

Contents

- Packet capture commands 1
 - packet-capture interface..... 1
 - packet-capture read 3

Packet capture commands

packet-capture interface

Use `packet-capture interface` to capture incoming packets on an interface.

Syntax

Save captured packets to a file:

```
packet-capture      interface      interface-type      interface-number  
[ capture-filter capt-expression | limit-captured-frames limit |  
limit-frame-size bytes | autostop filesize kilobytes | autostop duration  
seconds | autostop files numbers | capture-ring-buffer filesize kilobytes  
| capture-ring-buffer duration seconds | capture-ring-buffer files  
numbers ] * write filepath [ raw | { brief | verbose } ] *
```

Filter packet data to display:

```
packet-capture      interface      interface-type      interface-number  
[ capture-filter capt-expression | display-filter disp-expression |  
limit-captured-frames limit | limit-frame-size bytes | autostop duration  
seconds ] * [ raw | { brief | verbose } ] *
```

Views

User view

Predefined user roles

network-admin

Parameters

interface-type interface-number: Specifies an Ethernet interface by its type and number.

capture-filter *capt-expression*: Specifies an expression to match packets to be captured, a case-sensitive string of 1 to 256 characters. If you do not specify a capture filter expression, the device captures all incoming packets on an interface.

display-filter *disp-expression*: Specifies an expression to match packets to be displayed, a case-sensitive string of 1 to 256 characters. If you do not specify a display filter expression, the device displays all captured packets.

limit-captured-frames *limit*: Stops capturing packets when the maximum number of captured packets is reached. The *limit* argument sets the maximum number of packets to capture. The value range is 0 to 2147483647, and the default value is 10. If you set the limit to 0, the maximum number of captured packets is unlimited.

limit-frame-size *bytes*: Sets the maximum number of bytes to capture for a packet. The value range is 64 to 8000 bytes, and the default value is 8000 bytes.

autostop filesize *kilobytes*: Stops capturing packets if the maximum packet file size is exceeded when file rotation is disabled. The *kilobytes* argument sets the maximum packet file size. The value range is 1 to 65536 kilobytes. If you do not set a limit, the packet file size is unlimited.

autostop duration *seconds*: Stops capturing packets when the capturing duration expires. The *seconds* argument sets the capturing duration. The value range is 1 to 2147483647 seconds. If you do not set a limit, the capturing duration is unlimited.

autostop files *numbers*: Stops capturing packets when the maximum number of file rotations is reached. The *numbers* argument sets the maximum number of file rotations. The value range is 2

to 64. The capture creates a file to store packet data when a rotation is triggered. The first rotation occurs when the capture starts. If you do not set a limit, the number of file rotations is unlimited.

capture-ring-buffer filesize *kilobytes*: Rotates the packet file when the maximum file size is reached. The *kilobytes* argument sets the maximum file size. The value range is 1 to 65536 kilobytes.

capture-ring-buffer duration *seconds*: Rotates the packet file when the rotation interval expires. The *seconds* argument sets the rotation interval. The value range is 1 to 2147483647 seconds.

capture-ring-buffer files *numbers*: Sets the maximum number of packet files for file rotation, in the range of 2 to 64. If this limit is reached before the capture stops, newly captured packets will overwrite the packet data in the oldest file.

write *filepath*: Specifies the full path of the packet file to store captured packet data. The path must be a case-sensitive string of up to 64 characters. The filename extension must be **.pcap**. For more information about setting a file path, see file system management in *Fundamentals Configuration Guide*.

raw: Displays packet contents in hexadecimal notation. If you do not specify this keyword, the capture displays packet data in a string format.

verbose: Displays detailed information about captured packets.

brief: Displays brief information about captured packets.

Usage guidelines

To use this command, you must install the packet capture feature image by using the **boot-loader**, **install**, or **issu** command series. For more information about image installation, see software upgrade and ISSU in *Fundamentals Configuration Guide*.

The device displays captured packet data in real time.

- If you specify the **write** *filepath* option without specifying the **raw**, **brief**, or **verbose** keyword, this command displays the number of captured packets.
- If you do not specify any one of the **raw**, **brief**, **verbose**, and **write** *filepath* parameters, this command displays brief information about captured packets.

After packet capture is enabled, you are not allowed to configure other commands from the CLI. To stop the capture while it is capturing packets, press **Ctrl+C**.

If file rotation is disabled, the capture creates a packet file with the file name specified by the **write** *filepath* option. If file rotation is enabled, the capture automatically creates a packet file for each rotation, and renames the file to include a sequence number and timestamp. The sequence number increases by 1 for each file rotation. For example, set the file name to **a.pcap**. For the first rotation, the capture will create a packet file named **a_00001_20140211034151.pcap**. For the second rotation, the capture will create a packet file named **a_00002_20140211034207.pcap**.

Use [Table 1](#) when you configure the options for stopping the capture or rotating the file.

Table 1 Using the packet filter parameters

Purpose	Options	Remarks
Stop capturing	<ul style="list-style-type: none"> • Stop based on the capturing duration: autostop duration <i>seconds</i> • Stop based on the number of captured packets: limit-captured-frames <i>limit</i> • Stop based on the number of file 	<p>The packet capture stops if any one of the limits for the stop options is reached. The packet capture also stops if the file system's limit on the number of files has been reached.</p> <p>The autostop filesize option does not stop the capture if file rotation is enabled by the autostop files,</p>

Purpose	Options	Remarks
	rotations: autostop files <i>numbers</i> <ul style="list-style-type: none"> Stop based on the file size if file rotation is disabled: autostop filesize <i>kilobytes</i> 	capture-ring-buffer files , or capture-ring-buffer filesize option.
Rotate files	<ul style="list-style-type: none"> Rotate based on the file size: capture-ring-buffer filesize <i>kilobytes</i> Rotate based on the rotation interval: capture-ring-buffer duration <i>seconds</i> Rotate based on the file size specified for the autostop filesize <i>kilobytes</i> option: autostop files <i>numbers</i> autostop filesize <i>kilobytes</i> capture-ring-buffer files <i>numbers</i> 	The capture rotates the packet file when any one of the limits for the rotation options is reached. If you specify the autostop filesize option after the capture-ring-buffer filesize option, the capture rotates the file based on the file size specified for the autostop filesize option.

Examples

```
# Capture incoming packets on Ten-GigabitEthernet 1/0/1.
<Sysname> packet-capture interface ten-gigabitethernet 1/0/1
```

Related commands

```
packet-capture read
```

packet-capture read

Use **packet-capture read** to display the contents in a packet file.

Syntax

```
packet-capture read filepath [ display-filter disp-expression ] [ raw |
{ brief | verbose } ] *
```

Views

User view

Predefined user roles

network-admin

Parameters

filepath: Specifies the full path of the packet file to store captured packet data. The path must be a case-sensitive string of up to 64 characters. The filename extension must be **.pcap** or **.pcapng**. For more information about setting a file path, see file system management in *Fundamentals Configuration Guide*.

display-filter *disp-expression*: Specifies an expression to match packets to be displayed, a case-sensitive string of 1 to 256 characters. If you do not specify a display filter expression, this command displays all file contents.

raw: Displays file contents in hexadecimal notation. If you do not specify this keyword, the capture displays packet data in a string format.

brief: Displays brief information about captured packets in the file.

verbose: Displays detailed information about captured packets in the file.

Usage guidelines

To use this command, you must install the packet capture feature image by using **boot-loader**, **install**, or **issu** commands. For more information about image installation, see software upgrade and ISSU in *Fundamentals Configuration Guide*.

To stop displaying the file contents, press **Ctrl+C**.

The device stores captured packets in .pcap files but can read .pcap and .pcapng files.

If you do not specify the **raw**, **brief**, or **verbose** keyword, this command displays brief information about captured packets in the file.

Examples

Display the contents in the file **flash:/test/aaaa.pcap**.

```
<Sysname> packet-capture read flash:/test/aaaa.pcap
```

Related commands

packet-capture interface