



Configuring RSPAN

This document describes the Remote Switched Port Analyzer (RSPAN) feature and configuration steps to implement RSPAN.

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Prerequisites for Configuring RSPAN

- You must enable SPAN globally to support the desired SPAN configuration.
- NID must have an IP address.
- You must select a SPAN source from the following options:
 - Interface—one or more source interfaces.
 - VLAN— one or more source VLANs.
 - CPU— to monitor CPU traffic.

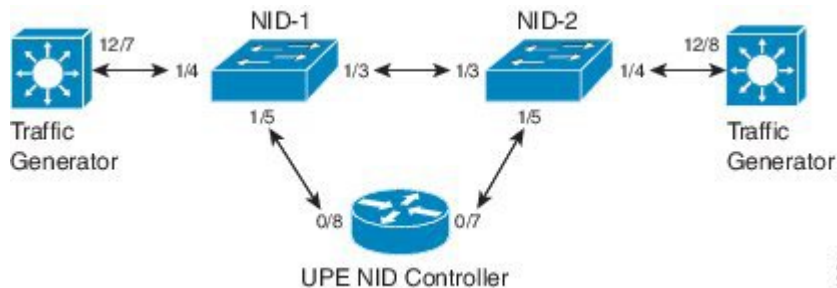
Restrictions for Configuring RSPAN

- You cannot configure a port as both a source and destination port.
- VLAN SPAN monitors only the traffic that leaves or enters Layer 2 ports in the VLAN.
- SPAN sources interface and VLAN cannot exist together.

Information About RSPAN

Remote Switched Port Analyzer (RSPAN) is an advanced feature that requires a special VLAN to carry the traffic that is monitored by SPAN between switches. RSPAN is useful when source ports are not located on the same switch as the destination port. The following figure shows the topology used for provisioning RSPAN on two NIDs using a UPE NID Controller.

Figure 1: RSPAN Topology



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How to Provision RSPAN

Enabling SPAN Globally to Start a Monitoring Session

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: Switch# configure terminal	Enters global configuration mode.
Step 2	controller nid 1 NID_ID Example: Switch(config)# controller nid 1/2	Enters the controller configuration mode.
Step 3	span Example: Switch(config-controller)# span	Enters the SPAN mode.
Step 4	setSpanGlobalConfReq {enable disable} Example: Switch(config-controller-SPAN)# setSpanGlobalConfReq enable	Enters SPAN global configuration mode. Sub-command options. • enable —Enables SPAN globally.

	Command or Action	Purpose
		<ul style="list-style-type: none"> • disbale—Disables SPAN globally.
Step 5	setSpanGlobalConf review Example: Switch(config-controller-SPAN)# setSpanGlobalConf review	(Optional) Displays the configuration.
Step 6	setSpanGlobalConf commit Example: Switch(config-controller-SPAN)# setSpanGlobalConf commit	Sends the configuration to NID.
Step 7	exit Example: Switch(config-controller-SPAN)# exit	Exits to the config-controller mode.

Configuration Example

- The example shows how to enable SPAN globally:

```
Switch(config)# controller nid 1/1
Switch(config-controller)# span
Switch(config-controller-SPAN)# setSpanGlobalConf setSpanGlobalConfReq enable
Switch(config-controller-SPAN)# setSpanGlobalConf review
Switch(config-controller-SPAN)# setSpanGlobalConf commit
Switch(config-controller-SPAN)# exit
```

Configuring SPAN Source Interface on NID-1

Before You Begin

Perform the steps to enable SPAN globally. See [Enabling SPAN Globally to Start a Monitoring Session](#).

DETAILED STEPS

	Command or Action	Purpose
Step 1	setSpanSrcConfRequest {source {cpu {rx tx both} {vlan vlan_list} interface {intf_range} traffic-type {rx tx both}}} Example: Switch(config-controller-SPAN)# setSpanSrcConf commitsetSpanSrcConf setSpanSrcConfRequest source interface intf_range 1/4	Configures SPAN source interface. <ul style="list-style-type: none"> • source—Mirrors source interface or VLAN. • cpu—Mirrors source CPU. • rx—Mirrors received traffic. • tx—Mirrors transmitted traffic. • both—Mirrors received and transmitted traffic.

	Command or Action	Purpose
		<ul style="list-style-type: none"> • vlan—Mirrors source VLAN. • vlan_list—Mirrors source VLAN. • interface— Mirrors source interface and traffic type. • intf_range—Mirrors an interface number or a range from 1 to 6. • traffic-type—Mirrors traffic type. • rx—Mirrors received traffic. • tx—Mirrors transmitted traffic. • both—Mirrors received and transmitted traffic.
Step 2	setSpanSrcConf review Example: Switch(config-controller-SPAN) # setSpanSrcConf review	(Optional) Displays the configuration.
Step 3	setSpanGlobalConf commit Example: Switch(config-controller-SPAN) # setSpanSrcConf commit	Sends the configuration to NID.
Step 4	exit Example: Switch(config-controller-SPAN) # exit	Exits to the config-controller mode.

Configuration Example

- The example shows how to configure SPAN source on NID-1:

```
Switch(config-controller-SPAN) # setSpanSrcConf commitsetSpanSrcConf setSpanSrcConfRequest
source interface intf_range 1/4
Switch(config-controller-SPAN) # setSpanSrcConf review
Switch(config-controller-SPAN) # setSpanSrcConf commit
Switch(config-controller-SPAN) # exit
```

Configuring Destination VLAN on NID-1

Before You Begin

Perform the steps to configure SPAN source on NID-1. See [Configuring SPAN Source Interface on NID-1, on page 3](#).

DETAILED STEPS

	Command or Action	Purpose
Step 1	setrSpandestConf setRSpanDestConfRequest remote <i>vlan_id</i> Example: <pre>Switch(config-controller-SPAN)# setrSpandestConf setRSpanDestConfRequest 500 vlan_id 500</pre>	Configures destination VLAN. <ul style="list-style-type: none"> • remote—Mirrors remote destination. • <i>vlan_id</i>— Remote mirror destination VLAN number.
Step 2	setrSpandestConf review Example: <pre>Switch(config-controller-SPAN)# setrSpandestConf review</pre>	(Optional) Displays the configuration.
Step 3	setrSpandestConf commit Example: <pre>Switch(config-controller-SPAN)# setrSpandestConf commit</pre>	Sends the configuration to NID.
Step 4	exit Example: <pre>Switch(config-controller-SPAN)# exit</pre>	Exits to the config-controller mode.

Configuration Example

- The example shows how to configure destination VLAN on NID-1:

```
Switch(SPAN)# exit Switch(config-controller-SPAN)# setrSpandestConf
setRSpanDestConfRequest remote vlan_id 500
Switch(config-controller-SPAN)# setrSpandestConf review
Switch(config-controller-SPAN)# setrSpandestConf commit
Switch(config-controller-SPAN)# exit
```

Configuring Source VLAN on NID-2

DETAILED STEPS

	Command or Action	Purpose
Step 1	configure terminal Example: <pre>Switch# configure terminal</pre>	Enters the global configuration mode.

	Command or Action	Purpose
Step 2	controller nid 1/NID_ID Example: Switch(config)# controller nid 1/2	Enters the controller configuration mode.
Step 3	span Example: Switch(config-controller)# span	Enters the SPAN mode.
Step 4	setRSpansrcConf setRSpanSrcConfRequest remote vlan_id Example: Switch((config-controller)SPAN)# setRSpansrcConf setRSpanSrcConfRequest remote vlan_id 500	Configures RSPAN source. <ul style="list-style-type: none"> • remote—Mirrors remote source. • vlan_id— Remote mirror source VLAN number.
Step 5	setRSpansrcConf review Example: Switch((config-controller)SPAN)# setRSpansrcConf review	(Optional) Displays the configuration.
Step 6	setRSpansrcConf commit Example: Switch((config-controller)SPAN)# setRSpansrcConf commit	Sends the configuration to NID.
Step 7	exit Example: Switch((config-controller)SPAN)# exit	Exits to the config-controller mode.

Configuration Example

- The example shows how to configure source VLAN on NID-2:

```

Switch(config)# controller nid 1/2
Switch(config-controller)# span
Switch(config-controller-SPAN)# setSpanGlobalConf setSpanGlobalConfReq enable
Switch(config-controller-SPAN)# setSpanGlobalConf review
Switch(config-controller-SPAN)# setSpanGlobalConf commit
Switch(config-controller-SPAN)# exit
Switch(config-controller-SPAN)# setRSpansrcConf setRSpanSrcConfRequest remote vlan_id
500
Switch(config-controller-SPAN)# setRSpansrcConf review
Switch(config-controller-SPAN)# setRSpansrcConf commit
Switch(config-controller-SPAN)# exit

```

Configuring Destination Interface on NID-2

Before You Begin

Perform the steps to configure source VLAN on NID-2. See [Configuring Source VLAN on NID-2](#), on page 5.

DETAILED STEPS

	Command or Action	Purpose
Step 1	setSpanDestConf setSpanDestConfRequest destination <i>intf_id</i> Example: Switch(config-controller-SPAN)# setSpanDestConf setSpanDestConfRequest destination intf_id 5	Configures destination interface. <ul style="list-style-type: none"> • destination—Mirrors destination interface. • intf_id— Single port ID from 1 to 6.
Step 2	setSpanDestConf review Example: Switch(config-controller-SPAN)# setSpanDestConf review	(Optional) Displays the configuration.
Step 3	setSpanDestConf commit Example: Switch(config-controller-SPAN)# setSpanDestConf commit	Sends the configuration to NID.
Step 4	exit Example: Switch(config-controller-SPAN)# exit	Exits to the config-controller mode.

Configuration Example

- The example shows how to configure destination VLAN on NID-1:

```
Switch(config-controller-SPAN)# setSpanDestConf setSpanDestConfRequest destination
intf_id 5
Switch(config-controller-SPAN)# setSpanDestConf review
Switch(config-controller-SPAN)# setSpanDestConf commit
Switch(config-controller-SPAN)# exit
```

Deleting RSPAN Source Configuration on NID-2

DETAILED STEPS

	Command or Action	Purpose
Step 1	delRSpanSrcConfRequest remote <i>vlan_id</i> Example: Switch(config-controller-SPAN)# delRSpanSrcConf delRSpanSrcConfRequest remote <i>vlan_id</i> 500	Deletes RSPAN source configuration. <ul style="list-style-type: none"> • remote—Removes remote mirror source. • <i>vlan_id</i>— Removes remote mirror source VLAN number.
Step 2	delRSpanSrcConf review Example: Switch(config-controller-SPAN)# delRSpanSrcConf review	(Optional) Displays the configuration.
Step 3	delRSpanSrcConf commit Example: Switch(config-controller-SPAN)# delRSpanSrcConf commit	Sends the configuration to NID.
Step 4	exit Example: Switch(config-controller-SPAN)# exit	Exits to the config-controller mode.

Configuration Example

- The example shows how to delete RSPAN source configuration on NID-2:

```
Switch(config-controller-SPAN)# delRSpanSrcConf delRSpanSrcConfRequest remote vlan_id
500
Switch(config-controller-SPAN)# delRSpanSrcConf review
Switch(config-controller-SPAN)# delRSpanSrcConf commit
Switch(config-controller-SPAN)# exit
```


Deleting RSPAN Destination Configuration on NID-1

DETAILED STEPS

	Command or Action	Purpose
Step 1	delRSpanDstConfRequest remote <i>vlan_id</i> Example: <pre>Switch(config-controller-SPAN)# delRSpanDstConf delRSpanDstConfRequest remote <i>vlan_id</i> 500</pre>	Deletes RSPAN destination configuration. <ul style="list-style-type: none"> • remote—Removes remote mirror destination. • <i>vlan_id</i>—Removes remote mirror destination VLAN number.
Step 2	delSpanDstConf review Example: <pre>Switch(config-controller-SPAN)# delRSpanDstConf review</pre>	(Optional) Displays the configuration.
Step 3	delSpanDstConf commit Example: <pre>Switch(config-controller-SPAN)# delRSpanDstConf commit</pre>	Sends the configuration to NID.
Step 4	exit Example: <pre>Switch(config-controller-SPAN)# exit</pre>	Exits to the config-controller mode.

Configuration Example

- The example shows how to delete RSPAN destination configuration on NID-1:

```
Switch(config-controller-SPAN)# delRSpanDstConf delRSpanDstConfRequest remote vlan_id
500
Switch(config-controller-SPAN)# delRSpanDstConf review
Switch(config-controller-SPAN)# delRSpanDstConf commit
Switch(config-controller-SPAN)# exit
```

Verifying RSPAN

Use the following commands to verify the RSPAN status on the controller.

- **showSpanConfig showSpanConfigReq**

This command displays the SPAN configuration status on the NID, when source interface is 1/4 and traffic type is both. The following is a sample output from the command:

```
Switch(config-controller-SPAN)# showSpanConfig showSpanConfigReq
Switch(config-controller-SPAN)# showSpanConfig review
```

```

Commands in queue:
  showSpanConfig showSpanConfigReq

Switch(config-controller-SPAN)# showSpanConfig commit

ShowSpanConfig_Output.showSpanConfigResp.span_config[0] = 'Session:
1, Mode: Disabled'
ShowSpanConfig_Output.showSpanConfigResp.span_config[1] = 'Type: Remote
Source Session'
ShowSpanConfig_Output.showSpanConfigResp.span_config[2] = 'Dest RMIRROR
VLAN: 500'
ShowSpanConfig_Output.showSpanConfigResp.span_config[3] = 'Source
VLAN(s): '
ShowSpanConfig_Output.showSpanConfigResp.span_config[4] = 'Source
port(s): 1/5'
ShowSpanConfig_Output.showSpanConfigResp.span_config[5] = 'Traffic
Type: '
ShowSpanConfig_Output.showSpanConfigResp.span_config[6] = 'rx : 1/5'
ShowSpanConfig_Output.showSpanConfigResp.span_config[7] = 'Destination
Ports: 1/4'
ShowSpanConfig Commit Success!!!

```

Additional References

Related Documents

Related Topic	Document Title
Cisco ME 3800x and ME 3600x Switches Software Configuration Guide, Cisco IOS Release 15.4(1)S	http://www.cisco.com/c/en/us/td/docs/switches/metro/me3600x_3800x/software/release/15-4_1_S/configuration/guide/3800x3600xscg.html

MIBs

MIB	MIBs Link
MIBs Supporting Cisco IOS	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	<p>http://www.cisco.com/support</p>

