



CHAPTER 12

Configuring SPAN

This chapter describes how to configure an Ethernet switched port analyzer (SPAN) to analyze traffic between ports.

This chapter includes the following sections:

- [Information About SPAN, page 12-1](#)
- [Licensing Requirements for SPAN, page 12-5](#)
- [Prerequisites for SPAN, page 12-5](#)
- [Guidelines and Limitations, page 12-5](#)
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Information About SPAN

You can use the SPAN feature to analyze all traffic between ports (called the SPAN source ports) by nonintrusively directing the SPAN session traffic to a SPAN destination port that has an external analyzer attached to it.

You create SPAN sessions to define the sources and destinations to use for the monitored network traffic. SPAN sessions apply to the local device.

This section includes the following topics:

- [SPAN Sources, page 12-2](#)
- [SPAN Destinations, page 12-2](#)
- [SPAN Sessions, page 12-3](#)
- [Virtual SPAN Sessions, page 12-3](#)
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SPAN Sources

The interfaces from which traffic can be monitored are called SPAN sources. Sources designate the traffic to monitor and whether to copy ingress, egress, or both directions of traffic. SPAN sources include the following:

- Ethernet ports
- VLANs
When a VLAN is specified as a SPAN source, all supported interfaces in the VLAN are SPAN sources.
- Remote SPAN (RSPAN) VLANs
- The inband interface to the control plane CPU
You can monitor the inband interface only from the default VDC. Inband traffic from all VDCs is monitored.

**Note**

A single SPAN session can include mixed sources in any combination of the above.

Characteristics of Source Ports

SPAN source ports have the following characteristics:

- A port configured as a source port cannot also be configured as a destination port.
- An RSPAN VLAN can only be used as a SPAN source.
- If you use the supervisor inband interface as a SPAN source, the following packets are monitored:
 - all packets that arrive on the supervisor hardware (ingress)
 - all packets generated by the supervisor hardware (egress)

SPAN Destinations

SPAN destinations refer to the interfaces that monitor source ports. Destination ports receive the copied traffic from SPAN sources.

Characteristics of Destination Ports

SPAN destination ports have the following characteristics:

- Destinations for a SPAN session include Ethernet ports or port-channel interfaces in either access or trunk mode.
- A port configured as a destination port cannot also be configured as a source port.
- A destination port can be configured in only one SPAN session at a time.
- Destination ports do not participate in any spanning tree instance. SPAN output includes Bridge Protocol Data Unit (BPDU) Spanning-Tree Protocol hello packets.
- An RSPAN VLAN can not be used as a SPAN destination.

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SPAN Sessions

You can create up to 18 SPAN sessions designating sources and destinations to monitor.

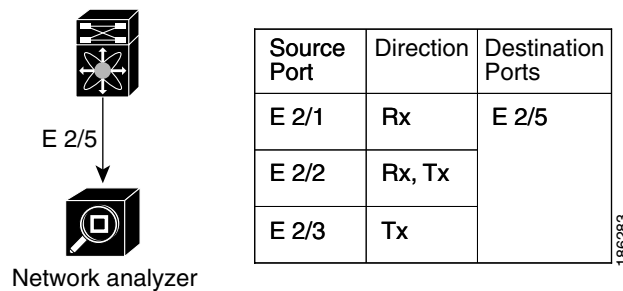


Note

Only two SPAN sessions can be running simultaneously.

Figure 12-1 shows a SPAN configuration. Packets on three Ethernet ports are copied to destination port Ethernet 2/5. Only traffic in the direction specified is copied.

Figure 12-1 SPAN Configuration



Network analyzer

Virtual SPAN Sessions

You can create a virtual SPAN session to monitor multiple VLAN sources and choose only VLANs of interest to transmit on multiple destination ports. For example, you can configure SPAN on a trunk port and monitor traffic from different VLANs on different destination ports.

Figure 12-2 shows a virtual SPAN configuration. The virtual SPAN session copies traffic from the three VLANs to the three specified destination ports. You can choose which VLANs to allow on each destination port to limit the traffic that the device transmits on it. In Figure 12-2, the device transmits packets from one VLAN at each destination port.

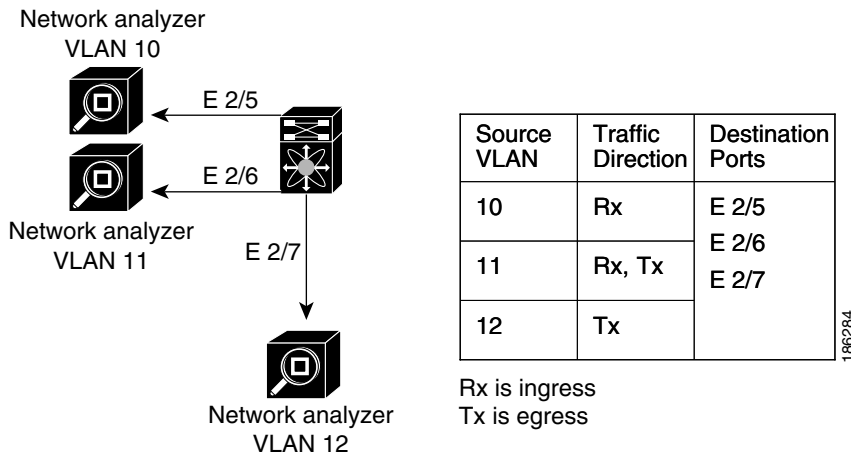


Note

Virtual SPAN sessions cause all source packets to be copied to all destinations, whether the packets are required at the destination or not. VLAN traffic filtering occurs at the egress destination port level.

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Figure 12-2 Virtual SPAN Configuration



For information about configuring a virtual SPAN session, see the “[Configuring a Virtual SPAN Session](#)” section on page 12-9.

Multiple SPAN Sessions

Although you can define up to 18 SPAN sessions, only two SPAN sessions can be running simultaneously. You can shut down an unused SPAN session.

For information about shutting down SPAN sessions, see the “[Shutting Down or Resuming a SPAN Session](#)” section on page 12-12.

High Availability

The SPAN feature supports stateless and stateful restarts. After a reboot or supervisor switchover, Cisco NX-OS applies the running configuration.

Virtualization Support

A virtual device context (VDC) is a logical representation of a set of system resources. SPAN applies only to the VDC where the commands are entered.



Note

You can monitor the inband interface only from the default VDC. Inband traffic from all VDCs is monitored.

For information about configuring VDCs, see the *Cisco Nexus 7000 Series NX-OS Virtual Device Context Configuration Guide, Release 4.0* at the following URL:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/virtual_device_context/configuration/guide/vdc_nx-os_book.html

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Licensing Requirements for SPAN

The following table shows the licensing requirements for this feature:

Product	License Requirement
NX-OS	SPAN requires no license. Any feature not included in a license package is bundled with the Cisco NX-OS system images and is provided at no extra charge to you. For a complete explanation of the NX-OS licensing scheme, see the <i>Cisco Nexus 7000 Series NX-OS Licensing Guide, Release 4.0</i> at the following URL: http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/licensing/configuration/guide/nx-os_licensing.html

Prerequisites for SPAN

SPAN has the following prerequisites:

- You must first configure the ports on each device to support the desired SPAN configuration. For more information, see the *Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 4.0* at the following URL:
http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/interfaces/configuration/guide/if_nxos_book.html
- You must first configure the destination ports to monitor a SPAN session using the **switchport monitor** command.

Guidelines and Limitations

SPAN has the following configuration guidelines and limitations:

- A maximum of 18 SPAN sessions can be configured on a device.
- A maximum of two SPAN sessions can be running simultaneously on a device.
- A destination port can only be configured in one SPAN session at a time.
- You cannot configure a port as both a source and destination port.
- A single SPAN session can include mixed sources in any combination of the following:
 - Ethernet ports
 - VLANs
 - The inband interface to the control plane CPU
- Destination ports do not participate in any spanning tree instance. SPAN output includes Bridge Protocol Data Unit (BPDU) Spanning-Tree Protocol hello packets.
- When a SPAN session contains source ports that are monitored in the transmit or transmit and receive direction, packets that these ports receive may be replicated to the SPAN destination port even though the packets are not actually transmitted on the source ports. Some examples of this behavior on source ports include:
 - Traffic that results from flooding
 - Broadcast and multicast traffic

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- For VLAN SPAN sessions with both ingress and egress configured, two packets (one from ingress and one from egress) are forwarded from the destination port if the packets get switched on the same VLAN.
- VLAN SPAN monitors only the traffic that leaves or enters Layer 2 ports in the VLAN.
- You can monitor the inband interface only from the default VDC. Inband traffic from all VDCs is monitored.
- You can configure an RSPAN VLAN for use only as a SPAN session source.
- You can configure a SPAN session on the local device only.
- If you configure a SPAN session to monitor a routed interface, only the received traffic is captured, even if the session is configured for both directions. This limitation is only for traffic that enters a Layer 2 interface (with SVI as a Layer 3 interface) and then exits a routed (physical Layer 3) interface, which is the source of the monitor session. If traffic enters a routed (physical Layer 3) interface and exits another routed (physical Layer 3) interface, which is the source of the monitor session, then the destination port of the monitor session captures traffic in both directions. A SPAN session captures traffic in both directions if traffic entering the routed port is destined to an IP address (SVI) on the switch.

Configuring SPAN

This section includes the following topics:

- [Configuring a SPAN Session, page 12-6](#)
- [Configuring a Virtual SPAN Session, page 12-9](#)
- [Configuring an RSPAN VLAN, page 12-11](#)
- [Shutting Down or Resuming a SPAN Session, page 12-12](#)



Note

Cisco NX-OS commands for this feature may differ from those in Cisco IOS.

Configuring a SPAN Session

You can configure a SPAN session on the local device only. By default, SPAN sessions are created in the shut state.

For sources, you can specify Ethernet ports, port channels, the supervisor inband interface, VLANs, and RSPAN VLANs. You can specify private VLANs (primary, isolated, and community) in SPAN sources.

For destination ports, you can specify Ethernet ports or port-channels in either access or trunk mode. You must enable monitor mode on all destination ports.

BEFORE YOU BEGIN

- When you specify the supervisor inband interface for a SPAN source, the device monitors all packets that arrive on the supervisor hardware (ingress) and all packets generated by the supervisor hardware (egress).
- Make sure that you are in the correct VDC (or use the **switchto vdc** command).

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- A single SPAN session can include mixed sources in any combination of Ethernet ports, VLANs, or the inband interface to the control plane CPU.
- You must have already configured the destination ports in access or trunk mode. For more information, see the *Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 4.0* at the following URL:
http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/interfaces/configuration/guide/if_nxos_book.html

SUMMARY STEPS

1. **config t**
2. **interface ethernet** *slot/port[-port]*
3. **switchport monitor**
4. Repeat Steps 2 and 3 to configure monitoring on all SPAN destinations.
5. **no monitor session** *session-number*
6. **monitor session** *session-number*
7. **description** *description*
8. **source** {**interface** *type* | **vlan** {*number* | *range*} [**rx** | **tx** | **both**]}
9. Repeat Step 8 to configure all SPAN sources.
10. **filter vlan** {*number* | *range*}
11. Repeat Step 10 to configure all source VLANs to filter.
12. **destination interface** *type* {*number* | *range*}
13. Repeat Step 12 to configure all SPAN destination ports.
14. **no shut**
15. **show monitor session** {**all** | *session-number* | **range** *session-range*} [**brief**]
16. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: switch# config t switch(config)#	Enters global configuration mode.
Step 2	interface ethernet <i>slot/port[-port]</i> Example: switch(config)# interface ethernet 2/5 switch(config-if)#	Enters interface configuration mode on the selected slot and port or range of ports.
Step 3	switchport monitor Example: switch(config-if)# switchport monitor allowed vlan 3-5	Configures the switchport interface to monitor SPAN traffic. Note The interface must already be configured as a switchport in trunk mode.

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	Command	Purpose
Step 4	(Optional) Repeat Steps 2 and 3 to configure monitoring on all SPAN destinations.	—
Step 5	no monitor session <i>session-number</i> Example: switch(config)# no monitor session 3	Clears the configuration of the specified SPAN session. The new session configuration is added to the existing session configuration.
Step 6	monitor session <i>session-number</i> Example: switch(config)# monitor session 3 switch(config-monitor)#	Enters the Monitor Configuration mode. The new session configuration is added to the existing session configuration. By default, the session is created in the shut state.
Step 7	description <i>description</i> Example: switch(config-monitor)# description my_span_session_3	Configures a description for the session. By default, no description is defined. The description can be up to 32 alphanumeric characters.
Step 8	source { interface <i>type</i> vlan } { <i>number</i> <i>range</i> } [rx tx both] Example 1: switch(config-monitor)# source interface ethernet 2/1-3, ethernet 3/1 rx Example 2: switch(config-monitor)# source interface port-channel 2 Example 3: switch(config-monitor)# source interface sup-eth 0 both Example 4: switch(config-monitor)# source vlan 3, 6-8 tx	Configures sources and the traffic direction in which to copy packets. You can enter a range of Ethernet ports, a port channel, an inband interface, or a range of VLANs. You can configure one or more sources, as either a series of comma-separated entries, or a range of numbers. The number value for interfaces is from 1 to 128. The number value for VLANs is from 1 to 3967, or 4048 to 4093. You can specify the traffic direction to copy as ingress (tx), egress (tx), or both. By default, the direction is both. Note You can monitor the inband interface only from the default VDC. The inband traffic from all VDCs is monitored.
Step 9	(Optional) Repeat Step 8 to configure all SPAN sources.	—
Step 10	filter vlan { <i>number</i> <i>range</i> } Example: switch(config-monitor)# filter vlan 3-5, 7	Configures which VLANs to select from the configured sources. You can configure one or more VLANs, as either a series of comma-separated entries, or a range of numbers. The number value for VLANs is from 1 to 3967, or 4048 to 4093
Step 11	(Optional) Repeat Step 10 to configure all source VLANs to filter.	—
Step 12	destination interface <i>type</i> { <i>number</i> <i>range</i> } Example: switch(config-monitor)# destination interface ethernet 2/5, ethernet 3/7	Configures destinations for copied source packets. You can configure one or more destinations, as either a series of comma-separated entries, or a range of numbers. The number value for interfaces is from 1 to 128. Note SPAN destination ports must be either access or trunk ports. You must enable monitor mode on the interface using the switchport monitor command.

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	Command	Purpose
Step 13	(Optional) Repeat Step 12 to configure all SPAN destination ports.	—
Step 14	no shut Example: switch(config-monitor)# no shut	Enables the SPAN session. By default, the session is created in the shut state. Note Only two SPAN sessions can be running simultaneously.
Step 15	show monitor session {all session-number range session-range} [brief] Example: switch(config-monitor)# show monitor session 3	(Optional) Displays the SPAN configuration.
Step 16	copy running-config startup-config Example: switch(config-monitor)# copy running-config startup-config	(Optional) Copies the running configuration to the startup configuration.

Configuring a Virtual SPAN Session

You can configure a virtual SPAN session to copy packets from source ports, VLANs, and RSPAN VLANs to destination ports on the local device. By default, SPAN sessions are created in the shut state.

For sources, you can specify ports, VLANs, or RSPAN VLANs.

For destination ports, you can specify Ethernet ports. You can choose which VLANs to allow on each destination port to limit the traffic that the device transmits on it.

BEFORE YOU BEGIN

- Ensure that you are in the correct VDC (or use the **switchto vdc** command).
- You have already configured the destination ports in trunk mode. For more information, see the *Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 4.0* at the following URL: http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/interfaces/configuration/guide/if_nxos_book.html
- You have already configured the destination ports to monitor a SPAN session with the **switchport monitor** command.

SUMMARY STEPS

1. **config t**
2. **no monitor session session-number**
3. **monitor session session-number**
4. **source {interface type | vlan} {number | range} [rx | tx | both]**
5. Repeat Step 4 to configure all virtual SPAN VLAN sources.
6. **destination interface type {number | range}**
7. Repeat Step 6 to configure all virtual SPAN destination ports.
8. **no shut**

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9. **show monitor session** {all | session-number | range session-range} [brief]
10. **interface ethernet** slot/port[-port]
11. **switchport trunk allowed vlan** {{number | range} | add {number | range} | except {number | range} | remove {number | range} | all | none}
12. Repeat Steps 10 and 11 to configure the allowed VLANs on each destination port.
13. **show interface ethernet** slot/port[-port] trunk
14. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: switch# config t switch(config)#	Enters global configuration mode.
Step 2	no monitor session session-number Example: switch(config)# no monitor session 3	Clears the configuration of the specified SPAN session. New session configuration is added to the existing session configuration.
Step 3	monitor session session-number Example: switch(config)# monitor session 3 switch(config-monitor)#	Enters the monitor configuration mode. New session configuration is added to the existing session configuration.
Step 4	source {interface type vlan} {number range} [rx tx both] Example: switch(config-monitor)# source vlan 3, 6-8 tx	Configures sources and the traffic direction in which to copy packets. You can configure one or more sources, as either a series of comma-separated entries, or a range of numbers. The number value for interfaces is from 1 to 128. The number value for VLANs is from 1 to 3967, or 4048 to 4093. You can specify the traffic direction to copy as ingress (tx), egress (tx), or both. By default, the direction is both.
Step 5	(Optional) Repeat Step 4 to configure all virtual SPAN source VLANs.	—
Step 6	destination interface type {number range} Example: switch(config-monitor)# destination interface ethernet 2/5, ethernet 3/7	Configures destinations for copied source packets. You can configure one or more interfaces, as either a series of comma-separated entries, or a range of numbers. The number value for interfaces is from 1 to 128.. Note You configure destination ports as trunk ports. For more information, see the <i>Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 4.0</i> .
Step 7	(Optional) Repeat Step 6 to configure all virtual SPAN destination ports.	—

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	Command	Purpose
Step 8	no shut Example: switch(config-monitor)# no shut	Enables the SPAN session. By default, the session is created in the shut state. Note Only two SPAN sessions can be running simultaneously.
Step 9	show monitor session {all session-number range session-range} [brief] Example: switch(config-monitor)# show monitor session 3	(Optional) Displays the virtual SPAN configuration.
Step 10	interface ethernet slot/port[-port] Example: switch(config)# interface ethernet 2/5 switch(config-if)#	Enters interface configuration mode on the selected slot and port or range of ports.
Step 11	switchport trunk allowed vlan {{number range} add {number range} except {number range} remove {number range} all none} Example: switch(config-if)# switchport trunk allowed vlan 3-5	Configures the range of VLANs that are allowed on the interface. You can add to or remove from the existing VLANs, you can select all VLANs except those you specify, or you can select all or none of the VLANs. By default, all VLANs are allowed on the interface. You can configure one or more VLANs, as either a series of comma-separated entries, or a range of numbers. The number value for VLANs is from 1 to 3967, or 4048 to 4093.
Step 12	(Optional) Repeat Steps 10 and 11 to configure the allowed VLANs on each destination port.	—
Step 13	show interface ethernet slot/port[-port] trunk Example: switch(config-if)# show interface ethernet 2/5 trunk	(Optional) Displays the interface trunking configuration for the selected slot and port or range of ports.
Step 14	copy running-config startup-config Example: switch(config-if)# copy running-config startup-config	(Optional) Copies the running configuration to the startup configuration.

Configuring an RSPAN VLAN

You can specify a remote SPAN (RSPAN) VLAN as a SPAN session source.

BEFORE YOU BEGIN

Ensure that you are in the correct VDC (or use the **switchto vdc** command).

SUMMARY STEPS

1. **config t**

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2. `vlan vlan`
3. `remote-span`
4. `exit`
5. `show vlan`
6. `copy running-config startup-config`

DETAILED STEPS

	Command	Purpose
Step 1	<code>config t</code> Example: <code>switch# config t</code> <code>switch(config)#</code>	Enters global configuration mode.
Step 2	<code>vlan vlan</code> Example: <code>switch(config)# vlan 901</code> <code>switch(config-vlan)#</code>	Enters VLAN configuration mode for the VLAN specified.
Step 3	<code>remote-span</code> Example: <code>switch(config-vlan)# remote-span</code>	Configures the VLAN as an RSPAN VLAN.
Step 4	<code>exit</code> Example: <code>switch(config-vlan)# exit</code> <code>switch(config)#</code>	Exits VLAN configuration mode.
Step 5	<code>show vlan</code> Example: <code>switch(config)# show vlan</code>	(Optional) Displays the VLAN configuration. Remote SPAN VLANs are listed together.
Step 6	<code>copy running-config startup-config</code> Example: <code>switch(config)# copy running-config startup-config</code>	(Optional) Copies the running configuration to the startup configuration.

Shutting Down or Resuming a SPAN Session

You can shut down SPAN sessions to discontinue the copying of packets from sources to destinations. Because only two SPAN sessions can be running simultaneously, you can shut down one session in order to free hardware resources to enable another session. By default, SPAN sessions are created in the shut state.

You can resume (enable) SPAN sessions to resume the copying of packets from sources to destinations. In order to enable a SPAN session that is already enabled but operationally down, you must first shut it down and then enable it.

You can configure the shut and enabled SPAN session states with either a global or monitor configuration mode command.

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BEFORE YOU BEGIN

Ensure that you are in the correct VDC (or use the **switchto vdc** command).

SUMMARY STEPS

1. **config t**
2. **monitor session** {*session-range* | **all**} **shut**
3. **no monitor session** {*session-range* | **all**} **shut**
4. **monitor session** *session-number*
5. **shut**
6. **no shut**
7. **show monitor**
8. **copy running-config startup-config**

DETAILED STEPS

	Command	Purpose
Step 1	config t Example: switch# config t switch(config)#	Enters global configuration mode.
Step 2	monitor session { <i>session-range</i> all } shut Example: switch(config)# monitor session 3 shut	Shuts down the specified SPAN sessions. The session ranges from 1 to 18. By default, sessions are created in the shut state. Only two sessions can be running at a time.
Step 3	no monitor session { <i>session-range</i> all } shut Example: switch(config)# no monitor session 3 shut	Resumes (enables) the specified SPAN sessions. The session ranges from 1 to 18. By default, sessions are created in the shut state. Only two sessions can be running at a time. Note If a monitor session is enabled but its operational status is down, then to enable the session you must first specify the monitor session shut command followed by the no monitor session shut command.
Step 4	monitor session <i>session-number</i> Example: switch(config)# monitor session 3 switch(config-monitor)#	Enters the monitor configuration mode. The new session configuration is added to the existing session configuration.
Step 5	shut Example: switch(config-monitor)# shut	Shuts down the SPAN session. By default, the session is created in the shut state.

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	Command	Purpose
Step 6	no shut Example: switch(config-monitor)# no shut	Enables the SPAN session. By default, the session is created in the shut state. Note Only two SPAN sessions can be running simultaneously.
Step 7	show monitor Example: switch(config-monitor)# show monitor	(Optional) Displays the status of SPAN sessions.
Step 8	copy running-config startup-config Example: switch(config-monitor)# copy running-config startup-config	(Optional) Copies the running configuration to the startup configuration.

Verifying the SPAN Configuration

To display SPAN configuration information, perform one of the following tasks:

Command	Purpose
show monitor session {all session-number range session-range} [brief]	Displays the SPAN session configuration.

For detailed information about the fields in the output from these commands, see the *Cisco NX-OS System Management Command Reference* at the following URL:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/system_management/command/reference/sm_cmd_ref.html

SPAN Example Configurations

This section includes the following topics:

- [SPAN Session Example Configuration, page 12-14](#)
- [Virtual SPAN Session Example Configuration, page 12-15](#)
- [Private VLAN Source in SPAN Session Example Configuration, page 12-16](#)

SPAN Session Example Configuration

To configure a SPAN session, follow these steps:

Step 1 Configure destination ports in access or trunk mode, and enable SPAN monitoring.

```
switch# config t
switch(config)# interface ethernet 2/5
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
```

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```
switch(config-if)# switchport monitor
switch(config-if)# no shut
switch(config-if)# exit
switch(config)#
```

Step 2 Configure a SPAN session.

```
switch(config)# no monitor session 3
switch(config)# monitor session 3
switch(config-monitor)# source interface ethernet 2/1-3, ethernet 3/1 rx
switch(config-monitor)# source interface port-channel 2
switch(config-monitor)# source interface sup-eth 0 both
switch(config-monitor)# source vlan 3, 6-8 tx
switch(config-monitor)# filter vlan 3-5, 7
switch(config-monitor)# destination interface ethernet 2/5
switch(config-monitor)# no shut
switch(config-monitor)# exit
switch(config)# show monitor session 3
switch(config)# copy running-config startup-config
```

Virtual SPAN Session Example Configuration

To configure a virtual SPAN session, follow these steps:

Step 1 Configure destination ports in access or trunk mode, and enable SPAN monitoring.

```
switch# config t
switch(config)# interface ethernet 3/1
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
switch(config-if)# switchport trunk allowed vlan add 100-200
switch(config-if)# switchport monitor
switch(config-if)# no shut
switch(config-if)# exit
switch(config)# interface ethernet 3/2
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
switch(config-if)# switchport trunk allowed vlan add 201-300
switch(config-if)# switchport monitor
switch(config-if)# no shut
switch(config-if)# exit
switch(config)#
```

Step 2 Configure a SPAN session.

```
switch(config)# no monitor session 3
switch(config)# monitor session 3
switch(config-monitor)# source vlan 100-300
switch(config-monitor)# destination interface ethernet 3/1-2
switch(config-monitor)# no shut
switch(config-monitor)# exit
switch(config)# show monitor session 3
switch(config)# copy running-config startup-config
```

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Private VLAN Source in SPAN Session Example Configuration

To configure a SPAN session that includes a private VLAN source, follow these steps:

Step 1 Configure source VLANs.

```
switch# config t
switch(config)# vlan 100
switch(config-vlan)# private-vlan primary
switch(config-vlan)# exit
switch(config)# interface ethernet 3/1
switch(config-if)# switchport
switch(config-if)# switchport access vlan 100
switch(config-if)# no shut
switch(config-if)# exit
switch(config)# interface ethernet 3/2
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
switch(config-if)# switchport trunk native vlan 100
switch(config-if)# no shut
switch(config-if)# exit
switch(config)#
```

Step 2 Configure destination ports in access or trunk mode, and enable SPAN monitoring.

```
switch# config t
switch(config)# interface ethernet 3/3
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
switch(config-if)# switchport trunk allowed vlan add 100-200
switch(config-if)# switchport monitor
switch(config-if)# no shut
switch(config-if)# exit
switch(config)#
```

Step 3 Configure a SPAN session.

```
switch(config)# no monitor session 3
switch(config)# monitor session 3
switch(config-monitor)# source vlan 100
switch(config-monitor)# destination interface ethernet 3/3
switch(config-monitor)# no shut
switch(config-monitor)# exit
switch(config)# show monitor session 3
switch(config)# copy running-config startup-config
```

Additional References

For additional information related to implementing SPAN, see the following sections:

- [Related Documents, page 12-17](#)
- [Standards, page 12-17](#)

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Related Documents

Related Topic	Document Title
VDCs	<i>Cisco Nexus 7000 Series NX-OS Virtual Device Context Configuration Guide, Release 4.0</i> at the following URL: http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/virtual_device_context/configuration/guide/vdc_nx-os_book.html
SPAN commands: complete command syntax, command modes, command history, defaults, usage guidelines, and examples	<i>Cisco NX-OS System Management Command Reference</i> at the following URL: http://www.cisco.com/en/US/docs/switches/datacenter/sw/4_0/nx-os/system_management/command/reference/sm_cmd_ref.html

Standards

Standards	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

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