

1 SPAN Commands

Command	Function
default monitor session	Delete all switch port analyzer (SPAN) sessions.
destination ip address	Configure the destination IP address when the encapsulation type is GRE.
ip dscp	Configure the DSCP value for an encapsulated IP packet.
ip ttl	Configure the TTL value for an encapsulated IP packet.
mac-loopback	Enable the MAC loopback function of an interface.
monitor session destination interface	Configure a destination port for a local SPAN session.
monitor session destination remote vlan interface	Configure an output port on an RSPAN source device or a destination port on an RSPAN destination device for an RSPAN session.
monitor session erpsan-source	Create an ERSPAN session.
monitor session filter vlan	Exclude one or more VLANs as the data source of SPAN.
monitor session remote-source	Configure the source device for an RSPAN session.
monitor session remote-destination	Configure a destination device for an RSPAN session.
monitor session source interface	Configure the source port for a local SPAN session.
monitor session source vlan	Specify a VLAN as the data source of SPAN.
no monitor session	Delete all SPAN sessions.
remote-span	Configure a remote VLAN.
origin ip address	Configure a source IP address for GRE encapsulation.
show monitor	Display the SPAN sessions.
source interface	Configure a source port for ERSPAN.
shutdown	Shut down an ERSPAN session.
vrf	Associate a VRF with ERSPAN.

1.1 default monitor session

Function

Run the **default monitor session** command to delete all switch port analyzer (SPAN) sessions.

Syntax

```
default monitor session { session-number | all }
```

Parameter Description

session-number: ID of a SPAN session. The value range is from 1 to 4.

all: Indicates all SPAN sessions.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example displays SPAN sessions configured on the device.

```
Hostname> enable
Hostname# show running-config | include monitor session
monitor session 1 remote-source
monitor session 1 destination remote vlan 10 interface GigabitEthernet 0/1
monitor session 1 filter vlan 3 rx
```

The following example removes all the SPAN sessions from the device.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# default monitor session all
Hostname(config)# exit
Hostname# show running-config | include monitor session
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.2 destination ip address

Function

Run the **destination ip address** command to configure the destination IP address when the encapsulation type is GRE.

Run the **no** form of this command to remove this configuration.

By default, no destination IP address is configured when the encapsulation type is GRE.

Syntax

```
destination ip address ipv4-address
no destination ip address
```

Parameter Description

ipv4-address: Destination IP address when the encapsulation type is GRE.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the destination IP address to 10.1.1.2 when the SPAN encapsulation type is GRE.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# destination ip address 10.1.1.2
```

Notifications

When the entered IP address is invalid, the following notification will be displayed:

```
Invalid ip address
```

Platform Description

N/A

Common Errors

N/A

Related Commands

N/A

1.3 ip dscp

Function

Run the **ip dscp** command to configure the DSCP value for an encapsulated IP packet.

Run the **no** form of this command to restore the default DSCP value.

The default DSCP of the encapsulated IP packet is **0**.

Syntax

ip dscp *dscp-value*

no ip dscp

Parameter Description

dscp-value: DSCP value of the encapsulated IP packet. The value range is from 0 to 63.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the DSCP of the encapsulated IP packet to 56.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# ip dscp 56
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.4 ip ttl

Function

Run the **ip ttl** command to configure the TTL value for an encapsulated IP packet.

Run the **no** form of this command to restore the default TTL value.

The default TTL of the encapsulated IP packet is **64**.

Syntax

ip ttl *ttl-value*

no ip ttl

Parameter Description

ttl-value: TTL value of the encapsulated IP packet. The value range is from 1 to 255.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the TTL of the encapsulated IP packet to 65.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# ip ttl 65
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.5 mac-loopback

Function

Run the **mac-loopback** command to enable the MAC loopback function of an interface.

Run the **no** form of this command to disable this feature.

By default, MAC loopback is disabled for an interface.

Syntax

mac-loopback

no mac-loopback

Parameter Description

N/A

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

When configuring one-to-many SPAN, you need to use this command to enable the MAC loopback function of an interface.

Do not add other configurations for this interface.

To save port resources, you are advised to configure a port in Down state as the MAC loopback port.

Examples

The following example configures the remote VLAN 10.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# vlan 100
Hostname(config-vlan)# remote-span
Hostname(config-vlan)# exit
```

The following example configures a source device and configures GigabitEthernet 0/1 as the source port.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 1 remote-source
Hostname(config)# monitor session 1 source interface gigabitEthernet 0/1 both
```

The following example configures GigabitEthernet 0/2 as the destination port, and enables the MAC loopback function on this port. (You can see that the state of GigabitEthernet 0/2 changes to Up instantly.)

```
Hostname(config)# monitor session 1 destination remote vlan 100 interface
gigabitEthernet 0/2 switch
Hostname(config)# interface gigabitEthernet 0/2
```

```
Hostname(config-if-GigabitEthernet 0/2)# switchport access vlan 100  
Hostname(config-if-GigabitEthernet 0/2)# mac-loopback  
The following example adds GigabitEthernet 0/3-4 to remote VLAN 100.
```

```
Hostname(config)# interface range gigabitEthernet 0/3-4  
Hostname(config-if-range)# switchport access vlan 100
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.6 monitor session destination interface

Function

Run the **monitor session destination interface** command to configure a destination port for a local SPAN session.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no destination port is configured for a local SPAN session.

Syntax

```
monitor session session-number destination interface interface-type interface-number [ switch ]  
no monitor session session-number destination interface interface-type interface-number [ switch ]  
default monitor session session-number destination interface interface-type interface-number [ switch ]
```

Parameter Description

session-number: ID of a SPAN session.

interface-type interface-number: Type and number of the source or destination port.

switch: Configures the switching function of the destination port.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A Examples

The following example configures GigabitEthernet 0/1 as the source port and GigabitEthernet 0/2 as the destination port for SPAN session 1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 1 source interface gigabitEthernet 0/1
Hostname(config)# monitor session 1 destination interface gigabitEthernet 0/2
```

Notifications

On some devices that do not support configuration of SPAN for AP member ports, if you try to configure an AP member port as the source or destination port for SPAN, the following notification will be displayed:

```
Set fail on ap member.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.7 monitor session destination remote vlan interface

Function

Run the **monitor session destination remote vlan interface** command to configure an output port on an RSPAN source device or a destination port on an RSPAN destination device for an RSPAN session.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no output port on the RSPAN source device or no destination port on the RSPAN destination device is configured.

Syntax

```
monitor session session-number destination remote vlan remote-vlan-id interface interface-type interface-number [ switch ]
no monitor session session-number destination remote vlan remote-vlan-id interface interface-type interface-number [ switch ]
default monitor session session-number destination remote vlan remote-vlan-id interface interface-type interface-number [ switch ]
```

Parameter Description

session-number: ID of a SPAN session.

interface-type interface-number: Type and number of the source or destination port.
remote-vlan-id: ID of a remote VLAN.
vlan-id-list: VLAN list (containing common VLANs instead of remote VLANs).
switch: Configures the switching function of the destination port.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures GigabitEthernet 0/1 as the output port on the source device.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 1 remote-source
Hostname(config)# monitor session 1 destination remote vlan 10 interface
gigabitEthernet 0/1
```

Notifications

On some devices that do not support configuration of SPAN for AP member ports, if you try to configure an AP member port as the source or destination port for SPAN, the following notification will be displayed:

```
Set fail on ap member.
```

If the VLAN specified by *remote-vlan-id* does not exist or is not a remote VLAN, the following notification will be displayed:

```
vlan 1 doesn't exist or it isn't remote span vlan.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.8 monitor session erpsan-source

Function

Run the **monitor session erpsan-source** command to create an ERSPAN session.

Run the **no** form of this command to delete an ERSPAN session.

No ERSPAN session is created by default.

Syntax

```
monitor session session-number erpsan-source  
no monitor session session-number
```

Parameter Description

session-number: ID of a SPAN session.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures an ERSPAN session with the ID 1.

```
Hostname> enable  
Hostname# configure terminal  
Hostname(config)# monitor session 1 erspan-source
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.9 monitor session filter vlan

Function

Run the **monitor session filter vlan** command to exclude one or more VLANs as the data source of SPAN.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no VLAN is excluded as the data source of SPAN.

Syntax

```
monitor session session-number filter vlan vlan-id-list rx
```

```
no monitor session session-number filter vlan vlan-id-list rx  
default monitor session session-number filter vlan vlan-id-list rx
```

Parameter Description

session-number: ID of a SPAN session.

vlan-id-list: VLAN list (containing common VLANs instead of remote VLANs).

rx: **rx** indicates that only received packets are mirrored.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

This command must be configured together with the **monitor session source interface** command.

If you add or delete a VLAN source port to or from an effective SPAN session, you need to re-apply the entire SPAN session. Therefore, a few existing mirrored packets may be lost.

Examples

The following example excludes the RX direction of VLAN 2 as the data source of SPAN.

```
Hostname> enable  
Hostname# configure terminal  
Hostname(config)# monitor session 1 filter vlan 2 rx
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [monitor session source interface](#)
- Ошибка: источник перекрёстной ссылки не найден

1.10 monitor session remote-source

Function

Run the **monitor session remote-source** command to configure the source device for an RSPAN session.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no source device is configured for an RSPAN session.

Syntax

```
monitor session session-number remote-source  
no monitor session session-number remote-source  
default monitor session session-number remote-source
```

Parameter Description

session-number: ID of a SPAN session.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the source device for the RSPAN session with ID 1.

```
Hostname> enable  
Hostname# configure terminal  
Hostname(config)# monitor session 1 remote-source
```

Notifications

On some devices that do not support configuration of SPAN for AP member ports, if you try to configure an AP member port as the source or destination port for SPAN, the following notification will be displayed:

```
Set fail on ap member.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.11 monitor session remote-destination

Function

Run the **monitor session remote-destination** command to configure a destination device for an RSPAN session.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no destination device is configured for an RSPAN session.

Syntax

```
monitor session session-number remote-destination  
no monitor session session-number remote-destination  
default monitor session session-number remote-destination
```

Parameter Description

session-number: ID of a SPAN session.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the destination device for the RSPAN session with ID 1.

```
Hostname> enable  
Hostname# configure terminal  
Hostname(config)# monitor session 1 remote-destination
```

Notifications

On some devices that do not support configuration of SPAN for AP member ports, if you try to configure an AP member port as the source or destination port for SPAN, the following notification will be displayed:

```
Set fail on ap member.
```

If the VLAN specified by remote-vlan-id does not exist or is not a remote VLAN, the following notification will be displayed:

```
vlan 1 doesn't exist or it isn't remote span vlan.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.12 monitor session source interface

Function

Run the **monitor session source interface** command to configure the source port for a local SPAN session.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no source port is configured for a local SPAN session.

Syntax

```
monitor session session-number source interface interface-type interface-number [both | rx [ acl { acl-name | acl-number } ] | tx ]
no monitor session session-number source interface interface-type interface-number [both | rx [ acl { acl-name | acl-number } ] | tx ]
default monitor session session-number source interface interface-type interface-number [ { both | rx [ acl { acl-name | acl-number } ] } | tx ]
```

Parameter Description

session-number: ID of a SPAN session.

interface-type interface-number: Type and number of the source port.

both: Indicates that both the received and sent packets are mirrored.

rx: Indicates that only the received packets are mirrored.

tx: Indicates that only the sent packets are mirrored.

acl { acl-name | acl-number }: Indicates that only packets that match ACL rules are mirrored. *acl-name*: Name of an ACL. The value is a case-sensitive string of 1 to 99 characters. *acl-number*: Number of an ACL. For a standard IP ACL, the value range is from 1 to 99 and from 1300 to 1999. For an extended IP ACL, the value range is from 100 to 199 and from 2000 to 2699. For a MAC ACL, the value range is from 700 to 799.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

- If you do not specify **both/rx/tx** when configuring a source port, **both** is used by default. If the direction is specified, only packets in the specified direction are mirrored.

Examples

The following example configures GigabitEthernet 0/1 as the source port for SPAN session 1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 1 source interface gigabitEthernet 0/1
```

Notifications

On some devices that do not support configuration of SPAN for AP member ports, if you try to configure an AP member port as the source port for SPAN, the following notification will be displayed:

```
Set fail on ap member.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.13 monitor session source vlan

Function

Run the **monitor session source vlan** command to specify a VLAN as the data source of SPAN.

Run the **no** form of this command to remove this configuration.

Run the **default** form of this command to restore the default configuration.

By default, no VLAN is specified as the data source of SPAN.

Syntax

```
monitor session session-number source vlan vlan-list rx
no monitor session session-number source vlan vlan-list rx [ both | rx | tx ]
default monitor session session-number source vlan vlan-list rx
```

Parameter Description

session-number: ID of a SPAN session.

vlan-list: VLAN list (containing common VLANs instead of remote VLANs).

rx indicates that only received packets are mirrored.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

If you add or delete a VLAN source port to or from an effective SPAN session, you need to re-apply the entire SPAN session. Therefore, a few existing mirrored packets may be lost.

Examples

The following example configures the RX direction of VLAN 2 as the data source of SPAN session 1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 1 source vlan 2 rx
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.14 no monitor session

Function

Run the **no monitor session** command to delete all SPAN sessions.

Syntax

```
no monitor session { session-number | all }
```

Parameter Description

session-number: ID of a SPAN session. The value range is from 1 to 4.

all: Indicates all SPAN sessions.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example displays SPAN sessions configured on a device.

```
Hostname> enable
Hostname# show running-config | include monitor session
monitor session 1 remote-source
monitor session 1 destination remote vlan 10 interface GigabitEthernet 0/1
monitor session 1 filter vlan 3 rx
```

The following example deletes all SPAN sessions from the device.

```
Hostname# configure terminal
Hostname(config)# no monitor session all
Hostname(config)# exit
Hostname# show running-config | include monitor session
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.15 remote-span

Function

Run the **remote-span** command to configure a remote VLAN.

Run the **no** form of this command to remove this configuration.

By default, no remote VLAN is configured.

Syntax

```
remote-span
no remote-span
```

Parameter Description

N/A

Command Modes

VLAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures VLAN 100 as the remote VLAN.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# vlan 100
Hostname(config-vlan)# remote-span
```

Notifications

If this VLAN is already a remote VLAN, the following notification will be displayed when you run the **remote-span** command:

```
RSPAN vlan can't be set as remote span vlan.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.16 origin ip address

Function

Run the **origin ip address** command to configure a source IP address for GRE encapsulation.

Run the **no** form of this command to remove this configuration.

By default, no source IP address is configured for GRE encapsulation.

Syntax

```
origin ip address ipv4-address
no origin ip address
```

Parameter Description

ipv4-address: Source IP address specified for GRE encapsulation.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example configures the source IP address of an IP packet to 11.1.1.2 when the ERSPAN encapsulation type is GRE.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# origin ip address 11.1.1.2
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.17 show monitor

Function

Run the **show monitor** command to display the SPAN sessions.

Syntax

```
show monitor session session-number
```

Parameter Description

session session-number: Specifies the ID of a SPAN session.

Command Modes

All modes except the user EXEC mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example displays all the SPAN sessions.

```
Hostname> enable
Hostname# show monitor
sess-num: 1
span-type: LOCAL_SPAN
src-intf:
GigabitEthernet 0/2      frame-type Both
dest-intf:
GigabitEthernet 0/3
sess-num: 3
span-type: ERSPAN_SOURCE
src-intf:
```

```

AggregatePort 1           frame-type: Both      TX status: Inactive   RX
status: Inactive
original ip address: 1.1.1.1
destination ip address: 1.1.1.2
status: disable
ip ttl: 64
ip dscp: 0
vrf: global-vrf

```

The following example displays the specified SPAN session.

```

Hostname> enable
Hostname# show monitor session 1
sess-num: 1
span-type: LOCAL_SPAN
src-intf:
GigabitEthernet 0/2      frame-type Both
dest-intf:
GigabitEthernet 0/3

```

Table 1-1Output Fields of the show monitor Command

Field	Description
sess-num	ID of a SPAN session
span-type	SPAN type
src-intf	Source interface of the SPAN session
frame-type	Direction of streams to be mirrored
TX/RX status	Connectivity status of the route to the destination IP address when the ERSPAN session is valid (that is, the session is complete and not shut down): <ul style="list-style-type: none"> ● Active: The route to the destination IP address is reachable, and the ERSPAN session is active. ● Inactive: The route to the destination IP address is unreachable, and the ERSPAN session is inactive.
dest-intf	Destination interface of the SPAN session
original ip address	Source IP address for ERSPAN
destination ip address	Destination IP address for ERSPAN
status	Availability status of the ERSPAN session: <ul style="list-style-type: none"> ● disable: When the shutdown command is configured, the status is displayed as disable, and the session is unavailable. ● enable: The session is available.
ip ttl	TTL value of the encapsulated IP packet
ip dscp	DSCP value of the encapsulated IP packet
vrf	VRF information of the ESPAN session

Field	Description

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.18 source interface

Function

Run the **source interface** command to configure a source port for ERSPAN.

Run the **no** form of this command to remove this configuration.

By default, no source port is configured for ERSPAN.

Syntax

```
source interface interface-type interface-number [ { both | rx [ acl { acl-name | acl-number } ] | tx ]
no source interface interface-type interface-number [ { both | rx [ acl { acl-name | acl-number } ] | tx ]
```

Parameter Description

interface-type interface-number: Type and number of the source port.

both: Indicates that both the received and sent packets are mirrored.

rx: Indicates that only received packets are mirrored.

tx: Indicates that only the sent packets are mirrored.

acl-name: Name of an ACL. The value is a case-sensitive string of 1 to 99 characters.

acl-number: Number of an ACL. For a standard IP ACL, the value range is from 1 to 99 and from 1300 to 1999.

For an extended IP ACL, the value range is from 100 to 199 and from 2000 to 2699. For a MAC ACL, the value range is from 700 to 799.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

- When a sub-interface is configured as the source port, mirroring is supported only in the inbound direction.
- If you do not specify **both/rx/tx** when configuring a source port, **both** is used by default. If the direction is specified, only packets in the specified direction are mirrored.

Examples

The following example configures GigabitEthernet 0/1 as the source port for a stream-based ERSPAN session, and mirrors packets that match ACL 90.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# source interface gigabitEthernet 0/1 rx acl 90
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.19 shutdown

Function

Run the **shutdown** command to shut down an ERSPAN session.

Run the **no** form of this command to remove this configuration.

An ERSPAN session is enabled by default.

Syntax

no shutdown

Parameter Description

N/A

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example shuts down the ERSPAN session with ID 2.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# shutdown
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A

1.20 vrf

Function

Run the **vrf** command to associate a VRF with ERSPAN.

Run the **no** form of this command to remove this configuration.

By default, no VRF is associated with ERSPAN.

Syntax

```
vrf vrf-name
no vrf
```

Parameter Description

vrf-name: Name of a VRF.

Command Modes

ERSPAN configuration mode

Default Level

14

Usage Guidelines

N/A

Examples

The following example associates the VRF "vrf-name" with ERSPAN.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# monitor session 2 erspan-source
Hostname(config-mon-erspan-src)# vrf vrf-name
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

N/A