CHAPTER 2

Understanding the User Interface

The user interface for your system provides several different command modes. This publication focuses on just one command mode: user EXEC mode. For more information about privileged EXEC mode, refer to the configuration guide or command reference guide for your server product.

Specifically, this chapter describes the following topics:

- Understanding the user EXEC command mode
- Getting context-sensitive help
- Using syntax checking
- Using the command history features
- Using the editing features

Understanding the User EXEC Command Mode

The EXEC commands available at the user level are generally used to connect to remote systems, change terminal settings on a temporary basis, perform basic tests, and list system information. Refer to the configuration guide for your server product for information about entering privileged EXEC mode.

Enter commands at the system prompt. The system prompt indicates the server's host name followed by an angle bracket (>). The default host name is CS for a communication server, and PT for a protocol translator, unless it has been changed during initial configuration using the **setup** command. (Refer to the getting started guide for your server product for information about the setup command facility.) The following example of a communication server prompt and a protocol translator prompt:

```
CS>

PT>
```

You can also change the name of the server using the **hostname** command as described in the configuration guide for your server product.

You can enter commands in uppercase, lowercase, or a mix of both. You can abbreviate commands and keywords to the number of characters that allow a unique abbreviation. For example, you can abbreviate the **show** command to **sh**.

After entering the command at the system prompt, press the Return key to execute the command at the user level.

To list the user EXEC commands, enter a question mark (**?**) at the user EXEC prompt.

Example

The following example shows the commands available in user EXEC mode on a communication server:

```
CS-1> ?
Exec commands:
  <1-99>           Session number to resume
  connect          Open a terminal connection
  disconnect       Disconnect an existing telnet session
  enable           Turn on privileged commands
  exit             Exit from the EXEC
  help             Description of the interactive help system
  lat              Open a lat connection
  lock             Lock the terminal
  login            Log in as a particular user
  logout           Exit from the EXEC
  name-connection  Name an existing telnet connection
  ping             Send echo messages
  resume           Resume an active telnet connection
  rlogin           Open an rlogin connection
  show             Show running system information
  systat           Display information about terminal lines
  telnet           Open a telnet connection
  terminal         Set terminal line parameters
  tn3270           Open a tn3270 connection
  where            List active telnet connections
  xremote          Enter XRemote mode
```

The list of commands might vary slightly from this example, depending upon how your server has been configured.

Getting Context-Sensitive Help

The previous section, "Understanding the User EXEC Command Mode," indicated that you can obtain help about available commands by typing a question mark (**?**) at the system prompt. You can also get a list of any command's associated keywords and arguments with the context-sensitive help feature. You can enter the following commands to obtain help:

Task	Command
Obtain a brief description of the help system.	**help**
Obtain a list of commands that begin with a specific character string.	*abbreviated-command-entry***?**
Recall a complete command name. Refer to the later section "Use the Tab Key to Complete a Command Name."	*abbreviated-command-entry*<**Tab**>
List all available commands.	**?**
List a command's associated keywords.	*command* **?**
List a keyword's associated arguments.	*command keyword* **?**

When using context-sensitive help, the space (or lack of a space) before the question mark (**?**) is significant. To obtain a list of commands that begin with a particular character set, enter those characters followed immediately by the question mark (**?**). Do not include a space. This form of help is called *word help*, because it completes a word for you.

To list keywords or arguments, enter a question mark (**?**) in place of a keyword or argument. Include a space before the **?**. This form of help is called *command syntax help*, because it reminds you which keywords or arguments are applicable based on the command, keywords, and arguments you have already entered.

Examples

The following example shows sample output from the **help** command:

```
CS-1> help
Help may be requested at any point in a command by entering
a question mark '?'.  If nothing matches, the help list will
be empty and you must backup until entering a '?' shows the
available options.
Two styles of help are provided:
1. Full help is available when you are ready to enter a
   command argument (e.g. 'show ?') and describes each possible
   argument.
2. Partial help is provided when an abbreviated argument is entered
   and you want to know what arguments match the input
   (e.g. 'show pr?'.)
```

The following example displays a list of keywords used with the **resume** command:

```
CS-1> resume ?
  /debug     Print parameter changes & messages
  /echo      Perform local echo
  /line      Enable telnet line mode
  /nodebug   Do not print parameter changes & messages
  /noecho    Disable local echo
  /noline    Disable telnet line mode
  /nostream  Disable stream processing
  /set       Set X3 connection options
  /stream    Enable stream processing
  <1-20>     The number of an active telnet connection
  <cr>
  WORD       The name of an active telnet connection or Connection options
```

Using Syntax Checking

The user interface provides syntax checking with an error location indicator. The error location indicator is a caret (^), and appears at the point in the command string where you have entered an incorrect command, keyword, or argument. The error location indicator and interactive help system allow you to easily find and correct any syntax errors.

In the following example, the **rlogin** command is entered incorrectly:

```
dunes> rlogin 131.108.32.208 my-host
                                ^
Invalid input detected at '^' marker.
```

The caret (^) symbol and help response indicate that an incorrect entry was made at the entry "my-host." Enter the command again up to the point of the error location indicator and include a question mark (?) at the end of the string to bring up context-sensitive help.

Using the Command History Features

The user interface for this software release provides a history, or record, of commands you have entered. You can complete the following tasks:

- Specify the number of commands the system will record
- Recall commands
- Disable command history

Specify the Number of Commands the System Will Record

To set the number of command lines the system will record, enter the following command:

terminal history size *number-of-lines*

Syntax Description

number-of-lines	Specifies the number of command lines that the system will record in its history buffer. The range is 0–256 and the default is 10 lines.

Recall Commands

To recall commands from the history buffer, enter any of the following key sequences:

Task	Keystrokes
Recall commands in the history buffer in a backward sequence, beginning with the most recent command. Repeat the key sequence to recall successively older commands.	Press **Ctrl-P** or the Up Arrow.
Return to more recent commands in the history buffer after recalling commands with **Ctrl-P** or the Up Arrow. Repeat the key sequence to recall successively more recent commands.	Press **Ctrl-N** or the Down Arrow.
While in EXEC mode, list the commands you have just entered.	**show history**

Note Ctrl indicates the Control key. It must be pressed simultaneously with its associated letter key. Keys are indicated in capitals, but are not case-sensitive.

Disable the Command History Feature

The command history feature is automatically enabled. You can disable it in configuration mode for all subsequent sessions or in user EXEC mode for the current session. For information about configuration mode commands, refer to the configuration guide or command reference guide for your server product. To disable it in user mode, enter the following command:

no terminal history size

Using the Editing Features

Enhanced editing mode provides a set of editing key functions similar to those of the EMACS editor. Enhanced editing mode is enabled by default.

You can enter commands in uppercase, lowercase, or a mix of both. Only passwords are case-sensitive. You can abbreviate commands and keywords to the number of characters that allow a unique abbreviation. For example, you can abbreviate the **show** command to **sh**. After entering the command line at the system prompt, press the Return key to execute the command.

This section describes how to perform the following tasks:

- Enable enhanced editing mode
- Move around on the command line
- Use the Tab key to complete a command name
- Paste in buffer entries
- Delete entries
- Scroll down a line or a screen
- Redisplay the current command line
- Transpose mistyped characters
- Control capitalization
- Designate a keystroke as a command entry
- Disable enhanced editing mode

Enable Enhanced Editing Mode

Although enhanced editing mode is enabled by default, you can disable it and revert to the editing mode of previous software releases. See “Disable Enhanced Editing Mode” later in this chapter.

You can re-enable the enhanced editing mode while in user EXEC mode. Enter the following command:

terminal editing

Move Around on the Command Line

Use the following keystrokes to move the cursor back and forth on the command line for editing.

Task	Keystrokes
Move the cursor back one character.	Press **Ctrl-B** or press the left arrow key.[1]
Move the cursor forward one character.	Press **Ctrl-F** or press the right arrow key.[1]
Move the cursor to the start of the command line.	Press **Ctrl-A**.
Move the cursor to the end of the command line.	Press **Ctrl-E**.
Move the cursor back one word.	Press **Esc-B**.
Move the cursor forward one word.	Press **Esc-F**.

1. The arrow keys function only on ANSI-compatible terminals, such as VT100s.

Use the Tab Key to Complete a Command Name

If you cannot remember a complete command name, you can use the Tab key to allow the system to complete a partial entry. Enter the first few letters of the command and press the Tab key. If your keyboard does not have a Tab key, press **Ctrl-I** instead.

Example

In the following example, when the letters "term" are entered and the Tab key is pressed, the system provides the complete command:

```
ganges> term<Tab>
ganges> terminal
```

If you enter a set of characters that could indicate more than one command, the system beeps to indicate an error. Enter a question mark (**?**) to obtain a list of commands that begin with that set of characters.

For example, there are two commands in user mode that start with "log":

```
mayday> log?
login logout
mayday> log
```

Paste in Buffer Entries

The system provides a buffer containing the last ten items you have deleted. You can recall these items and paste them in the command line by entering the following commands:

Task	Keystrokes
Recall the most recent entry in the buffer.	Press **Ctrl-Y**
Recall the next buffer entry.	Press **Esc-Y**

If you press **Esc-Y** more than ten times, you will cycle back to the first buffer entry.

Delete Entries

Enter any of the following keystrokes to delete command entries if you make a mistake or change your mind while entering a command:

Task	Keystrokes
Erase the character to the left of the cursor.	Press the **Delete** or **Backspace** key.
Delete the character at the cursor.	Press **Ctrl-D**.
Delete all characters from the cursor to the end of the command line.	Press **Ctrl-K**.
Delete all characters from the cursor to the beginning of the command line.	Press **Ctrl-U** or **Ctrl-X**.
Delete the word to the left of the cursor.	Press **Ctrl-W**.
Delete from the cursor to the end of the word.	Press **Esc-D**.

Scroll Down a Line or a Screen

When you use the help facility to list available commands, the list might be longer than the terminal screen can display. In such cases, a `---more---` prompt appears at the bottom of the screen. To scroll down one line to display the remaining commands, press the Return key. To scroll down one screen to display the remaining commands, press the Space bar. Press any other key to return to the prompt.

Redisplay the Current Command Line

If you are entering a command and the system suddenly sends a message to your screen, you can easily recall your current command line entry by pressing **Ctrl-L** or **Ctrl-R**.

Transpose Mistyped Characters

If you mistype a command entry, you can transpose the mistyped characters to the left of the cursor by pressing **Ctrl-T**.

Control Capitalization

You can capitalize or lowercase words or capitalize a set of letters with the following key sequences:

Task	Keystrokes
Capitalize the first letter of the word to the right side of the cursor.	**Esc-c**
Change all letters in the word to the right of the cursor from capital to lowercase.	**Esc-l**
Capitalize all letters in the word to the right of the cursor.	**Esc-u**

Designate a Keystroke as a Command Entry

You can insert a code to indicate that the keystroke immediately following should be treated as a command entry, and not as an editing key. This is useful when you want to use a particular keystroke as an executable command. Enter the following command to insert a system code for this purpose:

Ctrl-v or **Esc-q**

Disable Enhanced Editing Mode

Enhanced editing mode is the default. If you are more comfortable with the editing mode of previous software releases, you can disable enhanced editing mode by entering the following command:

no terminal editing

Use the following editing keys and functions for Software Release 9.1 and earlier.

Task	Keystrokes
Erase the character to the left of the cursor.	**Delete** or **Backspace**
Erase a word.	**Ctrl-W**
Erase a line.	**Ctrl-U**
Redisplay a line.	**Ctrl-R**
End configuration mode and returns to the EXEC prompt.	**Ctrl-Z**
Execute single-line commands.	**Return**

To disable enhanced editing mode from within configuration mode, refer to the configuration guide or command reference manual for your server product.