

Chapter 4

Getting Online Help

This chapter describes the JUNOS CLI online help.

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Getting Help About Commands

Information about commands is provided at each level of the CLI command hierarchy. You can type a question mark to get help about commands:

- If you type the question mark at the command-line prompt, the CLI lists the available commands and options. For example, to view a list of top-level operational mode commands, type a question mark (?) at the command-line prompt.

```
user@host> ?
```

```
Possible completions:
```

```
clear          Clear information in the system
configure      Manipulate software configuration information
file           Perform file operations
help           Provide help information
mtrace         Trace mtrace packets from source to receiver.
monitor        Real-time debugging
ping           Ping a remote target
quit           Exit the management session
request        Make system-level requests
restart        Restart a software process
set            Set CLI properties, date, time, craft display text
show           Show information about the system
ssh            Open a secure shell to another host
start          Start a software process
telnet         Telnet to another host
test           Diagnostic debugging commands
traceroute     Trace the route to a remote host
user@host>
```

- If you type the question mark after entering the complete name of a command or command option, the CLI lists the available commands and options, then redisplay the command names and options that you typed.

```
user@host> clear ?
```

```
Possible completions:
```

```
arp            Clear address-resolution information
bgp            Clear BGP information
chassis        Clear chassis information
firewall       Clear firewall counters
igmp           Clear IGMP information
interfaces     Clear interface information
ilmi           Clear ILMI statistics information
isis           Clear IS-IS information
ldp            Clear LDP information
log            Clear contents of a log file
mpls           Clear MPLS information
msdp           Clear MSDP information
multicast      Clear Multicast information
ospf           Clear OSPF information
pim            Clear PIM information
rip            Clear RIP information
route          Clear routing table information
rsvp           Clear RSVP information
```

```

snmp      Clear SNMP information
system    Clear system status
vrrp      Clear VRRP statistics information
user@host> clear

```

- If you type the question mark in the middle of a command name, the CLI lists possible command completions that match the letters you have entered so far, then redisplay the letters that you typed. For example, to list all operational mode commands that start with the letter c, type the following:

```

user@host> c?
Possible completions:
clear      Clear information in the system
configure  Manipulate software configuration information
user@host> c

```

- For introductory information on using the question mark or the help command, you can also type **help** and press Enter:

```
user@host> help
```

Getting Help About a String in a Statement or Command

You can use the **help** command to display help about a text string contained in a statement or command name:

help apropos *string*

string is a text string about which you want to get help. This string is used to match statement or command names as well as the help strings that are displayed for the statements or commands. (See the example on page 41.)

If the string contains spaces, enclose it in quotation marks (" "). You also can specify a regular expression for the string, using standard UNIX-style regular expression syntax.

In configuration mode, this command displays statement names and help text that matches the string specified. In operational mode, this command displays command names and help text that matches the string specified.

Example: Getting Help About a String in a Statement Name

Get help about statements that contain the string “traps”:

```

[edit]
user@host# help apropos traps
set interfaces <interface_name>
  Enable SNMP notifications on state changes
set interfaces <interface_name> unit <interface_unit_number>
  Enable SNMP notifications on state changes
set snmp trap-group
  Configure traps and notifications
set snmp trap-group <group_name> version <version> all
  Send SNMPv1 and SNMPv2 traps

```

```

set snmp trap-group <group_name> version <version> v1
  Send SNMPv1 traps
set snmp trap-group <group_name> version <version> v2
  Send SNMPv2 traps
set protocols mpls log-updown
  Send SNMP traps
set firewall filter <filter-name> term <rule-name> from source-port snmptrap
  SNMP traps
set firewall filter <filter-name> term <rule-name> from source-port-except
snmptrap
  SNMP traps
set firewall filter <filter-name> term <rule-name> from destination-port snmptrap
  SNMP traps
set firewall filter <filter-name> term <rule-name> from destination-port-except
snmptrap
  SNMP traps
set firewall filter <filter-name> term <rule-name> from port snmptrap
  SNMP traps
set firewall filter <filter-name> term <rule-name> from port-except snmptrap
  SNMP traps
[edit]
user@host# edit interfaces at-5/3/0
[edit interfaces at-5/3/0]
user@host# help apropos traps
set <interface_name>
  Enable SNMP notifications on state changes
set <interface_name> unit <interface_unit_number>
  Enable SNMP notifications on state changes

```

Getting Help About Configuration Statements

You can display help based on text contained in a statement name using the `help topic` and `help reference` commands:

```

help topic word
help reference statement-name

```

The `help topic` command displays usage guidelines for the statement based on information that appears in the JUNOS configuration guides. The `help reference` command displays summary information about the statement based on the summary descriptions that appear in the JUNOS configuration guides.

Getting Help About System Log Messages

You can display help based on a system log tag using the `help syslog` command:

```

help syslog syslog-tag

```

The `help syslog` command displays the contents of a system log message.

Help for Omitted Statements

If you have omitted a required statement at a particular hierarchy level, when you attempt to move from that hierarchy level or when you issue the **show** command in configuration mode, a message indicates which statement is missing. For example:

```
[edit protocols pim interface so-0/0/0]
user@host# top
Warning: missing mandatory statement: 'mode'
[edit]
user@host# show
protocols {
  pim {
    interface so-0/0/0 {
      priority 4;
      version 2;
      # Warning: missing mandatory statement(s): 'mode'
    }
  }
}
```

Using CLI Command Completion

You do not always have to remember or type the full command or option name for the CLI to recognize it.

- To display all possible command or option completions, type the partial command followed immediately by a question mark.
- To complete a command or option that you have partially typed, press the Tab key or the Spacebar. If the partially typed letters begin a string that uniquely identifies a command, the complete command name appears. Otherwise, a prompt indicates that you have entered an ambiguous command, and the possible completions are displayed.

Command completion also applies to other strings, such as filenames, interface names, and usernames. To display all possible values, type a partial string followed immediately by a question mark. However, to complete these strings, press the Tab key; pressing the Spacebar does not work.

Examples: Using CLI Command Completion

Issue the show interfaces command:

```

user@host> sh<Space>ow i<Space>
'i' is ambiguous.
Possible completions:
  igmp      Show information about IGMP
  interface Show interface information
  isis      Show information about IS-IS
user@host> show in<Space>terfaces <Enter>
Physical interface: at-0/1/0, Enabled, Physical link is Up
Interface index: 11, SNMP ifIndex: 65
Link-level type: ATM-PVC, MTU: 4482, Clocking: Internal, SONET mode
Speed: OC12, Loopback: None, Payload scrambler: Enabled
Device flags   : Present Running
Link flags     : 0x01
...
user@host>

```

Display a list of all log files whose names start with the string “messages,” and then display the contents of one of the files:

```

user@myhost> show log mes?
Possible completions:
<filename>      Log file to display
messages        Size: 1417052, Last changed: Mar 3 00:33
messages.0.gz   Size: 145575, Last changed: Mar 3 00:00
messages.1.gz   Size: 134253, Last changed: Mar 2 23:00
messages.10.gz  Size: 137022, Last changed: Mar 2 14:00
messages.2.gr   Size: 137112, Last changed: Mar 2 22:00
messages.3.gz   Size: 121633, Last changed: Mar 2 21:00
messages.4.gz   Size: 135715, Last changed: Mar 2 20:00
messages.5.gz   Size: 137504, Last changed: Mar 2 19:00
messages.6.gz   Size: 134591, Last changed: Mar 2 18:00
messages.7.gz   Size: 132670, Last changed: Mar 2 17:00
messages.8.gz   Size: 136596, Last changed: Mar 2 16:00
messages.9.gz   Size: 136210, Last changed: Mar 2 15:00
user@myhost> show log mes<Tab>sages.4<Tab>.gz<Enter>
Jan 15 21:00:00 myhost newsyslog[1381]: logfile turned over
...

```

Using Command Completion in Configuration Mode

The CLI command completion functions also apply to the commands in configuration mode and to configuration statements. Specifically, to display all possible commands or statements, type the partial string followed immediately by a question mark; to complete a command or statement that you have partially typed, press the Tab key or Spacebar.

Command completion also applies to identifiers, with one slight difference. To display all possible identifiers, type a partial string followed immediately by a question mark. To complete an identifier, you must press the Tab key. This scheme allows you to enter identifiers with similar names; then press the Spacebar when you are done typing the identifier name.

Examples: Using Command Completion in Configuration Mode

List the configuration mode commands:

```
user@host# ?
Possible completions:
<[Enter]>      Execute this command
activate       Remove the inactive tag from a statement
annotate      Annotate the statement with a comment
commit        Commit current set of changes
copy          Copy a statement
deactivate    Add the inactive tag to a statement
delete        Delete a data element
edit          Edit a sub-element
exit          Exit from this level
help          Provide help information
insert        Insert a new ordered data element
load          Load configuration from an ASCII file
quit          Quit from this level
rename        Rename a statement
rollback      Roll back database to last committed version
run           Run an operational-mode command
save          Save configuration to an ASCII file
set           Set a parameter
show          Show a parameter
status        Display database user status
top           Exit to top level of configuration
up            Exit one level of configuration
```

List all the statements available at a particular hierarchy level:

```
[edit]
user@host# edit ?
Possible completions:
> accounting-options Accounting data configuration
> chassis            Chassis configuration
> class-of-service   Class-of-service configuration
> firewall           Define a firewall configuration
> forwarding-options Configure options to control packet sampling
> groups             Configuration groups
> interfaces         Interface configuration
> policy-options     Routing policy option configuration
```

```
> protocols          Routing protocol configuration
> routing-instances Routing instance configuration
> routing-options    Protocol-independent routing option configuration
> snmp               Simple Network Management Protocol
> system             System parameters
```

user@host# **edit protocols ?**

Possible completions:

```
<[Enter]>          Execute this command
> bgp              BGP options
> connections      Circuit cross-connect configuration
> dvmrp            DVMRP options
> igmp             IGMP options
> isis             IS-IS options
> ldp              LDP options
> mpls             Multiprotocol Label Switching options
> msdp             MSDP options
> ospf             OSPF configuration
> pim              PIM options
> rip              RIP options
> router-discovery ICMP router discovery options
> rsvp             RSVP options
> sap              Session Advertisement Protocol options
> vrrp             VRRP options
|                 Pipe through a command
[edit]
```

user@host# edit protocols

List all commands that start with a particular letter or string:

user@host# **edit routing-options a?**

Possible completions:

```
> aggregate        Coalesced routes
> autonomous-system Autonomous system number
```

[edit]

user@host# edit routing-options a

List all configured Asynchronous Transfer Mode (ATM) interfaces:

user@host# **edit interfaces at?**

Possible completions:

```
<interface_name>  Interface name
at-2/1/1
at-2/2/0
at-5/1/0
```

[edit]

user@host# edit interfaces at

Display a list of all configured policy statements:

[edit]

user@host# **show policy-options policy-statement ?**

Possible completions:

```
<policy_name>     Name to identify a policy filter
```

[edit]

user@host# edit policy-options policy-statement

Displaying Tips About CLI Commands

To get tips about CLI commands, issue the `help tip cli` command. Each time you enter the command, a new tip appears. For example:

```
user@host> help tip cli
JUNOS tip:
Use 'request system software validate' to validate the incoming software
against the current configuration without impacting the running system.
```

```
user@host> help tip cli
JUNOS tip:
Use 'commit and-quit' to exit configuration mode after the commit has
succeeded. If the commit fails you are left in configuration mode.
```

You can also enter `help tip cli <number>` to associate a tip with a number. This enables you to recall the tip at a later time. For example:

```
user@host> help tip cli 10
JUNOS tip:
Use the re0 and re1 configuration groups to restrict configuration to
a particular routing engine.
```

```
user@host> help tip cli
JUNOS tip:
Use the 'save' CLI pipe to save output to a local or remote file.
```

```
user@host> help tip cli 10
JUNOS tip:
Use the re0 and re1 configuration groups to restrict configuration to
a particular routing engine.
```

