

Chapter 4

Command-Line Interface Overview

The *command-line interface (CLI)* is the interface to the software that you use whenever you access the router—whether from the console or through a remote network connection. The CLI, which automatically starts after the router finishes booting, provides commands that you use to perform various tasks, including configuring the JUNOS software and monitoring and troubleshooting the software, network connectivity, and the router hardware.

The CLI is a straightforward command interface. You type commands on a single line, and the commands are executed when you press the Enter key. The CLI provides command help and command completion, and it also provides Emacs-style keyboard sequences that allow you to move around on a command line and scroll through a buffer that contains recently executed commands.

The CLI is indicated by the presence of the > prompt, which is preceded by a string that defaults to the name of the user and the name of the router. For example:

```
user@host>
```

For information about customizing your CLI session, see “Control the CLI Environment” on page 73.

CLI Modes

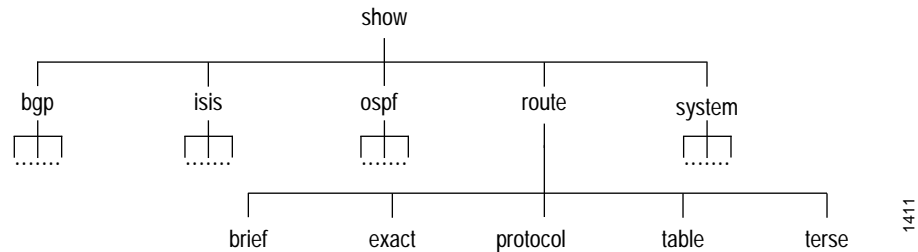
The CLI has two modes, operational and configuration. In operational mode, you monitor and troubleshoot the software, network connectivity, and the router by entering CLI commands. For more information on operational mode, see “Command-Line Interface Operational Mode” on page 55.

When in configuration mode, you configure the JUNOS software by creating a hierarchy of configuration statements. You can do this by using the CLI or by creating a text (ASCII) file that contains the statement hierarchy. (The statement hierarchy is identical in both the CLI and text configuration file.) You can configure all properties of the JUNOS software, including interfaces, general routing information, routing protocols, and user access, as well as several system hardware properties. When you have finished entering the configuration statements, you commit them, which activates the configuration on the router. For more information about configuration mode, see “Configure the Router with the CLI” on page 77.

CLI Command Hierarchy

The CLI commands are organized in a hierarchical fashion, with commands that perform a similar function grouped together under the same level. For example, all commands that display information about the system and the system software are grouped under the `show` command, and all commands that display information about the routing table are grouped under the `show route` command. Figure 2 illustrates a portion of the `show` command hierarchy.

Figure 2: CLI Command Hierarchy Example



To execute a command, you enter the full command name, starting at the top level of the hierarchy. For example, to display a brief view of the routes in the router table, use the command `show route brief`.

The hierarchical organization results in commands that have a regular syntax and provides several features that simplify use of the CLI:

Consistent command names—Commands that provide the same type of function have the same name, regardless of the portion of the software they are operating on. As examples, all `show` commands display software information and statistics, and all `clear` commands erase various types of system information.

Lists and short descriptions of available commands—Information about available commands is provided at each level of the CLI command hierarchy. If you type a question mark (?) at any level, you see a list of the available commands along with a short description of each command. This means that if you already are familiar with the JUNOS software or with other routing software, you can use many of the CLI commands without referring to the documentation.

Command completion—Command completion for command names (keywords) and for command options is available at each level of the hierarchy. If you type a partial command name followed immediately by a question mark (with no intervening space), you see a list of commands that match the partial name you typed.