



Overview

The IEEE 802.11 wireless multicast delivery mechanism does not provide a reliable way to acknowledge lost or corrupted packets. As a result, if any multicast packet is lost in the air, it is not sent again which may cause an IP multicast stream unviewable. The VideoStream feature makes the IP multicast stream delivery reliable over the air, by converting the broadcast frame over the air to a unicast frame. Each VideoStream client acknowledges receiving a video IP multicast stream.

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CLI Command Keyboard Shortcuts

The table below lists the CLI keyboard shortcuts to help you enter and edit command lines on the controller.

Table 1: CLI Command Keyboard Shortcuts

Action	Description	Keyboard Shortcut
Change	The word at the cursor to lowercase.	Esc l
	The word at the cursor to uppercase.	Esc u
Delete	A character to the left of the cursor.	Ctrl-h, Delete, or Backspace
	All characters from the cursor to the beginning of the line.	Ctrl-u

Action	Description	Keyboard Shortcut
	All characters from the cursor to the end of the line.	Ctrl-k
	All characters from the cursor to the end of the word.	Esc d
	The word to the left of the cursor.	Ctrl-w or Esc Backspace
Display MORE output	Exit from MORE output.	q, Q, or Ctrl-C
	Next additional screen. The default is one screen. To display more than one screen, enter a number before pressing the Spacebar key.	Spacebar
	Next line. The default is one line. To display more than one line, enter the number before pressing the Enter key.	Enter
Enter an Enter or Return key character.		Ctrl-m
Expand the command or abbreviation.		Ctrl-t or Tab
Move the cursor	One character to the left (back).	Ctrl-b or Left Arrow
	One character to the right (forward).	Ctrl-f or Right Arrow
	One word to the left (back), to the beginning of the current or previous word.	Esc b
	One word to the right (forward), to the end of the current or next word.	Esc f
	To the beginning of the line.	Ctrl-a
	To the end of the line.	Ctrl-e
Redraw the screen at the prompt.		Ctrl-l or Ctrl-r
Return to the EXEC mode from any configuration mode		Ctrl-z
Return to the previous mode or exit from the CLI from Exec mode.		exit command
Transpose a character at the cursor with a character to the left of the cursor.		Ctrl-t

Using the Interactive Help Feature

The question mark (?) character allows you to get the following type of help about the command at the command line. The following table lists the interactive help feature list.

Table 2: Interactive Help Feature List

Command	
help	Provides a brief description of the Help feature in any command mode.
? at the command prompt	Lists all commands available for a particular command mode.
partial command?	Provides a list of commands that begin with the character string.
partial command<Tab>	Completes a partial command name.
command ?	Lists the keywords, arguments, or both associated with a command.
command keyword ?	Lists the arguments that are associated with the keyword.

Using the Help Command

Before You Begin

To look up keyboard commands, use the help command at the root level.

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 back up until entering a '?' shows the available options. Two types of help are available

1. Full help is available when you are ready to enter a command argument (for example 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 (for example show pr?).

Examples

```
> help
HELP:
Special keys:
  DEL, BS... delete previous character
  Ctrl-A .... go to beginning of line
  Ctrl-E .... go to end of line
  Ctrl-F .... go forward one character
  Ctrl-B .... go backward one character
```

```

Ctrl-D .... delete current character
Ctrl-U, X. delete to beginning of line
Ctrl-K .... delete to end of line
Ctrl-W .... delete previous word
Ctrl-T .... transpose previous character
Ctrl-P .... go to previous line in history buffer
Ctrl-N .... go to next line in history buffer
Ctrl-Z .... return to root command prompt
Tab, <SPACE> command-line completion
Exit .... go to next lower command prompt
? .... list choices

```

Using the ? command

Before You Begin

To display all of the commands in your current level of the command tree, or to display more information about a particular command, use the ? command.

command name ?

When you enter a command information request, put a space between the **command name** and ?.

Examples

This command shows you all the commands and levels available from the root level.

```

> ?
clear          Clear selected configuration elements.
config         Configure switch options and settings.
debug          Manages system debug options.
help           Help
linktest       Perform a link test to a specified MAC address.
logout         Exit this session. Any unsaved changes are lost.
ping           Send ICMP echo packets to a specified IP address.
reset          Reset options.
save           Save switch configurations.
show           Display switch options and settings.
transfer       Transfer a file to or from the switch.

```

Using the partial? command

Before You Begin

To provide a list of commands that begin with the character string, use the partial command ?.

partial command?

There should be no space between the command and the question mark.

Examples

This example shows how to provide a command that begin with the character string “ad”:

```

> controller> config>ad?
The command that matches with the string “ad” is as follows:

advanced

```

Using the partial command<tab>

Before You Begin

To complete a partial command name, use the partial command<tab> command.

partial command<tab>

There should be no space between the command and <tab>.

Examples

This example shows how to complete a partial command name that begins with the character string “ad”:

```
> Controller>config>cert<tab> certificate
```

Using the command ?

Examples

To list the keywords, arguments, or both associated with the command, use the command ?.

command ?

There should be space between the command and the question mark.

This example shows how to list the arguments and keyword for the command acl:

```
> Controller >config acl ?
```

Information similar to the following appears:

apply	Applies the ACL to the data path.
counter	Start/Stop the ACL Counters.
create	Create a new ACL.
delete	Delete an ACL.
rule	Configure rules in the ACL.
cpu	Configure the CPU Acl Information

command keyword ?

To list the arguments that are associated with the keyword, use the command keyword ?
command keyword ?

Usage Guidelines

There should be space between the keyword and the question mark.

Examples

This example shows how to display the arguments associated with the keyword cpu:

```
> controller>config acl cpu ?
```

Information similar to the following appears:

```
none          None - Disable the CPU ACL  
<name>       <name> - Name of the CPU ACL
```