F Commands

This chapter describes the Cisco Nexus 1000V commands that begin with the letter F.

filter vlan

To configure a filter from the source VLANs for a specified Switch Port Analyzer (SPAN) session, use the **filter vlan** command. To remove the filter, use the **no** form of this command.

filter vlan {*number* | *range*}

no filter vlan {*number* | *range*}

SyntaxDescription

number	Number of the VLAN associated with this filter.
range	Range of VLANs associated with this filter.

Defaults

None

Command Modes

CLI monitor configuration (config-monitor)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to configure the filter for VLAN IDs, 3, 4, 5, and 7:

```
n1000v# config t
n1000v(config)# monitor session 3
n1000v(config-monitor)# filter vlan 3-5, 7
n1000v(config-monitor)#
```

This example shows how to remove the filter for VLAN ID 7:

```
n1000v# config t
n1000v(config)# monitor session 3
n1000v(config-monitor)# no filter vlan 7
n1000v(config-monitor)#
```

Related Commands

Command	Description
monitor session	Creates a session with the given session number and places you in the CLI monitor configuration mode to further configure the session.
description	For the specified SPAN session, adds a description.
source	For the specified session, configures the sources and the direction of traffic to monitor.
destination interface	Configures the ports, for the specified session, to act as destinations for copied source packets.
no shut	Enables the SPAN session.
interface ethernet	Places you in CLI interface configuration mode for the specified interface.
switchport trunk allowed vlan	For the specified interface, configures the range of VLANs that are allowed on the interface.
show interface ethernet	Displays the interface trunking configuration for the selected slot and port or range of ports.

find

To find filenames beginning with a character string, use the **find** command.

find *filename-prefix*

Syntax Description

filename-prefix	First part or all of a filename. The filename prefix is case sensitive.

Defaults

None

Command Modes

Any

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

The **find** command searches all subdirectories under the current working directory. You can use the **cd** and **pwd** commands to navigate to the starting directory.

Examples

This example shows how to display filenames beginning with ospf:

```
n1000v# find ospf
/usr/bin/find: ./lost+found: Permission denied
./ospf-gr.cfg
./ospfgrconfig
./ospf-gr.conf
```

Related Commands

Command	Description
cd	Changes the current working directory.
pwd	Displays the name of the current working directory.

flow exporter

To create or modify a Flexible NetFlow flow exporter defining where and how Flow Records are exported to the NetFlow Collector Server, use the **flow exporter** command. To remove a flow exporter, use the **no** form of this command.

flow exporter *exporter-name*

no flow exporter *exporter-name*

Syntax Description

exporter-name	Name of the flow exporter that is created or modified.

Defaults

Flow exporters are not present in the configuration until you create them.

Command Modes

Global configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

The following example shows how to create and configure FLOW-EXPORTER-1:

```
n1000v(config)# flow exporter FLOW-EXPORTER-1
n1000v(config-flow-exporter)# description located in Pahrump, NV
n1000v(config-flow-exporter)# destination A.B.C.D
n1000v(config-flow-monitor)# dscp 32
n1000v(config-flow-monitor)# source mgmt0
n1000v(config-flow-monitor)# transport udp 59
n1000v(config-flow-monitor)# version 9
```

The following example shows how to remove FLOW-EXPORTER-1:

```
n1000v(config)# no flow exporter FLOW-EXPORTER-1
n1000v(config)#
```

Related Commands

Command	Description
clear flow exporter	Clears the flow monitor.
show flow exporter	Displays flow monitor status and statistics.
description	Adds a description to a flow record, flow monitor, or flow exporter.
destination	Adds a destination IP address to a NetFlow flow exporter.
dscp	Adds a differentiated services codepoint (DSCP) to a flow exporter.

Command	Description
source mgmt	Adds the management interface to a flow exporter designating it as the source for NetFlow flow records.
transport udp	Adds a destination UDP port used to reach the NetFlow collector to a flow exporter.
version 9	Designates NetFlow export version 9 in the NetFlow exporter.

flow monitor

To create a Flexible NetFlow flow monitor, or to modify an existing Flexible NetFlow flow monitor, and enter Flexible NetFlow flow monitor configuration mode, use the **flow monitor** command. To remove a Flexible NetFlow flow monitor, use the **no** form of this command.

flow monitor *monitor-name*

no flow monitor *monitor-name*

Syntax Description

monitor-name	Name of the flow monitor that is created or modified.

Defaults

Flow monitors are not present in the configuration until you create them.

Command Modes

Global configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Flow monitors are the Flexible NetFlow component that is applied to interfaces to perform network traffic monitoring. Flow monitors consist of a record that you add to the flow monitor after you create the flow monitor, and a cache that is automatically created at the time the flow monitor is applied to the first interface. Flow data is collected from the network traffic during the monitoring process based on the key and non-key fields in the record which is configured for the flow monitor and stored in the flow monitor cache.

Once you enter the flow monitor configuration mode, the prompt changes to the following:

```
n1000v(config-flow-monitor)#
```

Within the flow monitor configuration mode, the following keywords and arguments are available to configure the flow monitor:

- **cache—**Specifies the cache size, from 256 to 16384 entries.
- **description** *description*—Provides a description for this flow monitor; maximum of 63 characters.
- **exit**—Exits from the current configuration mode.
- **exporter** *name*—Specifies the name of an exporter to export records.
- **no**—Negates a command or sets its defaults.
- **record** {*record-name* | **netflow ipv4** *collection-type* | **netflow-original**}—Specifies a flow record to use as follows:
  - *record-name*—Name of a record.

  - **netflow ipv4** *collection-type*—Specifies the traditional IPv4 NetFlow collection schemes as follows:

    original-input—Specifies the traditional IPv4 input NetFlow.

    original-output—Specifies the traditional IPv4 output NetFlow

    protocol-port—Specifies the protocol and ports aggregation scheme.
  - **netflow-original**—Specifies the traditional IPv4 input NetFlow with origin autonomous systems.
- **timeout** {**active** | **inactive**}—Specifies a flow timeout period as follows:
  - **active**—Specifies an active or long timeout in the range of 60 to 4092 seconds.
  - **inactive**—Specifies an inactive or normal timeout in the range of 15 to 4092 seconds.

The **netflow-original** and **original-input** keywords are the same and are equivalent to the following commands:

- **match ipv4 source address**
- **match ipv4 destination address**
- **match ip tos**
- **match ip protocol**
- **match transport source-port**
- **match transport destination-port**
- **match interface input**
- **collect counter bytes**
- **collect counter packet**
- **collect timestamp sys-uptime first**
- **collect timestamp sys-uptime last**
- **collect interface output**
- **collect transport tcp flags**

The **original-output** keywords are the same as **original-input** keywords except for the following:

- **match interface output** (instead of match interface input)
- **collect interface input** (instead of collect interface output)

Examples

The following examples creates and configures a flow monitor named FLOW-MONITOR-1:

```
n1000v(config)# flow monitor FLOW-MONITOR-1
n1000v(config-flow-monitor)# description monitor location las vegas, NV
n1000v(config-flow-monitor)# exporter exporter-name1
n1000v(config-flow-monitor)# record test-record
n1000v(config-flow-monitor)# netflow ipv4 original-input
```

Related Commands

Command	Description
clear flow monitor	Clears the flow monitor.
show flow monitor	Displays flow monitor status and statistics.

flow record

To create a Flexible NetFlow flow record, or to modify an existing Flexible NetFlow flow record, and enter Flexible NetFlow flow record configuration mode, use the **flow record** command. To remove a Flexible NetFlow flow record, use the **no** form of this command.

flow record *record-name*

no flow record *record-name*

Syntax Description

record-name	Name of the flow record that is created or modified.

Defaults

Flow records are not present in the configuration until you create them.

Command Modes

Global configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Flexible NetFlow uses key and non-key fields just as original NetFlow does to create and populate flows in a cache. In Flexible NetFlow a combination of key and non-key fields is called a record. Original NetFlow and Flexible NetFlow both use the values in key fields in IP datagrams, such as the IP source or destination address and the source or destination transport protocol port, as the criteria for determining when a new flow must be created in the cache while network traffic is being monitored. A flow is defined as a stream of packets between a given source and a given destination. New flows are created whenever NetFlow analyzes a packet that has a unique value in one of the key fields.

Once you enter the flow record configuration mode, the prompt changes to the following:

```
n1000v(config-flow-record)#
```

Within the flow record configuration mode, the following keywords and arguments are available to configure the flow record:

- **collect**—Specifies a non-key field. See the **collect** command for additional information.
- **description** *description*—Provides a description for this flow record; maximum of 63 characters.
- **exit**—Exits from the current configuration mode.
- **match**—Specifies a key field. See the **match** command for additional information.
- **no**—Negates a command or sets its defaults.

Cisco NX-OS enables the following match fields by default when you create a flow record:

- **match interface input**

- **match interface output**
- **match flow direction**

Examples

The following example creates a flow record named FLOW-RECORD-1, and enters Flexible NetFlow flow record configuration mode:

```
n1000v(config)# flow record FLOW-RECORD-1
n1000v(config-flow-record)#
```

Related Commands

Command	Description
clear flow monitor	Clears the flow monitor.
flow monitor	Creates a flow monitor.
show flow monitor	Displays flow monitor status and statistics.

format

To format an external Flash device to erase the contents and restore it to its factory-shipped state, use the **format** command.

format *filesystem***:**

Syntax Description

*filesystem***:**	Name of the file system. The valid values are **bootflash, logflash, slot0**, **usb1**, or **usb2**.

Defaults

None

Command Modes

Any

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to format an external Flash device:

```
n1000v# format slot0:
```

Related Commands

Command	Description
cd	Changes the current working directory.
dir	Displays the directory contents.
pwd	Displays the name of the current working directory.

from (table map)

To specify a set of mappings of input field values to output field values in a table map, use the **from** command.

from *source-value* **to** *dest-value*

Syntax Description

source-value	Specifies the source value in the range from 0 to 63.
dest-value	Specifies the destination value in the range from 0 to 63.

Defaults

None

Command Modes

Table map configuration

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to create a mapping from three source values to the corresponding destination values:

```
n1000v(config)# table-map cir-markdown-map
n1000v(config-tmap)# from 0 to 7
n1000v(config-tmap)# from 1 to 6
n1000v(config-tmap)# from 2 to 5
```

Related Commands

Command	Description
show table-map	Displays table maps.