUMBERS	Displays the calling number corresponding to the service.
SERVICE NAME	Displays the name of the service that corresponds to the called or calling number.

Unassign Number Service

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

Use the procedure below to unassign number service:

1. Start at the Number Services menu (Figure 3-63) and select

```
> Unassign Service
```

The system displays the Unassign Number Service window (Figure 3-66).

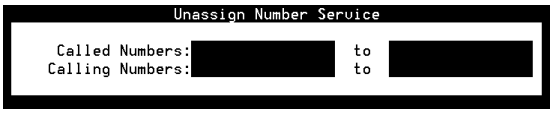


Figure 3-66. Unassign Number Service Window

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 5554876–5555210, 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.

Print a Voice Equipment Report

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

1. Start at the Display Voice Equipment window and press F8 (ACTIONS).

   The system displays the Actions menu.

2. Select

```
> Print
```

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

Feature Package Administration

4

Overview

This chapter describes the procedures to administer optional feature packages in the voice system. The feature packages covered in this chapter are:

- Script Builder Fax Actions
- Adjunct/Switch Application Interface (ASAI)

Purpose

This chapter contains procedures for administering Fax Actions and ASAI for use with the voice system.

Script Builder Fax Actions Administration

Administration for Fax Actions is accomplished through the Script Builder Fax Actions menu.

Use the procedure below to access the Script Builder Fax Actions menu:

1. Start at the Voice System Administration menu (Figure 3-1) and select

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

The system displays the Script Builder FAX Actions menu (Figure 4-1).

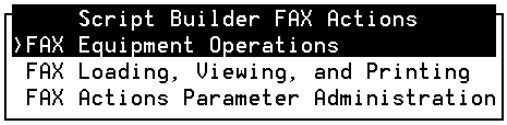


Figure 4-1. Script Builder FAX Actions Menu

FAX Equipment Operations

Use the Script Builder FAX Equipment Operations menu to perform:

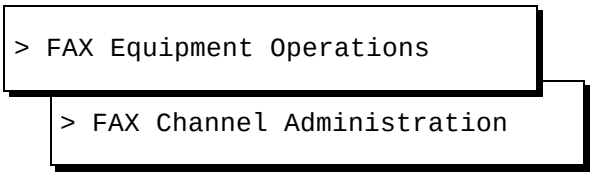
- Fax channel administration
- Fax transmission control
- Fax equipment diagnostics

FAX Channel Administration

Use the FAX Channel Administration menu options to change telephone numbers, print an equipment status report, or to change the state of the fax channels.

Use the procedure below to perform fax channel administration:

1. Start at the Script Builder FAX Actions Menu (Figure 4-1) and select



The system displays the FAX Channel Administration window (Figure 4-2).

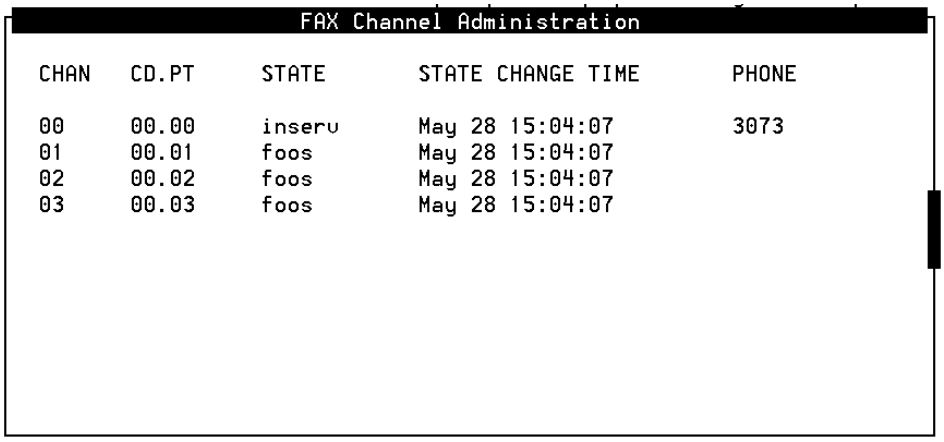


Figure 4-2. FAX Channel Administration Window

2. Press F8 (CHG-KEYS).

   The system displays the alternate set of function keys.

3. Do one of the following:

   - Press F2 (CHGSTATE) to change the state of one or more fax channels or cards. See Table 4-1 for a description of channel maintenance states.

Table 4-1. Description of Channel States in the FAX Channel Administration Window

Channel State	Description
inserv	Channel in service, able to support a transaction.
manoos	Manually-out-of-service, removed from service by system administrator but usually still operational.
foos	Facility-out-of-service, removed from service by system usually because of problems with the associated telephone line.
broken	Channel has failed diagnostic test and has been removed from service by the system.

- Press F3 (LINES) to assign, delete or change fax channel telephone line extension numbers.
- Press F6 (PRINT) to send the complete fax equipment report to the system printer.

4. Press F6 (CANCEL) repeatedly to return to the Script Builder FAX Actions menu.

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 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 4-1) and select

```
> FAX Equipment Operations
    > FAX Transmission Control
```

The system displays the FAX Transmission Control window (Figure 4-3).

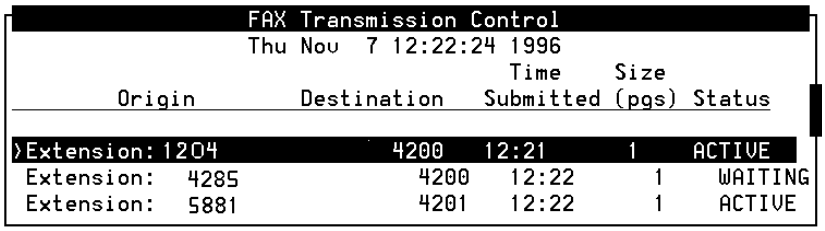


Figure 4-3. FAX Transmission Control Window

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 4-2 describes the columns and what they represent in this window.

Table 4-2. Description of Columns on the FAX Transmission Control Window

Column Name	Description
Origin	The name or extension of the person requesting the fax. If that name is not available, the information displays "Outside Call."
Destination	The telephone number where fax is to be delivered, or **lp** if the fax is to be printed on that telephone number.
Time Submitted	The time the fax was submitted to the fax channel
Size	The fax size (in pages.)
Status	The transmission status of each fax transmission, for instance: ■ ACTIVE: The job is currently on one of the fax lines or a laser printer. ■ WAITING: The job is waiting to be placed in the queue. ■ QUEUED: The job is waiting for a free fax channel. ■ SPOOLED: The job has been submitted to the local printer.

Update 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.

Use the procedure below to update the FAX Transmission Control window:

1. From the FAX Transmission Control window (Figure 4-3), press F6 (CANCEL) to return to the FAX Equipment Operations menu. You may need to press F8 (CHG-KEYS) to access CANCEL.
2. In the FAX Equipment Operations menu, select FAX Transmission Control.

   The system displays the updated fax queue.

Remove 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.

Use the procedure below 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.

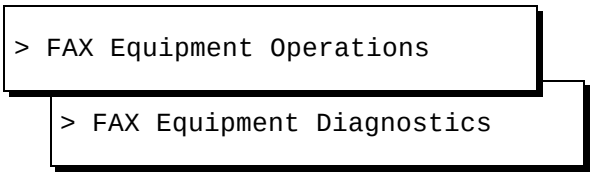
   The system removes the selected fax.
3. Press F6 (CANCEL) repeatedly to return to the Script Builder FAX Actions menu.

FAX Equipment Diagnostics

Use this procedure to run diagnostics on an individual fax channel or an entire fax circuit card. You can choose to run the diagnostics immediately (this terminates any fax action in progress), or wait until the channel is no longer in use.

Use the procedure below to access the FAX Equipment Diagnostics window:

1. Start at the Script Builder FAX Actions menu (Figure 4-1) and select



   The system displays the Diagnose FAX Equipment window (Figure 4-4).

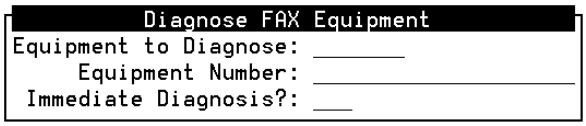


Figure 4-4. Diagnose FAX Equipment Window

2. Enter the information described in Table 4-3.

Table 4-3. Description of Fields on the Diagnose FAX Equipment Window

Field Name	Information to Enter
Equipment to Diagnose:	Enter **card** or **channel** to indicate whether tests are to be run on an entire card or an individual channel, or press F2 (Choices) for a list of acceptable choices.
Equipment Number:	Enter a number, a range of numbers, or **all**.
Immediate Diagnosis?:	Enter **yes** or **no** to indicate whether the tests are to be run immediately. If you enter **yes,** any fax actions on that card/channel will be terminated.

3. Press F3 (SAVE).

   The system displays the results of the diagnostic test in the FAX Equipment Diagnostic Results window (Figure 4-5).

4. Press F6 (CANCEL) to return to the FAX Equipment Operations menu (Figure 4-1).

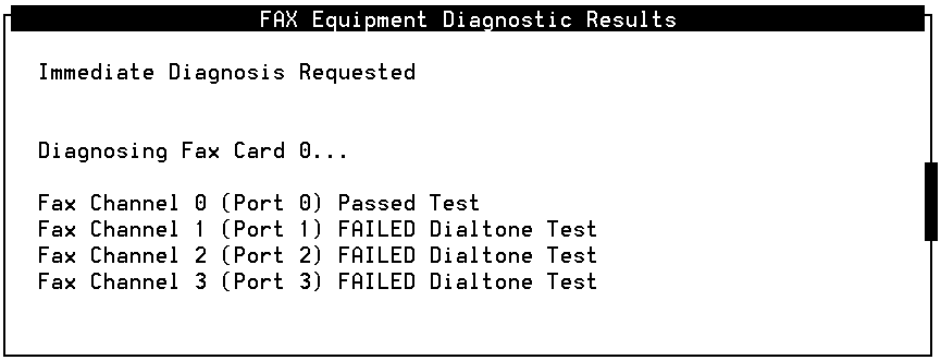


Figure 4-5. FAX Equipment Diagnostic Results Window

Load, View, and Print Faxes

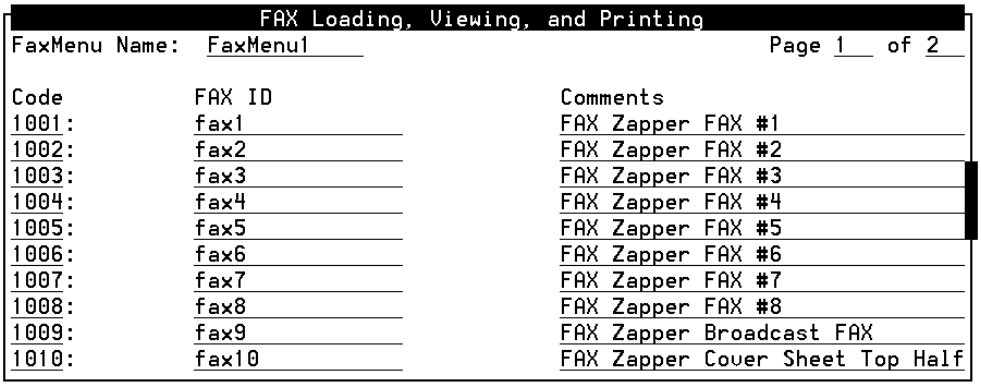
The FAX Loading, Viewing, and Printing window allows you to load a fax in the system, preview a fax, or send a fax to the printer.

Use the procedure below to access the FAX Loading, Viewing and Printing window:

1. Start at the Script Builder FAX Actions menu (Figure 4-1) and select

```
> FAX Loading, Viewing, and Printing
```

   The system displays the FAX Loading, Viewing, and Printing window (Figure 4-6).



FAX Loading, Viewing, and Printing

FaxMenu Name: FaxMenu1 Page 1 of 2

Code	FAX ID	Comments
1001:	fax1	FAX Zapper FAX #1
1002:	fax2	FAX Zapper FAX #2
1003:	fax3	FAX Zapper FAX #3
1004:	fax4	FAX Zapper FAX #4
1005:	fax5	FAX Zapper FAX #5
1006:	fax6	FAX Zapper FAX #6
1007:	fax7	FAX Zapper FAX #7
1008:	fax8	FAX Zapper FAX #8
1009:	fax9	FAX Zapper Broadcast FAX
1010:	fax10	FAX Zapper Cover Sheet Top Half

Figure 4-6. Sample FAX Loading, Viewing, and Printing Window

Figure 4-6 is a sample of the FAX Loading, Viewing, and Printer window. The window in your system may appear differently. The columns and what they represent, however, are the same. See Table 4-4 for a description of the columns in this window.

Table 4-4. Description of Columns on the FAX Loading, Viewing, and Printing Window

Column Name	Description
FaxMenu Name:	Name of the menu displayed in the window
Page	Number of pages in the menu (Figure 4-6 is two pages)
Code	A 4-digit identifier; the first digit may not be a zero
FAX ID	An alphanumeric string in the form of fax*N* where *N* is a number between 1 and 999 (see Figure 4-6)
Comments	A description of the fax; may be any alphanumeric character up to a length of 30 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, viewed, or printed, then do one of the following:
   - Press F2 (LOAD-FX) to load the fax onto the system.
   - Press F3 (VIEW-FX) to view the fax.
   - Press F6 (PRINT-FX) to send the fax to the system printer.
5. Press F6 (CANCEL) repeatedly until you return to the Script Builder FAX Actions menu.

FAX Actions Parameter Administration

The Script Builder FAX Actions Parameters are a set of values that dictate how your voice system applications interact with the fax features. After adding new fax circuit cards, or after bringing additional fax channels into service, be certain to save the FAX Actions Parameters using the FAX Actions Parameter Administration window (Figure 4-7) to ensure that the voice system recognizes the new fax channels.

Use the procedure below to administer Script Builder FAX Actions parameters:

1. Start at the Script Builder FAX Actions menu (Figure 4-1) and select

```
> FAX Actions Parameter Administration
```

   The system displays the FAX Actions Parameter Administration window (Figure 4-7).

```
          FAX Actions Parameter Administration

              Economy Time Period Begins (hhmm):2000
                Economy Time Period Ends (hhmm):0700
                   Dial String For Outside Call:_____
                           FAX Telephone Number: 6145554158
Length of Time to Retry FAX Transmission (hours):99
     Is '1' ever used to dial in this area code?:No_
                        Destination for printing:4157__
```

Figure 4-7. FAX Actions Parameter Administration Window

Table 4-5 describes the fields on this window.

Table 4-5. Description of Fields on the FAX Actions Parameters Window

Field Name	Description
Economy Time Period Begins:	Time when the economy time period begins. Use a 24-hour clock when entering digits, for example, 2300. The default is 2300 (11 p.m.).
Economy Time Period Ends:	Time when the economy time period ends. Use a 24-hour clock when entering digits, for example, 0700. The default is 0700 (7 a.m.).
Dial String For Outside Call:	Digits that precede an outside telephone number. If you leave this field blank, no automatic dial string is used. When you place a value in this field, Script Builder automatically attaches a "1" to the fax delivery number. This works when the system is installed in the United States and Canada, where you must dial a "1" before dialing the area code. Outside the United States and Canada, leave this field blank and use the **Concat5** action in your application to append any needed outside dial strings to the fax delivery number entered by the caller. See "Concat5" in Chapter 8, "Using Optional Features", in *INTUITY CONVERSANT System Version 6.0 Application Development with Script Builder*, 585-310-760, for more information about sending faxes outside the United States and Canada.
Fax Telephone Number:	10-digit telephone number for your voice system. This number identifies the system to calling fax machines. It does not have to be associated with a working telephone line.
Length Of Time To Retry Fax Transmission:	Number of hours (1 - 99) to wait to attempt to re-send a failed fax. If the fax is not transmitted by the length of time specified, the system stops attempting to re-send. Initially, it is recommended that you leave the default of 99 hours as the setting. If the initial transmission fails, retransmission is attempted 5 minutes later. If this transmission also fails, the second retransmission begins 10 minutes later. If this transmission also fails, the third retransmission begins 20 minutes after that, and so on.
Is "1" ever used to dial in this area code?:	Additional "1" needed when dialing within a given area code, (for example, 1-555-1234). This is different than the "1" attached before the area code in the Dial String for Outside Call field as described above. The default is no.
Destination for printing:	Specifies where faxes are printed during FAX Loading, Viewing, and Printing. This value should be **lp** (for laser printer) or a valid fax machine telephone number or extension. If you enter **lp**, the system prints faxes on the laser printer. If you enter a telephone number or extension, the system transmits the faxes to the fax machine connected to the specified telephone number or extension. The default is 9999.

2. Press F8 (CHG-KEYS).

   The system puts the cursor in the first field of the FAX Actions Parameter Administration window (Figure 4-7).

3. Change the parameter values as needed. Use the information in Table 4-5.

4. Press F3 (Save).

   The system activates the values you entered.

5. Press F6 (CANCEL) repeatedly until you return to the Voice System Administration menu (Figure 3-1).

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
- Diagnose, initialize, and take the IPCI circuit card off-line
- Show the status of the ASAI link and the version of ASAI software

Use the procedure below to access the ASAI Administration menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 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 3-1).

4. Select

   The system displays the ASAI Administration Menu (Figure 4-8).

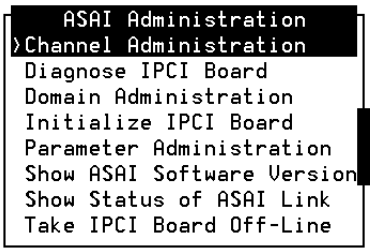


Figure 4-8. ASAI Administration Menu

Channel Administration

Channel Administration maps the voice system channels to the DEFINITY switch extension numbers. The Channel Administration window (Figure 4-9) 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:

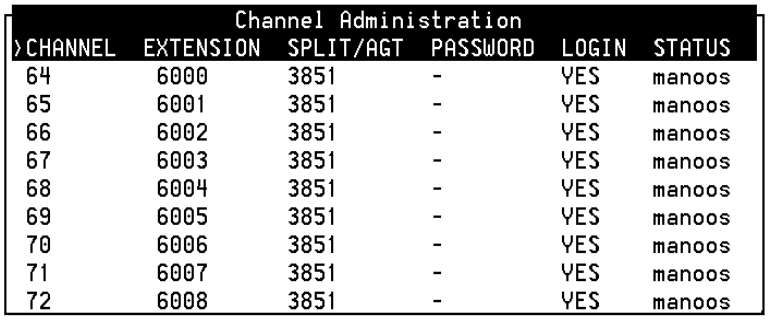
- Add an ASAI channel — assigns a Tip/Ring or LST1 channel as a voice system agent
- Change an ASAI channel — changes the switch extension assigned to a Tip/Ring or LST1 channel
- Remove an ASAI channel — unassigns a Tip/Ring or LST1 channel as a voice system agent
- Log in an ASAI channel — logs in 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

Use the procedure below to access the Channel Administration window:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Channel Administration
```

   The system displays the Channel Administration window (Figure 4-9).



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

Figure 4-9. Channel Administration Window

Table 4-6 describes the columns in the Channel Administration window.

Table 4-6. 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.
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.

Continued on next page

Table 4-6. Description of Columns in the Channel Administration Window — *Continued*

Column Name	Description
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.

Add a Channel Entry

Use the procedure below to add a channel entry:

1. Start at the Channel Administration window (Figure 4-9) 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 4-10).

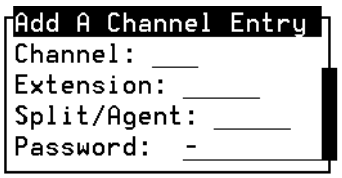


Figure 4-10. Add A Channel Entry Window

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 “Log In a Channel” procedure below.

Change a Channel Entry

NOTE:
The channel must be logged out before it may be changed. If the channel is not logged out, complete the “Log Out a Channel” procedure below.

Use the procedure below to change the switch extension associated with a channel:

1. Start at the Channel Administration window (Figure 4-9) 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 F2 (CHANGE).

   The system displays the Change A Channel Entry Window (Figure 4-11).

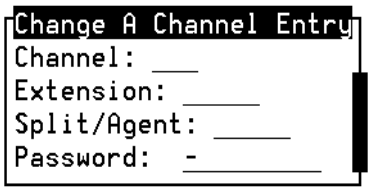


Figure 4-11. Change A Channel Entry Window

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 "Log In a Channel" procedure below.

Remove a Channel Entry

NOTE:
The channel must be logged out before you can remove it. If the channel is not logged out, complete the "Log Out a Channel" procedure below.

Use the procedure below to remove a channel entry:

1. Start at the Channel Administration window (Figure 4-9) 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 4-9).

Log 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.

Use the procedure below to log in a channel:

1. Start at the Channel Administration window (Figure 4-9) 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 F4 (LOGIN).

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

Log Out a Channel

Use the procedure below to log out a channel:

1. Start at the Channel Administration window (Figure 4-9) 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 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 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.

Use the procedure below to access the Domain Administration window:

1. Start at the ASAI Administration Menu (Figure 4-8) and select

```
> Domain Administration
```

   The system displays the Domain Administration window (Figure 4-12).

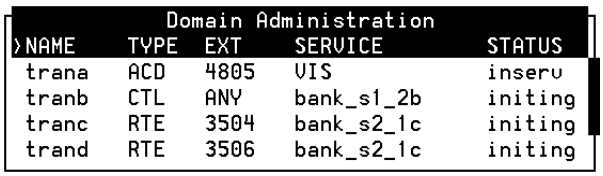


Figure 4-12. Domain Administration Window

Table 4-7 describes the columns in this window.

Table 4-7. 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.

Continued on next page

Table 4-7. Description of Columns in Domain Administration Window — *Continued*

Column Name	Description
SERVICE	Application name that services the domain, and can be assigned to any type of domain (ACD, VDN, etc.). 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 VIS 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 4, "Adjunct/Switch Application Interface," in *INTUITY CONVERSANT System Version 6.0 Communication Development*, 585-310-763, for more information. ■ RTE domains — The SERVICE must be routing. See Chapter 4, "Adjunct/Switch Application Interface," in *INTUITY CONVERSANT System Version 6.0 Communication Development*, 585-310-763, for a more information.

Continued on next page

Table 4-7. Description of Columns in Domain Administration Window — *Continued*

Column Name	Description
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. ■ inserv[1] (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.

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.

Add a Domain

Use the procedure below to add a domain:

1. Start at the Domain Administration window (Figure 4-12) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F1 (ADD).

1. The system displays the Add A Domain Entry window (Figure 4-13).

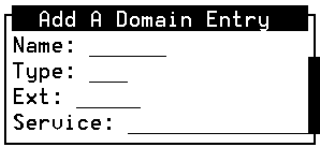


Figure 4-13. Add A Domain Entry Window

2. Enter the domain name in the `Name:` field. This is the name that has been given to the ACD on the PBX.
3. 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.
4. Enter the switch extension of the domain in the `Ext:` field.
5. 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.
6. Press F3 (SAVE).

   The system adds the new domain and returns to the Domain Administration window.
7. Complete the “Enable a Domain” procedure below.

Change a Domain

NOTE:
The domain must be disabled before you may change it. If it is not disabled, complete “Disable a Domain” below.

Use the procedure below to change a domain:

1. Start at the Domain Administration window (Figure 4-12) 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 4-14).

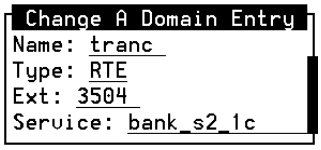


Figure 4-14. Change A Domain Entry Window

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 “Enable a Domain” procedure below.

Remove a Domain

NOTE:
The domain must be disabled before you may remove it. If it is not disabled, complete “Disable a Domain” below.

Use the procedure below to remove a domain:

1. Start at the Domain Administration window (Figure 4-12) 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.

Enable a Domain

Use the procedure below to enable a domain:

1. Start at the Domain Administration window (Figure 4-12) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F4 (ENABLE).

   The system changes the `Status:` field to “inserv”.

Disable a Domain

Use the procedure below to take a domain out of service:

1. Start at the Domain Administration window (Figure 4-12) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F5 (DISABLE).

   The system changes the `Status`: field to “manoos”.

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” in Chapter 8, “Daily Administration” for more information on **trace**.

Use the procedure below to set ASAI parameters regarding connect event reporting and the level of trace detail:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Parameter Administration
```

   The system displays the ASAI Parameters window (Figure 4-15).

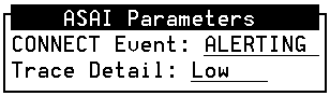


Figure 4-15. ASAI Parameters Window

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 4-8 summarizes the **trace** command settings and the level of detail achieved with each one.

Table 4-8. 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. Press F3 (SAVE).

   The system displays the level of trace detail specified.
5. Press F6 (CANCEL) repeatedly to return to the ASAI Administration menu (Figure 4-8).

Show the ASAI Software Version

This procedure displays the version information about the ASAI software loaded onto the voice system.

Use the procedure below to show the ASAI software version:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Show ASAI Software Version
```

The system displays the Show ASAI Software Version window (Figure 4-16).

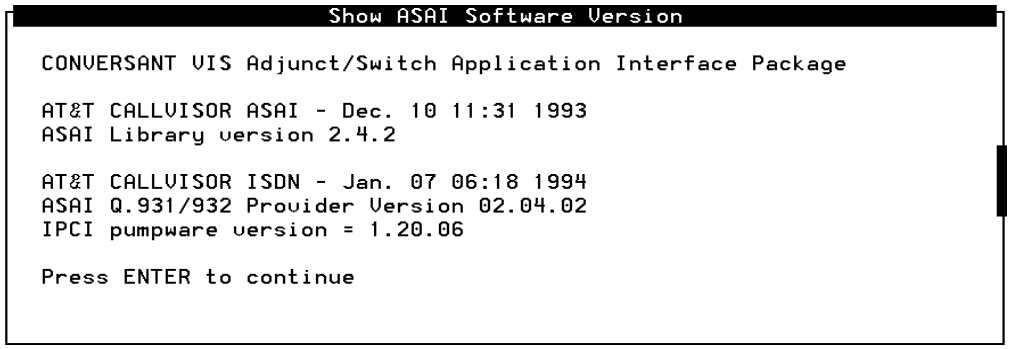


Figure 4-16. Show ASAI Software Version Window

2. Press ENTER.

   The system returns to the ASAI Administration menu (Figure 4-8).

Show the Status of the ASAI Link

NOTE:
The ASAI link must be administered on the DEFINITY® switch. See *DEFINITY Communications System Generic 3i Implementation*, 555-230-650, for more information.

This procedure displays the current maintenance state of the ASAI link to the voice system. It also displays whether the connection to the switch is provided by an IPCI circuit card or a local area network (LAN).

ASAI Link Status: IPCI Connection

Use the procedure below to display the current maintenance state of the ASAI link using an IPCI card connection to the PBX:

1. Start at the ASAI Administration menu (Figure 4-8) and select

   ```
   > Show Status of ASAI Link
   ```

   The system displays the Show Status of ASAI Link window (Figure 4-17).

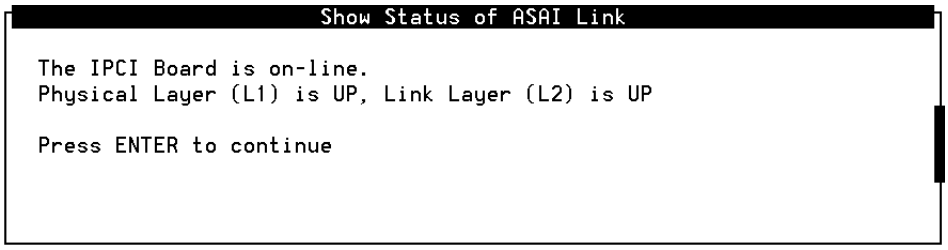


Figure 4-17. Show Status of ASAI Link Window (IPCI)

Table 4-9 describes the messages that appear on the Show Status of ASAI Link window if the link is experiencing problems.

Table 4-9. Show Status ASAI Link (IPCI) Messages

Status Message	Description
The IPCI card is on-line. Physical layer (L1) is DOWN, Link Layer (L2) is DOWN	L1 DOWN, L2 DOWN
The IPCI card is on-line. Physical layer (L1) is UP, Link Layer (L2) is DOWN	L1 UP, L2 DOWN
The IPCI card may be faulty or non-existent. Make sure the circuit card and the ASAI Library package have been installed with the correct options.	FAULTY HARDWARE or UNKNOWN or UNDETERMINED
The IPCI card is currently OFFLINE. The card must be initialized before service can begin.	OFFLINE
The IPCI card is currently being initialized.	PUMPING
The IPCI card is currently being taken OFFLINE	AWAITING GOING OFFLINE

2. Press ENTER.

   The system returns to the ASAI Administration menu (Figure 4-8).

ASAI Link Status: LAN Connection

Use the procedure below to display the current maintenance state of the ASAI link using a LAN connection to the switch:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Show Status of ASAI Link
```

   The system displays the Show Status of ASAI Link window (Figure 4-18).

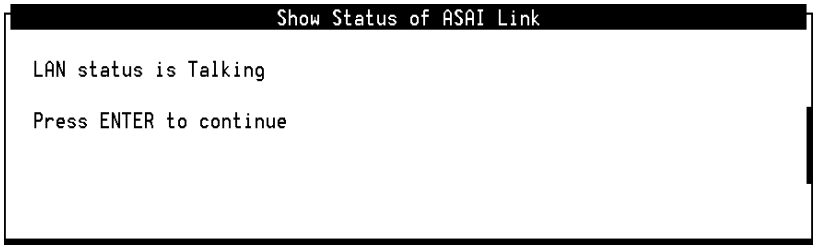


Figure 4-18. Show Status of ASAI Link Window (LAN)

Table 4-10 describes the messages that appear on the Show Status of ASAI Link screen if the LAN link is experiencing problems.

Table 4-10. Show Status ASAI Link (LAN) Messages

Status Message	Description
`LAN is Talking`	LAN connection is on-line.
`LAN is Quiet`	LAN connection is off-line.

2. Press ENTER.

   The system returns to the ASAI Administration menu.

IPCI Circuit Card Administration

See “PC/ISDN (IPCI) Circuit Card” in Chapter 5, “Replacing, Installing, or Upgrading Circuit Cards”, in the maintenance book for your platform for more information about the IPCI circuit card.

Initialize the IPCI Circuit Card

This procedure downloads driver software onto the IPCI circuit card, and then places the card on-line. The IPCI circuit card must be taken off-line before it can be initialized. If it is on-line, complete “Take IPCI Card Off-Line” below before doing this procedure.

⚠ CAUTION:
You do not need to initialize the IPCI circuit card each time you diagnose it. Run this procedure only when recovering from an error.

Use the procedure below to initialize the IPCI circuit card:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Initialize IPCI Card
```

The system initializes the IPCI circuit card.

Take IPCI Card Off-Line

This procedure takes the IPCI circuit card off-line and effectively disables the link between the IPCI circuit card and the driver software.

⚠ CAUTION:
Do not take the circuit card off-line while the ASAI application is running. Taking the IPCI circuit card off-line is NOT a common procedure. Use the procedure below as an error recovery procedure in conjunction with “Initialize the IPCI Circuit Card” above.

Use the procedure below to take an IPCI circuit card off-line:

1. Start at the ASAI Administration menu (Figure 4-8) and select

```
> Take IPCI Card Off-Line
```

The system displays the Request For Confirmation Window (Figure 4-19).

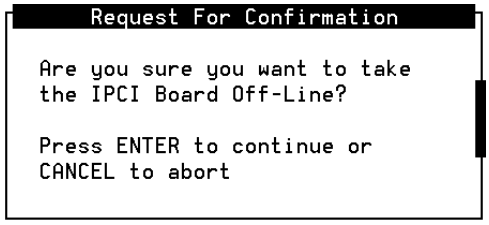


Figure 4-19. Request For Confirmation Window

2. Press ENTER.

   The system displays a message that the IPCI circuit card was successfully taken off-line.

3. Press F6 (CANCEL) repeatedly to return to the ASAI Administration menu (Figure 4-8).

Switch Interface Administration

5

Overview

The Switch Interfaces menu lets you to define the interaction between the INTUITY™ 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.

Purpose

The purpose of this chapter is to provide procedural information and reference information for administering the supported analog and digital switch interfaces.

Switch Interface Hardware

A voice system can utilize analog and digital interfaces in the same platform. The circuit cards that provide analog and digital interfaces share the same set of card numbers. Card numbers (Card 0, Card 1...Card *n*) and well as the slot allocations for the cards are determined by the voice system.

For information about slot allocation for digital and analog interface circuit cards, see Chapter 4, "Running the Configuration Program," in the hardware installation book for your platform. For information about configuration limits, see Chapter 6, "CONVERSANT System Requirements and Specifications," of *INTUITY™ CONVERSANT® System Version 6.0 System Description*, 585-310-241.

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

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 following digital circuit cards and protocols:

Table 5-1. Card Types and their Available Protocols

Protocol	Circuit Card Supported
T1 A/B Robbed-bit E&M	T1
Line Side on the DEFINITY switch	T1 and E1
Line Side on the Galaxy switch	T1
ISDN-Primary Rate Interface	T1 and E1
Digital R2 MFC — Mexico	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 5-1) and either accepting the default values as displayed, or changing the default values. If the default parameters are acceptable to you, you do not need to make any changes and may simply save the default values.

Access the Switch Interface Menu

Use the procedure below to access the Switch Interfaces menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 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 3-1).

4. Select

   ```
   > Switch Interfaces
   ```

5. Press ENTER.

   The system displays the Switch Interfaces menu (Figure 5-1).

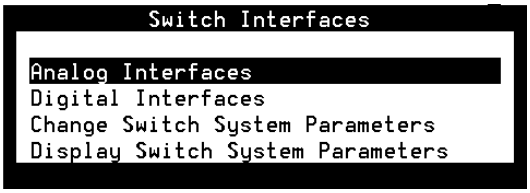


Figure 5-1. Sample Switch Interfaces Menu

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

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/menus discussed in the following sections. This term is used synonymously with *switch*.

Access the Analog Interfaces Window

Use the procedure below to access the Analog Interfaces window:

1. Start at the Switch Interfaces menu (Figure 5-1) and select

```
> Analog Interfaces
```

The system displays the Analog Interfaces window (Figure 5-2).

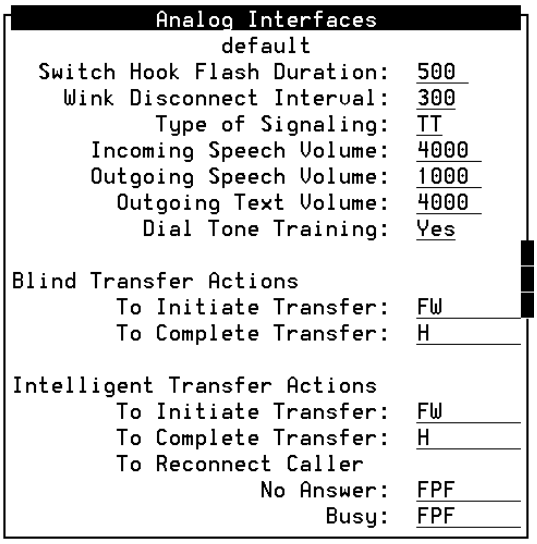


Figure 5-2. Analog Interfaces Window

Set Default Analog Interfaces Parameters

Use the procedure below to set the default analog switch interface parameters:

1. Start at the Analog Interfaces window (Figure 5-2) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F1 (DEFAULTS).

   The system displays the PBX Defaults menu (Figure 5-3).

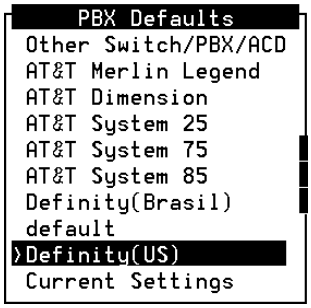


Figure 5-3. PBX Defaults Menu

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 5-2) 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.

   Table 5-2 shows the values that are displayed in the Analog Interfaces when that particular switch is selected.

4. (Optional) Make changes to any of the default switch value fields in the Analog Interfaces window to meet your requirements. See Table 5-2 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 “Stop the Voice System” and “Start the Voice System” in Chapter 3, “Voice System Administration”.

7. Reinstall any scripts that use transfer sequences.

Table 5-2. Default Parameter Values for Analog Switch Interfaces

	Switch Name					
Parameter	**AT&T Dimension**	**Merlin Legend**	**AT&T System 25**	**AT&T System 75**	**AT&T System 85**	**DEFINITY ECS**
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
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

Continued on next page

Table 5-2. Default Parameter Values for Analog Switch Interfaces — *Continued*

Parameter	Switch Name					
	AT&T Dimension	**Merlin Legend**	**AT&T System 25**	**AT&T System 75**	**AT&T System 85**	**DEFINITY ECS**
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]

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 = touch-tone 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)

Set Analog Interfaces Parameters

Use the procedure below 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 private branch exchange or network) to avoid service problems.

Standard Analog Interface Parameters

1. Start at the Switch Interfaces menu (Figure 5-1) and select

```
> Analog Interfaces
```

   The system displays the Analog Interfaces window (Figure 5-2).

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 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** (touch-tone 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, etc.

   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, etc.

   Table 5-3 shows the relationship between the volume number and the actual change in volume expressed in decibels.

Table 5-3. 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 `Incoming Speech Volume:`. 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 5-4 in the `To Initiate Transfer`: field. If you are using a DEFINITY switch with tip/ring circuit cards, FW is the default.
10. Enter one or more code letters from Table 5-4 in the `To Complete Transfer`: field. If you are using a DEFINITY switch with tip/ring circuit cards, H is the default.

Intelligent Transfer Actions

11. Enter one or more code letters from Table 5-4 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 5-4 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 5-4 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 5-4 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 5-4. 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 touch-tone digit)	Transmit that touch-tone digit to the PBX.
H	Hangup.

Print Analog Interface Information

Use the procedure below to print analog interface information:

1. Start at the Analog Interfaces window (Figure 5-2) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F6 (PRINT).

   The system prints the selected analog interface information.

NOTE:
This information does not print if a printer has not been configured for use with the voice system. See “Printer Administration” in Chapter 7, “Peripheral Administration”, for more information about printer administration.

Non-US 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 5-3) 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” 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

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 (private branch exchange or network) to avoid service problems.

Access the Digital Interfaces Menu

Use the procedure below to access the Digital Interfaces menu:

1. Start at the Switch Interfaces menu (Figure 5-1) and select

```
> Digital Interfaces
```

   The system displays the Digital Interfaces menu (Figure 5-4).

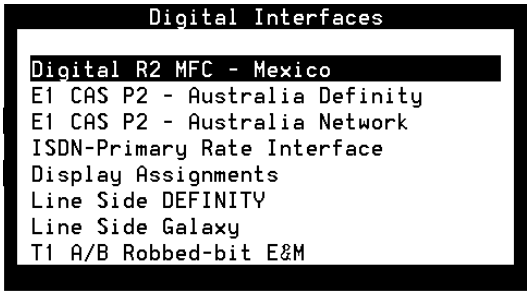


Figure 5-4. Digital Interfaces Menu

NOTE:
Figure 5-4 shows all currently supported digital protocols. All digital protocol packages must be installed before are displayed in this menu.

From this menu, you may either display the current digital assignments or select the protocol that you want to administer. Each item in the menu is described in the sections below.

Display 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.

Use the procedure below to display the installed E1/T1 circuit cards and their digital protocol assignments:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> Display Assignments
```

   The system displays the Display Digital Interface Assignments window (Figure 5-5).

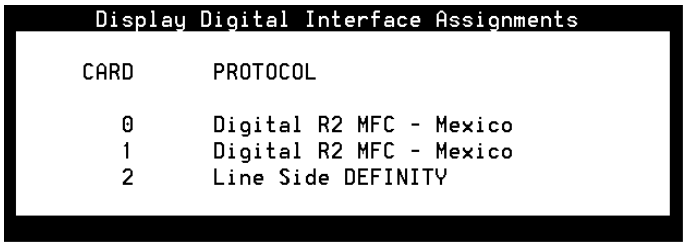


Figure 5-5. Sample Display Digital Interface Assignments Screen

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.

The supported circuit cards for use with T1 Robbed-bit protocols are:

- AYC3B (T1 circuit card)
- AYC11 (T1 circuit card)
- AYC21 (E1/T1 circuit card)

NOTE:
The AYC3 (T1 circuit card) is not supported.

The supported circuit card for use with E1 protocols is the AYC21 (E1/T1 circuit card.

The AYC21 can operate as either a T1 or E1 circuit card. See “Settings for Optional Circuit Cards” in Chapter 5, “Replacing, Installing, or Upgrading Circuit Cards,” in the maintenance book for your platform for more information on configuring the AYC21.

Supported Digital Protocol Parameters

Table 5-5 and Table 5-6 show the valid parameter 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 tables as you complete the procedure for your protocol.

Table 5-5. Valid Parameter and Default Values for T1 Digital Protocols

Field Name	Valid Parameter Value(s)	Protocol Name			
		T1 A/B Robbed-bit E&M Default	LST1-DEFINITY Default	LST1 - Galaxy Default	ISDN-PRI Layer 1
Framing/ Line Coding	D4ZCS, ESFB8ZS	D4ZCS	D4ZCS	D4ZCS	CEPTHDB3
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	—
Dial Tone Delay	20–5100 msec	—	1000 msec	1000 msec	—
Switch Hook Flash Duration[2]	10–2550 msec	—	700 msec	700 msec	—

Continued on next page

Table 5-5. Valid Parameter and Default Values for T1 Digital Protocols — *Continued*

Field Name	Valid Parameter Value(s)	Protocol Name			
		T1 A/B Robbed-bit E&M Default	**LST1-DEFINITY Default**	**LST1 - Galaxy Default**	**ISDN-PRI Layer 1**
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 Line Side protocols.
3. Applies only when Text-to-Speech is installed

Table 5-6. Valid Parameter and Default Values for E1 Digital Protocols

Field Name	Valid Parameter Value(s)	Protocol Name			
		E1 CAS Default	**LSE1-DEFINITY Default**	**E1 PRI Default**	**ISDN PRI Layer 1 (with ACULAB) Default**
Framing/ Line Coding	CEPTHDB3	CEPTHDB3	CEPTHDB3	CEPTHDB3	CEPTHDB3
DTMF Muting	Yes, No	Yes	Yes	Yes	Yes
D-channel on This Card?	Yes, No	—	—	—	—

Continued on next page

Table 5-6. Valid Parameter and Default Values for E1 Digital Protocols — *Continued*

Field Name	Valid Parameter Value(s)	Protocol Name			
		E1 CAS Default	LSE1-DEFINITY Default	E1 PRI Default	ISDN PRI Layer 1 (with ACULAB) Default
Dial Tone Delay	1000 msec	—	1000 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[1]	0–32000 (-30 to +30 dB)	1000	1000	1000	1000
Idle Code	01010100	01010100	01010100	01010101	01010100
A-LAW or MU-LAW	A-LAW	A-LAW	A-LAW	A-LAW	A-LAW
CRC	Yes, No	Yes	Yes	Yes	Yes

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

Line Side Protocols

The Line Side protocols give you the ability to make line side connections through the digital circuit cards (T1 and/or E1) in the voice system.

This section describes how to set the parameters and assign circuit cards to support Line Side switch integration with the voice system.

In the sections below, the Line Side protocols are abbreviated as follows:

- Line Side T1 = LST1
- Line Side E1 = LSE1

Line Side DEFINITY Protocol

The Line Side DEFINITY protocol supports:

- DEFINITY G3i, Release 4.0, or G3r, Release 5.4 off-premise station (switch) with forward disconnect indication
- DEFINITY G2, Release 2, Generics 2.1 and 2.2 switches, using the ANN11E DS1 circuit pack configured for the off-premises extension (OPS) port type

Access Line Side DEFINITY Menu

Use the procedure below to access the Line Side DEFINITY protocol:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> Line Side DEFINITY
```

   The system displays the Line Side DEFINITY menu (Figure 5-6).

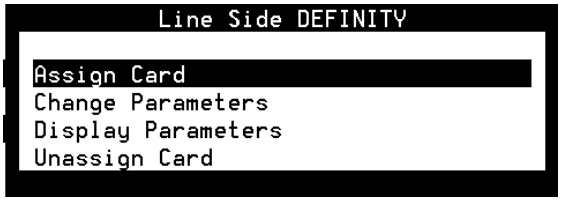


Figure 5-6. Line Side DEFINITY Menu

Use the procedures below to assign/unassign the Line Side DEFINITY protocol to digital circuit cards, and administer DEFINITY switch interface parameters.

Assign Line Side DEFINITY 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 "Unassign Line Side DEFINITY Protocol to Digital Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below to assign the Line Side DEFINITY protocol to a T1 or E1 circuit card:

1. Start at the Line Side DEFINITY menu (Figure 5-6) and select

```
> Assign Card
```

   The system displays the Assign Card: Line Side DEFINITY window (Figure 5-7).

```
          Assign Card: Line Side DEFINITY

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

Figure 5-7. Assign Card: Line Side DEFINITY 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 5-7. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - 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 touch tones. **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, etc.

   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, etc.

   See Table 5-3 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:
    In order for blind transfers to work with the Line Side DEFINITY 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 "Set Analog Interfaces Parameters" above for more information.

    U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for LST1 and LSE1 using an AYC21 digital circuit card. It is *not* supported with the AYC11 and AYC3B. In order for Full CCA to work with the Line Side DEFINITY protocol, you must set both the `No Answer:` and `Busy:` fields to "FPF" in the Analog Interface window. See "Set Analog Interfaces Parameters" above for more information.

11. (LST1 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.

    WARNING:
    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. (LSE1 only) Enter the 8-digit code that are generated when the channel is idle in the `Idle Code:` field.

13. (LSE1 only) Enter **A-LAW** or **MU-LAW** in the `A-LAW or MU-LAW:` field.
14. (LSE1 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 Line Side DEFINITY protocol to the selected E1/T1 circuit card.

Change Line Side DEFINITY Parameters

The digital circuit card must first be assigned to the Line Side DEFINITY protocol to use this procedure. See "Assign Line Side DEFINITY Protocol to Digital Circuit Cards", above 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 "Change Equipment State" 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.

Use the procedure below to change the Line Side DEFINITY parameters:

1. Start at the Line Side DEFINITY menu (Figure 5-6) and select

```
> Change Parameters
```

   The system displays the Change Parameters: Line Side DEFINITY window (Figure 5-8).

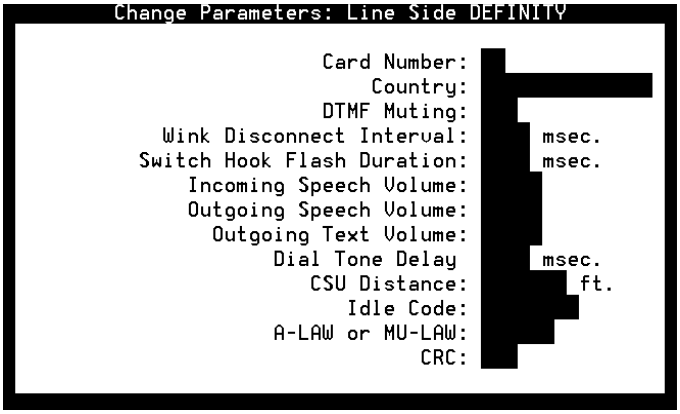


Figure 5-8. Change Parameters: Line Side DEFINITY Window

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 current values for the circuit card number entered.

   The `Card Number:` field is blank in Figure 5-8. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - CSU Distance

3. Change any of the parameters described in “Assign Line Side DEFINITY Protocol to Digital Circuit Cards” above.

4. Press F3 (SAVE).

   The system saves the changed parameters.

Display Line Side DEFINITY Parameters

The digital circuit card must first be assigned to the Line Side DEFINITY protocol to use this procedure. See "Assign Line Side DEFINITY Protocol to Digital Circuit Cards", above for more information about making the initial assignment.

Use the procedure below to display the Line Side DEFINITY parameters of a digital circuit card:

1. Start at the Line Side DEFINITY menu (Figure 5-6) and select

   ```
   > Display Parameters
   ```

   The system displays the Display Parameters: Line Side DEFINITY window (Figure 5-9).

```
Display Parameters: Line Side DEFINITY

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

Figure 5-9. Display Parameters: Line Side DEFINITY Window

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 5-9. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

The list below shows the LSE1-specific fields:

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

The list below shows the LST1-specific fields:

- CSU Distance

3. Press F6 (CANCEL) to return to the Line Side DEFINITY menu.

Unassign Line Side DEFINITY Protocol to Digital Circuit Cards

NOTE:
Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" in Chapter 3, "Voice System Administration", for additional information.

Use the procedure below to unassign the Line Side DEFINITY protocol:

1. Start at the Line Side DEFINITY menu (Figure 5-6) and select

```
> Unassign Card
```

The system displays the Unassign Card: Line Side DEFINITY window (Figure 5-10).

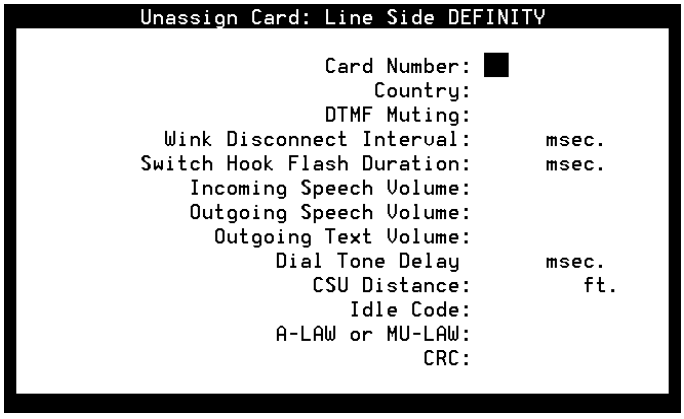


Figure 5-10. Unassign Card: Line Side DEFINITY Window

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 5-10. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - CSU Distance

3. Press F3 (SAVE).

   The system removes the Line Side DEFINITY assignment from the selected circuit card.

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

Line Side Galaxy Protocol

The Line Side Galaxy protocol is supported on the Rockwell Galaxy switch for use with T1 digital circuit cards. The Galaxy protocol is not supported for E1 digital interfaces.

Access Line Side DEFINITY Menu

Use the procedure below to access the Line Side Galaxy protocol:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> Line Side Galaxy
```

   The system displays the Line Side Galaxy menu (Figure 5-11).

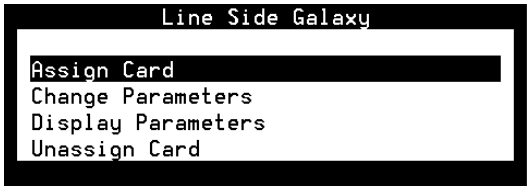


Figure 5-11. Line Side Galaxy Menu

Use the procedures below to assign/unassign the Line Side Galaxy protocol to digital circuit cards, and administer Galaxy switch interface parameters.

Assign Line Side Galaxy 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 "Unassign Line Side DEFINITY Protocol to Digital Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below to assign the Line Side Galaxy protocol to a T1 circuit card:

1. Start at the Line Side Galaxy menu (Figure 5-11) and select

```
> Assign Card
```

The system displays the Assign Card: Line Side Galaxy window (Figure 5-12).

```
Assign Card: Line Side Galaxy

                    Card Number:

                    DTMF Muting: YES
      Wink Disconnect Interval: 300  msec.
  Switch Hook Flash Duration: 700  msec.
      Incoming Speech Volume: 1414
      Outgoing Speech Volume: 707
        Outgoing Text Volume: 1000
             Dial Tone Delay  1000 msec.
                CSU Distance: 0-133   ft.
                   Idle Code: 11111111
           A-LAW or MU-LAW: MU-LAW
                         CRC: NO
```

Figure 5-12. Assign Card: Line Side Galaxy 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 5-12. After you enter the circuit card number, the fields are populated with the current settings.

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 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 touch tones. **Yes**, then *turns on* DTMF muting.

4. 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.

5. 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.

6. 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, etc.

   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, etc.

   See Table 5-3 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.

7. 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.

8. (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.

9. 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:
   U.S. and Canada: Intelligent transfer (full call classification analysis – Full CCA) is now supported for LST1 using an AYC21 digital circuit card. It is *not* supported with the AYC11 and AYC3B. In order for Full CCA to work with Line Side T1 Galaxy, you must set both the `No Answer:` field and `Busy:` field to "P" in the Analog Interface window.

   See "Set Analog Interfaces Parameters" above for more information.

10. 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.

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

11. Press F3 (SAVE).

    The system saves the parameter information and assigns the Line Side Galaxy protocol to the selected T1 circuit card.

Change Line Side Galaxy Parameters

The digitial circuit card must first be assigned to the Line Side Galaxy protocol to use this procedure. See “Assign Line Side Galaxy Protocol to Digital Circuit Cards”, above 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 “Change Equipment State” 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.

Use the procedure below to change the Line Side Galaxy parameters:

1. Start at the Line Side Galaxy menu (Figure 5-11) and select

```
> Change Parameters
```

The system displays the Change Parameters: Line Side Galaxy window (Figure 5-13).

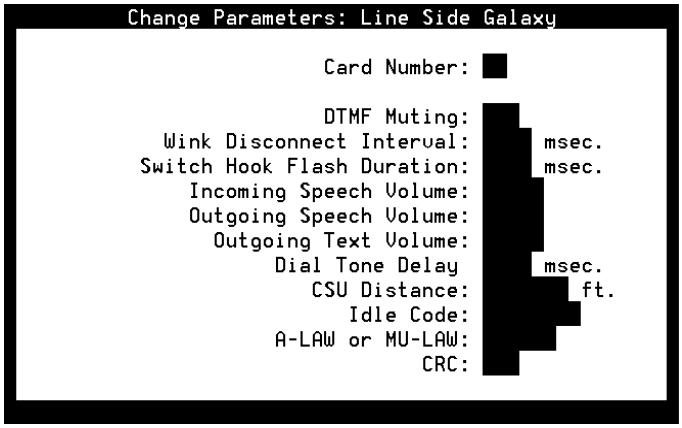


Figure 5-13. Change Parameters: Line Side Galaxy Window

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 current values for the circuit card number entered.
3. Change any of the parameters described in “Assign Line Side Galaxy Protocol to Digital Circuit Cards” above.

4. Press F3 (SAVE).

   The system saves the changed parameters.

Display Line Side Galaxy Parameters

The digital circuit card must first be assigned to the Line Side Galaxy protocol to use this procedure. See "Assign Line Side Galaxy Protocol to Digital Circuit Cards", above for more information about making the initial assignment.

Use the procedure below to display the Line Side Galaxy parameters of a digital circuit card:

1. Start at the Line Side Galaxy menu (Figure 5-11) and select

   ```
   > Display Parameters
   ```

   The system displays the Display Parameters: Line Side Galaxy window (Figure 5-14).

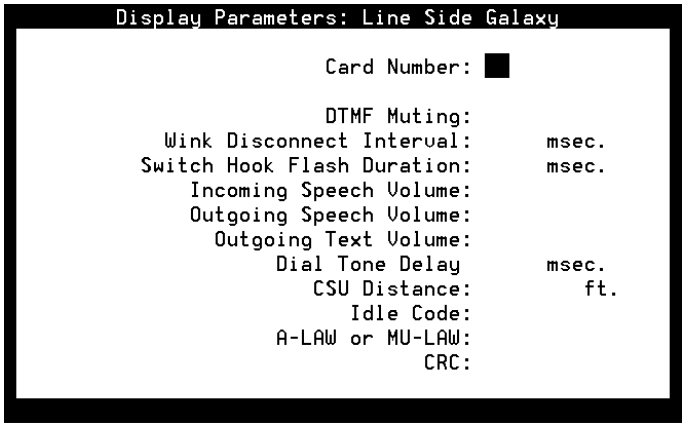


Figure 5-14. Display Parameters: Line Side Galaxy Window

2. Enter the circuit card number in the `Card Number:` field, or press F2 (CHOICES) to select from a menu.
3. Press F6 (CANCEL) to return to the Line Side Galaxy menu.

Unassign Line Side Galaxy Protocol to Digital Circuit Cards

NOTE:
Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" in Chapter 3, "Voice System Administration", for additional information.

Use the procedure below to unassign the Line Side Galaxy protocol:

1. Start at the Line Side Galaxy menu (Figure 5-11) and select

   ```
   > Unassign Card
   ```

   The system displays the Unassign Card: Line Side Galaxy window (Figure 5-15).

```
Unassign Card: Line Side Galaxy

                    Card Number:

                    DTMF Muting:
  Wink Disconnect Interval:      msec.
Switch Hook Flash Duration:      msec.
    Incoming Speech Volume:
    Outgoing Speech Volume:
      Outgoing Text Volume:
           Dial Tone Delay       msec.
              CSU Distance:         ft.
                 Idle Code:
           A-LAW or MU-LAW:
                       CRC:
```

Figure 5-15. Unassign Card: Line Side Galaxy Window

2. Enter the circuit card number in the `Card Number:` field, or press F2 (CHOICES) to select from a menu.
3. Press F3 (SAVE).

   The system removes the Line Side DEFINITY assignment from the selected circuit card.
4. Press F6 (CANCEL) repeatedly to return to the Digital Interfaces menu.

E1 CAS Protocols

The INTUITY CONVERSANT voice system supports the E1 Channel Associated Signalling (CAS) protocol for Australia and Mexico for use with the DEFINITY switch.

The following CAS protocols are supported with the installation of the corresponding switch integration packages:

- Digital R2 MFC - Mexico
- E1 CAS P2 - Australian DEFINITY
- E1 CAS P2 - Australian Network

Digital R2 MRC - Mexico Protocol

Access Digital R2 MFC - Mexico Menu

Use the procedure below to access the E1 CAS for Mexico protocol menu:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> Digital R2 MFC - Mexico
```

The system displays the Digital R2 MFC Protocol - Mexico menu (Figure 5-16).

```
Digital R2 MFC Protocol - Mexico

Assign Card
Change Parameters
Display Parameters
Unassign Card
```

Figure 5-16. Digital R2 MFC Protocol - Mexico Menu

Use the procedures below to assign/unassign the Digital R2 MFC - Mexico protocol to digital circuit cards, and administer the switch interface parameters.

Assign Digital R2 MFC - Mexico 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 "Unassign Digital R2 MFC - Mexico Protocol to E1 Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below to assign the Mexico protocol to an E1 circuit card:

1. Start at the Digital R2 MFC Protocol - Mexico menu (Figure 5-16) and select

```
> Assign Card
```

The system displays the Assign Card: Digital R2 MFC Protocol - Mexico window (Figure 5-17).

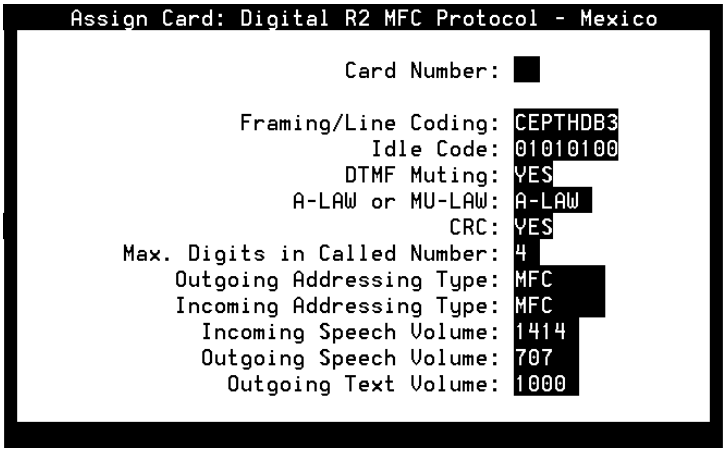


Figure 5-17. Assign Card: Digital R2 MFC Protocol - Mexico Window

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.

3. Enter the values as shown in Table 5-7 for each of the fields in the window.

Table 5-7. Parameter Values for Assign Card: Digital R2 MFC - Mexico 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:	MFC
Incoming Addressing Type:	MFC
Incoming Speech Volume:	1414
Outgoing Speech Volume:	707

4. Press F3 (SAVE).

   The system saves the parameter information and assigns the Digital R2 MFC - Mexico protocol to the selected E1 circuit card.

Change Digital R2 MFC - Mexico Parameters

The E1 circuit card must first be assigned to the Digital R2 MFC - Mexico protocol to use this procedure. See “Assign Digital R2 MFC - Mexico Protocol to E1 Circuit Cards”, above 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 “Change Equipment State” 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.

Use the procedure below to change the Digital R2 MFC - Mexico parameters:

1. Start at the Digital R2 MFC Protocol - Mexico menu (Figure 5-16) and select

```
> Change Parameters
```

   The system displays the Change Parameters: Digital R2 MFC Protocol - Mexico window (Figure 5-18).

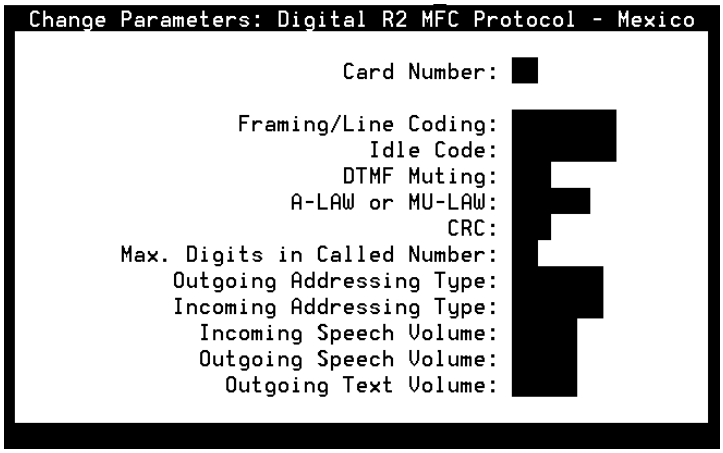


Figure 5-18. Change Parameters: Digital R2 MFC Protocol - Mexico Window

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 current values for the circuit card number entered.
3. Change any of the parameters described in "Assign Digital R2 MFC - Mexico Protocol to E1 Circuit Cards" above.
4. Press F3 (SAVE).

   The system saves the changed parameters.

Display Digital R2 MFC - Mexico Parameters

The E1 circuit card must first be assigned to the Digital R2 MFC - Mexico protocol to use this procedure. See "Assign Digital R2 MFC - Mexico Protocol to E1 Circuit Cards", above for more information about making the initial assignment.

Use the procedure below to display the Digital R2 MFC - Mexico parameters of an E1 circuit card:

1. Start at the Digital R2 MFC Protocol - Mexico menu (Figure 5-16) and select

   ```
   > Display Parameters
   ```

   The system displays the Display Parameters: Digital R2 MFC Protocol - Mexico window (Figure 5-19).

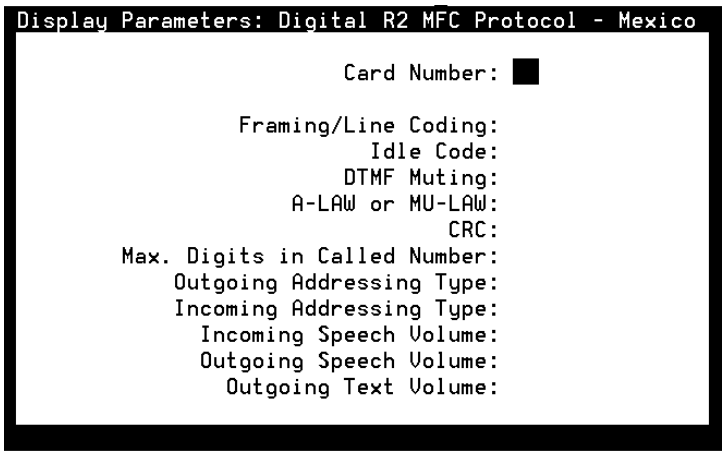


Figure 5-19. Display Parameters: Digital R2 MFC Protocol - Mexico Window

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 Digital R2 MFC Protocol - Mexico menu.

Unassign Digital R2 MFC - Mexico Protocol to E1 Circuit Cards

NOTE:
Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" in Chapter 3, "Voice System Administration", for additional information.

Use the procedure below to unassign the Digital R2 MFC - Mexico protocol:

1. Start at the Digital R2 MFC Protocol - Mexico menu (Figure 5-16) and select

   ```
   > Unassign Card
   ```

   The system displays the Unassign Card: Digital R2 MFC Protocol - Mexico window (Figure 5-20).

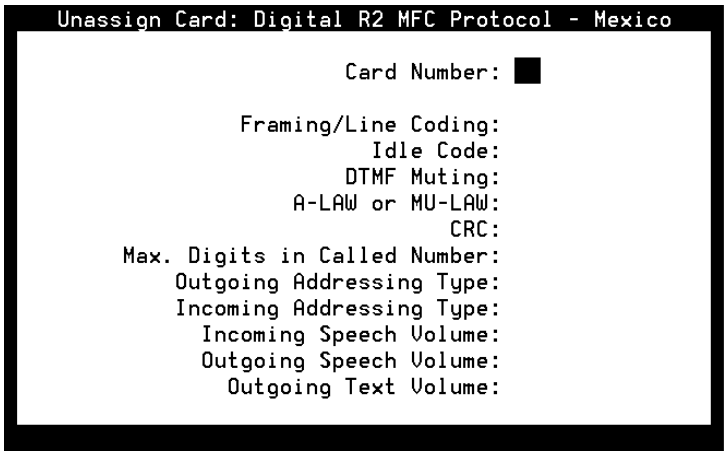


Figure 5-20. Unassign Card: Digital R2 MFC Protocol - Mexico Window

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

   The system displays the current parameter values for the selected circuit card.

3. Press F3 (SAVE).

   The system removes the Digital R2 MFC - Mexico protocol assignment from the selected circuit card.

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

E1 CAS P2 - Australian DEFINITY Protocol

Access E1 CAS P2 - Australian DEFINITY Menu

Use the procedure below to access the E1 CAS P2 - Australian DEFINITY protocol menu:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> E1 CAS P2 - Australian DEFINITY
```

   The system displays the E1 CAS P2 - Australian DEFINITY menu (Figure 5-21).

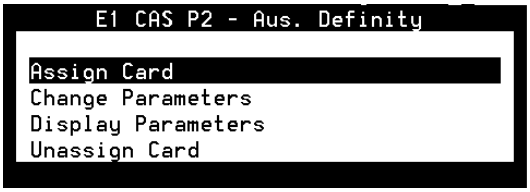


Figure 5-21. E1 CAS P2 - Australian DEFINITY Menu

Use the procedures below to assign/unassign the E1 CAS P2 - Australian DEFINITY protocol to digital circuit cards, and administer the switch interface parameters.

Assign 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 "Unassign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below 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 5-21) and select

```
> Assign Card
```

The system displays the Assign Card: E1 CAS P2 - Australian DEFINITY window (Figure 5-22).

```
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
```

Figure 5-22. Assign Card: E1 CAS P2 - Australian DEFINITY 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.
3. Enter the values as shown in Table 5-8 for each of the fields in the window.

Table 5-8. 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
`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 DEFINITY protocol to the selected E1 circuit card.

Change 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 “Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards”, above 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 “Change Equipment State” 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.

Use the procedure below to change the E1 CAS P2 - Australian DEFINITY parameters:

1. Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 5-21) and select

```
> Change Parameters
```

The system displays the Change Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 5-23).

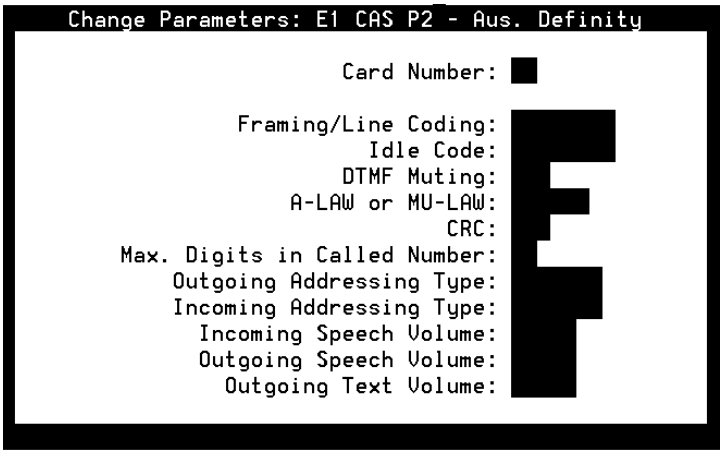


Figure 5-23. Change Parameters: E1 CAS P2 - Australian DEFINITY Window

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 current values for the circuit card number entered.
3. Change any of the parameters described in "Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards" above.
4. Press F3 (SAVE).

   The system saves the changed parameters.

Display 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 "Assign E1 CAS P2 - Australian DEFINITY Protocol to E1 Circuit Cards", above for more information about making the initial assignment.

Use the procedure below 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 5-21) and select

   ```
   > Display Parameters
   ```

   The system displays the Display Parameters: E1 CAS P2 - Australian DEFINITY window (Figure 5-24).

```
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:
```

Figure 5-24. Display Parameters: E1 CAS P2 - Australian DEFINITY 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 DEFINITY menu.

Unassign 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 "Change Equipment State" in Chapter 3, "Voice System Administration", for additional information.

Use the procedure below to unassign the E1 CAS P2 - Australian DEFINITY protocol:

1. Start at the E1 CAS P2 - Australian DEFINITY menu (Figure 5-21) and select

   ```
   > Unassign Card
   ```

   The system displays the Unassign Card: E1 CAS P2 - Australian DEFINITY window (Figure 5-25).

```
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:
```

Figure 5-25. Unassign Card: E1 CAS P2 - Australian DEFINITY 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 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

Access E1 CAS P2 - Australian Network Menu

Use the procedure below to access the E1 CAS P2 - Australian Network protocol menu:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> E1 CAS P2 - Australian Network
```

   The system displays the E1 CAS P2 - Australian Network menu (Figure 5-26).

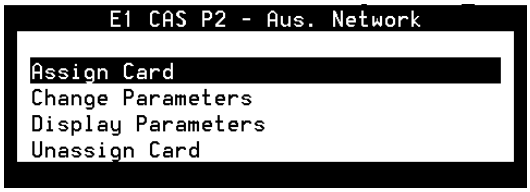


Figure 5-26. E1 CAS P2 - Australian Network Menu

Use the procedures below to assign/unassign the E1 CAS P2 - Australian Network protocol to digital circuit cards, and administer the switch interface parameters.

Assign 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 "Unassign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below 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 5-26) and select

```
> Assign Card
```

The system displays the Assign Card: E1 CAS P2 - Australian Network window (Figure 5-27).

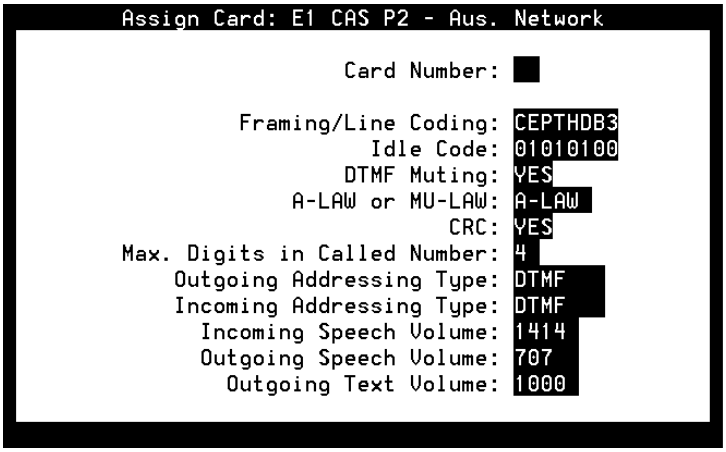


Figure 5-27. Assign Card: E1 CAS P2 - Australian Network Window

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

3. Enter the values as shown in Table 5-9 for each of the fields in the window.

Table 5-9. 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.

Change 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 "Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards", above 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 "Change Equipment State" 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.

Use the procedure below to change the E1 CAS P2 - Australian Network parameters:

1. Start at the E1 CAS P2 - Australian Network menu (Figure 5-26) and select

```
> Change Parameters
```

The system displays the Change Parameters: E1 CAS P2 - Australian Network window (Figure 5-28).

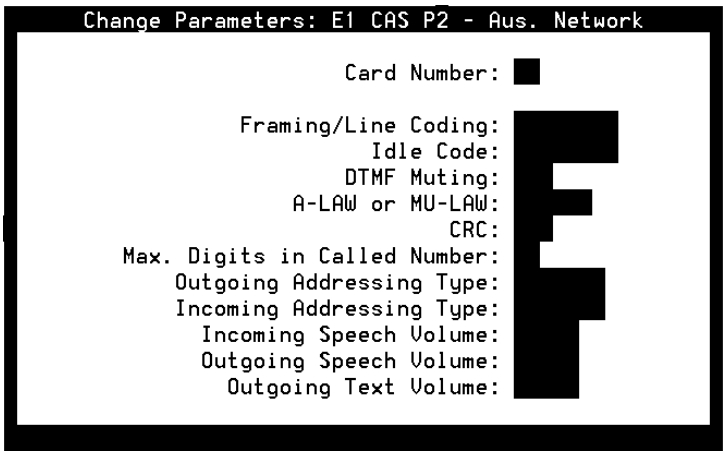


Figure 5-28. Change Parameters: E1 CAS P2 - Australian Network Window

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

3. Change any of the parameters as described in “Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards” above.
4. Press F3 (SAVE).

   The system saves the changed parameters.

Display 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 “Assign E1 CAS P2 - Australian Network Protocol to E1 Circuit Cards”, above for more information about making the initial assignment.

Use the procedure below 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 5-26) and select

   ```
   > Display Parameters
   ```

   The system displays the Display Parameters: E1 CAS P2 - Australian Network window (Figure 5-29).

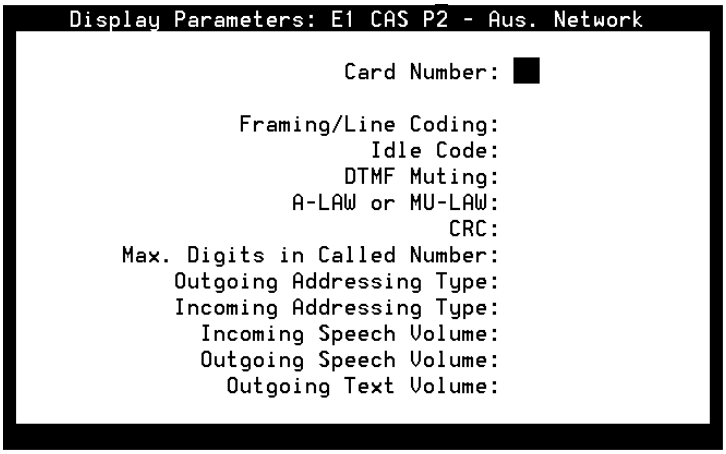


Figure 5-29. Display Parameters: E1 CAS P2 - Australian Network Window

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.

Unassign 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 "Change Equipment State" in Chapter 3, "Voice System Administration", for additional information.

Use the procedure below to unassign the E1 CAS P2 - Australian Network protocol:

1. Start at the E1 CAS P2 - Australian Network menu (Figure 5-26) and select

   ```
   > Unassign Card
   ```

   The system displays the Unassign Card: E1 CAS P2 - Australian Network window (Figure 5-30).

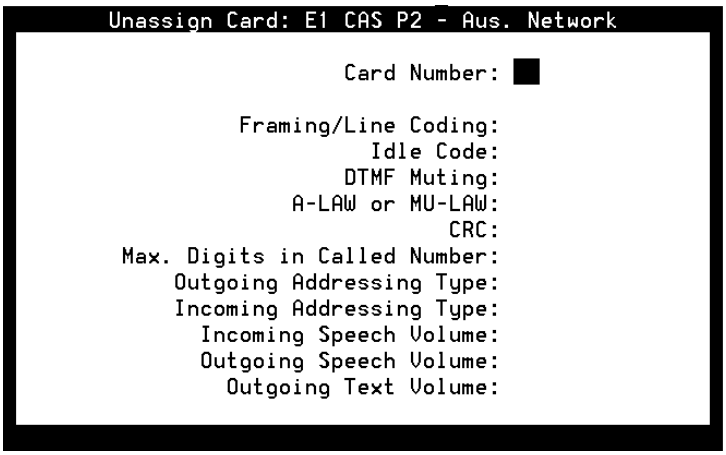


Figure 5-30. Unassign Card: E1 CAS P2 - Australian Network Window

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

   The system displays the 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 outpulses dual tone multifrequency (DTMF) tones at 7 pulses per second when originating outbound calls and requires DTMF when taking inbound calls.

Access T1 A/B Robbed-bit E&M Menu

Use the procedure below to access the T1 A/B Robbed-bit E&M menu:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> T1 A/B Robbed-bit E&M
```

The system displays the T1 A/B Robbed-bit E&M menu (Figure 5-31).

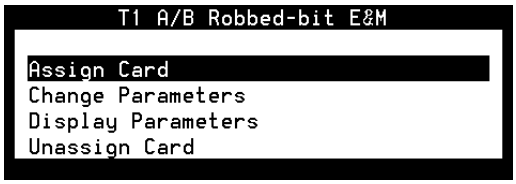


Figure 5-31. T1 A/B Robbed-bit E&M Menu

Assign 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 "Unassign T1 A/B Robbed-bit E&M to Digital Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below 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 5-31) and select

```
> Assign Card
```

The system displays the Assign Card: T1 A/B Robbed-bit E&M window (Figure 5-32).

```
        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
```

Figure 5-32. Assign Card: T1 A/B Robbed-bit E&M 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 5-32. 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 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 touch tones. **Yes**, then *turns on* DTMF 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 T1 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 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, etc.

    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, etc.

    See Table 5-3 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. Press F3 (SAVE).

    The system assigns the protocol to the selected circuit card.

Change 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 “Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards”, above 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 “Change Equipment State” 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.

Use the procedure below to change the T1 A/B Robbed-bit E&M parameters:

1. Start at the T1 A/B Robbed-bit E&M menu (Figure 5-31) and select

```
> Change Parameters
```

The system displays the Change Parameters: T1 A/B Robbed-bit E&M window (Figure 5-33).

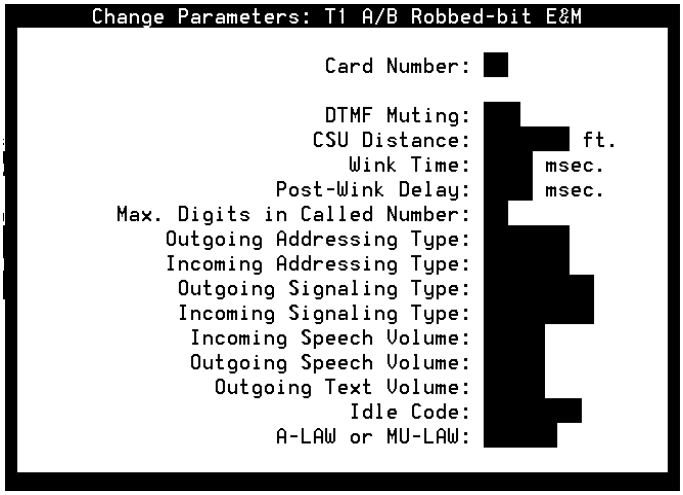


Figure 5-33. Change Parameters: T1 A/B Robbed-bit E&M Window

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 5-33. 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 "Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards" above.

4. Press F3 (SAVE).

   The system changes the protocol parameters on the selected circuit card.

Display 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 "Assign T1 A/B Robbed-bit E&M to Digital Circuit Cards", above for more information about making the initial assignment.

Use the procedure below to display the T1 A/B Robbed-bit E&M parameters:

1. Start at the T1 A/B Robbed-bit E&M menu (Figure 5-31) and select

```
> Display Parameters
```

   The system displays the Display Parameters: T1 A/B Robbed-bit E&M window (Figure 5-34).

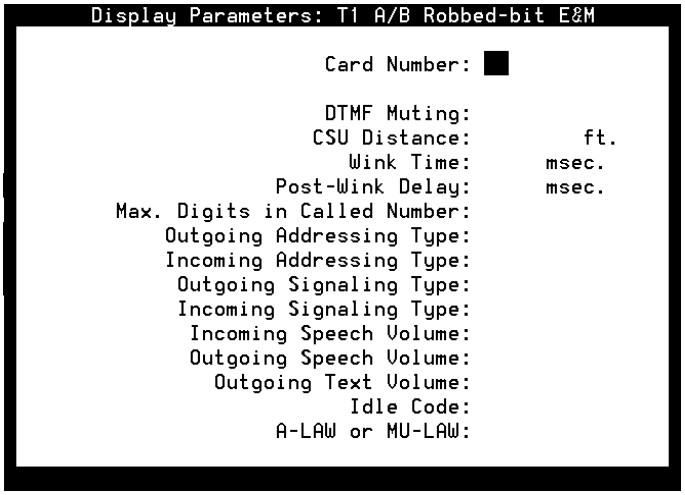


Figure 5-34. Display Parameters: T1 A/B Robbed-bit E&M Window

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 5-34. 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.

Unassign 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 "Change Equipment State" 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.

Use the procedure below 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 5-31) and select

   ```
   > Unassign Card
   ```

   The system displays the Unassign Card: T1 A/B Robbed-bit E&M window (Figure 5-35).

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.

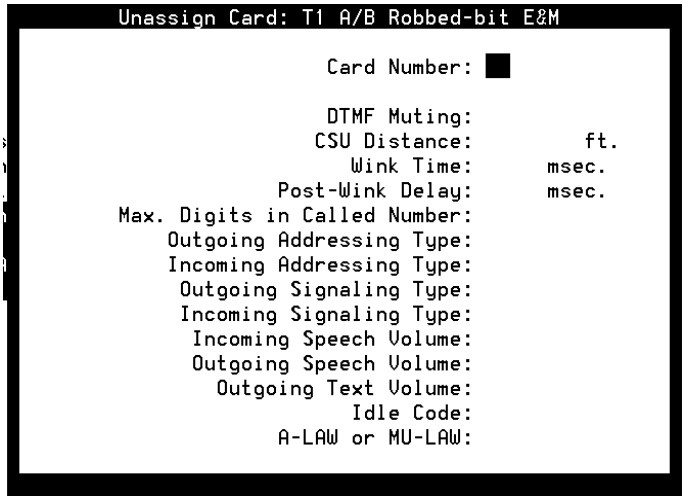


Figure 5-35. Unassign Card: T1 A/B Robbed-bit E&M Screen

ISDN-PRI Layer 1 Protocol

Depending on your configuration, to use the PRI protocol with an AYC11 or AYC3B it may be necessary to first assign PRI to an SP card.

Access the ISDN-PRI Layer 1 Menu

NOTE:
All selected options must match the corresponding options on the PBX or network switch, otherwise service problems can occur.

Use the procedure below to access the ISDN-Primary Rate Interface (ISDN-PRI) Layer 1 menu:

1. Start at the Digital Interfaces menu (Figure 5-4) and select

```
> ISDN-Primary Rate Interface
```

The system displays the ISDN-PRI Layer 1 menu (Figure 5-36).

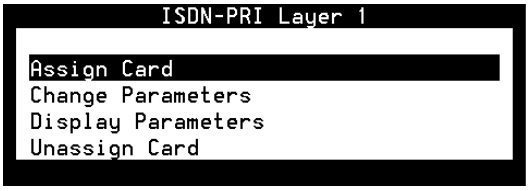


Figure 5-36. ISDN-PRI Layer 1 Menu

Assign an ISDN-PRI Layer 1 to Digital Circuit Cards

NOTE:
Before a new protocol can be assigned to a circuit card, any existing protocol must first be "unassigned." See "Unassign T1 A/B Robbed-bit E&M to Digital Circuit Cards" below for more information.

Before attempting to make any assignment changes to circuit cards, they must be in the "manoos" state. See "Change Equipment State" 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.

Use the procedure below to assign the ISDN-PRI Layer 1 to a digital circuit card:

1. Start at the ISDN-PRI Layer 1 menu (Figure 5-36) and select

```
> Assign Card
```

The system displays the Assign Card: ISDN-PRI Layer 1 window (Figure 5-37).

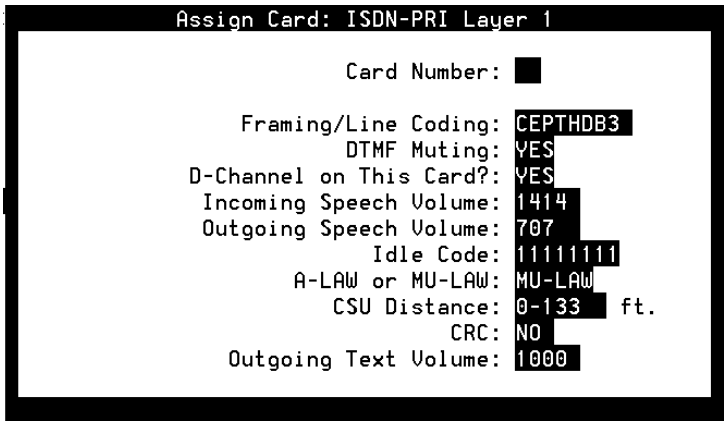


Figure 5-37. Assign Card: ISDN-PRI Layer 1 Window

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 5-37. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - 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 **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 touch tones. **Yes**, then *turns on* DTMF muting.

5. 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 (CHOICES) to select from a menu.

   Up to five PRI T1 circuit cards, or three PRI E1 circuit cards can have a D-channel. The voice system supports up to five 23B+D interfaces (each with its own D-channel and each optioned for "Yes" in this field) or up to 119B+D (where one card has the D-channel and the other four cards are controlled by that D-channel and have "No" in this field since they do not have a D-channel). The system also supports configurations with two to four D-channels given there are no more than five T1 circuit cards in the system. Typically, each E1 PRI interface has its own D-channel and the system supports up to three 30B+D interfaces.

6. 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, etc.

   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, etc.

   See Table 5-3 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.

7. 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.

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

8. (E1 only) Enter the 8-digit code that are generated when the channel is idle in the `Idle Code:` field.
9. (E1 only) Enter **A-LAW** or **MU-LAW** in the `A-LAW or MU-LAW:` field.
10. (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.
11. (E1 only) Enter **Yes** to enable the cyclical redundancy check error checking or **No** to disable the error checking in the `CRC:` field.
12. (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.

13. Press F3 (SAVE).

    The system saves the parameter information and assigns the ISDN-PRI Layer 1 protocol to the selected E1/T1 circuit card.

PRI Layer 2 and Layer 3 Parameters

Your PRI service provider may need to know some Layer 2 and Layer 3 parameters used by the voice system. Table 5-10 and Table 5-11 provide 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.

NOTE:
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.

NOTE:
While it is not recommended to change timer values from their defaults, the **/vs/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 5-10. PRI Layer 2 Parameters

Layer 2 Parameter	Value
Retry Count N200	3
Timer T200	1 sec.
Timer T203	30 sec.
HDLC (D4ZCS)	Inverted
HDLC (ESFB8ZS)	Noninverted

Table 5-11. PRI Layer 3 Parameters

Layer 3 Parameter	Value in Seconds
Timer T302	15
Timer T303	4
Timer T305	4
Timer T308	4
Timer T310	10
Timer T313	4
Timer T316	120
Timer T3M1	120
Timer T309	30
Interface ID (with D-channel)	1
Interface ID (without D-channel)	2–5
Bearer Capability	64 Kbit voice

Change ISDN-PRI Layer 1 Card Parameters

The circuit card must first be assigned to the ISDN-PRI Layer 1 protocol to use this procedure. See “Assign an ISDN-PRI Layer 1 to Digital Circuit Cards”, above 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 “Change Equipment State” 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.

Use the procedure below to change the ISDN-PRI Layer 1 parameters:

1. Start at the ISDN-PRI Layer 1 menu (Figure 5-36) and select

```
> Change Parameters
```

The system displays the Change Parameters: ISDN-PRI Layer 1 window (Figure 5-38).

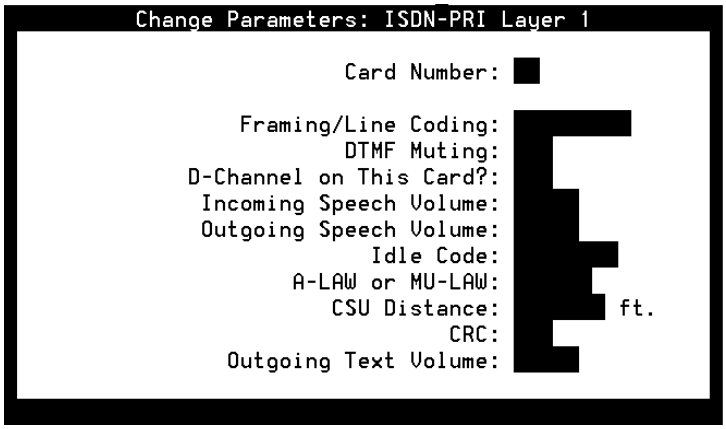


Figure 5-38. Change Parameters: ISDN-PRI Layer 1 Window

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 5-38. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - CSU Distance

3. Change any of the parameters as described above in "Assign an ISDN-PRI Layer 1 to Digital Circuit Cards".
4. Press F3 (SAVE).

   The system changes the specified parameters for the selected circuit card.

Display ISDN-PRI Layer 1 Parameters

The circuit card must first be assigned to the ISDN-PRI Layer 1 protocol to use this procedure. See "Assign an ISDN-PRI Layer 1 to Digital Circuit Cards", above for more information about making the initial assignment.

Use the procedure below to display the ISDN-PRI Layer 1 parameters:

1. Start at the ISDN-PRI Layer 1 menu (Figure 5-36) and select

```
> Display Parameters
```

   The system displays the Display Parameters: ISDN-PRI Layer 1 window (Figure 5-39).

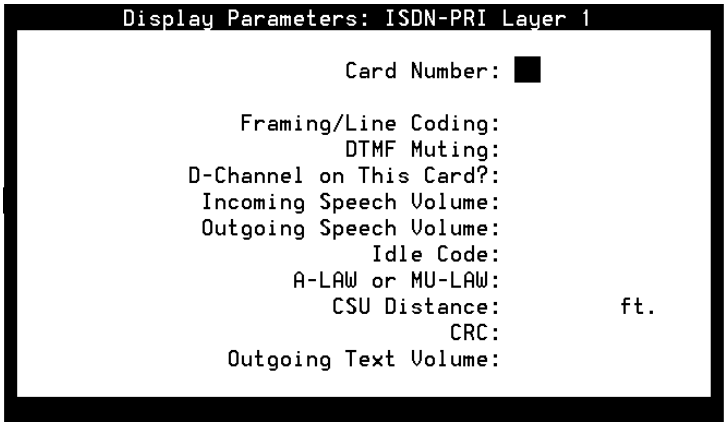


Figure 5-39. Display Parameters: ISDN-PRI Layer 1 Window

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 5-39. After you enter the circuit card number, certain fields disappear depending on the configuration of the selected circuit card; either E1 or T1.

   The list below shows the LSE1-specific fields:

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

   The list below shows the LST1-specific fields:

   - 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.

Unassign ISDN-PRI Layer 1 Card

NOTE:
Before attempting to make any assignment changes to circuit cards, they must be in the “manoos” state. See “Change Equipment State” 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.

Use the procedure below to unassign the ISDN-PRI Layer 1 protocol to a digital circuit card:

1. Start at the ISDN-PRI Layer 1 menu (Figure 5-36) and select

```
> Unassign Card
```

The system displays the Unassign Card: ISDN-PRI Layer 1 window (Figure 5-40).

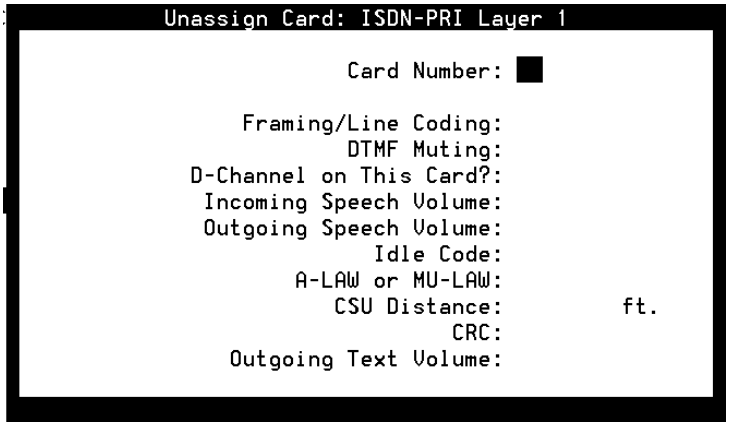


Figure 5-40. Unassign Card: ISDN-PRI Layer 1 Window

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

   The system displays the current parameter values for the selected circuit card.

3. Press F3 (SAVE).

   The system removes the ISDN-PRI Layer 1 assignment from the selected circuit card.

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

E1 PRI Using the ACULAB Protocol Converter

With the use of the ACULAB protocol converter card to support the United Kingdom's DASS2 and DPNSS protocols, it is no longer necessary to assign an SP card to PRI for use with the E1 PRI protocol. The D-channel processing can now be performed on the AYC21 circuit card leaving the SP circuit card available for other uses.

Countries that require the use of an Aculab Protocol Converter Card (for example, the United Kingdom) must connect the network, the AYC21 circuit card, and the Aculab Converter Card (Figure 5-41).

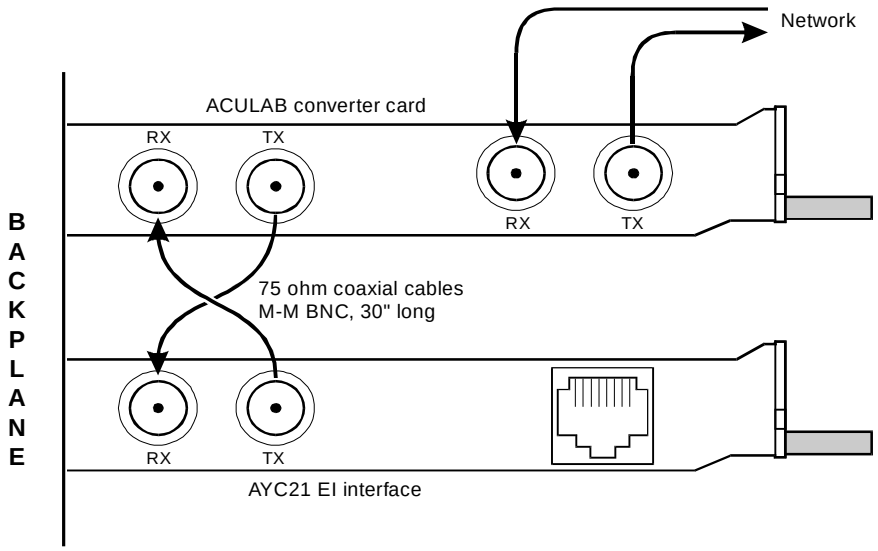


Figure 5-41. Aculab Converter Card Connections

When using the Aculab protocol converter, it is necessary to set the FLAGS and NPI_TOA parameters in the */vs/data/pri/pri.rc* file as described in the **/vs/man/cat4/pri.rc.4** manual page. This administration must be performed manually.

T1 Configuration for INTUITY CONVERSANT System 4ESS Applications

The following options should be used when connecting an INTUITY CONVERSANT Voice System Version 6.0 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 "Stop the Voice System" and "Start the Voice System" in Chapter 3, "Voice System Administration".

- CONVERSANT System E1/T1 E&M Options

  The following options should be set on the System E1/T1 circuit card when it is connected to an AT&T 4ESS:

  1. Wink Timing: 230 msec
  2. Maximum Digits in Called Number: 4 is typical
  3. Post-wink Delay: 80 msec

- CONVERSANT System E1/T1 E&M Fixed Parameters:

  1. Framing/Line Coding: D4/ZCS
  2. Signaling: A or AB Robbed-bit E&M protocol
  3. Incoming/Outgoing Start Dialing: wink/wink
  4. Incoming/Outgoing Addressing: DTMF/DTMF
  5. Timing Source: Looped Timed

- 4ESS Options

  The following information is requested by AT&T when provisioning the 4ESS for a CONVERSANT voice system E1/T1 connection. For purposes of this provisioning, "PBX" or "CPE" see the CONVERSANT voice system.

  1. TYPE CPE: DIGITAL PBX/ACD (WITH DS1 INTERFACE)
  2. 4E NETWORK SWITCHED BASED SERVICES: MEG (Megacom), MEG8 (Megacom 800), or MULTIQUEST* as desired
  3. ACCESS TYPE: T1
  4. 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.

5. SUPERVISION: EM
6. ADDRESS SIGNALING (TYPE OF PULSING) TO CPE: DTMF(TT)
7. ADDRESS SIGNALING TT DELAY: 70MS
8. ADDRESS SIGNALING from CPE: DTMF(TT)
9. START DIAL SIGNALING PROVIDED BY CPE: WK
10. START DIAL SIGNALING PROVIDED TO CPE: WK (senderized operation)
11. CPE DOES NOT SUPPORT DIFFERENT SIGNALING BIDIRECTIONALLY
12. NUMBER OF DIGITS OUTPULSED TO CPE: This number should match the number selected in the “Maximum Digits in Called Number” E1/T1 option
13. THE CPE CAN ACCEPT “O” AS THE FIRST DIGIT
14. GLARE CONTROL: CPE WILL YIELD (WILL RELEASE)
15. DIRECT INWARD DIAL (DID): N
16. PBX ANSWER SUPERVISION WITHHELD: N
17. NETWORK AUTHORIZATION CODES: N
18. FRAME FORMAT: D4
19. IS PBX SENDERIZED: YES
20. CPE TIMING CAPABILITY: loop timed
21. SOURCE OF SYNCHRONIZATION PROVIDED BY CPE: NONE
22. SOURCE OF AUDIBLE RINGING ON CALLS TO CPE: PBX (CPE)

Database Administration

6

Overview

ORACLE databases store voice system call data. This chapter describes how to administer database use with the voice system including how to determine database space requirements, how to size databases, and administering database tables. In addition, this chapter reviews the SQL*PLUS software program, a tool used to access the ORACLE databases.

Purpose

The purpose of this chapter is to provide information and procedures about how to administer databases for use with the voice system.

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 databases used to store/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

The base ORACLE software package creates the following database tables to store call data (Table 6-1):

Table 6-1. 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[1]	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)
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)

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.

NOTE:
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, “Daily Administration”, for procedures showing how to display, modify, print and update the available reports.

CCA Table

The CCA table contains the following information:

- START_TIME is a date field that specifies the starting time of each attempted transfer or outdialed call.
- PHONE_NUM is 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 is a variable-length character field that indicates the disposition of the call. This field can be 1 character in length.

NOTE:
Full CCA is not supported on the SSP circuit card.

CCASUM Table

The CCASUM table contains the following information:

- PHONE_NUM is 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 is a date field that specifies the starting time of the call summary period.
- END_TIME is a date field that specifies the ending time of the call summary period.
- SUM_TOT is a numeric field that indicates the number of calls transferred or outdialed in this period with this disposition and associated telephone number.
- RESULT_CODE is 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 is a numeric field that specifies a unique identification number that joins one CALL.CID to multiple SERVICE.CID.
- CHANNEL is a positive numeric field that specifies the channel number on which the call was running. This field can be up to 3 digits in length.
- START_TIME is a date field that specifies the starting time of each call.
- END_TIME is a date field that specifies the ending time of each call.

SERVICE Table

The SERVICE table contains the following information:

- CID is a 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” below.
- SID is a numeric field that specifies a unique identification that joins one SERVICE.SID to multiple EVENTS.SID.
- SERVICE is a variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.
- START_TIME is a date field that specifies the starting time of each service.
- END_TIME is a date field that specifies the ending time of each service.

CDHSUM Table

The CDHSUM table contains the following information:

- SUMID is a numeric field that specifies a unique identification number which joins CDHSUM.SUMID to EVSUM.SUMID.
- SERVICE is a variable length character field that specifies the service (application) name. This field can be up to 16 characters in length.
- START_TIME is a date field that specifies the start of the hour (for example 10:00:00).
- DURATION is a numeric field that specifies the sum of service run times during this hour in seconds.
- USAGE is a 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 is a 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” below.

- EVENT_NUMBER is a 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 will be 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 is a 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 is a 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 is a 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 is a 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 is a numeric field that specifies the internal mapping between the event and an internal number.
- SUM_TOT is a 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 is a date field that specifies the start of hour (for example 10:00:00).
- CHANNEL is a numeric field that indicates the channel number. This field can be up to 3 digits in length.
- CALL_TOT is a numeric field that specifies the total number of calls.
- DUR_TOT is a numeric field that specifies the total duration in seconds.

NOTE:
Records are generated on per hour and 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 6-1:

- 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.

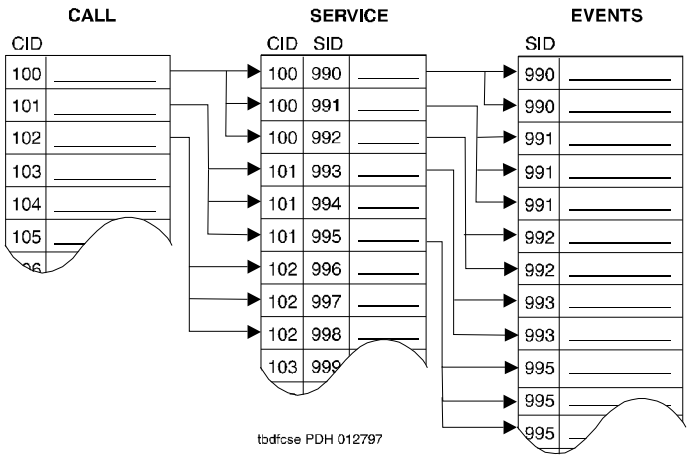


Figure 6-1. Relationship of CALL, SERVICE and EVENTS Tables

Resize 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 your 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.

Use the procedure below to increase the size of a call data table:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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. Write down this number.

6. Use the UNIX editor *vi* 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 determined in Step 5 above. 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.

7. Enter **stop_vs**

   The systems stops the voice system. See “stop_vs” 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 Steps 8 through 10.

8. 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**).

9. Enter **sqlplus \@ /oracle/dist/cdh.sql**

   The system reinitializes the table(s).

10. Enter **systblres *file***

    The system restores the table storage information from the UNIX file or device name where it was saved in Step 8 above (such as, **/dev/rmt/c0s0**).

11. Enter **start_vs**

    The system restarts the voice system. See “start_vs in Appendix A, ‘‘Summary of Commands’’ for more information about the **start_vs** command.

Verify Call Data Tables

Periodically, the field definitions of a table need to be reviewed for accuracy, or to assist with troubleshooting.

Use the procedure below to verify the field definitions of a table (such as, the CCA table):

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, enter **root**

   The system prompts you for a password.

2. Enter your root password.

   The system displays the system prompt #.

1. Enter **sqlplus sti/sti**

   The system starts a sqlplus session.

2. 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 is lower case, do not use the **describe** command. Instead, use **desc** as described below:

   desc *table_name*

3. 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.

Use the procedure below to create a unique index on a field called FIELD1 in a table called "table_name":

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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.

Use the procedure below to create non-unique indexes on fields called FIELD1 and FIELD2 in a table called “table_name”:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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.

5. Enter **create index <index_name> on “table_name” (“FIELD2”);**

   The system creates a non-unique index for FIELD2 in the table.

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.

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 non-indexed table, network congestion, etc.

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- and 300-seconds timeout values can be altered in **/vs/data/ldbdip.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 **ldbdip.rc** file is missing, the DIP uses the default timeout values of 45 and 300 seconds.

WARNING:
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 INTUITY CONVERSANT voice 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 insure 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:

channel X read X 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.

Increase Database Storage Size

The amount of storage space needed for the database should be decided at the initial installation because the size of the database can affect the disk partition sizes (the database is stored in the **/oracle** file system).

Use the procedure below to increase the database size:

NOTE:
The voice system does not need to be stopped while resizing the database.

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 /oracle**

   The system displays the number of free blocks available in the **/oracle** 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 **/oracle/bin/sqldba lmode=y**

   The system enters the sqldba mode.
8. Enter the following commands in the order shown:

   connect internal

   alter tablespace system

   add datafile '/oracle/dbs/dbsA2.dbf'

   NOTE:
   The file name *dbsA2.dbf* is a recommended name. If this file already exists in this directory, use *dbsA3.dbf*

   size *<number>*

   <*number*> is the number of bytes calculated in Step 6 above that you want to add to the database.

   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' above.
9. Enter **/vs/bin/util/dbfrag**

   The system displays the number of free database blocks.
10. Check that the database size has been increased as desired.
11. Enter **exit**

    The system exits the sqldba mode.
12. Enter **exit**

    The system displays the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:` prompt.

Decrease Database Storage Size

In order 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.

Reduce 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 “Reduce the Number of Days Data Is Stored” below, there are no system variables to modify. This minimization technique involves modifying every application that stores call data events to store fewer of them.

Reduce the Number of Days 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:

```
# Start the ORACLE DBMS

VSUTIL=/vs/bin/util
ORACLE_SID=A;export ORACLE_SID
ORACLE_HOME=‘/usr/lbin/dbhome $ORACLE_SID‘
PATH=$PATH:$ORACLE_HOME/bin;export PATH
ulimit 2113674
if /usr/lbin/orastat -s >/dev/null

then
:

else
 ulimit 2113674; ior w
fi

# perform the cron jobs

$VSUTIL/cdhsum
$VSUTIL/cdhdel
$VSUTIL/ccasum
$VSUTIL/ccadel

# cleanout the unwanted ORACLE log files

$VSUTIL/logdel
```

Change the Number of Days Worth of Data Stored

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, above.

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
```

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, the rollback segment does not automatically decrease in size and some ORACLE operations can cause the rollback segment to grow dramatically. Consequently, you may wish to restore the rollback segment to the original size by first eliminating it, and then recreating it.

The installation of the Base ORACLE software package creates one rollback segment called ***R1***.

This section provides information on verifying and reducing the size of this rollback segment.

Verify or Reduce the Size of the Rollback Segment

NOTE:
The procedure to *reduce the size* of the R1 rollback segment requires that the voice system and the database system be stopped. If possible, avoid reducing the size of the rollback segment when call traffic is heavy. 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.

Use the procedure below to verify or reduce the size of the rollback segment:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 current size of the rollback segment, **R1**.

   The system displays a message similar to the following:

   ```
   Rollback segment R1 is currently 653312 bytes in size,
   would you like to reduce the size of this rollback
   segment? (y/n)
   ```

   The original size of the rollback segment was set to 653312 bytes. If the current size is close to this number, or if it is less than 1/4 of your total database size, you do not need to reduce the size of the rollback segment.

To terminate this procedure, go to Step 4.

To continue with this procedure and reduce the size of the rollback segment, go to Step 5.

4. To terminate the **rb_init** command without reducing the size of the rollback segment, enter **n**

   The system returns to the system prompt #. You have completed this procedure.

5. Enter **y** to reduce the size of 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 reduce the size of 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 if 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 wish to restart the voice system and the database at this point, you may do so manually at a later time.

Voice System Database Administration

Use the procedure below to access the Database Administration window:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 3-1).

4. Start at the Voice System Administration menu and select

```
> Configuration Management
    > Database Administration
```

The system displays the Database Access ID Table window (Figure 6-2).

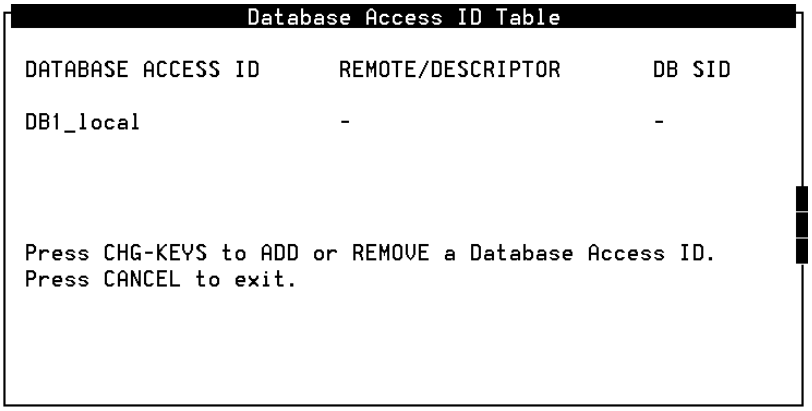


Figure 6-2. Database Access ID Table Window

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 6-2 describes each field in the Database Access ID Table window.

Table 6-2. 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" below 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.

Add a Local Database Access ID

Use the procedure below to add a *local* database access ID:

1. Start at Database Access ID Table window (Figure 6-2).
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 6-3).

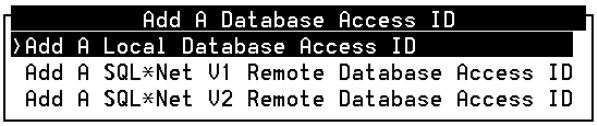


Figure 6-3. Add A Database Access ID Menu

4. Select

   ```
   > Add a Local Database Access ID
   ```

   The system displays the Add a Local Database Access ID window (Figure 6-4).

Figure 6-4. 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 exits 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 "Stop the Voice System" and "Start the Voice System" in Chapter 3, "Voice System Administration", for more information.

   The system establishes the local database connection(s).

Add a Remote Database Access ID Using SQL*NET V1

Before you can add a remote database access ID, the voice system and remote machines must be connected to a TCP/IP local area network and have the SQL*NET Version 1 or Version 2 software installed.

NOTE:
SQL*NET Version 1 and Version 2 can coexist in the same machine.

CAUTION:
The combination of machine name + database ID can be no longer than 13 characters. If the combined text string is longer than 13 characters, UNIX will perform a core dump, that is, UNIX will abort the current command involving the text string that is too long and write troubleshooting information to a file in the current directory called "core."

Use the procedure below to add a remote database access ID:

1. Start at Database Access ID Table window (Figure 6-2).
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 6-3).

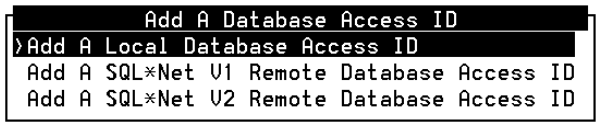


Figure 6-5. Add A Database Access ID Menu

4. Select

```
> Add a SQL*Net V1 Remote Database Access ID
```

   The system displays the Add a Remote Database ID window (Figure 6-6).

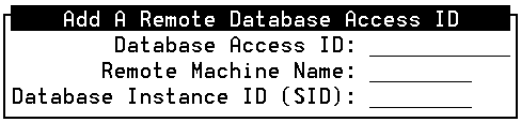


Figure 6-6. Add a Remote Database Access ID Window

5. Enter the access ID for the remote database in the `Database Access ID`: field, or press F2 (CHOICES) to select from a menu. Valid values are DB2_remote, DB3_remote, DB4_remote, and DB5_remote, those remote database access IDs which have not yet been added.
6. Enter the name of the remote machine in the `Remote Machine Name`: field.

   Rules for naming the remote machine:

   - The name must be between 1 and 8 characters in length.
   - Valid characters are letters (A–Z and a–z), numbers (0–9), and the underscore (_).
   - The first character of the name must be a letter (A–Z or a–z).
   - Names are case sensitive; that is, “ABC” is not the same as “Abc” or “abc.”
   - The machine name and network address must be in the */etc/hosts* file for that machine’s network address.
7. Enter the DB SID in the `Database Instance ID (SID):` field to identify the database instance of the remote ORACLE machine (the ORACLE_SID variable on ORACLE Version 5 machines or the dbname variable on ORACLE Version 6.0 machines).

   The DB_SID field is not required if the ORACLE database on the remote machine is a single instance that is not identified by ORACLE_SID (ORACLE Version 5) or dbname (ORACLE Version 6.0).

   The DB SID field is required if the remote machine ORACLE database is identified by ORACLE_SID or dbname.

Rules for naming the DB SID:

- The name must be between 1 and 8 characters in length.
- Valid characters are letters (A–Z and a–z), numbers (0–9), and the underscore (_).
- Names are case sensitive; that is, “ABC” is not the same as “Abc” or “abc.”

8. Press F3 (SAVE).

   The system saves the information and exits the Add a Remote Database Access ID window. The Add a Database Access ID window remains active, allowing you to add other database access IDs, if desired.

9. Press F6 (CANCEL) twice.

   The system closes the Database Access ID Table.

10. Stop and start the voice system. See “Stop the Voice System” and “Start the Voice System” in Chapter 3, “Voice System Administration”, for more information.

    The system establishes the remote database connection.

Add a Remote Database Access ID Using SQL*NET V2

NOTE:
You must have the INTUITY CONVERSANT System Version 6.0 SQL*NET TCP/IP installed on your system to use SQL*NET V2 for remote database access.

See “Installing the Oracle SQL*NET TCP/IP Package” in Chapter 11, “Installing Optional Feature Software”, in the maintenance book for your platform for information on installing the SQL*NET V2 software.

Host, Port and SID information is the same for both SQL*NET V1 and V2. See “Configuring the TNS Listener: LISTENER.ORA” and “Identifying the Servers: TNSNAMES.ORA” in Chapter 4, “Contents of the Configuration Files,” in the *ORACLE Administration Guide,* 585–350–909, for more information on setting these parameters.

Use the procedure below to add a remote database access ID using SQL*NET V2:

1. Start at Database Access ID Table window (Figure 6-2).
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 6-3).

4. Select

```
> Add a SQL*Net V2 Remote Database Access ID
```

   The system displays the Add V2 Remote Database ID window (Figure 6-7).

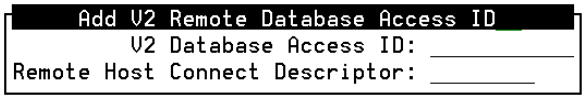


Figure 6-7. Add V2 Remote Database Access ID Window

5. Enter the access ID for the remote database in the `V2 Database Access ID:` field, or press F2 (CHOICES) to select from a menu. The CHOICES menu will list only those remote database access IDs which have not yet been added.
6. Enter the connect descriptor for the remote host in the `Remote Host Connect Descriptor:` field to identify the connection between the remote database SID and the name of the remote machine.
7. Press F3 (SAVE).

   The system saves the information and redisplays the Database Access ID Window.
8. Press F6 (CANCEL) twice.

   The system closes the Database Access ID Table.
9. Stop and start the voice system. See "Stop the Voice System" and "Start the Voice System" in Chapter 3, "Voice System Administration", for more information.

Remove 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.

1. Start at Database Access ID Table window (Figure 6-2).
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 6-8).

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 6-8. 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.
6. Stop and start the voice system.

   See "Stop the Voice System" and "Start the Voice System" 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 INTUITY CONVERSANT voice system 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.

By comparison, 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.

Monitor the Database

See the *ORACLE RDBMS Database Administrator's Guide* for information on commands/procedures used to monitor the database.

Database Commands

The following commands may be used to monitor database space utilization.

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 (below) 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.

Peripheral Administration

7

Overview

This chapter provides the procedures needed to configure and administer peripheral equipment.

Purpose

The purpose of this chapter is to provide the information and procedures needed to configure and administer the peripheral equipment connected to your voice system, namely modems, printers, and remote terminals.

Access the Unix Management Menu

Use the procedure below to access the Unix Management menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 7-1).

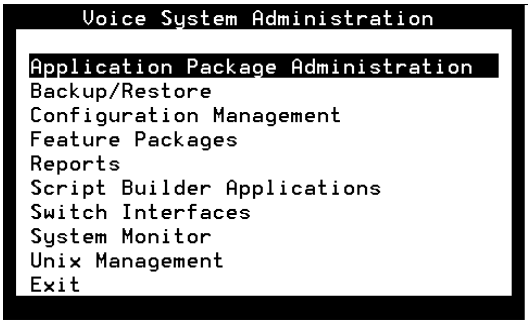


Figure 7-1. Voice System Administration Menu

4. Select `Unix Management`.

   The system displays the Unix Management menu (Figure 7-2).

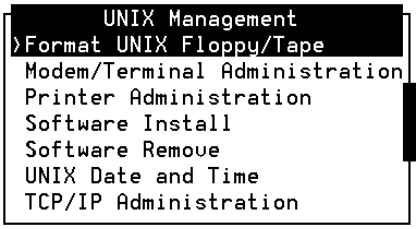


Figure 7-2. Unix Management Menu

The procedures in this chapter detail administration for peripherals: modems, printers, and TCP/IP.

The other menu options in the UNIX Management menu are discussed in detail in Chapter 8, ''Daily Administration''.

Modem Administration

This section describes the procedures to configure and administer a 3820 or 3920 modem for use with your voice system.

Install the Modem

Use the procedure below to install the modem:

1. Physically connect the modem to the system. See "Connecting the 3820 Modem to the Platform" in Chapter 4, "Connecting Peripherals and Powering Up", in the system installation book for your platform for the procedure to physically connect the modem.

Configure the Modem

In order 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 ''Configure the Modem Via the Modem Control Panel'' below for more information.
- Connect the modem to a terminal that acts as a DTE and configure the modem via the terminal. See ''Configure the Modem Via a Terminal'' below for more information.

Configure 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.Use the procedures below to configure the 3820 modem via its control panel:

Activate the Unix Dial Default Factory Configuration

Use the procedure below 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.

Set the Async DTE Rate

Use the procedure below 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.

   NOTE:
   9,600 baud is the recommended speed for remote administration.

9. Press F2 (SELECT).

   The LCD displays the baud rate.

10. Continue with the next procedure, ''Set the DTR Action and DSR Control to Standard RS-232 on the Modem''. Do *not* return to the top-level menu.

Set the DTR Action and DSR Control to Standard RS-232 on the Modem

Use the procedure below 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.

    NOTE:
    9,600 baud is the recommended speed for remote administration.
16. Press F2 (SELECT).

    The LCD displays the baud rate.
17. Press the single ▲.

    Modem response:

    `Edit StrapGroup`
18. Continue with the next procedure, ''Set the Error Control Mode to Buffer Mode on the 3820 Modem''. Do *not* return to the top-level menu.

Set the Error Control Mode to Buffer Mode on the 3820 Modem

Use the procedure below 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.

Configure the Modem Via a Terminal

Use the procedure below 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.

   For example, if the 3820 modem is attached to the remote maintenance port, set the terminal line to a baud rate of 9600.

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 rate>*S2=128&W0

   where *<dial line rate>* is one of the following baud rates:

   - 3 = 9600
   - 5 = 4800
   - 6 = 2400
   - 7 = 200, V.22
   - 8 =1200, 212A
   - 20 = 19200

   For example, to set the 3820 modem to use COM2, where the baud rate is 9600, enter **3** as the *<dial line rate>* as shown below:

   AT&TF3L0&D2&S1\N0\Q3S41=3S2=128&W0

   Modem response:

   0K

7. Disconnect the terminal.
8. Connect the modem to the communication port (COM port 1 or 2).

   The system activates the RTS, CTS, and LSD indicators.

Administer the Modem

In order 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.

Use the procedure below to administer the voice system to recognize the modem:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 7-3).

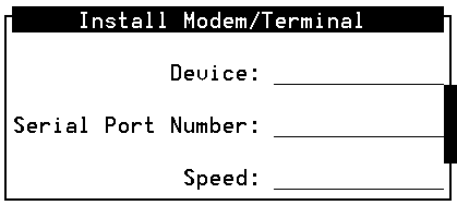


Figure 7-3. Install Modem/Terminal Window

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`

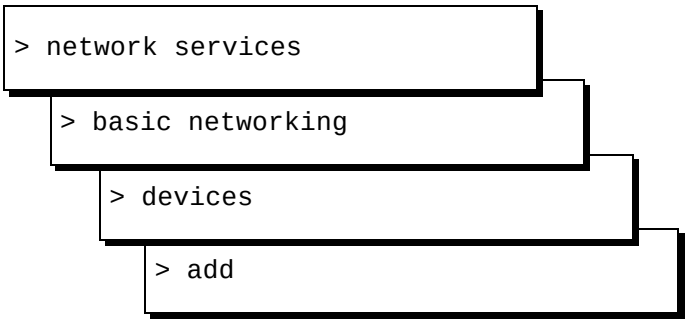
   If you physically connected the modem to one of the multi-port serial ports, choose `/dev/ttysaa – /dev/ttysah` (ports 1–8 on multi-port serial card).
8. Enter **9600** in the `Speed:` field.
9. Press F3 (SAVE).

   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

Use the procedure below to configure UnixWare for a modem:

1. Start at the UNIX System V Administration menu (Figure 2-2) and select



   The system displays the Adds a Device for Use by Basic Networking window (Figure 7-4).

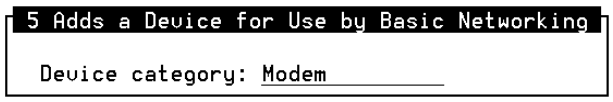


Figure 7-4. Adds a Device for Use by Basic Networking Window

2. Enter **Modem** in the `Device category:` field, or press F2 (CHOICES) to select from a menu. The default is Modem.
3. Press F3 (SAVE).

   The system displays the Add a Modem Device for use by Basic Networking (1) window (Figure 7-5).

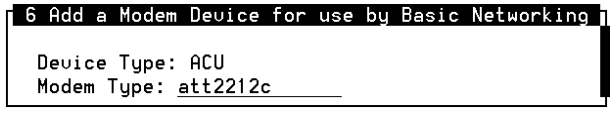


Figure 7-5. Add a Modem Device for use by Basic Networking (1) Window

4. Enter **ACU** in the `Device Type:` field.
5. 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.

6. Press F3 (SAVE).

   The system displays the Add a Modem Device for use by Basic Networking (2) window (Figure 7-6) with several of the fields already filled in.

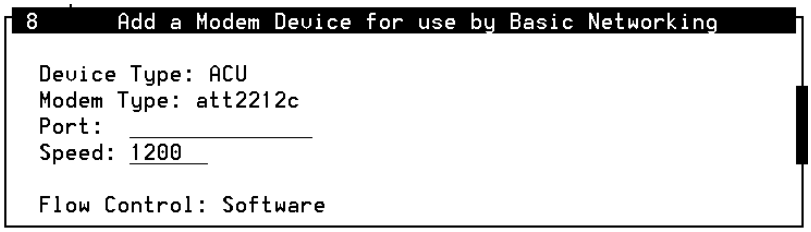


Figure 7-6. Add a Modem Device for use by Basic Networking (2) Window

7. 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, 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).

   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 pick term/01h, you are selecting port 1 with hardware flow control and Hardware displays in the `Flow Control:` field. If you pick term/01s, you are selecting port 1 with software flow control, and Software displays in the `Flow Control:` field.

8. Enter **9600** in the `Speed:` field, or accept the default.
9. Press F3 (SAVE).

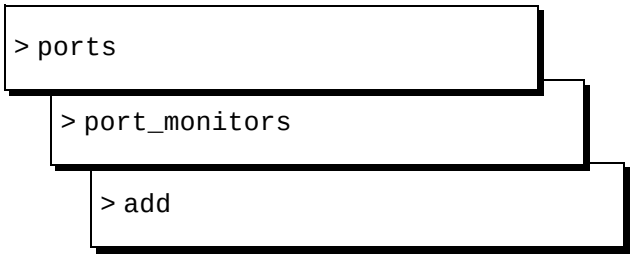
   The system displays the following message:

   ```
   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

Use the procedure below to configure UnixWare for a modem that can process incoming calls:

1. Start at the UNIX System V Administration menu (Figure 2-2) and select



The system displays the Add A Port Monitor window (Figure 7-7).

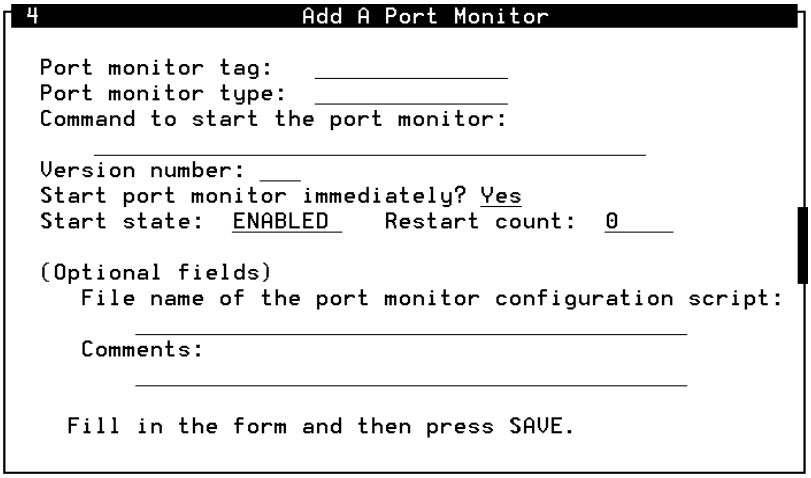


Figure 7-7. Add A Port Monitor Window

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 7-8).

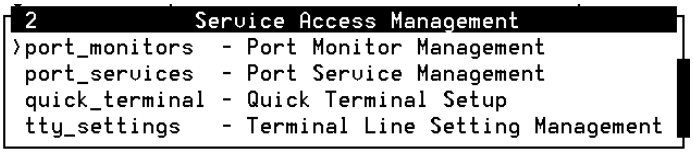
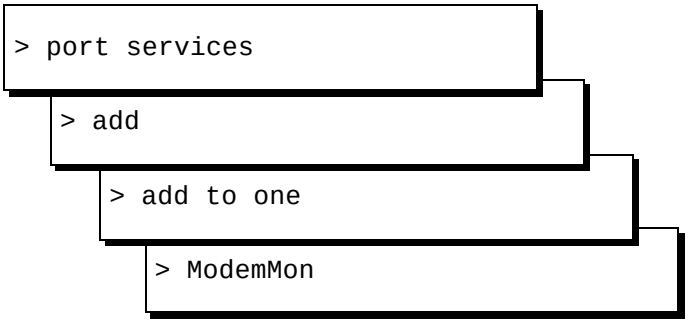


Figure 7-8. Service Access Management Menu

10. Select



The system displays the Add Port Services to Port Monitor window (Figure 7-9).

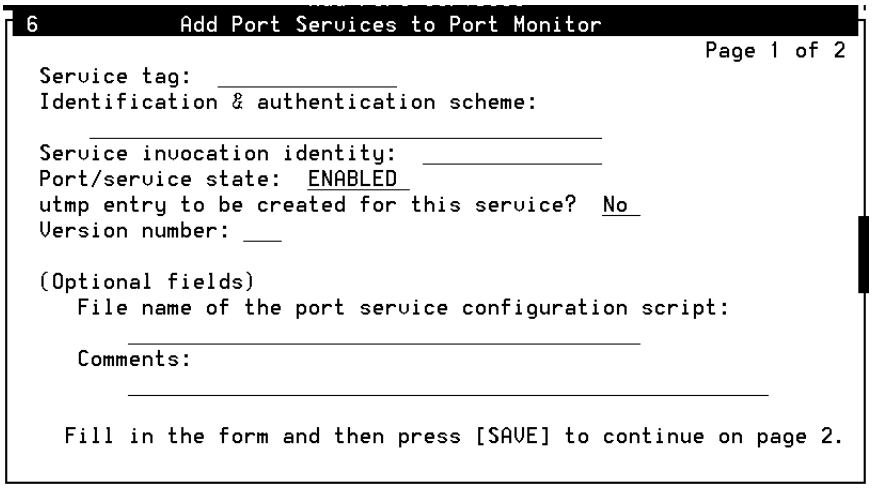


Figure 7-9. Add Port Services to Port Monitor Window

11. Enter **Modem** in the `Service Tag:` field.
12. Enter **login** in the `Identification & Authentication Scheme:` field.
13. Leave the `Service invocation identity:` field blank.
14. Enter **ENABLED** in the `Port/service State:` field.
15. Enter **YES** in the `utmp entry to be created for this service:` field.
16. Enter **2** in the Version Number field.

    Leave the remaining Optional fields blank.
17. Press F3 (SAVE).

    The system displays the Add Port Services for ttymon window (Figure 7-10).

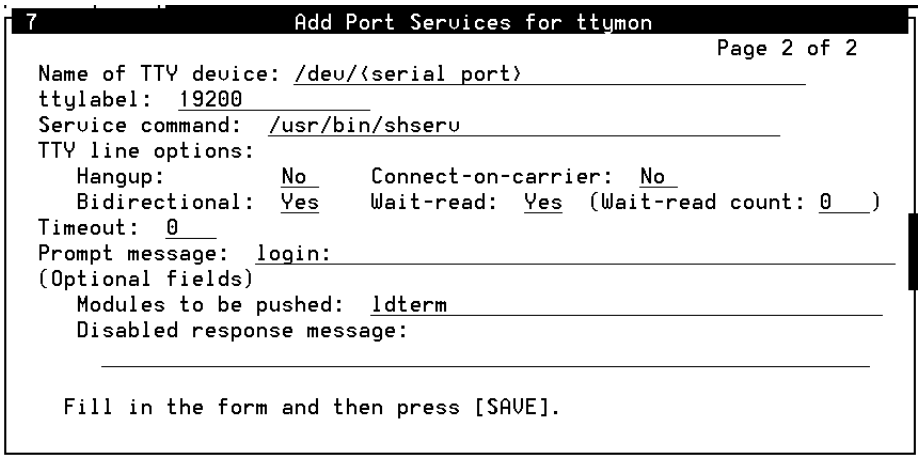


Figure 7-10. Add Port Services for ttymon Window

18. Enter **/dev/<serial port selected>** in the `Name of TTY device:` field, where <serial port selected> is the port connected to the modem.
19. Enter **19200** in the `ttylabel`: field.
20. Enter **/usr/bin/shserv** in the `Service command`: field.
21. Enter **No** in the `Hangup`: field.
22. Enter **No** in the `Connect-in-Carrier`: field.
23. Enter **Yes** in the `Bidirectional`: field.
24. Enter **No** in the `Wait-read Count`: field.
25. Enter **0** in the `Timeout`: field.
26. Enter **login:** in the `Prompt Message`: field.
27. Enter **ldterm** in the `Modules to be Pushed`: field.
28. Leave the `Disabled Response Message`: field blank

29. Press F3 (SAVE).

    The system saves the configuration information and displays the following message:

    ```
    Service <tty00s> is added successfully.
    ```

30. Press F3 (CONT).

    The system returns to the Port Service Management menu (Figure 7-11).

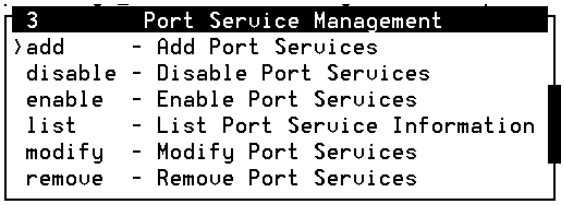


Figure 7-11. Port Service Management Menu

31. Press F6 (CANCEL) 5 times.

    The system returns to the UNIX System V Administration menu.

Printer Administration

This section describes how to configure and administer the printer for use with the voice system.

Install the Printer

See “Connecting the Printer” in Chapter 4, “Connecting Peripherals and Powering Up”, in the system installation book for your platform for the procedure to physically connect the printer.

Configure the Printer

The voice system supports parallel printers. Contact your local Lucent Technologies representative if you want to connect a serial printer to the system.

Use the procedure below to configure a local parallel printer.

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, enter **root**

   The system prompts you for a password.

2. Enter your root password.

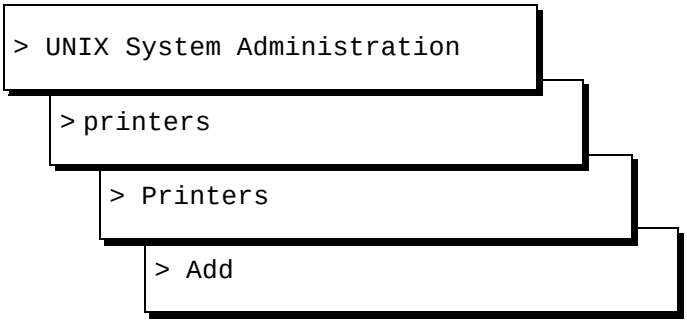
   The system displays the system prompt #.

3. Enter **cvis_mainmenu**

   The system displays the INTUITY CONVERSANT V6.0 menu (Figure 7-12).

Figure 7-12. INTUITY CONVERSANT V6.0 Menu

4. Select



The system displays the Add a New Printer window (Figure 7-13).

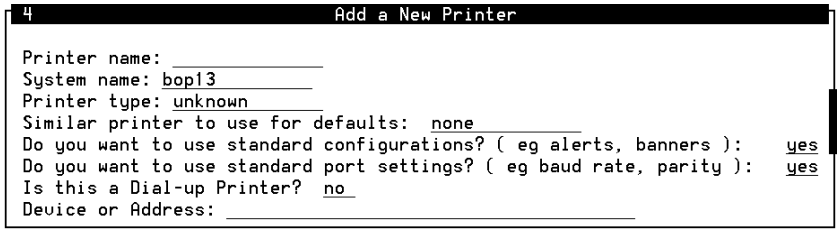


Figure 7-13. Add a New Printer Window

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 7-14).

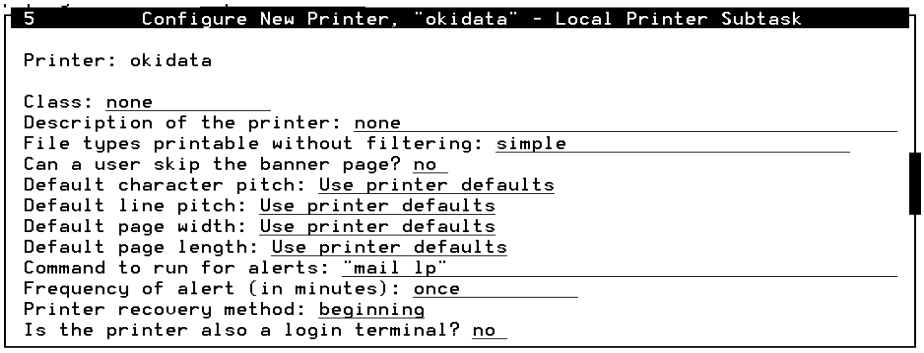


Figure 7-14. Configure New Printer Window

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 7-15).

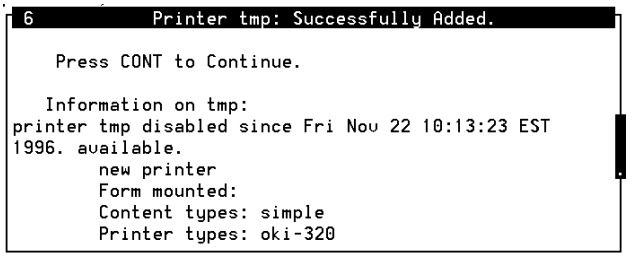


Figure 7-15. Printer: Successfully Added Window

24. Press F8 (CONT).

    The system displays the Setup Printer Access window (Figure 7-16).

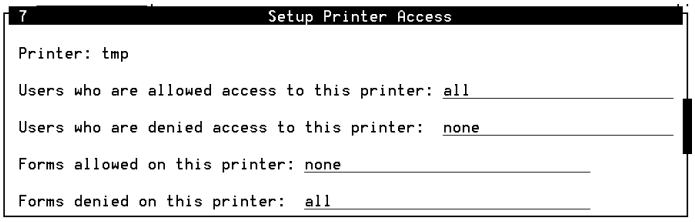


Figure 7-16. Setup Printer Access Window

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 7-17).

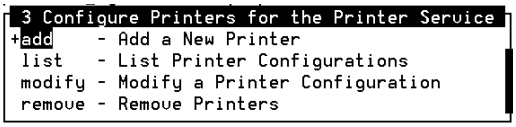


Figure 7-17. Configure Printers for the Printer Service Window

30. Press F6 (CANCEL).

    The system displays the Line Printer Services Configuration and Operations window (Figure 7-18).

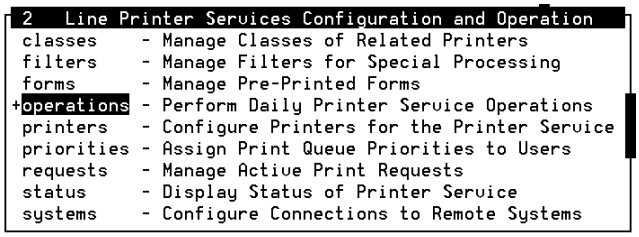


Figure 7-18. Line Printer Services Configuration and Operations Window

NOTE:
Wait at least 30 minutes before continuing with Step 31.

31. Select

```
> operation
    > accept
```

    The system displays the Allow Classes/Printers to Accept Requests window (Figure 7-19).

Figure 7-19. 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.
33. Press F3 (SAVE).
34. Press F6 (CANCEL) twice.

    The system displays the Line Printer Services Configuration and Operations window (Figure 7-18).
35. Select

```
> operation
    > enable
```

    The system displays the Enable Printer for Printing window (Figure 7-20).

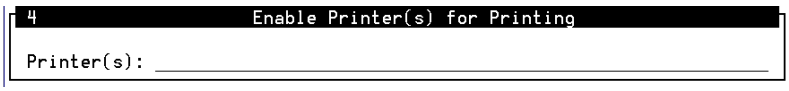


Figure 7-20. Enable Printer for Printing Window

36. Enter the name of the printer in the `Printer(s):` field, or press F2 (CHOICES) to select from a menu.
37. Press F3 (SAVE).
38. Press F6 (CANCEL).

    The system displays the Line Printer Services Configuration and Operations window (Figure 7-18).
39. Select

```
> operation
    > set default
```

    The system displays the Set Default Print Destination window (Figure 7-21).

Figure 7-21. Set Default Print Destination Window

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.

Administer the Printer

Use the procedure below to administer the voice system to recognize the printer:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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
      > Printer Administration
         > Install Okidata 320 Printer Software
   ```

   OR

   Select

   ```
   > 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

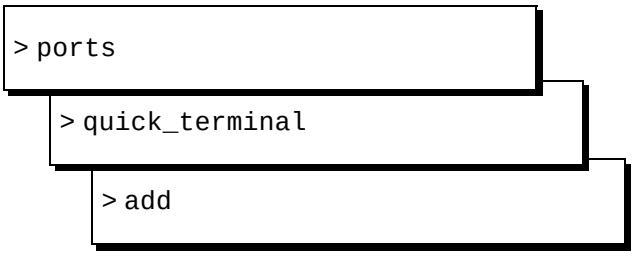
Remote Terminal Administration

This section describes the procedures to configure and administer a remote terminal for use with the voice system.

Configure the Remote Terminal

Use the procedure below to configure a terminal (monitor):

1. Start at the UNIX System V Administration menu (Figure 2-2) and select



The system displays the Quick Terminal Setup window (Figure 7-22).

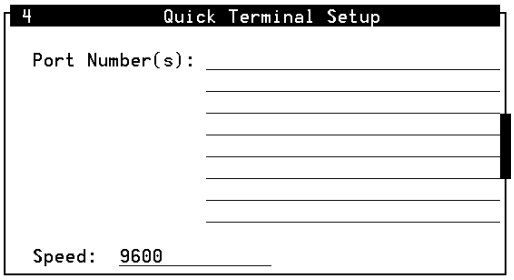


Figure 7-22. Quick Terminal Setup Window

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 **9600**.
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.

Administer the Remote Terminal

Use the procedure below to administer the voice system to recognize the modem:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 7-3).

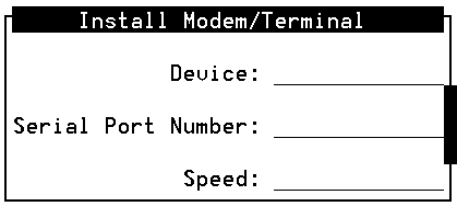


Figure 7-23. Install Modem/Terminal Window

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 **9600** 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

This section describes the procedures to administer TCP/IP for use with the voice system.

Administer TCP/IP

Use the procedure below to administer the voice system to administer TCP/IP:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 7-3).

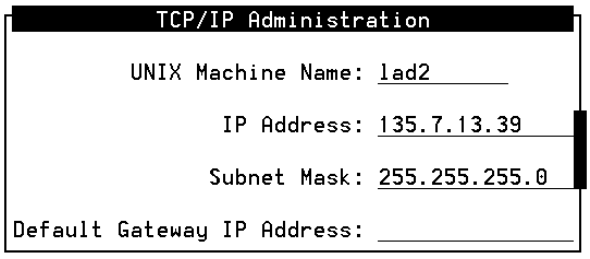


Figure 7-24. TCP/IP Administration Window

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 redisplays the TCP/IP Administration window.
10. Press F6 (CANCEL) to finish and return to the Unix Management menu.

Daily Administration

8

Overview

This chapter provides the information and procedures needed to perform daily administrative tasks.

Purpose

The procedures in this chapter have been organized together so as to facilitate quick reference for some of the more common, or daily, administrative tasks. Daily administration includes running system reports, common procedures such as system monitoring, media formatting, and back ups, and administering the date and time.

Command Menu

The Command Menu enables you to quick access to the System Monitor and Trace services, and exit the voice system. The Command Menu key appears as F7 on almost every INTUITY CONVERSANT administration menu or window.

Access the Command Menu

Use the procedure below to access the Command Menu

1. Once you have accessed the Voice System Administration menus (as described in Chapter 3, “Voice System Administration”, from almost any menu or window, press F7 (CMD-MENU).

   The system displays the Command Menu (Figure 8-1).

Figure 8-1. 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.

Access System Monitor

Use the procedure below to access the System Monitor window from the Command Menu:

1. Start at the Command Menu (Figure 8-1) and select

   ```
   > System Monitor
   ```

   The system displays System Monitor-Voice Channels window (Figure 8-2).

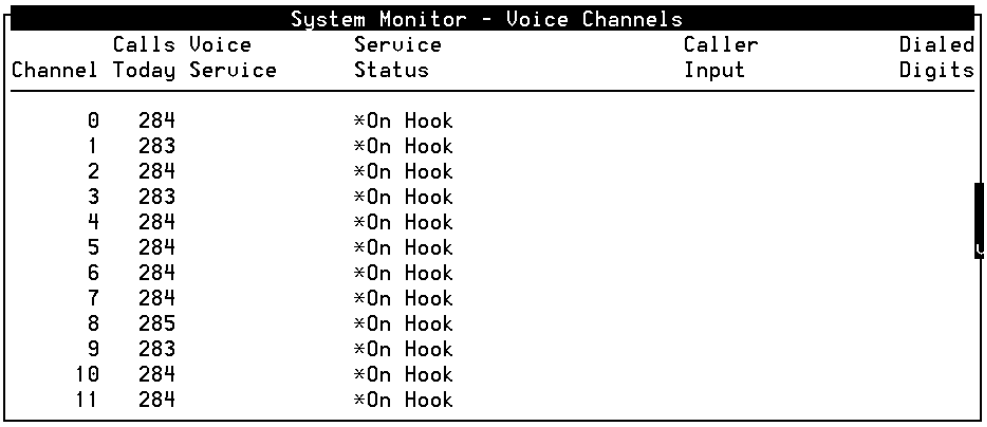


Figure 8-2. System Monitor-Voice Channels Window

System Monitor Window

Table 8-1 describes the columns in the System Monitor-Voice Channels window.

Table 8-1. 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.

Continued on next page

Table 8-1. Columns in the System Monitor Window — *Continued*

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 8-2 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 touch-tone 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.

Service Status Column

The following list describes the Service Status column possible entries and their meanings:

NOTE:
All hardware states are marked with an asterisk (*).

Table 8-2. 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

Continued on next page

Table 8-2. Entries for Service Status Column — *Continued*

Service Status Entry	Description
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
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

Change the System Monitor Refresh Rate

By default, the system updates the voice channel status every five seconds.

Use the procedure below to change the refresh rate to a specified amount of time:

1. Start at the System Monitor-Voice Channels window (Figure 8-2) 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 8-3).

Figure 8-3. Change Refresh Rate Window

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.

Print System Monitor-Voice Channel Report

Use the procedure below to print a System Monitor-Voice Channel report:

1. Start at the System Monitor-Voice Channels window (Figure 8-2) 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” in Appendix A, “Summary of Commands”, for more information on the **trace** command-line format.

Perform a Trace

Use the procedure below to trace a channel or session or both:

1. Start at the Command Menu (Figure 8-1) and select

```
> Trace Service
```

   The system displays Trace Service window (Figure 8-4).

Figure 8-4. Trace Service Window

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 8-5).

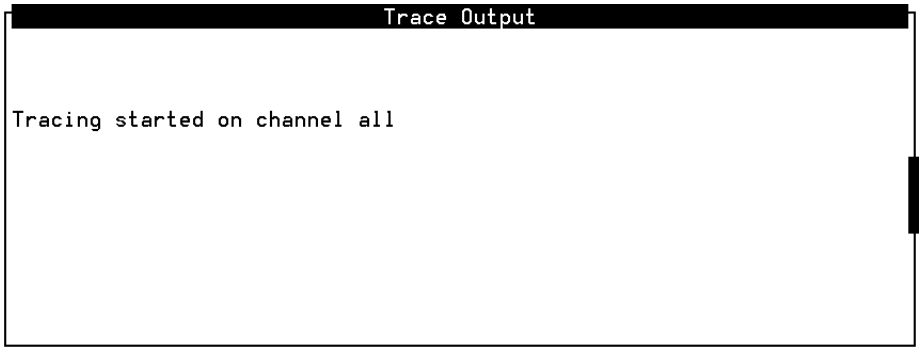


Figure 8-5. Trace Output Window

4. Select one of the following options while in the Trace Output window:
   - Press F1 (PAUSE) to stop the information from scrolling.
   - Press F2 (PREVPAGE) and F3 (NEXTPAGE) 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.

Reports Administration

The Reports Administration window gives you access to system reports, including call classification reports, call data detail reports, call data summary reports, message log, and traffic reports. The voice system allows you to taylor each report to meet your needs and requirements.

Access Reports Administration Menu

Use the procedure below to access the Reports Administration menu:

1. At the `Welcome to USL UNIX System V Release 4.2 Version 1 Console Login:`, 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 3-1).

4. Select

   ```
   > Reports
   ```

   The system displays the Reports menu (Figure 8-6).

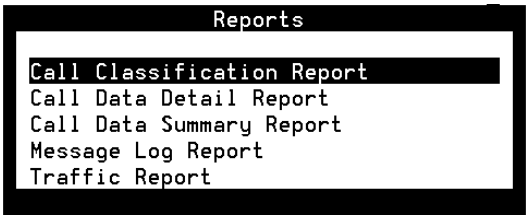


Figure 8-6. Reports Menu

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

Display the Call Classification Report

Use the procedure below to display the Call Classification Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Call Classification Report
```

The system displays the Call Classification Report window (Figure 8-7).

```
                    Call Classification Report

                         Date: 11/10/1996

                           Attempts
                 ---------------------------------
Dialed Number    Total Failed  Unclass    Class Answer   Busy   Ring  Other
-------------- -------- ------ -------- -------- ------ ------ ------ ------
         4900      798      1        0      797    797      0      0      0
-------------- -------- ------ -------- -------- ------ ------ ------ ------
        Total      798      1        0      797    797      0      0      0
      Percent      100      0        0       99     99      0      0      0
```

Figure 8-7. Call Classification Report Window

Table 8-3 defines the columns in this window.

Table 8-3. Column Description for Call Classification Report

Column	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.

Modify the Call Classification Report

You can specify the beginning and ending dates for the Call Classification Report.

Use the procedure below to modify the Call Classification Report:

1. Start at the Call Classification Report window (Figure 8-7) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

Figure 8-8. Actions Menu

2. Select

```
> Modify
```

   The system displays the Modify Call Classification Report window (Figure 8-9).

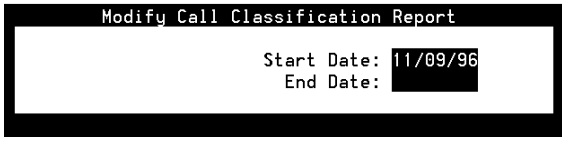


Figure 8-9. Modify Call Classification Report Window

3. Enter the beginning and ending dates for the report in the `Start Date:` and `End Date:` fields using the format of "mm/dd/yy" 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 03/01/97 and an end date of 03/31/97 means that the voice system displays call classification information on calls made in the month of March 1997. 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 8-18).

6. (Optional) Select

```
> Update
```

The system redisplays the Call Classification Report reflecting the new dates.

Print 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 has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Call Classification Report:

1. Start at the Call Classification Report window (Figure 8-7) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Print
```

The system prints the Call Classification Report using the last set of options saved to the voice system.

Update the Call Classification Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See "Modify the Call Classification Report" above.

Use the procedure below to update the Call Classification Report:

1. Start at the Call Classification Report window (Figure 8-7) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Update
```

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 information from the last 7 days:

- Date, time, and duration of the call
- Service run on the call
- Channel receiving the call
- Assigned database record number

Display the Call Data Detail Report

Use the procedure below to display the Call Classification Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Call Data Detail Report
```

The system displays the Call Data Detail Report window (Figure 8-10).

```
                    Call Data Detail Report

 Record   Channel          Start          Duration       Service
-------- -------- ---------------------- -------- ------------------
       3       11   01:30:49pm(11/10/96)       41        Catalog15DP
       2       39   01:30:49pm(11/10/96)       41        Catalog15DP
       6        7   01:30:47pm(11/10/96)       40        Catalog15DP
       8       45   01:30:31pm(11/10/96)       41        Catalog15DP
       5        6   01:30:30pm(11/10/96)       58        Catalog15DP
       4       51   01:30:30pm(11/10/96)       58        Catalog15DP
      10       15   01:30:18pm(11/10/96)       42        Catalog15DP
```

Figure 8-10. Call Data Detail Report Window

Table 8-4 defines the columns on this window.

Table 8-4. Column Description for Call Data Detail Report

Column	Description
Record	Specifies the database record number of each call made to the voice system.
Channel	Specifies the channel on which call was made.
Start	Specifies time the call began.
Duration	Specifies the length of the call in minutes and seconds.
Service	Specifies the script that was associated with the call.

Modify 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

Use the procedure below to modify the Call Data Detail Report:

1. Start at the Call Data Detail Report window (Figure 8-10) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Modify
   ```

   The system displays the Modify Call Data Detail Report window (Figure 8-11).

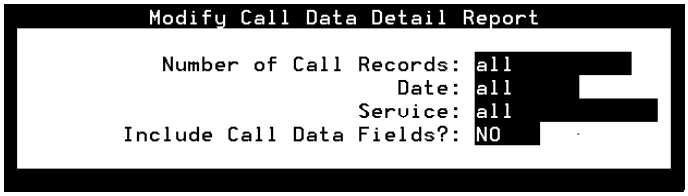


Figure 8-11. Modify Call Data Detail Window

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/yy" 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 `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 (CHOICES) 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 (CHOICES) 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 8-10).

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 8-18).

9. (Optional) Select

   ```
   > Update
   ```

   The system redisplays the Call Data Detail Report window with the new parameters.

Print 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 has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Call Data Detail report:

1. Start at the Call Data Detail Report window (Figure 8-10) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Print
   ```

   The system prints the Call Data Detail Report using the last set of options saved to the voice system.

Update 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 "Modify the Call Data Detail Report" above.

Use the procedure below to update the Call Data Detail Report:

1. Start at the Call Data Detail Report window (Figure 8-10) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Update
```

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.

Display the Call Data Summary Report

Use the procedure below to display the Call Data Summary Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Call Data Summary Report
```

The system displays the Call Data Summary Report window (Figure 8-12).

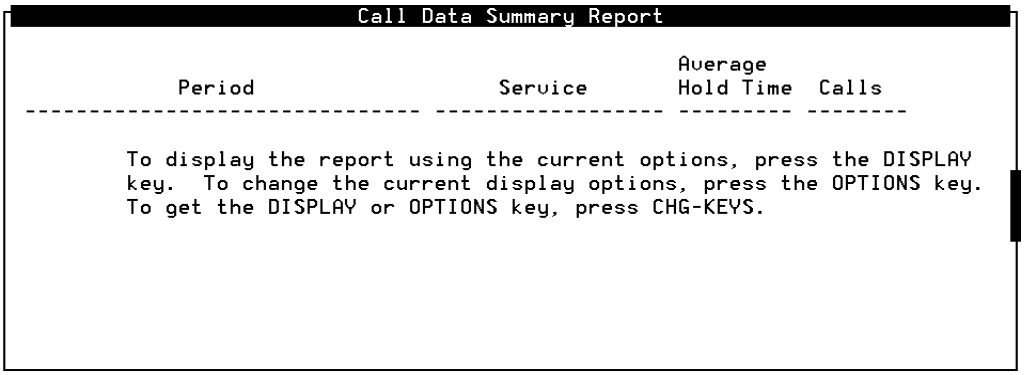


Figure 8-12. Call Data Summary Report Window

Table 8-5 describes the columns on this window.

Table 8-5. Column Description for Call Data Summary Report

Column	Description
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.
Calls	Total number of calls for the specified time.
Event Description[1]	Name of the call data field.
Event No[1]	Identifying number for each call data message.
Count[1]	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.

1. Appears only when the Include Call Data Fields?: field is set to Yes. See "Modify the Call Data Summary Report" below.

Modify 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

Use the procedure below to modify the Call Data Summary Report:

1. Start at the Call Data Detail Report window (Figure 8-10) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Modify
```

The system displays the Options for Call Data Summary Report window (Figure 8-13).

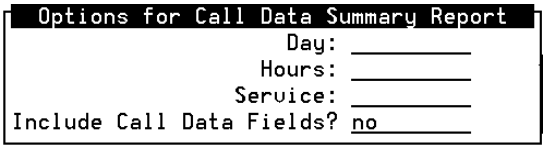


Figure 8-13. Options for Call Data Summary Report Window

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 8-18).

9. (Optional) Select

   ```
   > Update
   ```

   The system redisplays the Call Data Summary Report window with the new parameters.

Print 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 has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Call Data Summary Report:

1. Start at the Call Data Summary Report window (Figure 8-12) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Print
   ```

   The system prints the Call Data Summary Report using the last set of options saved to the voice system.

Update 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 "Modify the Call Data Summary Report" above.

Use the procedure below to update the Call Data Summary Report:

1. Start at the Call Data Summary Report window (Figure 8-10) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Update
```

The system updates the report and displays the values last saved.

Form Filler Plus Reports

The two Form Filler Plus Reports store call records for the Form Filler database. The Call Record Summary Report and the Last Audit Report represent two looks at the information in the database.

Access Form Filler Plus Reports

Use the procedure below to access the Form Filler Plus Reports menu:

1. Start at the Reports menu (Figure 8-6) and select

```
> Form Filler Plus Reports
```

The system displays the Form Filler Plus Reports menu (Figure 8-14):

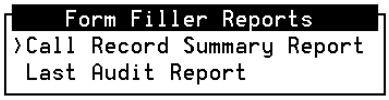


Figure 8-14. Form Filler Reports Menu

Call Record Summary Report

The Call Record Summary Report provides summary statistics on the call records in the Form Filler database, such as the:

- ID of the script used to store call records in Form Filler database
- Number of call records ready for review or transcription
- Oldest and newest call records in the database
- Amount of disk space used to store recorded speech (all recorded speech, not just Form Filler speech), including the:
  - — Name of the disk partition
  - — Number of disk blocks associated with that disk partition
  - — Number of disk blocks that are free
  - — Percentage of free disk space in the partition

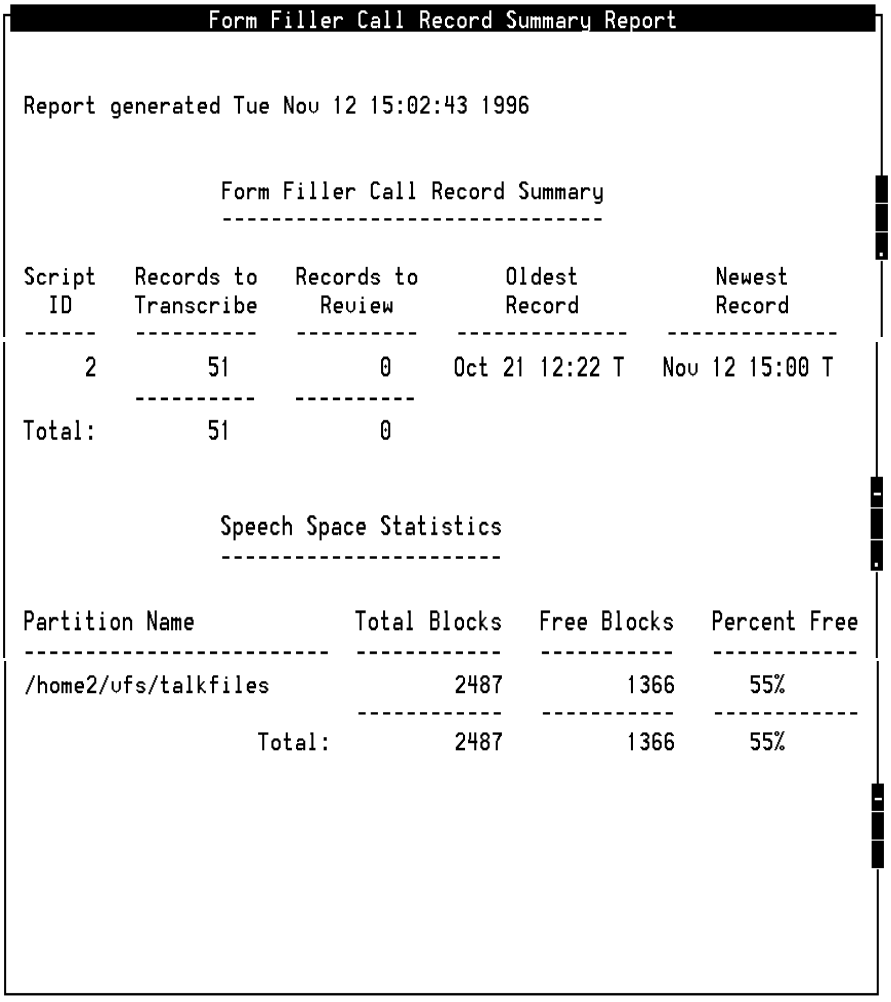
Display Call Record Summary Report

Use the procedure below to display the Call Record Summary Report:

1. Start at the Form Filler Plus Reports menu (Figure 8-14) and select

```
> Call Record Summary Report
```

   The system displays the Form Filler Call Record Summary Report window (Figure 8-15).



Form Filler Call Record Summary Report

Report generated Tue Nov 12 15:02:43 1996

Form Filler Call Record Summary

Script ID	Records to Transcribe	Records to Review	Oldest Record	Newest Record
2	51	0	Oct 21 12:22 T	Nov 12 15:00 T
Total:	51	0		

Speech Space Statistics

Partition Name	Total Blocks	Free Blocks	Percent Free
/home2/ufs/talkfiles	2487	1366	55%
Total:	2487	1366	55%

Figure 8-15. Form Filler Call Record Summary Report Window

NOTE:
The above graphic (Figure 8-15) is actually three pages in length. It is presented here on one page for clarity.

Table 8-6 describes the columns on the Form Filler Call Summary Report.

Table 8-6. Column Description for Form Filler Call Summary Report

Column	Description
Script ID	ID of script that stores call records to Form Filler database.
Records to Transcribe	Number of call records to transcribe.
Records to Review	Number of call records to review.
Oldest Record	Date of the oldest call record.
Newest Record	Date of the most recent call record.
Partition Name	Name of disk partition where recorded speech is stored.
Total Blocks	Amount of disk space used for recorded speech.
Free Blocks	Number of free blocks free of disk storage.
Percentage Free	Amount of free disk space as a percentage of disk partition.

Print the Call Record Summary Report

NOTE:
This report will not print if a printer has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Call Record Summary Report:

1. Start at the Call Record Summary Report window (Figure 8-15) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F6 (PRINT).

   The system prints the report.

Last Audit Report

The Last Audit Report checks for inconsistency between Form Filler talkfiles and the Form Filler database. When it finds an inconsistency, it performs the following actions:

- Removes speech phrases from the transcription talkfile that do not exist in Form Filler database
- Deletes phrases from the database that are not in the talkfile
- Deletes the entire call record from the Form Filler database if none of its speech phrases exist in the talkfile
- Rebuilds the database index when corrupted

The Last Audit Report runs automatically when the voice system is started, however it can be manually run at any time.

Display Last Audit Report

Use the procedure below to display the Last Audit Report:

1. Start at the Form Filler Plus Reports menu (Figure 8-14) and select

```
> Last Audit Report
```

   The system displays the Last Audit Report window (Figure 8-15).

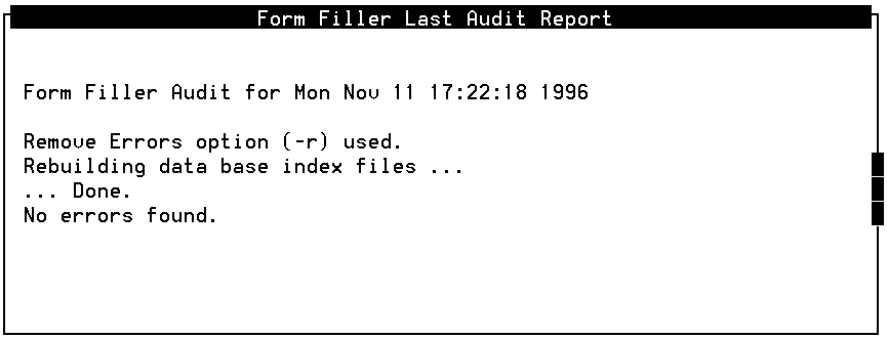


Figure 8-16. Form Filler Last Audit Report Window

Print Last Audit Report

NOTE:
This report will not print if a printer has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Last Audit Report:

1. Start at the Last Audit Report window (Figure 8-15) and press F8 (CHG-KEYS).

   The system displays the alternate function keys.

2. Press F6 (PRINT).

   The system prints the report.

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

Display the Message Log Report

Use the procedure below to display the Message Log Report:

1. Start at the Reports menu (Figure 8-6) and select

   ```
   > Message Log Report
   ```

   The system displays the Message Log Report window (Figure 8-17).

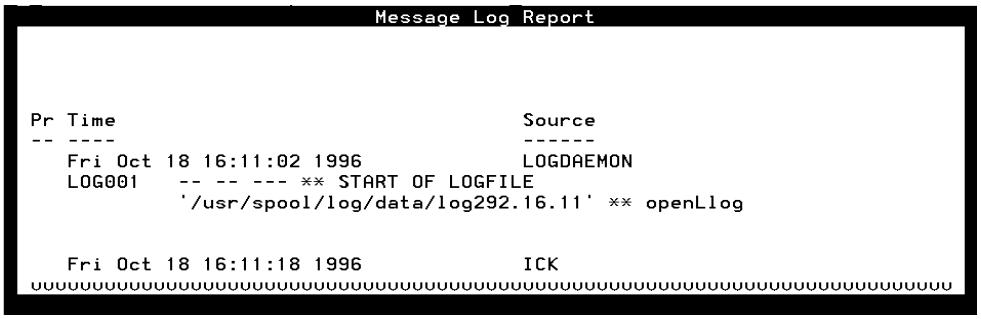


Figure 8-17. Message Log Report Window

Use F2 (PREVPAGE) and F3 (NEXTPAGE) to scroll through the report.

Table 8-7 defines the information on the Message Log Report window.

Table 8-7. 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.

Continued on next page

Table 8-7. Entry Description for Message Log Report — *Continued*

Entry	Description
Source	Originating software process; messages are divided into subgroups according to the software process that outputs the messages. The following is a sample of possible sources: ■ 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 DIO0 and DIO1 processes are the disk input/output for VROP for disk 0 and 1. ■ 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.

Use the procedure below to get additional information about a particular message in the Message Log Report window:

1. Start at the Message Log Report window (Figure 8-17) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

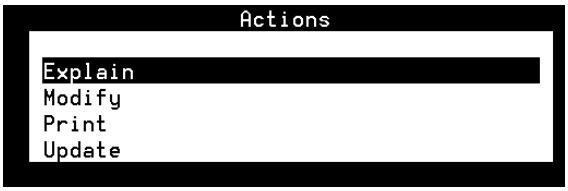


Figure 8-18. Message Log Report Actions Menu

2. Press F3 (EXPLAIN).

   The system displays the Explain Message ID window (Figure 8-19).

Figure 8-19. 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.

Modify 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.

Use the procedure below to limit what is displayed in the Message Log Report window:

1. Start at the Message Log Report window (Figure 8-17) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

2. Select

   ```
   > Modify
   ```

   The system displays the Modify Message Log Report window (Figure 8-20).

Figure 8-20. Modify Message Log Report Window

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, meaning all message sources are included.
5. Enter a single circuit card number or multiple circuit card numbers separated by commas (for example, T1,2,TR) 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 of 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 of 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 (PREVPAGE) and F3 (NEXTPAGE) to scroll through the report.

11. (Optional) Press F8 (ACTIONS).

    The system displays the Actions Menu (Figure 8-18).

12. (Optional) Select

```
> Update
```

    The system updates the report and displays the values last saved.

Print 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" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Message Log Report:

1. Start at the Message Log Report window (Figure 8-17) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

2. Select

   ```
   > Print
   ```

   The system prints the Message Log Report using the last set of options saved to the voice system.

Update the Message Log Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See "Modify the Message Log Report" above.

Use the procedure below to update the Message Log Report:

1. Start at the Message Log Report window (Figure 8-17) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

2. Select

   ```
   > Update
   ```

   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/Activities Included in the Report

The following administrative commands/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**, **hconfig**
- 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/activity results in either one or two entries to the Administrative Commands Log:

- Start message entries — indicate the execution of the administrative command/activity
- End message entries — indicate the result of the command/activity if the information would be critical for troubleshooting purposes

NOTE:
Some commands/activities log only a Start message entry.

Display the Administrative Commands Log Report

Display the Administrative Commands Log report through the Message Log Report.

Use the procedure below to display the Administrative Commands Log Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Message Log Report
```

   The system displays the Message Log Report window (Figure 8-17).

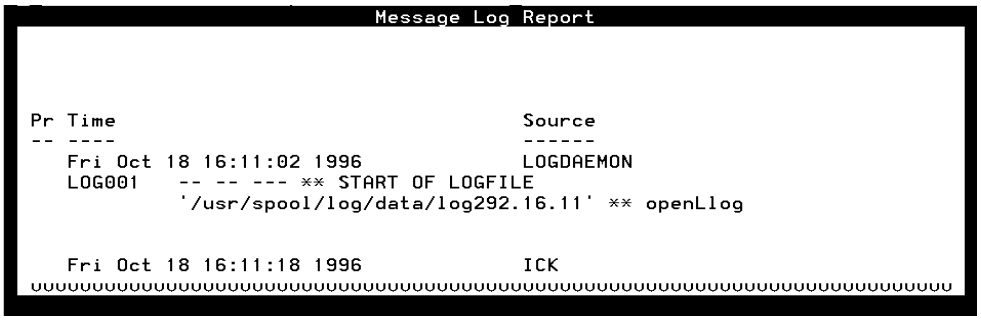


Figure 8-21. Message Log Report Window

2. Press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

3. Select

```
> Modify
```

   The system displays the Modify Message Log Report window (Figure 8-20).

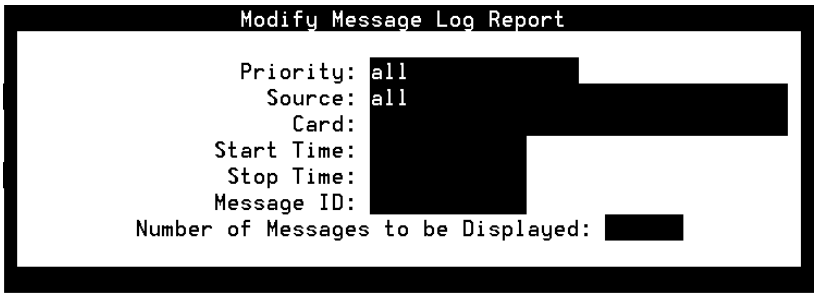


Figure 8-22. Modify Message Log Report Window

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 of 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 of 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 8-23).

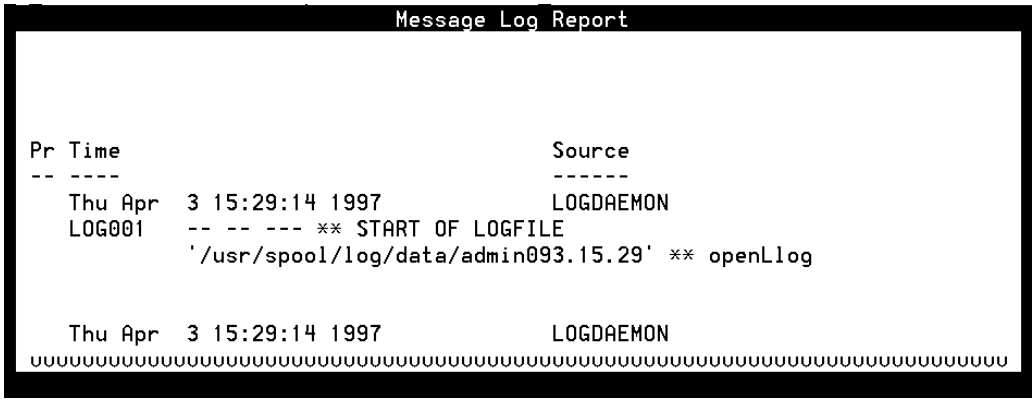


Figure 8-23. Administrative Commands Log Report Window (displayed under Message Log Report Window)

Use F2 (PREVPAGE) and F3 (NEXTPAGE) to scroll through the report.

The list below describes the entries in the Administrative Commands Log window:

- `Time` — Date and time when the command/activity was executed
- `Source` — Name of the originating software process that executed the command/activity
- Login ID — Login ID that executed the command/activity (if applicable). A common login ID to see is `root`
- Administrative command text — Full text of the command/activity executed with all applicable parameters
- Disposition — Full text of the result of the command/activity

12. (Optional) Press F8 (ACTIONS).

    The system displays the Actions Menu (Figure 8-18).

13. (Optional) Select

    ```
    > Update
    ```

    The system updates the report and displays the values last saved.

Print 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 has not been configured for use with the voice system. See "Printer Administration" in Chapter 7, "Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Administrative Commands Log Report:

1. Start at the Administrative Commands Log Report window (Figure 8-23) displayed under the Message Log Report window and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

2. Select

   ```
   > Print
   ```

   The system prints the Administrative Commands Log Report using the last set of options saved to the voice system.

Update 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 "Modify the Message Log Report" above.

Use the procedure below to update the Message Log Report:

1. Start at the Administrative Commands Log Report window (Figure 8-23) displayed under the Message Log Report window and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-18).

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.

Display the Traffic Report

Use the procedure below to display the Traffic Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Traffic Report
```

The system displays the Traffic Report window (Figure 8-24).

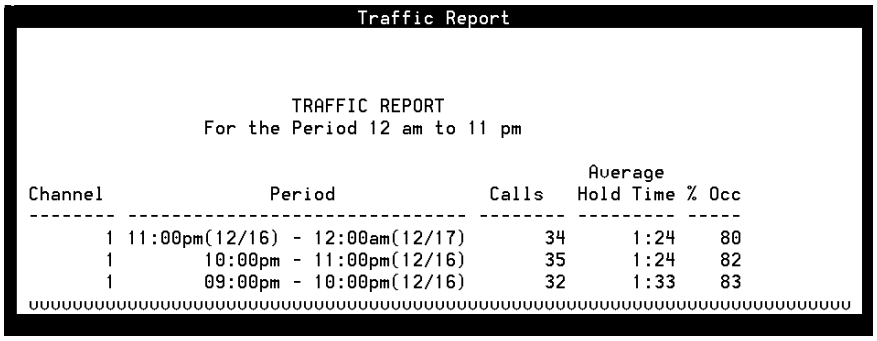


Figure 8-24. Traffic Report Window

Table 8-8 describes the information on this window.

Table 8-8. 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).

Modify the Traffic Report

You change the Traffic Report with the Modify function on the Actions Menu (Figure 8-8). You can specify the date and time when you want the system to monitor call traffic, and whether you would like the data summarized.

Use the procedure below to modify the Traffic Report:

1. Start at the Traffic Report menu (Figure 8-24) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Modify
   ```

   The system displays the Modify Traffic Report window (Figure 8-25).

Figure 8-25. Modify Traffic Report Window

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, which 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, which means 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

   ```
   > Update
   ```

   The system updates the report and displays the values last saved.

Print 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” in Chapter 7, “Peripheral Administration, for more information about printer administration.

Use the procedure below to print the Traffic Report:

1. Start at the Traffic Report window (Figure 8-24) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Print
```

The system prints the Traffic Report using the last set of options saved to the voice system.

Update the Traffic Report

Use the Update function to redisplay the report. The report reflects the values last saved to the voice system. See “Modify the Traffic Report” above.

Use the procedure below to update the Traffic Report:

1. Start at the Traffic Report window (Figure 8-24) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

```
> Update
```

The system updates the report and displays the values last saved.

Script Builder FAX Channel Utilization Report

Script Builder FAX Channel Utilization Report displays the capacity use of the system dedicated FAX channels. The report is broken down in 24 increments of 1 hour each. If the utilization percentage for a period is 50%, the FAX channels were busy half the time during that period. The data in this report is cumulative and is averaged over the time since the report was last updated.

Display the Script Builder FAX Channel Utilization Report

Use the procedure below to display the Script Builder FAX Channel Utilization Report:

1. Start at the Reports menu (Figure 8-6) and select

```
> Script Builder Fax Actions
    > FAX Channel Utilization Report
```

The system displays the Output for Channel Utilization Report window (Figure 8-26).

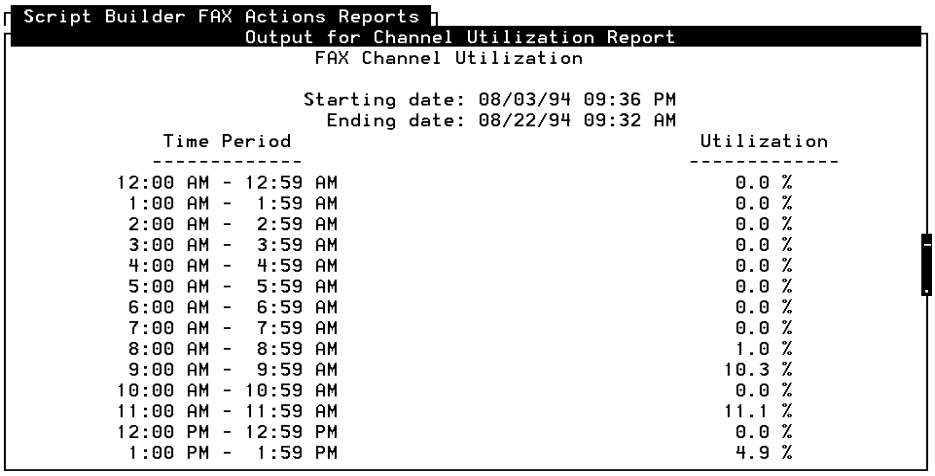


Figure 8-26. Output for Channel Utilization Report Window

Update the FAX Channel Utilization Report

Updating the FAX Channel Utilization Report empties the current report and restarts the data collection period.

Use the procedure below to update the FAX Channel Utilization Report window:

1. Start at the Output for Channel Utilization Report window (Figure 8-26) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Update
   ```

   The system clears the FAX Channel Utilization Report and begins the new collection period.

Print the FAX Channel Utilization Report

The print option provides a complete printout of the FAX Channel Utilization Report.

NOTE:
This report will not print if a printer has not been configured for use with the voice system. See “Printer Administration” in Chapter 7, “Peripheral Administration, for more information about printer administration.

Use the procedure below to print the FAX Channel Utilization Report:

1. Start at the Output for Channel Utilization Report window (Figure 8-26) and press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 8-8).

2. Select

   ```
   > Print
   ```

   The system prints the FAX Channel Utilization Report using the last set of options saved to the voice system.

Signal Processing Activity Reports

The Signal Processing Activity reports display information about the voice system signal processing resources. These resources include:

- signal processing algorithms
- signal processing circuit cards (SP/SSP)
- 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 **spdata.*X*** where *X* is the day of the week (Sunday = 0 and Saturday = 6).

The **spdata.X** 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 mm/dd/yy:HH:MM format.
- 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 SP/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** and **spar** 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 Chapter 3, “Common System Procedures”, in the maintenance book for your platform for information and procedures to perform the following common administrative tasks:

- Format floppy diskettes and cartridge tapes
- Create system back up
- Restore a system from back up
- Change the system date and/or time

Summary of Commands

A

Overview

Table A-1 provides an alphabetical list and brief description of all commands. The rest of this appendix provides complete details on each command in alphabetical order.

Purpose

To provide reference material on the INTUITY CONVERSANT command language.

Table A-1. 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.
add_device	Adds a new device to the **/vs/data/device_data** file.
addhdr	Adds a voice or code header to a speech file.
addmsg	Allows for the addition of explanation texts for error messages prior to Version 3.1.
alarm disable	Disables the specified Alarm Contact Set.
alarm display	Displays all Message IDs associated with a specified Alarm Contact Set.
alarm enable	Enables the specified Alarm Contact Set for use.
alarm help	Provides the user a means of assigning or removing Message IDs to each of 3 Alarm Contact Sets.
alarm reinit	Causes the alarm process to reinitialize all internal data structures referring to alarms.
alarm retire	Retires the specified Alarm Contact Set.25.
alarm status	Displays the state and status of the specified Alarm Contact Set.
alarm test	Tests the specified Alarm Contact Set for use.
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.
assign_tty	Permits the user to alter the ports assigned to be monitored by the SCCS and ARU.
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.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
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.
change_device	Changes the name of a device in the **/vs/data/device_data** file.
checktf	Checks for the existence of talkfiles in the voice system.
chg_machname	Changes the name of the machine the SCCS is monitoring.
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.
console_off	Turn the flow of error messages to the console off during system operation.
console_on	Turn the flow of error messages to the console on during system operation.
copy	Copies a phrase from one UNIX file to another UNIX file.
cpuType	Returns the type of CPU used in the system.
cvis_mainmenu	Accesses the INTUITY CONVERSANT 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.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
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.
displaypkg	Lists the software packages installed on the voice system.
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.
etStub	Reads the IPC message queue for error messages that use the ET process.
explain	Displays on-line error message explanations.
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.
gse	Invokes the Graphical Speech Editor.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
gse_add	Transfers a speech phrase from a UNIX file to the UNIX file in the Graphical Speech Editor (GSE) format.
gse_addpl	Adds (restores) phrases to a specific speech pool from UNIX files in the GSE format.
gse_copy	Extracts a speech phrase from the speech file system to a UNIX file in the GSE format.
gse_copypl	Copies multiple speech phrases from the speech file system in the GSE format.
hassign	Assigns host services to host sessions.
hcapture	Captures the unrecognized screen exchanged between the host and CONVERSANT.
hconfig	Configures the host interface parameters.
hdefine	Displays the host screens created by hcapture in a two page format.
hdelete	Removes host services from host sessions.
hdiagnose	Diagnoses the SDLC communication card.
hdisplay	Shows host applications that have been successfully verified and installed.
hdump	Dumps screens exchanged between the host and CONVERSANT.
headFIX	Converts ET message rules header files to the logger/alerter environment.
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.
hnewscript	Installs a changed host script.
host_cfg	Translates an ASCII configuration file into a properly formatted binary configuration file.
hsend	Sends a file to the host via INTUITY CONVERSANT file transfer.
hspy	Displays a screen currently present on the specified host session.
hstatus	Shows the current status of the host sessions.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
iCk	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.
installpkg	Installs a software package.
into_et	Sends error messages to the error tracker (ET).
lComp	Combines message files to produce compressed and expanded format files.
list	Lists the directory entries for specific phrases.
load_aru	Downloads the parameter settings of the ARU.
load_bin	Initializes the 3270 host card.
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 arbitrary messages to the logging files.
logTest	Generates an arbitrary list of logging messages to be sent to logdaemon.
mkAlerter	Reads an alerter description and generates the code that implements the description.
mkerr	Converts ET message rules to the logger/alerter environment.
mkETrules	Produces a valid etStub.rules file from one or more errors files used to control the ET process.
mkheader	Allocates user memory for script variables.
mkimage	Performs a complete system backup.
mkMsg	Converts ET message rules to files for use in the logger/alerter environment.
msgadm	Facilitates the administration of system messages.
newscript	Updates the changes to all currently assigned scripts.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
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.
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_device	Removes a device from the **/vs/data/device_data** file.
remove_sw	Removes an installed package if enhanced file transfer is installed.
removepkg	Removes a software package.
restore	Restores a unit to the in-service (INSERV) state.
restore_appl	Restores an application if enhanced file transfer is installed.
retire	Retires critical and major alarm indications on the ARU.
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 Buillder applications and the host mainframe for the specified host channel.
sccsDaemon	Distributes messages to the SCCS or CompuLert systems and to the alarm relay unit (ARU); can be used to send commands from the user to the daemon process.
show_config	Displays and prints to a file the valid or incomplete voice system configuration.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
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_szr	Starts a script on a channel.
spCtlFlags	Sets and clears flags used to control the behavior on SP executive pack files as they run on an SP card.
spres	Restores speech from a backup.
spsav	Backs up speech.
spStatus	Displays information about the pack file running on an SP card.
spVrsion	Prints the version of the SP 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.
stop_vs	Stops the voice system software gracefully.
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.
upg	Provides automated assistance in upgrading the system software to the latest release.
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.

Continued on next page

Table A-1. Command Synopsis — *Continued*

Command	Function
vsusage	Displays the current load on the voice system.
wdog_off	Disables the watchdog timer function of the ARU.
wdog_on	Enables the watchdog timer function of the ARU.
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 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.

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.

NOTE:
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.

NOTE:
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 3, "System Message Listings," of the INTUITY CONVERSANT Version 6.0 maintenance book for your platform 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

add_device

The **add_device** command adds a new device to the **/vs/data/device_data** file.

Synopsis

/vs/bin/util/add_device

Description

The **add_device** command is an interactive command which allows the user to add a new device to the **/vs/data/device_data** file. Once a new device is added to this file, it appears in the device menus of the **/vs/bin/util/configure** program and may be selected for possible configuration in a machine.

The **add_device** program prompts for all attributes that must be specified to make a new device entry. If there are no special attributes or rules associated with the new device, executing **add_device** is all that is necessary to add complete support of the device to the **configure** program.

Files

/vs/data/device_data

See Also

configure
change_device
remove_device
show_devices
show_config
save_config
get_config

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 by GSE, 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.

NOTE:
Customers using **gse_add**, **gse_addpl**, **gse_copy**, and **gse_copypl** do not need to use this command directly.

See Also

codetype, **striphdr**

alarm disable

The **alarm disable** command disables the specified alarm and makes it unavailable for use.

Synopsis

alarm disable ***[all/1/2/3...]***

Description

The **alarm disable** command disables the specified Alarm Contact Set. This command does not affect the state of the contacts themselves. If an alarm occurs that is assigned to a disabled Alarm Contact Set, then the contacts will not close. Note that the alarm retire and test commands cause the contacts to close and open even though the set is disabled.

The numeric arguments refer to the alarm contact set.

Examples

The following is an example of the output for the **alarm disable 2** command:

```
Alarm Contact Set 2 now disabled
```

The following is an example output for the alarm disable all command:

```
Alarm Contact Set 1 already disabled
Alarm Contact Set 2 now disabled
Alarm Contact Set 3 now disabled
```

Alarm Display

The **alarm display** command displays all message IDs assigned to Alarm Contact Sets.

Synopsis

alarm display ***[all/1/2/3...]***

Description

The **alarm display** command displays all Message IDs associated with a specified Alarm Contact Set. The numeric arguments refer to the alarm contact set. This command is used in conjunction with the *[all]* or *[n]* options (where n is the alarm contact set number). A warning message is output if the specified Alarm Contact Sets are already disabled.

Examples

The following is a sample output for the **alarm display 1** command:

```
No Message IDs currently assigned to Alarm Contact Set
1.
```

The following is a sample output for the **alarm display 2** command:

```
Alarm Contact Set 2
     TWIP001 TWIP002 TWIP003
```

The following is a sample output for the **alarm display all** command:

```
Alarm Contact Set 1
     VROP001 VROP002 VROP003
Alarm Contact Set 2
     TWIP001 TWIP002 TWIP003
Alarm Contact Set 3
     TSM001  TSM002  TSM003
```

Alarm Enable

The **alarm enable** command enables the specified alarms to be available for use.

Synopsis

alarm enable ***[all/1/2/3...]***

Description

The **alarm enable** command enables the specified Alarm Contact Set for use. This command does not affect the state of the contacts themselves. If an alarm occurs that is assigned to an enabled Alarm Contact Set, then the contacts will close if they are not already closed. The numeric arguments refer to the alarm contact sets on the alarm relay card. This command is used in conjunction with the *[all]* or *[n]* options (where *n* is the alarm contact set number). A warning message is output if the specified Alarm Contact Sets are already enabled.

Examples

The following is a sample output for the **alarm enable 2** command:

```
Alarm Contact Set 2 now enabled
```

The following is a sample output for the **alarm enable all** command:

```
Alarm Contact Set 1 already enabled
Alarm Contact Set 2 now enabled
Alarm Contact Set 3 now enabled
```

Alarm Help

The **alarm help** command provides output information on each alarm command.

Synopsis

alarm help

Description

The purpose of External Alarm Administration is to provide the user a means of assigning or removing Message IDs to each of 3 Alarm Contact Sets. It also provides the user with the capability of enabling or disabling specific Alarm Contact Sets. The user can also test the functionality of each Alarm Contact Set without initiating a system alarm by using the test command to close a specific Alarm Contact Set. The **alarm retire** command will reopen the closed set.

Alarm Reinit

The **alarm reinit** command forces alarm processes to reinitialize internal data structures.

Synopsis

alarm reinit

Description

The **alarm reinit** command causes the alarm process to reinitialize all internal data structures referring to alarms. When alarm reinit is executed, all alarm contact sets are reset (alarm contacts are open), all alarm contact sets are enabled, the **/vs/data/alarms/alarmX files** are reread, and the **/vs/data/alarms/mask*file*** is reread. If the file **/vs/data/alarms/timer** exists, it will also be reread. In essence, execution of alarm reinit results in placing the system in a state identical to the state expected after system startup.

This command is useful for making changes take effect after the configuration file is modified. Any errors encountered in the configuration files are logged to the logger. Refer to the information on the alarm display command for additional information.

Examples

There is no sample output for the **alarm reinit** command. You may check the System Message Display screen for the results of the **alarm reinit** command.

Alarm Retire

The **alarm retire** command shuts off an alarm.

Synopsis

alarm retire ***[all|1|2|3...]***

Description

The **alarm retire** command retires the specified Alarm Contact Set. The command removes external alarm by opening contacts on the specified Alarm Contact Set whether set is enabled or not. This command is used in conjunction with the *[all]* or *[n]* options (where *n* is the alarm contact set number).

Examples

The following is a sample output for the **alarm retire 2** command:

```
Alarm Contact Set 2 retired
```

The following is a sample output for the **alarm retire all** command:

```
Alarm Contact Set 1 already retired
Alarm Contact Set 2 retired
Alarm Contact Set 3 retired
```

Alarm Status

The **alarm status** command displays the status of Alarm Contact Sets.

Synopsis

alarm status ***[all/1/2/3...]***

Description

The **alarm status** command displays the state and status of the specified Alarm Contact Set. The numeric arguments refer to the alarm contact set. This command is used in conjunction with the *[all]* or *[n]* options (where *n* is the alarm contact set number).

Examples

The following is a sample output for the **alarm status 2** command:

```
Alarm Contact Set 2
     Enabled: Yes  Status: off (open)
```

The following is a sample output for the **alarm status all** command:

```
Alarm Contact Set 2
     Enabled: Yes  Status: off (open)
Alarm Contact Set 3
     Enabled: No  Status: on (closed)
```

Alarm Test

The **alarm test** command manually initiates alarms.

Synopsis

alarm test *[all/1/2/3...]*

Description

The **alarm test** command tests the specified Alarm Contact Set for use. The command initiates external alarm by closing contacts on specified Alarm Contact Set whether set is enabled or not. This command is used in conjunction with the *[all]* or *[n]* options (where *n* is the alarm contact set number).

Examples

The following is a sample output for the **alarm test 2** command:

```
Alarm Contact Set 2 is now on (closed)
```

The following is a sample output for the **alarm test all** command:

```
Alarm Contact Set 1 already on (closed)
Alarm Contact Set 2 is now on (closed)
Alarm Contact Set 3 is now on (closed)
```

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.

The parameters that can be used with the **assign card/channel** command are:

- *number* — The channel number (a single card or channel number, a range of card or channel numbers specified m–n, or the word “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 to create user logins.

The *<user login>* argument represents the user who is to be assigned security permissions.

The *<permissions level>* argument is the specific security class permission to be assigned. The security classes are as follows:

- 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.

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 channel numbers in 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 (for example, **phone1:phone2**)

The *phone number*

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 eqpgrp/group

delete eqpgrp

assign_tty

The **assign_tty** command specifies which serial port to use for the Switching Control Center System (SCCS) monitoring and for the alarm relay unit (ARU).

Synopsis

assign_tty

Description

The **assign_tty** command permits the user to alter the ports assigned to be monitored by the SCCS and ARU. The command prompts for a device for each. Respond to the prompt with the device name; for example, tty00 or tty01.

The SCCS port and the ARU port can be the same port if the proper cabling is available. However, for greater reliability, it is recommended that you use separate ports.

NOTE:
If the port to which you assign the SCCS or ARU has a getty entry in **/etc/inittab**, it will be turned off. That is, the old getty entry is turned off. A new getty entry is needed.

Example

assign_tty

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.

The parameters for the attach command are:

- *<unit>* — This option identifies the unit; the choices are "channel" or "card."
- *<number>* — This option specifies the channel or card number, a range of channel or card numbers in the form m–n, or the word "all" for all channel or card numbers. Card numbers are in the form *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* — This option 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* — This option is 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 DEL. If this does not terminate the command, you may need to press CONTROL ALT DEL simultaneously. 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 auto-reboot feature.

Synopsis

autoreboot *[enable|disable] [reboots <numbers>] [window <minutes>] [uptime <minutes>]*

autoreboot *[status|s]*

autoreboot *[help|h]*

Description

The **autoreboot** command may be used to change parameters associated with the auto-reboot feature and to monitor the status of these parameters. The following options are recognized:

- *enable|disable* — This option specifies whether to enable or disable the auto-reboot feature. The default is enable.
- *reboots <number>* — This option specifies the number of unanticipated reboots tolerated within the time period specified by *window*. The default is 5.
- *window <minutes>* — This option specifies the time period for the *reboots* parameter. The default is 60 minutes.
- *uptime <minutes>* — This option specifies the amount of time that the system must be in service before the automatic reboot feature is activated. The default is 5 minutes.
- *status* — This option shows the current values of the automatic reboot parameters, plus the number of unanticipated reboots that occurred in the *window* minutes preceding the most recent system boot.

When the auto-reboot feature is enabled and activated, the system automatically reboots after a UNIX panic. The auto-reboot 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 auto-reboot 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 *window* to two 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 super user.
- 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 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 A-2. In the table, the letter **l** indicates the **long** option, which causes the corresponding heading to appear. The **all** option means that the heading always appears.

Table A-2. 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
WK	(l)	The ET work state
SKEY	(l)	The semaphore key associated with process and slot
QID	(l)	The message queue ID
RE-SPA	(l)	The number of respawns from last restart of the voice system
WKCNT	(l)	The ET work count for process

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]***

Variable	Definition
a	Used for backing up both the speech and transaction component 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 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 backup 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 may be in the form 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 and above, the 20th Century is assumed; for example, 5/27/96 is interpreted as May 27, 1996.
- If the year argument is between 00 and 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.

The parameters for the **cddrpt** command are:

- *<records>* — This parameter 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>* — This parameter represents the script (application) name, or "all" for all applications.
- *<calldata>* — This parameter 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>* — This parameter is the date the data was collected in the system. The valid options are either a date in mm/dd/yy format, 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 and above, the 20th Century is assumed; for example, 5/27/96 is interpreted as May 27, 1996.
  - If the year argument is between 00 and 69, the 21st Century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following two examples generate a call data detail report for the first 100 call data collected on date October 20, 1993 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 10/20/93

cddrpt 100 balance_chk y all 10/20/1993

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 exits 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.

The parameters for the **cdsrpt** command are:

- *<hours>* — This parameter is the hour the call data was collected. It can be any number between 0 to 24 or "all" indicating all 24 hours.
- *<service>* — This parameter is the script (application) name, or "all" indicating all applications.
- *<event data>* — This parameter is 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>* — This parameter is 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 and above, the 20th Century is assumed; for example, 5/27/96 is interpreted as May 27, 1996.

  — If the year argument is between 00 and 69, the 21st Century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Examples

The following two examples generates call data summary report 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 two examples generate 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 exits and is current.
- Remove unnecessary files from the /vs/trans/ directory.

change_device

The **change_device** command changes the presentation name of a device in the **/vs/data/device_data** file.

Synopsis

/vs/bin/util/change_device

Description

The **/vs/data/device_data** file, as it is initially populated, contains standard generic presentation names (user mnemonic names, see **add_device** in this book). The **change_device** command allows a user to change the user mnemonic name from the generic name to a possibly more specific name (for example, a comcode).

The command is interactive and menu driven; the user selects the generic name which they wish to change, then inputs the 2–20 character new name.

Upon the next invocation of the **/vs/bin/configure** program, the new names appear in the device selection menu and in all output generated by the program.

Files

/vs/data/device_data

See Also

add_device
configure
get_config
remove_device
save_config
show_devices
show_config

chg_machname

The **chg_machname** command changes the name of the machine the SCCS is monitoring.

Synopsis

chg_machname

Description

The **chg_machname** command allows you to change the name of the machine that the SCCS is monitoring. This name is used in the header of the messages sent to SCCS. You will be prompted for the name of the machine. Use this command if an error occurred during installation in entering the name of the machine or if the current machine name is unknown.

NOTE:
You must stop and restart the voice system for the change to take effect.

Example

chg_machname

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

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 which 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/conf_data** file. An unsuccessful or incomplete configuration is written to the **/vs/data/fail_data** 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 program allows the user to choose the hardware platform they are attempting to configure, followed by all devices which are to be included in the configuration. This ensures that all required devices for the platform are selected.

The program has built-in rules which 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, the user is 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/conf_data** 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 **conf_data** file is saved in **/vs/data/conf_MMDDYY** where MM=month, DD=day and YY=year. The existing
conf_data file is saved because, upon determination of a valid configuration which includes the user's newly specified devices, the current **conf_data** 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 the user to view the configuration represented by the saved conf_ MMDDYY file.

Once the file is read, the user is 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. This may be a two pass process:

- PASS 1: An attempt is made to fit the newly specified devices into the current configuration without disturbing any devices currently configured. If this can be done, Pass 2 is not executed.
- PASS 2: If Pass 1 was unsuccessful, Pass 2 attempts the equivalent of a new configuration, unassigning all currently used resources, and pooling the newly selected devices with those already in the configuration. If Pass 2 is successful, the user may be required to change the switch settings on some of the cards already in the system, move them to different slots, etc. If Pass 2 is unsuccessful, the newly specified devices will not fit into the current configuration.

Specifying a New Configuration

If **configure** is executed with no argument and a **/vs/data/conf_data** file does not exist, a menu of currently supported hardware platforms is presented, followed by the menu of devices which may be configured with that platform. The user selects the platform and devices desired, indicating when finished. The program attempts to allocate resources to each device selected. If successful, the program terminates. Otherwise, the user is asked if they wish to remove something and try again.

The **configure** command may be executed with an argument of "new." This forces a new configuration, as described above, even if a **/vs/data/conf_data** file exists.

Presetting Device Hardware Resources

You may wish to preset certain resources of a single new device being selected for a configuration. It may be desired for example to force the **configure** program to select interrupt 6 for a a particular device being specified. Whenever a single device is specified, the following prompt is shown to the user:

```
Do you wish to preset any hardware options of
device_name? [y|(n)]
```

If “y” is specified, the user is allowed to preset any of the following hardware attributes of the selected device (where applicable):

Interrupt
DMA Channel
IO Address
RAM Address

When the user indicates that they are finished selecting devices, the **configure** program continues as normal. In the case of a new configuration, if a valid configuration is determined, the program terminates normally. If a valid configuration cannot be determined, the system displays a message indicating this and the program terminates. The user is not prompted to remove something and try again if any hardware option for any device was preset.

In the case of an upgrade, the program attempts Pass 1 as described above. If successful, then the program terminates normally. If Pass 1 is unsuccessful, the system displays a message indicating this. Pass 2 is not attempted if the user has preset any hardware options for any device.

Device Data

The devices presented to the user in the menus described above are kept in the **/vs/data/device_data** 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.

It may be desirable from time to time to add a new device to those which are configurable in a machine by the **configure** program. The **/vs/bin/util/add_device** prompts a user for all necessary attributes required to add the new device to the **device_data** file. Once added to the file, the new device is available to the configure program.

Devices which are added to the **device_data** file may also be removed. The **/vs/bin/util/remove_device** program provides this capability.

The names by which devices are presented in the menus described above may be changed to suit a particular user’s needs. The **device_data** file is shipped with default generic user names. The **/vs/bin/util/change_device** program allows a user to name devices according to user preference.

Files

/vs/data/device_data
/vs/data/conf_data
/vs/data/fail_data

NOTE:
Upon reaching the first unresolvable resource conflict, the **configure** program terminates (unless the user selects the "remove" option, in the case of a new configuration), and writes the incomplete configuration to **/vs/data/fail_data**. The system displays a message indicating which device and which hardware resource caused the conflict.

The format of the **/vs/data/conf_data** file and the **/vs/data/device_data** file is very specific. A user should not edit or alter these files.

The **configure** program should only be run by persons familiar with system configurations and hardware platforms. See Chapter 4, "Running the Configuration Program," in the hardware installation book for your platform for slot position and numbering information. See the documentation on each device for the switch or jumper settings which correspond to the hardware resources determined by the **configure** program.

Serial and parallel port numbering is used for allocation purposes only. There is no correlation between the port number specified in the configuration output and actual physical ports. In configurations where there are multiple ports, any of the available ports may be used for those devices which require one.

See Also

add_device
change_device
get_config
remove_device
save_config
show_config
show_devices

console_off

The **console_off** command turns the flow of error messages to the console off during system operation.

Synopsis

console_off

Description

Output to the console from the CompuLert/SCCS interface package is normally disabled and handled directly by the error logging system. However, if you set the CONSOLE_OUTPUT_DEFINED parameter in the default parameter file to *TRUE*, you can use the **console_off** command to turn the flow of error messages to console off during system operation.

See Chapter 8, “Data Network Connectivity Alarms,” in *INTUITY CONVERSANT System Version 6.0 Communications Development*, 585-310-764, for instructions on changing the CONSOLE_OUTPUT_DEFINED parameter.

Examples

console_off

console_on

The **console_on** command turns the flow of error messages to the console on during system operation.

Synopsis

console_on

Description

Output to the console from the CompuLert/SCCS interface package is normally disabled and handled directly by the error logging system. However, if you set the CONSOLE_OUTPUT_DEFINED parameter in the default parameter file to *TRUE*, you can use the **console_on** command to turn the flow of error messages to console on during system operation.

See Chapter 8, “Data Network Connectivity Alarms,” in *INTUITY CONVERSANT System Version 6.0 Communication Development*, 585-310-764, for instructions on changing the CONSOLE_OUTPUT_DEFINED parameter.

Examples

console_on

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 login root 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 talkfile 1 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 INTUITY CONVERSANT administration menus.

Synopsis

cvis_mainmenu

Description

The **cvis_mainmenu** program is a menu interface used to access the INTUITY CONVERSANT 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 6.0 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/util/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 (shown under “Diagnostics” below) 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 30720 available.
                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_TABLE
                Reason:  Low DB Extents
*    Mon Feb 15 16:35:06 1883 dbcheck logTest.c:418
DBC003     -- -- --- Rollback segments=7680 blocks, 25 percent of total space.
                Reason:  High Rollback Usage.
```

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", of Chapter 3, "Voice System Administration".

See Also

dbfrag
dbfree
dbused
explain
logCat

dbfrag

The **dbfrag** command lists fragmentation information on the database (Version 6.0 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 6.0 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 6.0 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 the user to specify the oracle user id and password (the default is sti/sti, all for all users).

Below is an output summary for user "all."

 # dbused -su all

Space allocated to objects. Oracle blocks (2048 Bytes/Block)

TYPE	BLOCKS	MBYTES	EXTENTS	OBJECTS
CACHE	18	.04	1	1
CLUSTER	2843	5.55	41	8
INDEX	1530	2.99	200	113
ROLLBACK	4049	7.91	24	3
TABLE	1860	3.63	172	102
sum	10300	20.12	438	227

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 **/vs/trans/*<application>*.T** file.

Files

/vs/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 the word "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 the word “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:

- *application 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 word “any” or “all” shows 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 the word "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:

  1. Is the T1 card being diagnosed
  2. Will cause a change in the existing TDM bus master assignment
  3. 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

detach 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 detach.

To delete out of the command, press DEL. If this does not stop the command, you may need to press CTRL and backslash 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 TDM bus while it is in service. The *<bus number>* option is the number of the bus you want to diagnose. The valid option for the number argument is 1. 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.

If the bus passes diagnostics, the system displays a message similar to the following:

```
Diag TDM n: Diagnostics completed.
```

You may also receive a message like the following:

```
Diag TDM n: Diagnostics bus n failed.
```

To delete out of this command, press DEL. If this does not stop the command, you may need to press CTRL and backslash simultaneously.

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>* option is the card number you want to diagnose. The word “all” can be used to specify all cards.

This command changes the temporary state of a unit to diagnostic (DIAG). If a card is stuck in the INSERV state, use the **diagnose card <number> immed** 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 “immed” 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 SP cards below.

For Tip/Ring and SP 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 Tip/Ring and SP 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:

  1. Is the T1 card being diagnosed
  2. Will cause a change in the existing TDM bus master assignment
  3. 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 **diagnose 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 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 SP 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:

1. Nonex state — This channel is not checked for dial tone.
2. Dial Tone Found — This channel is operational.
3. 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.
4. 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 a Tip/Ring and/or SP 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 SP 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 DEL. If this does not stop the command, you may need to press CTRL and backslash 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 is successful, a 0 value is returned. If any value other than 0 is returned, the dip_int command completely or partially failed.

If dip_int 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:

Option	Description
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.

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.
- *sp — Displays all SP circuit cards.*
- *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 SP/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

The following example displays information on all e1 cards.

disp card e1

The following example displays information on all cards in the state "Mtc."

disp card mtc

The following example displays information on all Tip/Ring (T/R) cards in the state "Broken."

disp card tr 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 *chan 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 (T/R) 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 SP 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 wish to display only specific types of messages, you may 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. The word "today" is equivalent to specifying the current date. Examples of specifying the date are:

- "May 1, 1992"
- "05/01/93"
- "05-01-93"

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 tr** displays all messages logged about Tip/Ring (TR) 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 TR 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. For example, some of the standard system processes are listed in Table A-3.

Table A-3. Standard System Processes

Process Name	Function	Types of Messages Reported
ASAI	Adjunct/Switch Application Process	ASAI Problems/Status.
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

For example, **display messages source TRIP** displays all messages logged regarding Tip/Ring 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 the logCat command later in this book for additional information.) The *pattern* must 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 A-4 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 A-4. 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

Continued on next page

Table A-4. System Message Formats — *Continued*

Field	Definition	Examples
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 HO 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 1992TWIP
   TWIP017  T1 CA   0   Facility out of service.
            Reason: Blue alarm

*  Wed Jan  6 13:38:21 1993TRIP
   TRIP002  TR CA   1   Corrupted data detected on TDM bus.
            Timeslot 254. Reason: TDM Parity Error

*  Wed Jan  6 13:41:52 1993TRIP
   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

displaypkg

The **displaypkg** command lists the software packages installed on the voice system.

Synopsis

displaypkg

Description

The **displaypkg** command lists the software packages currently installed on the voice system. It is helpful to use this command to see what software is on the system before using either the installpkg or removepkg commands.

Example

The following example lists all the software packages currently installed on the voice system.

displaypkg

See Also

installpkg
removepkg

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.

The following are environment variables for the **edExplain** command:

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:

1. Any line beginning with a "#" character is considered to be an internal comment and is not displayed
2. 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

Encode 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.

Warning

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 many 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

etStub

The **etStub** process provides the compatibility daemon to log old **et_send**() messages into the new error logging system.

Synopsis

etStub ***[-c] [-r {rule-file}]***

etStub ***-s ~{cmd}~***

Description

The **etStub** process is a daemon process which reads the IPC message queue for error messages that used to be serviced by the Error Tracker (ET) process in INTUITY CONVERSANT system generics prior to Version 3.1. It takes each error message received and transforms it based on an ASCII rules file into a logging message for the new logging/alerting system. It is provided as a compatibility feature so that executables that worked in previous generics can be supported until the executable can be upgraded to the new logging methods.

The **etStub** process is normally started from **/etc/inittab** with an entry of the following form:

CVet:respawn:4:/vs/bin/vrs/etStub </dev/null >/dev/null 2>&1

Used in this form, **etStub** continuously reads the ET message queue and logs the messages that arrive.

The rules file that specifies the priority, destination, format, and whether the message should be flagged as obsolete for each message is normally **/vs/data/etStub.rules**. An alternate file can be specified with the *-r* flag. This would be most commonly used in conjunction with the *-c* flag, which causes **etStub** to just read the rules files, check it for syntactic correctness and immediately exit. It is recommended that any time the rules file is altered, that **etStub -c -r *{file}*** be used to insure that the file is correct before installing it.

The **etStub** process can be requested to reread its rules file by using the *-s* option. By executing **etStub** as a command with the *-s* option and *{cmd}* set to *rules*, a message is sent to the **etStub** causing it to discard its current rules and reread the rules file. This process can also be used to request that an alternate rules file be used or that etStub exit.

Refer to the following examples:

etStub -s rules	# reread current rules file
etStub -s "rules *{file}*"	# read new rules from {file}. Quotes required.
etStub -s exit	# request the etStub daemon to exit & respawn

NOTE:
Notice that the quotes are required in the second example since there is a space between the command word rules and the file name.

Rules File

The format of the rules file is as follows:

```
#     Comments begin with the '#' character
{msg-#} {flag} {priority} {dst} ".....format of message....."
...
```

Table A-5 provides an explanation of the fields in the rules files.

Table A-5. Command Line Options

Option	Description
{msg-#}	The number that identifies this message. It is defined by a header file found in **/att/msgipc/etmsgs**.
{flag}	This may be either 0, meaning the message is to be considered OBSOLETE and noted as such when it is logged, or -, meaning that the message will not be flagged obsolete when received and logged.
{priority}	This takes one of the following values: -, *, **, or ***C**. These correspond to NONE, MINOR, MAJOR, and CRITICAL.
{dst}	The destination for the message as used to be specified in the errors files. Legal values are **LOG** and **PRT**. Messages with a destination of **LOG** are sent to the MASTER_LOG files and to either the EVENT_LOG files or the ALARM_LOG files based upon the priority of the message. Those with priority NONE go to the EVENT_LOG destination in addition to the MASTER_LOG destination. All non-zero priority messages go to the ALARM_ LOG destination in addition to the MASTER_LOG destination. Messages with destination of **PRT** go to the same destinations as those marked **LOG**. They also go to the **stdout** of the **etStub** process itself. If this is directed to **/dev/null** as shown in the **/etc/inittab** example, then it has no visible effect. If the **stdout** is directed to a device, such a **/dev/console**, then these messages show up at this device as well.
format	The format of the message is the same as the one that appeared in the original **/vs/data/errors** or **/gendb/data/errors** file.

Files

/vs/data/etStub.rules

Exit Values

The **etStub** process consists of a whole series of well defined exit values that can help in determining why it has exited. The exit values come in two forms, those used when it is running as a daemon process and those used when it is running as a command that sends messages to the daemon process. The exit values when it is running as a daemon process appear in the DEAD_PROCESS entries listed by **init** in the **/etc/utmp** and **/etc/wtmp** files. If the **etStub** daemon process is not staying up, examining the output of **who -du /etc/wtmp |grep Cvet** can provide useful information about what the problem is in addition to what is being logged to the error logging system, assuming that the **logdaemon** process is up and properly running.

Table A-6 describes the exit values.

Table A-6. Exit Values of the etStub Daemon Process

Exit Value	Description
1 = X_MSGRCV_FAILED	An attempt to receive a message failed. Has the message queue been removed or does it have unexpected modes?
2 = X_NO_MSGQ	The process was unable to attach a message queue. Is there more than one **etStub** daemon process?
3 = X_QKEY_BAD	Bulletin Board routines are reporting that the message queue key is bad.
4 = X_MSG_TOOBIG	The message received was too big and had to be truncated. This is not an exit condition at this time.
5 = X_NO_DEVTBL	The device table shared memory does not exits. Was an attempt made to run **etStub** at run level when the voice system was not active? Or has the shared memory been removed?
6 = X_NO_BB	The Bulletin Board shared memory does not exist. Was an attempt made to run **etStub** at a run level when the voice system was not active? Or has the shared memory been removed?
7 = X_LOGINIT_FAILED	An attempt to contact the **logdaemon** process failed. Is **etStub** running a level when the logdaemon is not running?

Table A-7 describes the exit values that apply when the *-s* option is being used to send commands to the **etStub** daemon process.

Table A-7. Exit Values of the etStub Command Process

8 = X_NO_CMD	No command was provided.
9 = X_UNRECOGNIZED_ CMD	The command was not recognized.
9 = X_AMBIGUOUS_CMD	The command was ambiguous.
10 = X_WRONG_ARGS	The number of arguments provided with the command are wrong.
11 = X_TOO_LONG	The command string was too long for the message buffer and could not be transmitted to the **etStub** daemon process.
12 = X_MSGSND_FAILED	The **msgsnd** () system call failed.

See Also

mkETrules

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 *-l* option is used, **explain** looks up all messages whose *{msgID}* matches the pattern. For example, **explain -l A V** lists the names of explanations available that begin with either “A” or “V,” while **explain -l 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** will disable 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 "#" 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 description for ADM001 and ADM_SYSERR are found in a file named ADM_SYSERR. The description 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 /.

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 {msgID}s."

See Also

edExplain

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.

The *[?]* argument displays a help message.

The *[-v]* argument causes a list of saved files to be printed as they are moved.

The *-D <dir>* argument 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 **lComp** 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

The **get_config** command gets the **/vs/data/conf_data** file from floppy disk.

Synopsis

/vs/bin/util/get_config

Description

The **get_config** command is used to retrieve from the CONFIGURATION DATA floppy for a particular machine the **/vs/data/conf_data** file. That file represents the configuration of the voice system machine as it was shipped from the factory or as determined by the **/vs/bin/util/configure** program 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/conf_data

See Also

add_device
change_device
configure
remove_device
save_config
show_config
show_devices

gse

The **gse** command invokes the Graphical Speech Editor (GSE) used for speech files.

Synopsis

gse ***[-l<chan#>] [-p<playchan#>] [-r<recchan#>]***

Description

The **gse** command invokes the GSE for speech files. Speech files are opened using a standard Motif interface, and various editing tasks such as cutting, pasting, and changing speech volume can be performed. Recording and playback is provided through the tipring card as well.

NOTE:
The voice system can be stopped while using the GSE. Entering the **gse** command results in a system prompt asking you if it is okay to stop the voice system.

The [-l chan#] argument is used to specify a single channel to use for speech playback and recording. If this argument is not specified, and if the -p and -r arguments are not specified, then the channel number defaults to 0.

The [-p playchan#] argument is used to specify which channel to use for speech playback.

The [-r recchan#] argument is used to specify which channel to use for speech recording.

The [-D directory] argument is used to specify that the program will start in the given directory.

The [-O] option is for debugging purposes: it causes certain tipring events to be displayed in an output window.

The [-I] option inhibits automatic resetting of the tipring circuit cards.

The designated channels must be configured for both input and output; this will facilitate recording and playing back speech phrases. The *-l* channel is used for telephone lines and incorporates both audio input and output. Alternatively, the *-p* and *-r* channels must be used together to establish the audio input/output, where *-r* (input) is designated for the microphone, and *-p* (output) for the speaker.

WARNING:
Channel numbers for the gse are hardware channel numbers, not voice system channel numbers. The method for computing hardware channel

numbers is given in Appendix C, "Computing Channel Numbers," of INTUITY™ CONVERSANT® System Version 6.0 Speech Development, Processing, and Recognition, 585-310-762.

See Also

gse_add
gse_addpl
gse_copy
gse_copypl

gse_add

The **gse_add** command transfers a speech phrase from a UNIX file to a UNIX file in the Graphical Speech Editor (GSE) format.

Synopsis

gse_add *<talkfile number> <phrase number> <codestyle> <input file>*

Description

The **gse_add** command transfers a speech phrase from a UNIX file to a talkfile in a GSE format. Use this command when a phrase that does not belong to a speech pool needs to be added to a talkfile.

The *<talkfile number>* and *<phrase number>* parameters refer to the talkfile and phrase identifiers in the speech file system. The talkfile and phrase numbers of the phrases to be added must be known. Use the list command when this information is not known. The *<codestyle>* parameter can be pcm64, adpcm32, or adpcm16. The *<input file>* parameter is the file from which the phrase is to be taken.

Example

The following example adds the phrase 100 to talkfile 103 using ADPCM32 format from the file **/usr/speech/103/1000**.

gse_add 103 100 adpcm32 /usr/speech/103/1000

See Also

gse_addpl
gse_copy
gse_copypl

gse_addpl

The **gse_addpl** command adds (restores) phrases to a specific speech pool from UNIX files in the Graphical Speech Editor (GSE) format.

Synopsis

gse_addpl *<speech pool> <input directory> <codestyle> [<file1>...<fileN>]*

Description

The **gse_addpl** command reads the phrase list file in the speech pool (/speech/talk/*<speech pool>*.pl) to determine the talkfile, phrase numbers, and file names of the phrases to be added. Use the Shared Speech Pools screen for the Script Builder application to determine which speech pools are being used by the application.

The *<speech pool>* parameter is the name of the speech pool to which the speech is to be added. The *<input directory>* parameter is the name of the directory where the GSE edited files are located. The *<codestyle>* is either pcm64, adpcm16, or adpcm32. The *<file1>* through *<fileN>* parameters are the optional file names identifying the phrase names to be added. If no file names are specified on the command line, all phrases in the speech pool for which file are found in *<input directory>* are added. If file names are given, only the phrases with the particular file names that are specified in the phrase list file are added.

An unrecorded phrase is marked with a negative number in the phrase list file. If gse_addpl is used to add a previously unrecorded phrase, the phrase number is changed to a positive value to indicate the phrase exists. The applications using that phrase list must then be verified and installed with the specific speech pool.

Example

The following example adds phrases 1000, 1001, and 1002 to talkfile 103 using ADPCM32 format from files **f1000**, **f1001**, and **f1002** in the directory **/speech/talk/talk3.files**

```
gse_addpl talk3 /speech/talk/talk3.files adpcm32
```

See Also

gse
gse_add
gse_copy
gse_copypl

gse_copy

The **gse_copy** command extracts a speech phrase from the speech file system to a UNIX file in the Graphical Speech Editor (GSE) format.

Synopsis

gse_copy ***<talkfile number> <phrase number> <output file> ["<tag>"]***

Description

The **gse_copy** command extracts a speech phrase from the speech file system to a UNIX file. This command may be used when a phrase that does not belong to a speech pool needs to be edited.

The *<talkfile number>* and *<phrase number>* parameters refer to the talkfile and phrase identifiers in the speech file system. The talkfile and phrase numbers of the phrases to be added must be known. Use the list command when this information is not known. The *<output file>* parameter is the file where the speech phrase is to be placed. The "*<tag>*" parameter is an optional 50 character string that is placed into the GSE voice header of the output file. The GSE displays the tag value when the file is being edited.

NOTE:
You must keep record of which extracted files are associated with what talkfile and phrase in order to return the speech to its proper place after editing. We recommend that the *<output file>* be the same as the *<phrase number>* and the directory containing the *<output file>* be the same as the *<talkfile number>*. See the example below.

Example

The following example extracts phrase 1000 from talkfile 103 and places it in the file **/usr/speech/103/1000** for editing by the GSE.

```
gse_copy 103 1000 /usr/speech/103/1000
```

See Also

gse
gse_add
gse_addpl
gse_copypl

gse_copypl

The **gse_copypl** command allows multiple speech phrases to be copied from the speech file system in the Graphical Speech Editor (GSE) format.

Synopsis

gse_copypl *<speech pool> <output directory> [<file1>...<fileN>]*

Description

The **gse_copypl** command allows you to copy multiple speech phrases from the speech file system. It reads the phrase list file belonging to the speech pool (**/speech/talk/*<speech pool>*.pl**) to determine the talkfile, phrase numbers, and output file names for the phrases to be extracted. Use the Shared Speech Pools screen for the Script Builder application to determine which speech pools are being used by the application.

The *<speech pool>* parameter is the name of the speech pool from which the speech is to be retrieved. The *<output directory>* parameter is the name of the directory where the output files are to be placed. The *<file1>* through *<fileN>* parameters are the optional file names identifying the particular phrase names to be extracted. If no output file names are specified on the command line, all phrases in the speech pool are extracted. If file names are given, only phrases with those file names specified in the phrase list file are extracted.

Example

The following example extracts phrases 1000, 1001, and 1002 from talkfile 103 and places them in files f1000, f1001, and f1002 (respectively) in the directory **/speech/talk/talk3.files**. These files are then ready to be editing using the GSE.

gse_copypl talk3 /speech/talk/talk3.files

See Also

gse_add
gse_addpl
gse_copy

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

Hcapture saves the unrecognized screen exchanged between a host and CONVERSANT.

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 ~ 128>***

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.

Table A-8 defines the command line parameters.

Table A-8. Hcapture Command Line Parameters

Parameter	Description
-m	Turn the operation mode of **hcapture** on/off.
-a	Specify 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	Specify the range of LUs. The LU doesn't have to 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

hconfig

The **hconfig** command configures host interface parameters.

NOTE:
See "Configure Host Sessions" in Chapter 3, "Voice System Administration", to configure host interface parameters.

Synopsis

hconfig ***[-t {SDLC | TR}] [connection name]***

hconfig ***-c [-t {SDLC | TR}]***

hconfig ***-l [-t {SDLC | TR}]***

hconfig ***-w <field name_1>=<value_1>...<fieldname_n>=<value_n><connection name***

hconfig ***-d <connection name>***

hconfig ***-r <old name> <new name>***

hconfig ***-n***

hconfig ***-s***

hconfig ***-b***

hconfig ***-a <connection name>***

hconfig ***-m***

Description

The **hconfig** command is the command interface used to read and write LINKix configuration files.

When used with no options, the **hconfig** command will output the current values for the connection parameters for the specified connection, or all connections, if no connection is specified. If the -t option is specified, only connections of the specified type, SDLC or Token Ring, are displayed. If a connection is an SDLC connection, the following fields are displayed: connection name, card number, line type, node id to send, encoding, constant carrier, poll address, and LU. If a connection is a Token Ring connection, the following fields are displayed: connection name, adapter, local sap, remote sap, node id to send, remote address, and LU.

Table A-9 describes the command line parameters.

Table A-9. Hconfig Command Line Parameters

Variable	Definition
-c	Used to generate a list of defined connection names. If the -t option is specified, only the names of connections of the specified type, SDLC or Token Ring, are displayed.
-l	Used to generate a list of defined LUs and their associated connection names. If the -t option is specified, only the LUs of the specified type, SDLC or Token Ring, are displayed.
-w	Writes the value <*value*> to the fieldname <*fieldname*> parameter of the connection <*connection name*>. The following fields are supported for SDLC connections: name, card_number, line_type, node_send, encoding, const_carrier, poll_address, LU.
-d	Used to delete a connection.
-r	Used to rename a connection from <*old name*> to <*new name*>
-n	Used to renumber host sessions. The voice system must be stopped before renumbering is done.
-s	Used to synchronize the /vs/data/hostsvc file with the current configuration. The voice system must be stopped before resynchronization can be done.
-b	Used to generate a list of the SDLC cards in the system. The output shows the card number, whether a connection has been configured for that card, the card type (PC/XL or FIFO/SIB), the IRQ, the I/O address, and the RAM address (for PC/XL cards only).
-a	Used to specify the connection over which NetView Alerts are sent.
-m	Used to determine the Token Ring MAC Address of the voice system.

NOTE:
The voice system must be restarted before any configuration changes take effect.

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

hdefine

Hdefine 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.

Table A-10 defines the command line options.

Table A-10. Hdefine Command Line Parameters

Parameter	Description
-d	Directory where the host screen is stored. The default directory is /vs/data/hdump.

Table A-11 describes the control options.

Table A-11. Control Sequences

Sequence	Description
n <return> or <return> by itself	Means go to next page. A beep sound 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 or range or 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

hdiagnose

The **hdiagnose** command diagnoses the SDLC communication card.

Synopsis

hdiagnose conn *<connection name>*

hdiagnose info *<connection name>*

Description

The **hdiagnose** command runs card level diagnostics on the SDLC card associated with the connection <*connection name*>.

The **hdiagnose info** command attempts to determine actual values for host protocol parameters by watching link traffic.

The <*connection name*> variable should be a valid name of a host connection or you can specify the connection name as **all**.

NOTE:
The voice system must be down for hdiagnose to run. All host connections, including connections not being diagnosed, will be disrupted during command execution.

Example

The following example displays the host application currently verified and installed on the system as well as the current session assignments.

hdisplay

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, et al. 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 will print 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 will print out the current **hdump** status of a range of LUs including directory name, number of screens limit, and LU on/off state.

Subsequent **hdump**s 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. Table A-12 describes the command line parameters..

Table A-12. Hdump Command Line Parameters

Parameter	Description
-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

headFIX

The **headFIX** command converts user application Error Tracker (ET) message rules header files used in generics prior to Version 3.1 (V3.1) to the header files required for the V3.1 logger/alerter environment.

Synopsis

headFIX ***[-y {year}] [-c{company}] [{class1}_et.h] [{class2}_et.h...]***

Description

"Full" conversion from the ET environment associated with voice system generics prior to V3.1 to that used by V3.1 requires that the application source be modified or converted and then recompiled. Additionally, several files used in conjunction with the ET environment must be converted to those used by the V3.1 logger/alerter.

The **headFIX** converts the ET error rule header files to a set of header files used by the V3.1 alerter/logger. The ET rules header file reserved for applications (generics prior to V3.1) is **/att/msgipc/etmsgs/appl_et.h**; however, any properly formatted rules header file may be converted. The **headFIX** command converts the ET header file name *{class}_et.h* into a corresponding file ***{CLASS}*.h** which is used by the V3.1 alerter/logger. File names input into the converter must adhere to this naming convention. Following conversion, the **log*{CLASS}*.h** header file resides in your working directory. This file must be moved to the directory **/usr/spool/log/head** where i5 is used by the processes which use the alerter/logger.

If no ET header files are supplied as command arguments, a help message is displayed explaining the usage of the command and the target locations of the output. If the file argument is not found, is not named properly, or is not formatted in accordance with ET rules files, the appropriate error and help messages are displayed.

Each **log*{CLASS}*.h** file created by **headFIX** has a copyright header. By default it is for the current year and is assigned to AT&T. A alternate year can be specified using the *-y* flag and the company name can be altered using the *-c* flag.

Example

The following example converts ET headers {class1}_et.h {class2}_et.h etc.

```
headFIX class1_et.h class2_et.h...
```

See Also

mkMsg

hfree

The **hfree** command unconditionally releases host sessions from Script Builder host application assignments.

Synopsis

hfree ***<host_application> or <session number or range or 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> or <session number or range or 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> or <session number or range or 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

WARNING:
*The **hnewscript** command may temporarily prevent access to any host sessions which have been modified while they are in the process of logging out and logging back in.*

host_cfg

The **host_cfg** command translates an ASCII configuration file into a properly formatted binary configuration file.

Synopsis

host_cfg *<ASCII_config_file> <binary_config_file>*

Description

The **host_cfg** command translates the data from the specified ASCII configuration file into the format needed by the 3270 host card. This command then writes the data to the specified binary configuration file.

The *<ASCII_config_file>* argument is the name of the ASCII configuration file. This file is usually in **/usr/lib/3270/host.cfg0** or **/usr/lib/3270/host.cfg1** for card 0 and 1, respectively. These ASCII files contain configuration data for 3270 host cards 0 and 1.

The *<binary_config_file>* argument is the file name where the compiled ASCII configuration data is stored. Once the binary configuration file is created, it can be used via the **load_bin** command to initialize the card.

A series of keyword name = keyword value(s) entries appear in the ASCII configuration file with only one “name=value(s)” entry per line. The keyword name must start at column one on each line. An equal sign (=) should separate the keyword name from the keyword value(s). All letters in all keyword names should be upper case. A list of keyword values for a given keyword name must be separated by commas. All white spaces (spaces and tabs) are ignored. See *INTUITY™ CONVERSANT® System Version 6.0 Communications Development*, 585-310-763, for additional information about configuration parameters.

Files

/usr/lib/3270/host.cfg0 **/usr/lib/3270/host.cfg1**	The ASCII configuration files
/usr/lib/3270/host.bin0 **/usr/lib/3270/host.bin1**	The binary configuration files

Example

The following example shows the contents of an ASCII configuration file for a card name “host3270a” using SNA protocol with 6 logical units (terminals), half duplex operation, cluster controller address of 193, with an XID of 0176c8c4 hex, and NRZ encoding.

```
SYNCPORT=host3270a
EXEC_TYPE=SNA
CRT24_80=2, 32, 64, 108, 187, 254
SDLC_ADDR=193
XID=0176c8c4
LINE_MODE=HALF
NRZ_CODE=NRZ
```

See Also

load_bin

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:

- The *file* parameter is 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 *INTUITY™ CONVERSANT® System Version 6.0 Communications Development*, 585-310-763, for file name guidelines for file transfer.
- The *dest* parameter is 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.
- The *opt* parameter is an optional argument, where *option_list|n* is the list of option parameters or the letter *n* (for no options). Options must be separated by a space. See *INTUITY™ CONVERSANT® System Version 6.0 Communications Development*, 585-310-763, 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 *INTUITY™ CONVERSANT® System Version 6.0 Communications Development*, 585-310-763, 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 or range or 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.

WARNING:
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> or <session_number or range or 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, “Daily 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 which performs various integrity checks on the INTUITY CONVERSANT 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, the *-v* flag, which initializes the internal verbosity flags according to the value NNN provided. This value can be in decimal, hexidecimal, or octal. None of the symbolic flag names apply in this mode. Table A-13 describes the bit meanings.

Table A-13. 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
0x0080	V_TRACE	Log messages about all major routines in **iCk**
0x0100	V_SERVICE	Log messages whenever a service is queued or performed

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 the “Commands” section below for details about commands to which **iCk** will respond.

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*

  This option causes **iCkAdmin** to verbosely check out the rules file and report complaints.

- *a {on|off}*

  This option causes the rules file to be read, the **autoReboot** entry set the specified state, and written back out again.

- *-s {entryType[:{ID}]}*

  This option causes the rules for the specified entries to be shown.

- *-e {entryType[:{ID}]}*

  This option allows interactive editing of the specified entries. *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 the "#" 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} {s**ec}

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 which 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 which 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* 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 hexidecimal 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 is 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

  This parameter 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

  This parameter 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 is does not use full path names, like **/etc/profile**:

cpio -iBcvtI /dev/rdsk/f0

The following files are needed to perform the UNIX installpkg 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 -iBacvdI /dev/rdsk/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 “path>/<name>.”
- 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 which contains the INTUITY CONVERSANT Script Builder Version 6.0 package.

```
install_sw -n sbpkg
```

See Also

remove_sw

into_et

The **into_et** command sends error messages to the error tracker (ET).

NOTE:
This command can only be used in the logger/alerter environment (prior to Version 3.1). See the **logit** command for additional information on sending error messages (post Version 3.1).

Synopsis

into_et ***[-fhlpstv] [-n no_messages] [-r error no_times]***

Description

The **into_et** command sends the error messages to ET and is used primarily to verify that the specified errors are being recognized by ET. Once errors are sent, display the Event Log Report in the **cvis_menu** system to see if ET logged them appropriately.

The error messages can be specified as the numeric message id or as the mnemonic (the default). After processing its options (except for the -r option), into_et goes into interactive mode where error messages can be entered one per line using the following format:

mnemonic channel card e_arg[0] e_arg[1] e_arg[2] e_arg[3] e_strarg
or
message id

The input fields above are separated by tabs and/or spaces and are optional except for the mnemonic or message id. The mnemonic should be exactly as defined in the **/att/msgipc/etmsgs** directory's files or **into_et** rejects it. ET applies the e_arg and e_strarg fields to the rule associated with the error to form the text description; they are the same arguments that are passed to **et_send**.

To quit **into_et**, perform the following procedure:

1. Enter a lower case letter for the mnemonic.
2. Enter a number less than 100 for the message id.
3. Press DELETE.

The into_et command recognizes the following options:

- *-a* — Sends all message ids known to **into_et**. **Into_et** sends 20 at a time, then sleeps for 5 seconds before continuing with the next 20.
- *-f* — Provides a fuller prompt message instead of the default terse message while in interactive mode.
- *-h* — Displays a help message.

- *-l* — Accepts message ids as input instead of mnemonics (the default).
- *-n no_messages* — Sends at most the specified maximum number of messages. **Into_et** exits after the number of messages sent equals no_ messages.
- *-p* — Displays all known messages ids or mnemonics. It sends all message ids known to **into_et**. **Into_et** sends 20 at a time, then sleeps for 5 seconds before continuing with the next 20.
- *-r* — Sends the specified error message the specified number of times. The error argument is either a mnemonic or message id depending on whether option -1 is specified. **Into_et** exits after the last message is sent and thus it skips interactive mode.
- *-s* — Accepts an unknown mnemonic and send message id 17 that is unknown currently to ET.
- *-t* — Sends a message in file into.t in the current directory. Each line in into.t specifies an error message to be sent, having the same fields as when specifying error messages interactively (see above). However, note that **into_et** interprets the first field as a mnemonic only; the first field should be a message id.
- *-v* — Turns on verbose mode. All arguments sent to ET are displayed.

ET expects every error message received to have a source of the error. Error messages sent **into_et** have ET as the source of the error. In effect, **into_et** pretends to be ET.

Upon successful completion, **into_et** displays the total number of error messages sent and an exit status of zero is returned. Otherwise, **into_et** prints an error message on stdout and returns a non-zero exit status.

NOTE:
After the initial prompt, **into_et** no longer prompts for a error message which makes it difficult to tell if the message has been sent and whether to proceed to enter the next error message. If the cursor rests on the beginning of the next line, you can enter the next error message.

NOTE:
The **into_et** messages are subject to flood control, meaning that multiple messages of the same type are not shown in the error log unless flood control is turned off. See the discussion of **etset** for more information.

Examples

In the following examples “"cr>” stands for carriage return. Assume that mnemonics (message id) DIP_READ_ERROR (1440) and DIP_HOST_ACCESS (1450) are known while BAD_ARGS and BAD_NAME are unknown to **into_et**.

Example 1: The following example sends DIP_READ_ERROR to ET twice.

into_et -f <cr>
DIP_READ_ERROR <cr>
DIP_READ_ERROR <cr>
q <cr>

Example 2: The following example is an alternate way to send the DIP_READ_ ERROR to ET twice with verbose mode on.

into_et -v -r DIP_READ_ERROR 2 <cr>

Example 3: The following example is a third way to send DIP_READ_ERROR to ET twice>

into_et -l <cr>
1440 <cr>
1440 <cr>
1 <cr>

Example 4: The following example sends DIP_HOST_ACCESS, DIP_READ_ ERROR, and BAD_ARGS to ET.

into_et -s <cr>
DIP_HOST_ACCESS <cr>
DIP_READ_ERROR <cr>
BAD_ARGS <cr>
q <cr>

See Also

et_send
logit

lan_chk

The lan_chk command displays or changes certain cofiguration 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 integrety set to “on”.
  - UTPFD — Sets the card for SMC8432, unshieled 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, unshieled twisted pair mode at 100 mbps with full duplex
  - UTP10Link — Sets the card for SMC9332, unshieled 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 umber 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

ezsetup

lComp

This command combines a series of message files and produces a file of compressed format files and an expansion format file.

Synopsis

lComp ***[-s name] [-c name] [-t name] [-d name] [-m name] <file1> [file2...]***

Description

lComp 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 **lComp** and treated as one long line during compilation.

lComp 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 talkfile all:

  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 file 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 \\ \/ \[

- *-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
: This variable is 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 it its rule file. This means that as long and 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.

Table A-14 defines the command line arguments.

Table A-14. Argument Descriptions for logEvent/logMsg

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	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 which 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.

Table A-15 defines the **logFmt** command line arguments.

Table A-15. Argument Descriptions for logFmt

Argument	Description
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 **[ ]** s.
mnenonics=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 to NN, 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 represents a program used to log arbitrary messages to the logging files.

Synopsis

logit ***[-p {priority}] [-d {destination}] [message...]***

Description

The **logit** command sends an arbitrary message to the logging files and logs it under GEN002. By default, the priority is E_NONE, which is 0. Alternate priorities for the logged message can be selected with the *-p* option. Legal values for *{priority}* are 0–4 or none, manual, minor, major, or critical. The message is identified as the current user.

By default, messages generated by **logit** are sent to the MASTER_LOG which is associated with the first destination defined in the ***$LOGROOT*/Config** file (normally, the flat log files with the prefix log). Messages are also generated in the expanded form on SYSDBG so that you can see what has been logged. Alternate destinations may be specified with the *-d* flag. The destination specification may be numeric (for example, 0x11) or as a series of symbolic names taken from the list MASTER_LOG, SYSDBG, SCREEN, SYSCONS, RFSTATS, and ALERTERMSG separated by "+." The destination can also be a mix of both styles. Regardless of the specification of the destination, MASTER_LOG is always added to the list.

Example

Enter the following at the system prompt:

```
logit -p3 -d SYSDBG+0x20 Sample major alarm
```

System response:

```
** Tue Oct 22 20:43:09 1992 LOGIT logit.c:136
GEN002 abc: Sample major alarm
```

The output appears in the MASTER_LOG by default and sent to the alerter pipe, as 0x20 is equivalent to destination ALERTERMSGS.

See Also

logTest
logEvent/logMsg

logTest

The **logTest** command is a program which can generate an arbitrary list of logging messages to be sent to the logdaemon.

Synopsis

logTest ***["-s dir"] [-v] [-x] ["file1 file2..."]***

Description

The **logTest** command reads a script of logging messages to be sent to the **logdaemon** process. The format of the script is:

{interval} {dst} {priority} {process} {index} [arg arg...]

Following is a description of each of the values used in the **logTest** script.

- *{interval}* — This value is the number of seconds to wait before sending this message. If this is 0, then the message is sent immediately.
- *{dst}* — This value is the destination mask. Each destination is specified in the Config file for the logging system. Normally, this value will be 0x01, meaning logging the message is the primary log files only. The standard voice system Config file looks like:

```
#       @(#)Config      4.1.1.1 20:48:10 12/19/93

L C 100000 log 10               # dst bit 0x0001
D E 0 stderr                    # dst bit 0x0002
S E 0 SCREEN                    # dst bit 0x0004
T E 0 /dev/console              # dst bit 0x0008
N C 0 $LOGROOT/alertPipe        # dst bit 0x0010
L C 100000 alarm 10             # dst bit 0x0020
L C 100000 event 10             # dst bit 0x0040
N C 0 $LOGROOT/sccsCtlPipe      # dst bit 0x0080
N C 0 $LOGROOT/mxmtrPipe        # dst bit 0x0100

$EOF
```

Therefore, to send something to the "alarm" log and the "sccsCtlPipe" destinations, *dst* should be set to 0xa0, the combination of 0x20 and 0x80. 0x01, the master log, is added automatically to all destinations.

NOTE:
Realize that messages sent with **logTest** are independent of the logging priority and destination mechanism that makes use of **/usr/spool/log/msgDst.rules**. With **logTest** you can send a message to any destination with any priority as anybody. It is truly a test tool.

- *{priority}* — This is a value from 0 to 4, specifying the priority of the message. 0 is E_NONE, 1 is E_MANUAL, 2 is E_MINOR, 3 is E_MAJOR, and 4 is E_CRITICAL. See the **log.h** file for more details.
- *{process}* — This value is the name of the process to be forged into the logging message. Normally, each process attaches an identifying string to each message it logs. *{process}* allows **logTest** to act like any process.
- *{index}* — This value specifies the log message index associated with the message of interest. It can be either the absolute index of the message, which might be obtained by examining a compressed log file with a text editor (it is the first field of each message), or the relative name of the message index in the form ***logTYPE(index)*** where *TYPE* is the module associated with the message, (for example, GEN, LOG, SYS, PERM, etc), and *index* is the relative location of the message within the module. **logGEN(20)** means the twentieth message in the GEN category, or it can be the symbolic name of the message, (for example, **LG_NUMARGS**).
- *[arg]* — This value is the argument required by the message format. The number of arg elements depends upon the specific logging message chosen. There should be one argument for each "%" argument specifier in the **log/formats/{TYPE}msg** file that describes the logging message. If the argument include spaces, it should enclosed in double quotes. Given the following formats:

  SYS001 EPERM **File protection (modify) error %s**
  SYS002 ENOENT **No such file or directory. %s**
  SYS003 ESRCH **No such process for kill or ptrace. %s**
  PERM12 PERM_SHADOW **%s %s %s by %s**
  PERM13 PERM_PROFILE **%s's .profile %s by %s**

  the following lines would be appropriate as input to **logTest**:

```
 3   0x01  2  doghouse  logSYS(2) fidget.c
10   0x01  0  editUser logPERM(12)  linda "added to" /etc/shadow root
 0   0x01  0  editUser logPERM(13)  linda  modified  root
```

  The first line is logged in 3 seconds, from the process "doghouse," saying that it could not open or create the file **fidget**. The second line comes 10 seconds later, indicating that "editUser" added "linda" to the shadow password file and that **root** made the change. The third line comes immediately and says that linda's .profile was modified by **root**.

  NOTE:
  No checking is done on the number of arguments required. It is the responsibility of the user to supply the proper number. If the wrong number of arguments is provided, **logCat** complains when trying to explain the message, saying that there is an expansion failure.

The *-v* flag causes **logTest** to send copies of the messages it is going to log to the standard error output. The *-x* option prevents **logTest** from sending the messages to **logdaemon**. The *-x* automatically implies and enables *-v*, since if it

does not send the message to **logdaemon**, the only other thing it can do is list it. *-x* is used to test run a script without actually logging all the messages.

To be able to use the symbolic names for the message indicies, it is necessary that **logTest** be able to read a copy of the appropriate **systemLog.h** file created by **lComp**. If **systemLog.h** does not exist is the current directory, the *-s* switch specifies the directory in which **logTest** can find **systemLog.h**. If **logTest** cannot find **systemLog.h**, only absolute log indicies are accepted in the input.

See Also

logit

mkAlerter

The **mkAlerter** command reads an alerter description and generates C or C++ code which 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 is 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 which should be searched is separated by ':' 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 *-l* 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

mkerr

The ***mkerr*** command converts user application error tracker (ET) message rules used in generics prior to Version 3.1 (V3.1) to a file suitable for use with the V3.1 "transparent" logger/alerter environment.

NOTE:
This command is obsolete for the Version 3.1 logger/alerter environment.

Synopsis

mkerr [-o] [-n] [error_file]
mkerr [var]
mkerr [-h]

Description

The "transparent" ET environment allows application code compiled for voice system generics prior to V3.1 to run without modifications, conversion, or recompilation. It does suffer from the fact that old style messages do not appear in the same format as the new messages in terms of numbering or layout.

The transparent ET environment requires that a rules file be built from the original ET errors files used to drive the earlier ET supported systems. The process **etStub** uses the file **/vs/data/etStub.rules** for this transparent conversion. mkerr can be used to create the file **/vs/data/etStub.rules** from the user application ET rules file **gendb/data/errors** found in previous generics.

The **mkerr** command creates etStub.rules from the *{error_file}* provided as an argument. The command output file is automatically installed in the directory **/vs/data**. If no *{error_file}* is supplied, a help message is displayed explaining the usage of the command and the target of the output. If the *{error_file}* file does not exist or is not formatted in accordances with the expected ET rules file, appropriate error and help messages are displayed.

The *-o* option flags each occurrence of a message as "obsolete." The *-n* option causes the rules to be generated without the "obsolete" flag set; hence the messages generated by these rules are not flagged as OBSOLETE. The default setting is *-o*.

The *-var* option automatically converts the **/gendb/data/errors** file and installs the result in the directory **/vs/data**. This option insures compatibility with the intent of this same command name and option in previous voice system generics.

Example

The following example converts the ET rule file errors to the Version 3.1 logging environment.

mkerr errors

mkETrules

The **mkETrules** command provides the compatibility daemon to log old et_ send() messages into the new error logging system.

Synopsis

mkETrules ***[-o|-n] [{ET-errors-file...}]***

Description

The **mkETrules** command is a shell problem which produces a valid **etStub.rules** file from one or more errors files of the type that used to control the ET process. It takes as input one or more of the old style **errors** files and generates a file called **etStub.rules** in the current directory. By default all entries are created with the *O* (obsolete) flag set. The *-o* flag specifies that the obsolete flag be set explicitly. The *-n* flag specifies that the rules created not be marked with the “obsolete” flag.

See Also

etStub

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-name def.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 which 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 which 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 which 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 **mesg.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 the word all (if all structures are needed) or specific structure names.

   Mkheader recursively allocates memory and produces ***application-name*****def.h** defines for structure members which 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_name*****def.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_name*def.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_aloc.c

Running /usr/has/another/test6_aloc

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

/******* CDATA STRUCTURE *******/

#define CDATA                 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
```

mkMsg

The **mkMsg** command converts user application error tracker (ET) message rules used in generics prior to Version 3.1 (V3.1) to the files required for the V3.1 full logger/alerter environment.

Synopsis

mkMsg ***[-y {year}] [-c {company}] {error_file1} [{error_file2}...]***
mkMsg -h

Description

Full conversion from the ET environment associated with voice system generics prior to Version 3.1 (V3.1) requires that the application source be modified or converted and then recompiled. Additionally, several files used in conjunction with the ET environment must be converted to those used by the logger/alerter.

The **mkMsg** command converts the ET error rules files to a set of files used by the V3.1 alerter/logger. The ET rules file reserved for applications (generics prior to V3.1) is **/gendb/data/errors**; however, any properly formatted rules file may be converted. Prior to reformatting via **mkMsg**, you must separate your ET rules files that correspond to message classes, each class being defined by an ET message header file. The naming convention for this header file was ***{class}_*** **et.h**. The header file corresponding to **/gendb/data/errors** was **/att/msgipc/etmsgs/appl_et.h**. The **mkMsg** command converts the ET file named *{CLASS}* into a corresponding file ***{CLASS}msg*** which is used by the V3.1 alerter/logger. To maintain a consistent naming convention, we recommended that the /gendb/data/errors file be copied to appl prior to conversion. Following conversion, the ***{CLASS}msg*** should be copied into **/usr/spool/log/formats** where it can be used by the alerter/logger. The **/usr/spool/log/formats/formats.mk** should also be modified to include the new ***{CLASS}msg*** file.

If no ET message files are supplied as command arguments, a help message is displayed explaining the usage of the command and the target locations of the output. If the file argument is not found or is not formatted in accordance with ET rules files, appropriate error and help messages are displayed.

Each ***{CLASS}msg*** file created by **mkMsg** has a copyright header. By default it is for the current year and is assigned to “AT&T.” An alternate year can be specified using the *-y* flag and the company name can be altered by using the *-c* flag.

msgadm

This program facilitates the administration of system messages in the voice system application software.

Synopsis

msgadm *[-e] <[-f <[<input_file>|-]>|<command>]>*

Description

The **msgadm** provides an interface to the INTUITY CONVERSANT system logger/alerter administrative files. Commands to **msgadm** may be specified individually on the command line using **msgadm *<command>*** or may be 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 variable arguments:

- *<message_ID>* — Specifies a member of the set of system message IDs which include all those whose message class is indexed through the **systemLog.h** file and whose mnemonics appear in a configured **log*XXX*.h** file.
- *<priority>* — Specifies a priority tag as defined with the $priority operator in the **/vs/data/msgDst.rules** file. Use **msgadm** priorities to see a list of priority tags configured with the system.
- *<time>* — Specifies a non-zero positive integer indicating time in seconds if suffixed by "s," minutes if suffixed by "m" or hours if suffixed by "h."
- *<dst>* — Specifies the set of destination tags defined in the **/usr/spool/log/msgDst.rules** file through the $destination operator. To see the list, execute **msgadm** destinations. Note that only the latest destination specified in **/usr/spool/log/msgDst.rules** is used.
- *<threshold>* — Specifies a non-zero positive integer indicating a threshold value.

The following are examples of how the msgadm command may be used:

- **msgadm set *<message_ID>* priority *<priority>*** — 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 destination(s).
- **msgadm <[add/delete]> *<message_ID>* destination <*dst*>** — If added and specified, and *<message_ID>* exists in the **msgDst.rules** file, adds a new destination entry to the file. If the entry does not exists 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 set <*message_ID*> window <*time*>** — 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 THR001.
- **msgadm <[add/delete]> <*message_ID*> threshold <*threshold*> message <*thresh_message_ID*>** — Adds or deletes a <*threshold*>/ <*thres_message_ID*> pair from the **thresh.rules** file. If add is specified, and no entry for <*message_ID*> exists, an entry is created with a threshold window of 1 hour. If delete is specified and the <*threshold*>/ <*thres_ message_ID*> pair is the last pair specified, the entire threshold structure is removed.
- **msgadm display <[<*message_ID*>/all]>** — Lists all administrative parameters associated with <*message_ID*> or all system messages if *all* is specified.
- **msgadm priorities** — Outputs the default list of message priorities. **msgadm destinations** outputs the default list of message destinations.
- **msgadm thresholds** — Outputs the set of thresholding messages.
- **msgadm sync** — Makes all changes made through previous calls to **msgadm** take affect in the live logger/alerter system. If sync is not used, a system reboot is required to make changes take affect.
- **msgadm -f <[<*input_file*>/-]>** — 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/alerter configuration files regardless of where the error occurred in the input.

Examples

The following example sets the priority of system message VROP003 to critical. Note that *C has been 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 VROP003.

msgadm display VROP003

System response:

```
 Message Id:              VROP003 (VROP_NOSPBUF)
Message Priority:         *
Message Destinations:     log|alarm

Threshold Period:         1m
Message Thresholds:
Threshold                 Threshold Message Id
----------        --------------------
          20              THR003 (THRESH_MAJOR)

    Message Text:
VROP003  -- -- --- (VROP_NOSPBUF) No resources available on
     SP for speech %s.  Reason:  No SP window buffers.
```

The following example shows the use of the file input mechanism. This example sets message VROP003 to priority "-" (none), changes its destination from the alarm to the event and removes its thresholding structures (if any exist). It then sets TSM002's priority 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 message THR003
delete VROP003 threshold 100 message THR004
set TSM002 priority '*C'
sync
!
```

See Also

display messages
explain

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

pkgadd 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 which 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

pkginfo displays information about software packages which are 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 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 ver- sion (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 bing 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

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 which 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 the word **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 This option removes the database tables.

-s This option removes the speech.

-t This option removes the transaction.

-f This option 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_device

The **remove_device** command removes a device from the /vs/data/device_data file.

Synopsis

/vs/bin/util/remove_device

Description

The **remove_device** command is an interactive menu driven program that allows a user to remove a device entry from the **/vs/data/device_data** file. Only those devices which have been added may be deleted. The standard set of default devices with which the file is initially populated may not be removed.

Removing a device from the **device_data** file ends support of that device by the **/vs/bin/util/configure** program. The removed device is no longer available for possible configuration by the **configure** program.

Files

/vs/data/device_data

See Also

add_device
change_device
configure
get_config
save_config
show_config
show_devices

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 a displaypkg 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 6.0”

See Also

install_sw

removepkg

The **removepkg** command removes a software package.

Synopsis

removepkg

Description

The **removepkg** command removes a software package from the hard disk. You must have superuser permissions to execute the **removepkg** command.

When you enter the **removepkg** the voice system displays a list of the software packages installed on that machine and prompts you to specify the package you want to remove. Type the number associated with the software package, then press ENTER. The voice system displays messages when the software has been removed.

Example

The following example executes the program to remove a software package from the hard disk.

removepkg

See Also

installpkg

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 (INSERV). The specified unit is placed in the INSERV 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 the word "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

retire

The **retire** command is used to retire critical and major alarm indications on the ARU.

Synopsis

retire

Description

Use the **retire** command to send appropriate control sequences to the ARU to retire any critical or major alarm indications.

Example

retire

See Also

load_aru

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 arguments shown in Table A-16:

Table A-16. Argument Description for rmdb

Variable	Definition
-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).

Continued on next page

Table A-16. Argument Description for rmdb — *Continued*

Variable	Definition
-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 A-17.

Table A-17. 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 shown in Table A-18.

Table A-18. 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].

Table A-19 defines the **rs_appl** command arguments.

Table A-19. Rs_appl Arguments

Variable	Definition
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

The **save_config** command saves the **/vs/data/conf_data** to floppy disk.

Synopsis

/vs/bin/util/save_config

Description

The **save_config** command is used to save the **/vs/data/conf_data** file to floppy disk. The **/vs/data/conf_data** file is the file representing the configuration of a voice system machine as determined by the **/vs/bin/util/configure** program.

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/conf_data

See Also

add_device
change_device
configure
get_config
remove_device
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>]***

Table A-20 defines the **sb_backup** command arguments.

Table A-20. Sb_backup Arguments

Variable	Definition
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.

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 flloppy 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 backup all components of an application.

See Also

sb_restore

sb_restore

The **sb_restore** command restores a Script Builder application.

Synopsis

sb_restore *<a/d/s/t> <application_name>*

Table A-21 defines the **sb_restore** command arguments.

Table A-21. Sb_restore Arguments

Variable	Definition
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.

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 CONVERSANT release.

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 re-used 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". The 26th, 27th, and so on sessions 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 which 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- 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

The **show_config** command displays and prints to file the valid INTUITY CONVERSANT voice system configuration represented by the /vs/data/conf_ data file or the incomplete configuration represented by the /vs/data/fail_data file.

Synopsis

/vs/bin/util/show_config ***[fail/filename]***

Description

The output of the **/vs/bin/util/configure** program is either the **/vs/data/conf_data** file or the **/vs/data/fail_data** file depending respectively on whether the program arrives at a complete and valid configuration, or an incomplete, conflicting 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 displays it in tabular form to the screen and also writes it to a file in the current directory.

A message from the **configure** program instructs the user whether to use the *fail* option with **show_config** or not.

If the **configure** program was successful, executing **show_config** with no argument creates a **./configuration** file, by expanding the contents of **/vs/data/conf_data**. 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 to determine what conflicting resource caused the configuration to fail.

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/conf_data** 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/conf_data
/configuration (show sample output, describe each HEADING)
/vs/data/fail_data
/vs/data/failed_config

See Also

add_device
change_device
configure
get_config
remove_device
save_config
show_devices

NOTE:
The **show_config** command takes only one argument. The *fail* and *filename* arguments are mutually exclusive.

show_devices

The **show_devices** command displays and prints to file all devices and their attributes as represented in the **/vs/data/device_data** file.

Synopsis

/vs/bin/utilshow_devices

Description

The **/vs/bin/util/show_devices** command uncompresses the database of devices and their attributes contained in the **/vs/data/device_data** 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/device_data
./devices (show sample output)

See Also

add_device
change_device
configure
get_config
remove_device
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
- SP 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 CONVERSANT 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 *-l* 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_szr

The **soft_szr** command starts a script on a channel.

Synopsis

soft_szr *<channelStart-channelEnd> <script>*

Description

The **soft_szr** command can be used to start a script on a channel. The **soft_szr** 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_szr** waits for a response from TSM. When **soft_szr** exits, TSM has either accepted the request and started the script or rejected the request.

There are two arguments to the **soft_szr** 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 number(s) must be valid and the channel(s) must not be busy, and the channel(s) 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_szr 0-4 sodapop

The following example starts the script “test1”’ on channel 10.

soft_szr 10 test1

Return Values

If the **soft_szr** is successful, a 0 value is returned. If any value other than 0 is returned, the **soft_szr** command completely or partially failed. If **soft_szr** returns a value of 2, then **soft_szr** 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.

Synopis

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 **spdata.*X*** where *X* is day of the week on which the command was executed (Sunday = 0 and Saturday = 6). 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 **spdata.*X*** 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* — direcotry; 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, 15, etc.) The default is 20.
- *-f* — file; used to specify an input data file. If no -f argument is given, the **/var/adm/spa/spdata.X** 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.

Example

spar -b -t 10

This command creates a report representing 10 minutes of signal processing data activity.

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 SP 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** 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 symbolic names shown in Table A-22.

Table A-22. Argument Description for spCtlFlags

Argument	Description
printf	This flag controls whether printfs from within an SP card actually generate output or not.
letters	This flag contains executive trace flag of letters arriving from the PC.
terminations	This flag 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	This flag enables timing of TDM and DSP functions.
checkmem	This flag 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	This flag enables various general purpose debugging code if it is compiled into the executive.
dbg{1-16}	This is 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."

Notice that the current value of the flags is printed if no other arguments are specified and that by starting the flags with a '+' causes them to be added to those already in place rather than just replacing the current flags with the new ones. Table A-23 provides additional information for each of the symbolic names.

Table A-23. 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.
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.

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 the word **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 the word **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 the word **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 the word **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 back up.

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 are the options that 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 SP card. This is the last value of meaning if the pack is an original-style pack. The remaining information applies only to SP 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
This is 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 Servicings Deferred
This is 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
This is 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
The mailbox information is 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 SP 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-Mbyte version and the 44-Mbyte 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 three 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 you 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 the 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 120–140 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] [-I<include_directory> -T<talk_directory> -U<name> -D<name> -D<name_def> -Y<dir> -H] -o<output_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). 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.

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* and **chan** options. The *name* and **chan** 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.

Table A-24 describes the trace area arguments.

Table A-24. Trace Area Arguments

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 defined as shown in Table A-25.

Table A-25. Trace Level Arguments

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 200ms.

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 sleep time = 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 may be in the mm/dd/yy or mm/dd/yyyy format.

  If a 2-digit year argument is used, the following rules apply:

  - If the year argument is 70 and above, the 20th Century is assumed; for example, 5/27/96 is interpreted as May 27, 1996.
  - If the year argument is between 00 and 69, the 21st Century is assumed; for example, 5/27/06 is interpreted as May 27, 2006.

Example

The following two examples generate a traffic summary report for data collected on date August 24, 1993 between 8 a.m. and 5 p.m. on multiple entries per channel, and are equivalent command statements.

trarpt 8-17 y 08/24/93

trarpt 8-17 y 08/24/1993

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 08/24/93

trarpt all n 08/24/1993

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

upg

The **upg** command provides automated assistance in upgrading an INTUITY CONVERSANT system.

Synopsis

/usr/lib/upgrade/upg ***[-v] [-f] [-t] [-d] [-c] [-F] [-h]***

Description

The **upg** command and all of its associated files and functions are installed as part of the target-release specific Software Upgrade Assistance Package delivered as part of an upgrade.

This command should be run with the full path name, **/usr/lib/upgrade/upg**. The command assists with the procedure of upgrading a CONVERSANT system with Version 3.1.1 or later software on a MAP/40 or MAP/100 platform to the target offer. It provides online guidance in implementing the upgrade procedures. In combination with *INTUITY CONVERSANT System Version 6.0 Upgrade*s, 585-310-183, the tool simplifies the upgrade procedure and eliminates many sources of potential errors in upgrades.

The procedures implemented by this command are intended to be self-documenting. Read and carefully follow all instructions that appear on the screen during the upgrade.

Before executing the command, perform all of the actions defined in "Getting Started" in Chapter 1, "Introduction to Software Upgrades," of *INTUITY CONVERSANT System Version 6.0 Upgrade*s, 585-310-183, which applies to the particular customer scenario being upgraded. Help is available for most requests made by the upgrade package by entering **?**

NOTE:
Help messages and graceful user exit from the questions which are part of each software package's individual removal or [re]installation are not available at this time.

Only the options intended for use in the field by customers are listed below. A full set of options may be accessed using the *-h* option. The options not listed below are intended for use in the development environment and should not be used in the field by customers.

- *-c* — Introduces an additional confirmation step between each of the phases of the upgrade procedure, allowing you to stop the upgrade procedure (by entering **q**) between each phase.
- -d — Forces the ORACLE database and associated SQL packages to be removed and reinstalled even if they are compatible with the target software release. This option applies only to software-only upgrades.

- -F — Forces all packages to be loaded from floppy diskette, even if they are available on tape. This option should only be used if target versions of *all* packages to be upgraded are available on floppy diskette.
- *-h* — Prints a help message defining the **upg** command syntax. All options are included in this message. Use this option if you wish to see a definition of the other available options, even though they are intended for use only in the development environment.

Files

All files associated with the Software Upgrade Assistance tool are stored/written in the **/usr/lib/upgrade** directory during the upgrade procedure. Save these files if you choose to remove the Software Upgrade Assistance package from the system before verifying *all* functionality of the upgraded system. If an upgrade includes a disk change of any kind (disk upgrade, repartition, etc.), then the first three files should be saved to floppy disk before any modifications are made to the disk.

- **output.list** — This file is a record of most screen interactions during the entire upgrade procedure.
- **CVIS.info** — This file is a survey of some hardware and software parameters and configuration settings on the system *before* it is upgraded. This file contains most of the information needed to install or reinstall newer versions of the software packages on the system.
- **rmvPkgsList** — This file contains an ordered list of the “older” software packages on the system. These are the packages that need to be removed and/or installed or reinstalled on the system to accomplish the upgrade.
- **insPkgsList** — This file contains an ordered list of the “new” software packages to be installed to accomplish the upgrade. These are the packages that need to be installed or reinstalled on the system to accomplish the upgrade.
- **fileList** — This file contains a list of the files encountered on the system which will be preserved in some form during the upgrade procedure. Many, but not all, will be restored on or merged into the target system during the upgrade.
- **ignoreList** — This file contains a list of files which are to be ignored, even if a later operation indicates they should be preserved.

Save these files to floppy diskette if you choose to remove the Software Upgrade Assistance package from your system before fully verifying *all* functionality of your upgraded system. If an upgrade includes disk change of any kind (disk upgrade, repartition, etc.), the first three files should be saved to floppy diskette *before* any modifications are made to the disk.

vfyLogMsg

The **vfyLogMsg** command verifies the information associated with a specific logging message format.

Synopsis

lComp ***<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 *lComp*.

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 four 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 the '(' and ')' are shell meta-characters, which 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 lComp 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

lComp

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 INTUITY CONVERSANT voice system is rebooted. Running **vsdisable** allows you to log into 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 INTUITY CONVERSANT voice 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)

$
```

WARNING:
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 <TTS sp#>] [-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 [-l *<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, “Computing Channel Numbers,” of *INTUITY™ CONVERSANT® System Version 6.0 Speech Development, Processing, and Recognition,* 585-310-762, for information about computing channel numbers.

NOTE:
Be sure to validate the Tip/Ring channel number before executing the **wl_edit** command.

The [-s *<TTS sp#>*] argument is used to specify which TTS sp circuit card to use for speech playback. Circuit cards are referenced by O.S. index. Therefore, you need to include the O.S. index of the TTS SP card for this argument, rather than the TTS SP card number. If this argument is not specified, then playback will default to the sp circuit card with O.S. index 0.

NOTE:
Be sure to validate the O.S. index before executing the **wl_edit** command .

The [-D directory] argument is used to specify that the program will start in the given directory.

The [-O] option is for debugging purposes: it causes certain Tip/Ring events to be recorded in the output window.

The [-I] option inhibits forced initialization of the Tip/Ring and SP 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.

WARNING:

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 TTS SP with O.S. index 5, enter the following command: **wl_edit -l0 -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

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 SP circuit card after using the **wl_gen** command.

If more than 38 phonemes, including the underscore (_), 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 '_' 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

WARNING:
The file names should be upper case for Script Builder compatibility.

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

See Also

wl_copy
wl_gen

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

Country Switch Packages

B

Overview

This appendix lists the switch package for every country where the INTUITY™ 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.

Purpose

The purpose of this chapter is to provide reference material on country specific switch packages and related 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
  - 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[1]

  Timer values are available to adjust the steady state timer and minimum reversal duration.

- CODEC_Filter_Coefficients[1]

  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[1]

  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[1]

  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)

1. Only applies to the NGTR (AYC30).

— DSP complex output convert (to CODEC)

— The CODEC (one setting both directions)

- Country_Code[1]

  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 INTUITY CONVERSANT system is currently sold for both the DEFINITY PBX and PSTNs. Table B-1 through Table B-24 are presented in alphabetical order by country name.

Table B-1. 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	
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

Continued on next page

Table B-1. DEFINITY Switch Package Parameters for Argentina — *Continued*

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	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	
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

Continued on next page

Table B-1. DEFINITY Switch Package Parameters for Argentina — *Continued*

Parameter	Value	Units	Specification, Notes
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-2. 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	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	
TR_MAX_RING_FREQ	90	Hz	

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Table B-2. DEFINITY Switch Package Parameters for Australia — *Continued*

Parameter	Value	Units	Specification, Notes
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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-3. 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	
TR_MAX_RING_FREQ	90	Hz	

Continued on next page

Table B-3. PSTN Switch Package Parameters for Australia — *Continued*

Parameter	Value	Units	Specification, Notes
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-4. 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		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

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Table B-4. DEFINITY Switch Package Parameters for Belgium — *Continued*

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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-5. 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		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	
TR_V21_GAIN	-9	dBm	
TR_V27_24GAIN	-4.7	dBm	

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Table B-5. DEFINITY Switch Package Parameters for Brazil — *Continued*

Parameter	Value	Units	Specification, Notes
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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-6. Switch Package Parameters for Canada

Parameter	Value	Units	Specification, Notes
Same as US built in defaults			

Table B-7. 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	
TR_ONHOOK_SUP	0		
TR_COUNTRY_CODE	3		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

Continued on next page

Table B-7. DEFINITY Switch Package Parameters for France — *Continued*

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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-8. 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	-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	4		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	

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Table B-8. DEFINITY Switch Package Parameters for Germany — *Continued*

Parameter	Value	Units	Specification, Notes
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)
Dial tone training enabled	Yes		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-9. 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	
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	4		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	

Continued on next page

Table B-9. Switch Pkg. Parameters (Germany: PSTN) — *Continued*

Parameter	Value	Units	Specification, Notes
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
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-10. 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	
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	

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Table B-10. DEFINITY Switch Package Parameters for Hong Kong — *Continued*

Parameter	Value	Units	Specification, Notes
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
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	Fpf		

Table B-11. 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
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	

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Table B-11. PSTN Switch Package Parameters for Hong Kong — *Continued*

Parameter	Value	Units	Specification, Notes
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
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-12. 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
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	

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Table B-12. DEFINITY Switch Package Parameters for Ireland — *Continued*

Parameter	Value	Units	Specification, Notes
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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-13. DEFINITY Switch Package Parameters for Luxemborg

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		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

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Table B-13. DEFINITY Switch Package Parameters for Luxemborg — *Continued*

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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-14. 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		
TR_COMPANDING	0		

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Table B-14. DEFINITY Switch Package Parameters for Mexico — *Continued*

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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-15. 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		
TR_COMPANDING	0		

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Table B-15. PSTN Switch Package Parameters for Mexico — *Continued*

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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-16. DEFINITY Switch Package Parameters for 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		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

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Table B-16. DEFINITY Switch Package Parameters for Netherlands — *Continued*

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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-17. 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	-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	
TR_MAX_RING_FREQ	90	Hz	

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Table B-17. DEFINITY Switch Package Parameters for New Zealand — *Continued*

Parameter	Value	Units	Specification, Notes
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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-18. 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		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	

Continued on next page

Table B-18. DEFINITY Switch Package Parameters for Spain — *Continued*

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	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-19. PSTN 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	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		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	

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Table B-19. PSTN Switch Package Parameters for Spain — *Continued*

Parameter	Value	Units	Specification, Notes
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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-20. Switch Pkg. Parameters (Thailand)

Parameter	Value	Units	Specification, Notes
Same as US built in defaults			

Table B-21. DEFINITY Switch Package Parameters for 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	
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 B-21. DEFINITY Switch Package Parameters for United Kingdom — *Continued*

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	-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		
Blind Transfer, Initiate	FW		
Blind Transfer, Complete	H		
Intelligent Transfer, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-22. PSTN Switch Package Parameters for 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	5000	msec	Time between start of ring voltage signals
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	

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Table B-22. PSTN Switch Package Parameters for United Kingdom — *Continued*

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	-12	dB	
Switch Hook Flash Duration	80	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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Table B-23. DEFINITY Switch Package Parameters for 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
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	-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	1		
TR_COMPANDING	0		
TR_MIN_RING_FREQ	20	Hz	
TR_MAX_RING_FREQ	90	Hz	

Continued on next page

Table B-23. DEFINITY Switch Package Parameters for United States — *Continued*

Parameter	Value	Units	Specification, Notes
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 (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, Inititate	FW		
Intelligent Transfer, Complete	H		
Intelligent Transfer, Reconnect (No Ans)	FPF		
Intelligent Transfer, Reconnect (Busy)	FPF		

Country Switch Package Supported Call Progress Tones

Table B-24 lists the supported call progress tone parameters for every country where the INTUITY 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 B-24. 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 400 or 400+450	+/- 3	-30 - +1	Steady (2.3 sec min)
		Ring Back				400/200/400/2000
		Busy	425 400			375/375
		Reorder/ # Unobtainable	425 or 400			2500/500
		FAX cng	1100	+/-12		-25 - +1
	DEFINITY	Stutter Dial Tone	404 + 450	+/- 3	-20 - +1	150/150 150/150 150/150
		Ring Back				400/200/400/2000
		Busy/Reorder	425			400/400
		Intercept				2500/500
		FAX cng	1100	+/-12		-25 - +1
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			500/500
			425			
		Reorder	425 or			250/250
			480+620			
		FAX cng	1100	+/- 12		-25 - +1

Continued on next page

Table B-24. Switch Package Supported Call Progress Tones — *Continued*

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
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
Brasil	DEFINITY	Dial Tone	425 or	+/- 3	-20 - +1	Steady (1.2 Sec min)
			425			
		Stutter Dial Tone	425			100/100 100/100 100/steady
		Ring Back				1000/4000
		Busy/ Reorder				250/250
		FAX cng	1100	+/- 12		-25 - +1
Canada	PSTN	Dial Tone	350+440	+/- 3	-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
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
		FAX cng	1100	+/- 12		-25 - +1

Continued on next page

Table B-24. Switch Package Supported Call Progress Tones — *Continued*

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
Columbia	DEFINITY	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
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

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Table B-24. Switch Package Supported Call Progress Tones — *Continued*

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
France	DEFINITY	Dial Tone	330 and/or 440	+/- 5	-30 - +1	Steady (2 sec min)
		Stutter Dial Tone				
		Ring Back	440			1500/3500
		Busy				500/500
		Reorder				200/200
		FAX cng	1100	+/- 12		-25 - +1
Germany	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	+/- 12		-25 - +1
	DEFINITY	Dial Tone	425	+/- 3	-20 - +1	Steady (1.3 sec min)
		Stutter Dial Tone				150/150 150/150 150/steady
		Ring Back				1000/4000
		Busy				150/475
		Re-order				250/250
		FAX cng	1100	+/- 12		-25 - +1
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	+/- 12		-25 - +1
	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			400/200/400/3200
		Busy	480 + 620			500/500
		Reorder				250/250
		FAX cng	1100	+/- 12		-25 - +1

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Table B-24. Switch Package Supported Call Progress Tones — *Continued*

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
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	+/- 3	-20 - +1	1000/3000
		Busy				500/500
		Reorder				200-250/ 200-250
		FAX cng	1100	+/- 12		-25 - +1
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
	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

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Table B-24. Switch Package Supported Call Progress Tones — *Continued*

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
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
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	425			400/400
		Intercept				2500/500
		FAX cng	1100	+/- 12		-25 - +1
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
	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

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Table B-24. Switch Package Supported Call Progress Tones — *Continued*

Country	Switch	Tone	Frequency (Hz)	Deviation (Hz)	Level (dBm)	Cadence on/off (msec)
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
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
	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		-30 - +1	375/375
		Reorder				400/350/225/525
		FAX cng	1100	+/- 12		-25 - +1
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

Glossary

Numerics

23B+D
23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

30B+D
30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

3270 interface
A link between one or more INTUITY™ CONVERSANT® machines and a host mainframe. In INTUITY 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 INTUITY system administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to the ability of the INTUITY CONVERSANT system to administer the switch directly.

Adjunct/Switch Application Interface
An optional feature package that provides an Integrated Services Digital Network-based interface between Lucent Technologies 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 and FlexWord® inputs from callers.

affiliate
A business organization that Lucent controls or with which Lucent is in partnership.

AGL
application generation language

alarm relay unit
A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (such as an INTUITY CONVERSANT system) to audio.

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 upper- 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 INTUITY CONVERSANT system that provides access to the applications currently available on your system and helps you to manage and administer them.

application installation
A two-step process in which the INTUITY 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 INTUITY CONVERSANT system provides several methods for creating application scripts, including Graphical Designer, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

application verification
A process in which the INTUITY CONVERSANT 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 m) in length.

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.

AYC2C
The signal processor (SP) circuit card.

AYC3B
A T1 (digital) circuit card.

AYC5B
The IVP6 Tip/Ring (analog) circuit card.

AYC6B
The IVP4 Tip/Ring (analog) circuit card.

AYC7
The companion (CMP) circuit card.

AYC9
The Text-to-Speech circuit card.

AYC10
The IVC6 Tip/Ring (analog) circuit card.

AYC11
A T1 (digital) circuit card.

AYC16
The IVP6-IU Tip/Ring (analog) circuit card.

AYC21
The E1/T1 (digital) circuit card.

AYC26
The IVP6-IA Tip/Ring (analog) circuit card.

AYC27
The IVP6-ID Tip/Ring (analog) circuit card.

AYC28
The IVP6 Tip/Ring (analog) circuit card.

AYC30
The NGTR (analog) circuit card.

AYC43
The speech and signal processor (SSP) circuit card.

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 back-up copy can be restored to the system if the on-line 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 and Dial Pulse Recognition (DPR) 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 INTUITY CONVERSANT system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., 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 INTUITY CONVERSANT system, and interacts with it. As the INTUITY CONVERSANT system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

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 INTUITY CONVERSANT system 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/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 INTUITY CONVERSANT 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
An office or 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.

CMP (AYC7)
The companion circuit card to the signal processor (SP).

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 INTUITY CONVERSANT 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 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 Script Builder 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. An example of this is the use of an INTUITY CONVERSANT system along with a package from a different vendor on the same system 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 speech
Unique words or phrases to be used in INTUITY CONVERSANT system voice prompts that Lucent Technologies custom 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 INTUITY CONVERSANT system documentation to alert the user to the possibility of personal injury or death.

data interface process
A software process that communicates with Script Builder 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, etc. 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 Tip/Ring, E1/T1, or SSP circuit cards.

dial ahead
The ability to collect and process touch-tone 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 touch-tone 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”.

dictionary
A reference book containing an alphabetical list of words, with information given for each word including meaning, pronunciation, and etymology.

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 touch-tone 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 crashes. The dump can be fetched after rebooting to help in analyzing the cause of the crash.

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 and dial pulse 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. See "Graphical Speech Editor."

EFT
Enhanced File Transfer

EIA
Electronic Industries Association

EISA
Extended Industry Standard Architecture

EMI
electromagnetic interference

Enhanced Basic Speech
Pre-recorded speech available from Lucent Technologies in several languages. Sometimes called “standard speech.”

Enhanced File Transfer
A feature that allows the transferring of files automatically between the INTUITY CONVERSANT system and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface
A software- 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 a possible suggestion of how to correct it.

ESD
electrostatic discharge

ESDI
Enhanced Serial Data Interface

ESS
electronic switching system

ET
error tracker

Ethernet
A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.

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 system tasks that Graphical Designer or 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, etc.

external functions
Specific predefined (or customer-created) system tasks that can Graphical Designer or Script Builder can call or *invoke* to interact with other products or services. The function allows the application developer to enter the argument(s) for the function to act on (they are not provided in a choices list). Examples are concat, getarg, length, substring, etc.

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 INTUITY CONVERSANT 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 INTUITY CONVERSANT system software program that allows a user to perform self-tests of critical hardware and software functionality.

FEP
front end processor

FFE
Form Filler Plus feature message class

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

Form Filler Plus
An optional feature package that provides the capability for application scripts to record a caller’s responses to prompts for later transcription and review.

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 INTUITY CONVERSANT 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.

Graphical Speech Editor
A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files for applications.

Graphical Designer
An optional software package that provides a graphical interface to assist in development of voice response applications on the INTUITY CONVERSANT system (see also "Script Builder").

GSE
Graphical Speech Editor

GUI
graphical user interface

H

hard disk drive
A high-capacity data storage/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 floppy drives, etc., are all hardware.

Hardware Resource Allocator
A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

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

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 Lucent Technologies to develop software to work with the INTUITY CONVERSANT 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.

Integrated Voice Processing (IVP) circuit card
The IVP4 or IVP6 circuit card that provides Tip/Ring connections. The NGTR (AYC30) card also provides the same functions.

intelligent CCA
Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It 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. With respect to the INTUITY CONVERSANT system, the interface is designed to provide you with easy access to the software capabilities.

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.

IPC
interprocess communication

IPC
intelligent ports card (IPC-900)

IPCI
integrated personal computer interface

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

IVC6 circuit card (AYC10)
A Tip/Ring (analog) circuit card with six channels.

IVP4 circuit card (AYC6 or AYC6B)
A Tip/Ring (analog) card with four channels.

IVP6 circuit card (AYC5, AYC5B, or AYC28)
A Tip/Ring (analog) card with six channels.

K

Kbps
kilobites per second

Kbyte
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 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 an INTUITY CONVERSANT system to a PBX or “switch” using E1-related hardware and software.

line side T1
A digital method of interfacing an INTUITY CONVERSANT 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 INTUITY CONVERSANT system.

LOG
INTUITY CONVERSANT 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 INTUITY CONVERSANT 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, floppy disk drives, and cartridge tape drives.

main screen
The INTUITY CONVERSANT 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

MAP/100
multi application platform 100

MAP/100C
multi application platform 100C

MAP/40
multi application platform 40

MAP/5P
multi application platform 5P

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

MByte
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

Microsoft
A manufacturer of software products, primarily for IBM-compatible computers.

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 crashes 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 signalling (similar to DTMF), used for trunk addressing between network switches or by network operators.

multithreaded application
A single process/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

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.

next generation Tip/Ring (AYC30) circuit card
An analog circuit card with six channels.

NFAS
non-facility associated signalling

NFS
network file sharing

NGTR
next generation Tip/Ring (AYC30) circuit card

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 would likely encounter state transition errors by trying to 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

obsolete hardware
Hardware that is no longer supported on the INTUITY CONVERSANT system.

OEM
original equipment manufacturer

OGA
operator-generated alert

on-line help
Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

operator-generated alert
A system-monitoring message that is transmitted from the INTUITY 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 Script Builder action step

PBX
private branch exchange

PC
personal computer

PCB
printed circuit board

PCI
peripheral component interconnect

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 filtering (screening)
The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the INTUITY CONVERSANT system does not recognize a spoken response.

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.

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 INTUITY CONVERSANT system documentation, the computer on which UnixWare and INTUITY CONVERSANT 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 responses is collected and the script progresses based on the caller's response.

pseudo driver
A driver that does not control any hardware.

PS&BM
power supply and battery module

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

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 touch-tone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord and FlexWord speech recognition.

recognizer
The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.

record
See "database record."

recovery
The process of using copies of the INTUITY CONVERSANT system software to reconstruct files that have been lost or damaged. See also "restore."

remote database
Information stored on a system other than the INTUITY CONVERSANT system that can be accessed by the INTUITY CONVERSANT system.

remote maintenance circuit card
An INTUITY CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all INTUITY CONVERSANT system machines. This card is standard equipment on all new MAP/100, MAP/40, and MAP/5P purchases.

REN
ringer equivalence number

reports administration
The component of INTUITY CONVERSANT 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 back-up 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
sub-band coding

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 INTUITY 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 INTUITY CONVERSANT system.

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 (AYC2, AYC2B, AYC2C, or AYC9d)
A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card (AYC43).

SIMMs
single inline memory modules

single inline memory modules
A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU 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, etc.

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 INTUITY CONVERSANT 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).

SP
signal processor circuit card (AYC2, AYC2B, AYC2C, or AYC9d)

speech and signal processor circuit card (AYC43)
The high-performance signal processing circuit card introduced in V6.0 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-Kbyte 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.

SPIP
singal processor interface process

SPPLIB
speech processing library

SQL
structured query language

SR
speech recognition

SSP
speech and signal processor circuit card (AYC43)

standard speech
The speech package available in several languages containing simple words and phrases produced by Lucent Technologies for use with the INTUITY CONVERSANT 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 Lucent Technologies 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 local 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 (SR)."

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 INTUITY CONVERSANT system that enables you to define the interaction between the INTUITY CONVERSANT system and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

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 INTUITY CONVERSANT system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture
The manner in which the INTUITY CONVERSANT system software is structured.

system message
An event or alarm generated by either the INTUITY CONVERSANT system or end-user process.

system monitor
A component of the INTUITY CONVERSANT system that tests to verify that each incoming telephone line and its associated Tip/Ring or T1 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."

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 an INTUITY CONVERSANT system. Supported telephone connections are Tip/Ring, 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 INTUITY CONVERSANT 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. Text-to-Speech application development is supported through Graphical Designer and Script Builder.

ThickNet
A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

ThinNet
A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

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.

Tip/Ring
Analog telecommunications using four-wire media.

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 INTUITY CONVERSANT system. It can also involve one or more of the system optional features, such as speech recognition, 3270 host interface, FAX Actions, etc.

transaction assembler script
The computer program code that controls the application operating on the voice response system. The code can be produced from Graphical Designer, 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.

TRIP
Tip/Ring interface process

troubleshooting
The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSO
Technical Services Organization

TSO
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, etc.

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 (Tip/Ring, 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 INTUITY CONVERSANT system is able to recognize using either WholeWord or FlexWord 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 channel
A channel that is associated with an interface to the telephone network (Tip/Ring, T1, E1, LSE1/LST1, or PRI). Any INTUITY CONVERSANT system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a "soft seizure" request to TSM from a DIP or the **soft_szr** command.

voice processing co-marketer
A company licensed to purchase voice processing equipment, such as the INTUITY CONVERSANT system, to market and sell based on their own marketing strategies.

voice response output process
A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SSP circuit cards) and data storage devices (for example, hard disk, etc.)

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- and nonvoice-related aspects of the system.

VPC
voice processing co-marketer

VROP
voice response output process

VRU
voice response unit

W

warning
An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of equipment damage.

WholeWord speech recognition (SR)
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 touch tones (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 FlexWords that are available for 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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