



## I Commands

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This chapter describes the Cisco NX-OS system management commands that begin with the letter I.

### ip flow monitor

To enable a Flexible NetFlow flow monitor for traffic that the router is receiving or forwarding, use the **ip flow monitor** interface configuration mode command. To disable a Flexible NetFlow flow monitor, use the **no** form of this command.

**ip flow monitor** *monitor-name* {**input** | **output**} [**sampler** *sampler-name*]

#### Syntax Description

<i>monitor-name</i>	Name of a flow monitor that you previously configured.
<b>input</b>	Monitors traffic that the routers is receiving on the interface.
<b>output</b>	Monitors traffic that the routers is transmitting on the interface.
<b>sampler</b>	(Optional) Specifies the name of a flow sampler for the flow monitor.
<i>sampler-name</i>	Enables a flow sampler for this flow monitor using the name of a sampler that you previously configured.

#### Command Default

Disabled.

#### Command Modes

Interface configuration

#### Supported User Roles

network-admin  
vdc-admin

#### Command History

Release	Modification
4.0(1)	This command was introduced.

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### Usage Guidelines

You must have already created a flow monitor by using the **flow monitor** command before you can apply the flow monitor to an interface with the **ip flow monitor** command to enable traffic monitoring with Flexible NetFlow.

You must have already created a sampler by using the **sampler** command before you can enable a flow sampler for this flow monitor with the **ip flow monitor** command.

This command does not require a license.

### ip flow monitor sampler

When adding a sampler to a flow monitor, only packets which are selected by the named sampler will be entered into the cache to form flows. Each use of a sampler will result in separate statistics being stored for that usage.

You cannot add a sampler to a flow monitor after the flow monitor has been enabled on an interface. You must remove the flow monitor from the interface prior to enabling the same flow monitor with a sampler. See the “Examples” section for more information.



### Note

The statistics for each flow will need to be scaled to give the expected true usage. For example, if using a 1 in 10 sampler it is expected that the packet and byte counters will need to be multiplied by 10.

### Examples

The following example enables a flow monitor for monitoring input traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
```

The following example enables a flow monitor for monitoring output traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 output
```

The following example enables the same flow monitor on the same interface for monitoring input and output traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
switch(config-if)# ip flow monitor FLOW-MONITOR-1 output
```

The following example enables two different flow monitors on the same interface for monitoring input and output traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
switch(config-if)# ip flow monitor FLOW-MONITOR-2 output
```

The following example enables the same flow monitor on two different interfaces for monitoring input and output traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
switch(config)# interface ethernet1/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 output
```

The following example enables two different flow monitors on two different interfaces for monitoring input and output traffic:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
```

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```
switch(config)# interface ethernet1/0
switch(config-if)# ip flow monitor FLOW-MONITOR-2 output
```

The following example enables a flow monitor for monitoring input traffic, with a sampler to limit the input packets that are sampled:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
```

The following example enables a flow monitor for monitoring output traffic, with a sampler to limit the output packets that are sampled:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 output sampler SAMPLER-1
```

The following example enables two different flow monitors for monitoring input and output traffic, with a sampler on the flow monitor that is monitoring input traffic to limit the input packets that are sampled:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
switch(config-if)# ip flow monitor FLOW-MONITOR-2 output
```

The following example enables two different flow monitors for monitoring input and output traffic, with a sampler on the flow monitor that is monitoring output traffic to limit the output packets that are sampled:

```
switch(config)# interface ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-2 input
switch(config-if)# ip flow monitor FLOW-MONITOR-2 output sampler SAMPLER-1
```

The following example shows what happens when you try to add a sampler to a flow monitor that has already been enabled on an interface without a sampler:

```
switch(config)# interface Ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
% Flow Monitor: Flow Monitor 'FLOW-MONITOR-1' is already on in full mode and cannot be
enabled with a sampler.
```

The following example shows how to remove the flow monitor from the interface so that it can be enabled with the sampler:

```
switch(config)# interface Ethernet0/0
switch(config-if)# no ip flow monitor FLOW-MONITOR-1 input
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
```

The following example shows what happens when you try to remove a sampler from a flow monitor on an interface by entering the **flow monitor** command again without the **sampler sampler-name** keyword and argument:

```
switch(config)# interface Ethernet0/0
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
% Flow Monitor: Flow Monitor 'FLOW-MONITOR-1' is already on in sampled mode and cannot be
enabled in full mode.
```

The following example shows how to remove the flow monitor that was enabled with a sampler from the interface so that it can be enabled without the sampler:

```
switch(config)# interface Ethernet0/0
switch(config-if)# no ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input
```

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Related Commands	Command	Description
	<b>flow exporter</b>	Creates a flow exporter.
	<b>flow monitor</b>	Creates a flow monitor.
	<b>flow record</b>	Creates a flow record.
	<b>sampler</b>	Creates a flow sampler.