



# Configuring ERSPAN

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## Information About ERSPAN

ERSPAN transports mirrored traffic over an IP network, which provides remote monitoring of multiple switches across your network. The traffic is encapsulated at the source router and is transferred across the network. The packet is decapsulated at the destination router and then sent to the destination interface.

ERSPAN consists of an ERSPAN source session, routable ERSPAN generic routing encapsulation (GRE)-encapsulated traffic, and an ERSPAN destination session. You can separately configure ERSPAN source sessions and destination sessions on different switches.

## ERSPAN Source Sessions

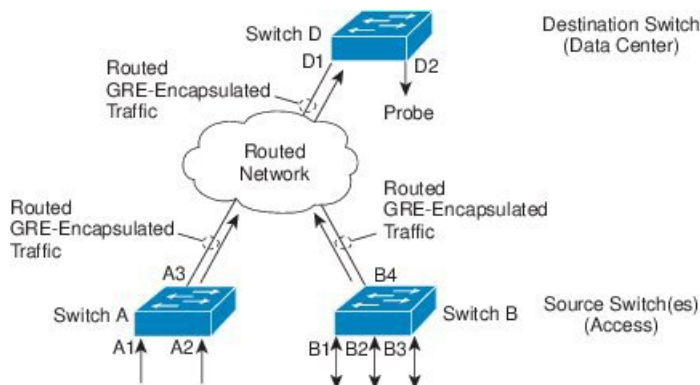
An ERSPAN source session is defined by the following:

- A session ID.
- A list of source ports, source VLANs, or source VSANs to be monitored by the session.
- An ERSPAN flow ID.
- Optional attributes related to the GRE envelope such as IP TOS and TTL.
- Destination IP address.
- Virtual Routing and Forwarding tables.

ERSPAN source sessions do not copy ERSPAN GRE-encapsulated traffic from source ports. Each ERSPAN source session can have ports, VLANs, or VSANs as sources. However, there are some limitations. For more information, see Guidelines and Limitations for ERSPAN.

The following figure shows an example ERSPAN configuration.

**Figure 1: ERSPAN Configuration**



## Monitored Traffic

By default, ERSPAN monitors all traffic, including multicast and bridge protocol data unit (BPDU) frames.

The direction of the traffic that ERSPAN monitors depends on the source, as follows:

- For a source port, the ERSPAN can monitor ingress, egress, or both ingress and egress traffic.
- For a source VLAN or source VSAN, the ERSPAN can monitor only ingress traffic.

## ERSPAN Sources

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

- Source Ports—A source port is a port monitored for traffic analysis. You can configure source ports in any VLAN, and trunk ports can be configured as source ports and mixed with nontrunk source ports.
- Source VLANs—A source VLAN is a virtual local area network (VLAN) that is monitored for traffic analysis.
- Source VSANs—A source VSAN is a virtual storage area network (VSAN) that is monitored for traffic analysis.

## Truncated ERSPAN

Truncated ERSPAN can be used to reduce the amount of fabric or network bandwidth used in sending ERSPAN packets.

The default is no truncation so switches or routers receiving large ERSPAN packets might drop these oversized packets.



**Note** Do not enable the truncated ERSPAN feature if the destination ERSPAN router is a Cisco Nexus 6001 or Cisco Nexus 6004 switch because the Cisco Nexus 6000 Series switch drops these truncated packets.

## Multiple ERSPAN Sessions

For information about shutting down ERSPAN sessions, see [Shutting Down or Activating an ERSPAN Session, on page 11](#).

## High Availability

The ERSPAN feature supports stateless restarts. After a reboot, the running configuration is applied.

## Licensing Requirements for ERSPAN

The following table shows the licensing requirements for this feature:

| Product     | License Requirement   |
|-------------|---|
| Cisco NX-OS | ERSPAN 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 Cisco NX-OS licensing scheme, see the <i>License and Copyright Information for Cisco NX-OS Software</i> available at the following URL:<br><a href="http://www.cisco.com/US/products/switches/4010/related_documents/nxos.html">http://www.cisco.com/US/products/switches/4010/related_documents/nxos.html</a> |

## Prerequisites for ERSPAN

ERSPAN has the following prerequisite:

- You must first configure the Ethernet interfaces for ports on each device to support the desired ERSPAN configuration. For more information, see the Interfaces configuration guide for your platform.

## Guidelines and Limitations for ERSPAN

ERSPAN has the following guidelines and limitations:

- Cisco Nexus 5000 Series switches support only ERSPAN source sessions. Destination sessions are not supported.
- The Cisco Nexus 5000 Series switch supports a maximum of 2 sessions.
- The Cisco Nexus 5500 Series switch supports a maximum of 4 sessions.

- The maximum number of ports for each ERSPAN session is 32.
- You can have source ports, source VLANs, and source VSANs in one ERSPAN session.
- On Cisco Nexus 5000 Series switches, ERSPAN can monitor ingress, egress, or both ingress and egress traffic on a source port and only ingress traffic on source VLANs or source VSANs as long as the VLAN is not mapped to a VSAN.
- On Cisco 5500 Series switches, source ports and source VLANs can be in the same ERSPAN session.
- ERSPAN traffic can exit the switch through a Layer 2 interface, Layer 3 interface, port channel, or FabricPath core port.
- The Cisco Nexus 5000 series switch cannot reach a destination IP address of a remote switch through a virtual Ethernet port or FEX port. This functionality is not supported.
- ERSPAN traffic is not load balanced if the reachability to a destination IP address is a Layer 3 ECMP or a port channel. In the case of ECMP, the ERSPAN traffic is sent to only one next-hop router or one member of the port channel.
- ERSPAN on the Cisco Nexus 5000 Series switch supports Fast Ethernet, Gigabit Ethernet, TenGigabit Ethernet, and port channel interfaces as source ports for a source session.
- When a session is configured through the ERSPAN configuration commands, the session ID and the session type cannot be changed. In order to change them, you must first use the no version of the configuration command to remove the session and then reconfigure the session.
- ERSPAN traffic might compete with regular data traffic.
- ERSPAN traffic is assigned to the QoS class-default system class (qos-group 0).
- To ensure that data traffic is prioritized over ERSPAN traffic, you can create a QoS system class with prioritization above the class-default system class on the ERSPAN destination port.  
On Layer 3 networks, ERSPAN traffic can be marked with a the desired Differentiated Services Code Point (DSCP) value using the ip dscp command. By default, ERSPAN traffic is marked with a DSCP value of 0.
- ERSPAN can monitor ingress traffic on a source VSAN only on Cisco Nexus 5010 and 5020 switches.
- ERSPAN cannot monitor egress traffic on source VLANs and VSANs on any Cisco Nexus 5000 Series switch.
- ERSPAN can monitor ingress, egress, or both ingress and egress traffic on a source port.
- VSANs as ERSPAN sources are not allowed on Cisco Nexus 5548 and 5596 switches.
- ERSPAN source sessions are supported on F3 Series modules. Beginning with Cisco NX-OS Release 7.0, ERSPAN destination sessions are also supported on these modules. However, ERSPAN ACL sessions are not supported on F3 Series modules.
- The SPAN session ignores any permit or deny actions specified in the access-list, and spans only the packets that match the access-list filter criteria.

## Default Settings for ERSPAN

The following table lists the default settings for ERSPAN parameters.

*Table 1: Default ERSPAN Parameters*

| Parameters       | Default                    |
|------------------|----------------------------|
| ERSPAN sessions  | Created in the shut state. |
| Truncated ERSPAN | Disabled.                  |

## Configuring ERSPAN

### Configuring an ERSPAN Source Session

The ERSPAN source session defines the session configuration parameters and the ports or VLANs to be monitored. This section describes how to configure an ERSPAN source session.

#### Procedure

|               | Command or Action   | Purpose  |
|---------------|---|--|
| <b>Step 1</b> | <b>configuration terminal</b><br><br><b>Example:</b><br><pre>switch# config t switch(config)#</pre>   | Enters global configuration mode.  |
| <b>Step 2</b> | <b>monitor session <i>span-session-number</i> type {erspan-source   local}</b><br><br><b>Example:</b><br><pre>switch(config)# monitor session 1 type erspan-source switch(config-erspan-src)#</pre> | <p>Defines an ERSPAN source session using the session ID and the session type, and places the command in ERSPAN monitor source session configuration mode.</p> <p>The <i>span-session-number</i> argument range is from 1 to 1024. The same session number cannot be used more than once.</p> <p>The session IDs for source sessions are in the same global ID space, so each session ID is globally unique for both session types.</p> <p>The session ID (configured by the <i>span-session-number</i> argument) and the session type (configured by the <b>erspan-source</b> keyword) cannot be changed once entered. To change session ID or session type, use the <b>no</b> version of the command to remove the session and then recreate the session through the</p> |

|                | Command or Action  | Purpose   |
|----------------|--|---|
|                |  | command with a new session ID or a new session type.  |
| <b>Step 3</b>  | (Optional) <b>description</b><br><i>erspan_session_description</i><br><br><b>Example:</b><br>switch(config-erspan-src)# description<br>sourcel                               | Describes the ERSPAN source session.<br><br>The <i>erspan_session_description</i> argument can be up to 240 characters and cannot contain special characters or spaces. |
| <b>Step 4</b>  | <b>source interface</b> { <i>ethernet slot/chassis number</i>   <i>portchannel number</i> }<br><br><b>Example:</b><br>switch(config-erspan-src)# source<br>interface eth 1/1 | Associates the ERSPAN source session number with the source ports (1-255).  |
| <b>Step 5</b>  | <b>source vlan</b> <i>number</i><br><br><b>Example:</b><br>switch(config-erspan-src)# source vlan<br>1   | Associates the ERSPAN source session number with the VLANs (1-4096).  |
| <b>Step 6</b>  | <b>source vsan</b> <i>number</i><br><br><b>Example:</b><br>switch(config-erspan-src)# source vsan<br>1   | On Cisco Nexus 5000 Series switches, specifies the VSAN ID number. The range is 1 to 4093. On Cisco Nexus 5500 Series switches, you cannot configure source VSANs.      |
| <b>Step 7</b>  | <b>destination ip</b> <i>ip-address</i><br><br><b>Example:</b><br>switch(config-erspan-src)# destination<br>ip 192.0.2.2   | Configures the destination IP address in the ERSPAN session. Only one destination IP address is supported per ERSPAN source session.                                    |
| <b>Step 8</b>  | <b>erspan-id</b> <i>flow-id</i><br><br><b>Example:</b><br>switch(config-erspan-src)# erspan-id 5   | Configures the flow ID to identify the ERSPAN flow. The range is from 1 to 1023.  |
| <b>Step 9</b>  | <b>vrf</b> { <i>vrf-name</i>   <b>default</b> }<br><br><b>Example:</b><br>switch(config-erspan-src)# vrf default   | Configures the VRF to use instead of the global routing table. You can use a VRF that you have specifically configured or the default VRF.                              |
| <b>Step 10</b> | (Optional) <b>ip ttl</b> <i>ttl-number</i><br><br><b>Example:</b><br>switch(config-erspan-src)# ip ttl 5   | Configures the IP time-to-live (TTL) value of the packets in the ERSPAN traffic. Valid values are from 1 to 255. The default value is 255.                              |
| <b>Step 11</b> | (Optional) <b>ip dscp</b> <i>dscp_value</i><br><br><b>Example:</b><br>switch(config-erspan-src)# ip dscp 42  | Configures the IP Differentiated Services Code Point (DSCP) value of the packets in the ERSPAN traffic. Valid values are from 0 to 63. The default value is 0.          |

|                | Command or Action   | Purpose  |
|----------------|---|--|
| <b>Step 12</b> | <b>no shut</b><br><b>Example:</b><br><pre>switch(config-erspan-src)# no shut</pre>  | Enables the ERSPAN source session. By default, the session is created in the shut state.<br><br><b>Note</b> On Cisco Nexus 5000 Series switches, only two ERSPAN source sessions can be running simultaneously. On Cisco Nexus 5500 Series switches, up to four source sessions can be running simultaneously. |
| <b>Step 13</b> | <b>exit</b><br><b>Example:</b><br><pre>switch(config-erspan-src)# exit switch(config)# exit</pre>   | Updates the configuration and exits ERSPAN source session configuration mode.  |
| <b>Step 14</b> | (Optional) <b>copy running-config startup-config</b><br><b>Example:</b><br><pre>switch(config-erspan-src)# copy running-config startup-config</pre> | Copies the running configuration to the startup configuration.   |

## Configuring a Source Rate Limit for an ERSPAN Session

Depending upon the platform, each TCAM region might have a different minimum/maximum/aggregate size restriction. The default size of the EFP TCAM for IPv4 Egress VACL (e-vacl) is 512 and Egress RACL (e-racl) is 512.

To enable the ERSPAN rate-limit feature, you must carve e-racl TCAM region to program TCAM entry in the EFP TCAM to match on ERSPAN mirror copy traffic and provide policer result with the new configured rate-limit. If the default values of the egress TCAM are not changed or if the e-racl region has a non-zero value, then you need not explicitly carve TCAM to enable ERSPAN egress rate-limit feature. However, if the e-racl region was carved to be zero earlier then you must resize other TCAM regions to allocate entries for e-racl region. After TCAM carving, you must save the configuration and reload the switch.

### Procedure

|               | Command or Action   | Purpose                              |
|---------------|---|--------------------------------------|
| <b>Step 1</b> | <b>configure terminal</b><br><b>Example:</b><br><pre>switch# config t switch(config)#</pre> | Enters global configuration mode.    |
| <b>Step 2</b> | <b>monitor session {session-number   all} type erspan-source</b><br><b>Example:</b>         | Configures an ERSPAN source session. |

|               | Command or Action   | Purpose  |
|---------------|---|--|
|               | <pre>switch(config)# monitor session 1 type erspan-source switch(config-erspan-src)#</pre>  |  |
| <b>Step 3</b> | <p><b>hardware profile tcam region</b> {arpacl   {ipv6-e-racl   e-racl}   ifacl   ipsg   {ipv6-qos   qos}   qoslbl   {ipv6-racl   racl}   vacl }<br/><i>tcam_size</i></p> | <p>Changes the ACL TCAM region size.</p> <ul style="list-style-type: none"> <li>• <b>arpacl</b>—Configures the size of the Address Resolution Protocol (ARP) ACL (ARPACL) TCAM region.</li> <li>• <b>e-racl</b>—Configures the size of the egress router ACL (ERACL) TCAM region.</li> <li>• <b>e-vacl</b>—Configures the size of the egress VLAN ACL (EVACL) TCAM region.</li> <li>• <b>ifacl</b>—Configures the size of the interface ACL (ifacl) TCAM region. The maximum number of entries is 1500.</li> <li>• <b>ipsg</b>—Configures the size of the IP Source Guard (IPSG) TCAM region.</li> <li>• <b>qos</b>—Configures the size of the quality of service (QoS) TCAM region.</li> <li>• <b>qoslbl</b>—Configures the size of the QoS Label (qoslbl) TCAM region.</li> <li>• <b>racl</b>—Configures the size of the router ACL (RACL) TCAM region.</li> <li>• <b>vacl</b>—Configures the size of the VLAN ACL (VACL) TCAM region.</li> <li>• <i>tcam_size</i>—TCAM size. The range is from 0 to 2,14,74, 83, 647 entries.</li> </ul> <p><b>Note</b>     <b>vacl</b> and <b>e-vacl</b> TCAM regions should be set to the same size. You must carve e-racl regions with non-zero TCAM values.</p> |
| <b>Step 4</b> | <p><b>copy running-config startup-config</b></p> <p><b>Example:</b></p> <pre>switch(config)# copy running-config startup-config</pre>                                     | <p>Saves the change persistently through reboots and restarts by copying the running configuration to the startup configuration.</p>   |
| <b>Step 5</b> | <p><b>switch(config)# show hardware profile tcam region</b></p> <p><b>Example:</b></p> <pre>switch(config)# show hardware profile tcam region</pre>                       | <p>Displays the TCAM sizes that will be applicable on the next reload of the switch.</p>   |



|               | Command or Action  | Purpose   |
|---------------|--|---|
| <b>Step 6</b> | <pre>switch(config)# reload</pre> <p><b>Example:</b></p> <pre>switch(config)# reload</pre>   | <p>Copies the running configuration to the startup configuration.</p> <p><b>Note</b> The new size values are effective only upon the next reload after saving the <b>copy running-config to startup-config</b>.</p> |
| <b>Step 7</b> | <pre>switch(config)# hardware rate-limit erspan-egress</pre> <p><b>Example:</b></p> <pre>switch(config)# hardware rate-limit erspan-egress 1000 kbps</pre>                         | Specifies the ERSPAN egress rate-limit.   |
| <b>Step 8</b> | <pre>switch(config)# show hardware rate-limit erspan-egress</pre> <p><b>Example:</b></p> <pre>switch(config)# show hardware rate-limit erspan-egress</pre>                         | Displays the configured ERSPAN egress rate-limit and also the permitted and dropped ERSPAN traffic statistics.  |
| <b>Step 9</b> | <pre>switch(config)# clear hardware rate-limit erspan-egress statistics</pre> <p><b>Example:</b></p> <pre>switch(config)# clear hardware rate-limit erspan-egress statistics</pre> | Clears the currently permitted and dropped ERSPAN traffic statistics.   |

### Example

The following example shows how to change the size of the e-VACL region:

```
switch(config)# hardware profile tcam region e-vacl 256
[SUCCESS] New tcam size will be applicable only at boot time.
You need to 'copy run start' and 'reload'
```

```
switch(config)# copy running-config startup-config
switch(config)# reload
WARNING: This command will reboot the system
Do you want to continue? (y/n) [n] y
```

The following example shows how to configure ERSPAN rate-limit:

```
switch# configure terminal
switch(config)# hardware rate-limit erspan-egress 1000 kbps
```

## Configuring an Origin IP Address for ERSPAN Packets

You must configure an IP address to be used as the source of the ERSPAN traffic.

**Procedure**

|               | <b>Command or Action</b>  | <b>Purpose</b>  |
|---------------|---|---|
| <b>Step 1</b> | <b>configure terminal</b><br><b>Example:</b><br>switch# configure terminal<br>switch(config)#   | Enters global configuration mode.   |
| <b>Step 2</b> | <b>monitor erspan origin ip-address <i>ip_address</i></b><br><b>Example:</b><br>switch(config)# monitor erspan origin<br>ip-address 192.0.2.1 | Configures an IP address to be used as the source of the ERSPAN traffic.  |
| <b>Step 3</b> | <b>exit</b><br><b>Example:</b><br>switch(config-erspan-src)# exit   | Updates the configuration and exits ERSPAN source session configuration mode.   |
| <b>Step 4</b> | (Optional) <b>copy running-config startup-config</b><br><b>Example:</b><br>switch(config)# copy running-config<br>startup-config              | Saves the change persistently through reboots and restarts by copying the running configuration to the startup configuration. |

## Configuring Truncated ERSPAN

You can configure an MTU size for the ERSPAN traffic to reduce the amount of fabric or network bandwidth used in sending ERSPAN packets.

**Procedure**

|               | <b>Command or Action</b>   | <b>Purpose</b>  |
|---------------|--|---|
| <b>Step 1</b> | enable<br><b>Example:</b><br>switch> enable  | Enables privileged EXEC mode. Enter your password if prompted.  |
| <b>Step 2</b> | <b>configure terminal</b><br><b>Example:</b><br>switch# configure terminal<br>switch(config)#  | Enters global configuration mode.   |
| <b>Step 3</b> | <b>monitor session <i>erspan_session_number</i> type {erspan-source   local}</b><br><b>Example:</b><br>switch(config)# monitor session 1 type<br>erspan-source<br>switch(config-erspan-src)# | Defines an ERSPAN source session using the session ID and the session type, and places the command in ERSPAN monitor source session configuration mode.<br><br>The span-session-number argument range is from 1 to 1024. The same session number cannot be used more than once. |

|               | Command or Action  | Purpose   |
|---------------|--|---|
|               |  | <p>The session IDs for source sessions are in the same global ID space, so each session ID is globally unique for both session types.</p> <p>The session ID (configured by the span-session number argument) and the session type (configured by the erspan-source keyword) cannot be changed once entered. To change session ID or session type, use the no version of the command to remove the session and then re-create the session through the command with a new session ID or a new session type.</p> |
| <b>Step 4</b> | <b>mtu</b> <i>mtu-value</i><br><b>Example:</b><br><pre>switch(config-erspan-src)# mtu 64</pre>   | <p>Defines the maximum transmission unit (MTU) truncation size for ERSPAN packets. Valid values are from 64 to 1518.</p> <p>The default is no truncation enabled.</p>   |
| <b>Step 5</b> | <b>exit</b><br><b>Example:</b><br><pre>switch(config-mon-erspan-src)# exit</pre>   | <p>Updates the configuration and exits ERSPAN source session configuration mode.</p>  |
| <b>Step 6</b> | <b>(Optional) copy running-config startup-config</b><br><b>Example:</b><br><pre>switch(config)# copy running-config startup-config</pre> | <p>Saves the change persistently through reboots and restarts by copying the running configuration to the startup configuration.</p>  |

## Shutting Down or Activating an ERSPAN Session

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

You can enable ERSPAN sessions to activate the copying of packets from sources to destinations. To enable an ERSPAN session that is already enabled but operationally down, you must first shut it down and then enable it. You can shut down and enable the ERSPAN session states with either a global or monitor configuration mode command.

### Procedure

|               | Command or Action   | Purpose                                  |
|---------------|---|--|
| <b>Step 1</b> | <b>configuration terminal</b><br><b>Example:</b><br><pre>switch# configuration terminal switch(config)#</pre> | <p>Enters global configuration mode.</p> |

|               | Command or Action  | Purpose  |
|---------------|--|--|
| <b>Step 2</b> | <p><b>monitor session</b> {<i>session-range</i>   <b>all</b>} <b>shut</b></p> <p><b>Example:</b></p> <pre>switch(config)# monitor session 3 shut</pre>   | <p>Shuts down the specified ERSPAN sessions. The session range is from 1 to 48. By default, sessions are created in the shut state.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• In Cisco Nexus 5000 and 5500 platforms, two sessions can run simultaneously.</li> <li>• In Cisco Nexus 5600 and 6000 platforms, 16 sessions can run simultaneously.</li> </ul>   |
| <b>Step 3</b> | <p><b>no monitor session</b> {<i>session-range</i>   <b>all</b>} <b>shut</b></p> <p><b>Example:</b></p> <pre>switch(config)# no monitor session 3 shut</pre>   | <p>Resumes (enables) the specified ERSPAN sessions. The session range is from 1 to 48. By default, sessions are created in the shut state. Only two sessions can be running at a time.</p> <p><b>Note</b> If a monitor session is enabled but its operational status is down, then to enable the session, you must first specify the <b>monitor session shut</b> command followed by the <b>no monitor session shut</b> command.</p> |
| <b>Step 4</b> | <p><b>monitor session</b> <i>session-number</i> <b>type</b> <b>erspan-source</b></p> <p><b>Example:</b></p> <pre>switch(config)# monitor session 3 type erspan-source switch(config-erspan-src)#</pre> | <p>Enters the monitor configuration mode for the ERSPAN source type. The new session configuration is added to the existing session configuration.</p>   |
| <b>Step 5</b> | <p><b>monitor session</b> <i>session-number</i> <b>type</b> <b>erspan-destination</b></p> <p><b>Example:</b></p> <pre>switch(config-erspan-src)# monitor session 3 type erspan-destination</pre>       | <p>Enters the monitor configuration mode for the ERSPAN destination type.</p>  |
| <b>Step 6</b> | <p><b>shut</b></p> <p><b>Example:</b></p> <pre>switch(config-erspan-src)# shut</pre>   | <p>Shuts down the ERSPAN session. By default, the session is created in the shut state.</p>  |
| <b>Step 7</b> | <p><b>no shut</b></p> <p><b>Example:</b></p> <pre>switch(config-erspan-src)# no shut</pre>   | <p>Enables the ERSPAN session. By default, the session is created in the shut state.</p>   |
| <b>Step 8</b> | <p>(Optional) <b>show monitor session all</b></p> <p><b>Example:</b></p>   | <p>Displays the status of ERSPAN sessions.</p>   |

|                | Command or Action   | Purpose  |
|----------------|---|--|
|                | <code>switch(config-erspan-src)# show monitor session all</code>  |  |
| <b>Step 9</b>  | (Optional) <b>show running-config monitor</b><br><b>Example:</b><br><code>switch(config-erspan-src)# show running-config monitor</code>               | Displays the running ERSPAN configuration.                     |
| <b>Step 10</b> | (Optional) <b>show startup-config monitor</b><br><b>Example:</b><br><code>switch(config-erspan-src)# show startup-config monitor</code>               | Displays the ERSPAN startup configuration.                     |
| <b>Step 11</b> | (Optional) <b>copy running-config startup-config</b><br><b>Example:</b><br><code>switch(config-erspan-src)# copy running-config startup-config</code> | Copies the running configuration to the startup configuration. |

## Verifying the ERSPAN Configuration

Use the following command to verify the ERSPAN configuration information:

| Command  | Purpose                                    |
|--|--|
| <code>show monitor session {all   session-number   range session-range}</code> | Displays the ERSPAN session configuration. |
| <code>show running-config monitor</code>                                       | Displays the running ERSPAN configuration. |
| <code>show startup-config monitor</code>                                       | Displays the ERSPAN startup configuration. |

## Configuration Examples for ERSPAN

### Configuration Example for an ERSPAN Source Session

The following example shows how to configure an ERSPAN source session:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# description source1
switch(config-erspan-src)# source interface ethernet 1/1
switch(config-erspan-src)# source vlan 1
switch(config-erspan-src)# source vsan 1
switch(config-erspan-src)# destination ip 192.0.2.2
switch(config-erspan-src)# erspan-id 1
switch(config-erspan-src)# vrf default
```

```

switch(config-erspan-src)# ip ttl 5
switch(config-erspan-src)# ip dscp 5
switch(config-erspan-src)# no shut
switch(config-erspan-src)# exit
switch(config)# copy running-config startup config

switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# description source1
switch(config-erspan-src)# source interface ethernet 1/1
switch(config-erspan-src)# source vlan 1
switch(config-erspan-src)# source vsan 1
switch(config-erspan-src)# destination ip 192.0.2.2
switch(config-erspan-src)# erspan-id 1
switch(config-erspan-src)# vrf default
switch(config-erspan-src)# ip ttl 5
switch(config-erspan-src)# ip dscp 5
switch(config-erspan-src)# no shut
switch(config-erspan-src)# exit
switch(config)# copy running-config startup config

```

## Configuration Example for an IP Address as the Source for an ERSPAN Session

This example shows how to configure an IP address as the source for an ERSPAN session:

```

switch# configure terminal
switch(config)# monitor erspan origin ip-address 192.0.2.1
switch(config)# exit
switch(config)# copy running-config startup config

```

## Configuration Example for Truncated ERSPAN

This example shows how to configure truncated ERSPAN:

```

switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# mtu 64
switch(config-mon-erspan-src)# exit
switch(config)# copy running-config startup config

```

## Additional References

### Related Documents

| Related Topic  | Document Title  |
|--|---|
| ERSPAN commands: complete command syntax, command modes, command history, defaults, usage guidelines, and examples | <i>Cisco Nexus NX-OS System Management Command Reference</i> for your platform. |