

1 QinQ Commands

Command	Function
dot1q outer-vid register inner-vid	Configure a policy of adding an outer VID based on the inner VID of packets.
dot1q-tunnel cos remark-cos	Configure a priority mapping policy and modify the outer priority based on the inner priority of input packets.
frame-tag tpid	Configure TPID of packets.
inner-priority-trust enable	Configure a priority replication policy and replicate the inner priority of input packets as outer priority.
l2protocol-tunnel	Enable the layer-2 protocol tunneling function globally.
l2protocol-tunnel enable	Enable the layer-2 protocol tunneling function on an interface.
l2protocol-tunnel tunnel-dmac	Configure a layer-2 protocol tunnel address.
show dot1q-tunnel	Display the dot1q-tunnel configuration of an interface.
show frame-tag tpid	Display the TPID configuration of an interface.
show inner-priority-trust	Display the priority replication configuration of an interface.
show interfaces dot1q-tunnel	Display the configuration of allowed VLANs and native VLANs of a dot1q-tunnel port.
show interfaces remark	Display the priority mapping configuration of an interface.
show l2protocol-tunnel	Display the configuration of layer-2 protocol transparent transmission.
show registration-table	Display the policy of adding the outer VID based on the inner VID of packets.
show translation-table	Display the inner and outer VID modification policy.
switchport dot1q-tunnel allowed vlan	Configure allowed VLANs of the dot1q-tunnel port.
switchport dot1q-tunnel native vlan	Configure the native VLAN of dot1q-tunnel.

switchport mode dot1q-tunnel	Configure an interface as a dot1q-tunnel port.
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1.1 dot1q outer-vid register inner-vid

Function

Run the **dot1q outer-vid register inner-vid** command to configure a policy of adding an outer VID based on the inner VID of packets.

Run the **no** form of this command to delete a policy of adding an outer VID based on the inner VID of packets.

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

No policy of adding an outer VID based on the inner VID of packets is configured by default.

Syntax

dot1q outer-vid *svid* **register inner-vid** *cvid-list*

no dot1q outer-vid *svid* **register inner-vid** *cvid-list*

default dot1q outer-vid *svid* **register inner-vid** *cvid-list*

Parameter Description

svid: Outer VLAN ID added for input packets. It is a VLAN ID of the SP network, and the value range is from 1 to 4094.

cvid-list: Inner VLAN ID list of input packets, which can include one or more VLANs. When multiple VLANs are included, they are separated by commas. You can also specify a VLAN range by connecting the start VLAN ID and end VLAN ID using an en dash (-). It contains VLAN IDs of the client network, and the value range is from 1 to 4094.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

This command is used to configure a C-Tag-based QinQ encapsulation policy. It can be configured only on the dot1q-tunnel and hybrid ports.

You can run the **show registration-table [interface interface-type interface-number]** command to display the related configuration on the interface.

Examples

The following example adds the outer VID 30 on the dot1q-tunnel port GigabitEthernet 0/1 when the inner VID of input packets ranges from 11 to 20.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# vlan 30
Hostname(config-vlan)# exit
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
```

```
Hostname(config-if-GigabitEthernet 0/1)# dot1q outer-vid 30 register inner-vid 11-20
```

The following example adds the outer VLAN ID 10 on the hybrid port GigabitEthernet 0/2 when the inner VID of input packets ranges from 1 to 10.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# vlan 10
Hostname(config-vlan)# exit
Hostname(config)# interface gigabitethernet 0/2
Hostname(config-if-GigabitEthernet 0/2)# switchport mode hybrid
Hostname(config-if-GigabitEthernet 0/2)# dot1q outer-vid 10 register inner-vid 1-10
```

Notifications

If this command is configured when the destination VLAN is not created in advance, the following notification will be displayed:

```
The destination vlan 30 shall be exist,undynamic and not supervlan.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [switchport mode dot1q-tunnel](#)
- [show registration-table](#)

1.2 dot1q-tunnel cos remark-cos

Function

Run the **dot1q-tunnel cos remark-cos** command to configure a priority mapping policy and modify the outer priority based on the inner priority of input packets.

Run the **no** form of this command to delete a priority mapping policy.

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

No policy of mapping the outer priority based on the inner priority of input packets is configured by default.

Syntax

```
dot1q-tunnel cos inner-cos-value remark-cos outer-cos-value
```

```
no dot1q-tunnel cos inner-cos-value remark-cos
```

```
default dot1q-tunnel cos inner-cos-value remark-cos outer-cos-value
```

Parameter Description

inner-cos-value: Inner priority of input packets. The value range is from 0 to 7. A larger value indicates a higher priority.

outer-cos-value: Outer priority of input packets. The value range is from 0 to 7. A larger value indicates a higher priority.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

When a priority mapping policy is configured, the CoS value of the outer tag can be set to different values based on the packet priority. In this case, important services can be preferentially transmitted and processed.

You can run the **show interface [interface *interface-type interface-number*] remark** command to display the related configuration on the interface.

Examples

The following example configures a priority mapping policy on the dot1q-tunnel port GigabitEthernet 0/1, and maps the CoS value of outer VLAN tag priority to 5 when the CoS value of inner VLAN tag priority of input packets is 3.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-GigabitEthernet 0/1)# dot1q-Tunnel cos 3 remark-cos 5
```

Notifications

When the interface is not configured as the dot1q-tunnel mode and priority mapping configuration is not supported, the following notification will be displayed:

```
Only support the tunnel-mode switchport.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show interfaces remark](#)

1.3 frame-tag tpid

Function

Run the **frame-tag tpid** command to configure TPID of packets.

Run the **no** form of this command to delete the configured TPID value and restore the default configuration.

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

The default TPID value is 0x8100.

Syntax

frame-tag tpid *tpid*

no frame-tag tpid

default frame-tag tpid

Parameter Description

tpid: Packet type value. The value range is from 0 to ffff in hexadecimal. The common value is 0x8100 or 0x9100. The default value 0x8100 indicates IEEE 802.1Q frame.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

If the TPID value of a third-party device is not the default value 0x8100 defined in IEEE 802.1Q, the TPID value needs to be configured on the port connected to the third-party device to keep consistency and compatibility with the third-party device.

Run the **show frame-tag tpid** command to display the configuration.

Examples

The following example sets the packet type value to 0x9100 on the interface GigabitEthernet 0/1.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# frame-tag tpid 0x9100
```

Notifications

When no TPID value is displayed, the following notification will be displayed, indicating that TPID is the default value 0x8100:

```
Hostname# show frame-tag tpid
Ports    tpid
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show frame-tag tpid](#)

1.4 inner-priority-trust enable

Function

Run the **inner-priority-trust enable** command to configure a priority replication policy and replicate the inner priority of input packets as outer priority.

Run the **no** form of this command to delete the priority replication policy.

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

The priority replication function is disabled by default.

Syntax

inner-priority-trust enable

no inner-priority-trust enable

default inner-priority-trust enable

Parameter Description

N/A

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

If a priority replication policy is configured, the client VLAN tag priority can be replicated to the outer VLAN tag priority so that the client packets are encapsulated with the outer VLAN tag and have the same priority as the client VLAN tag. In this case, the client packets can be preferentially processed and transmitted in the SP network.

Run the **show inner-priority-trust** command to display the configuration.

Examples

The following example configures a priority replication policy and replicates the inner tag priority of input packets of the interface GigabitEthernet 0/1 as the outer tag priority.

```
Hostname> enable
Hostname# configure terminal
```

```
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-gigabitethernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-gigabitethernet 0/1)# inner-priority-trust enable
```

Notifications

When the interface is not configured as the dot1q-tunnel mode and priority replication configuration is not supported, the following notification will be displayed:

```
Only support the tunnel-mode switchport.
```

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show inner-priority-trust](#)

1.5 I2protocol-tunnel

Function

Run the **I2protocol-tunnel** command to enable the layer-2 protocol tunneling function globally.

Run the **no** form of this command to disable the layer-2 protocol tunneling function globally.

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

The layer-2 protocol tunneling function is disabled globally by default.

Syntax

```
I2protocol-tunnel { stp | gvrp }
```

```
no I2protocol-tunnel { stp | gvrp }
```

```
default I2protocol-tunnel { stp | gvrp }
```

Parameter Description

stp: Enables a Spanning Tree Protocol (STP) bridge protocol data unit (BPDU) tunnel.

gvrp: Enables a GARP VLAN registration protocol (GVRP) BPDU tunnel.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

The layer-2 protocol tunneling function takes effect only when it is enabled globally and on the interface at the same time.

You can run the **show I2protocol-tunnel { gvrp | stp }** command display the configuration.

Examples

The following example enables the layer-2 protocol (GVRP and STP) tunneling function globally.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# l2protocol-tunnel stp
Hostname(config)# l2protocol-tunnel gvrp
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [bridge-frame forwarding protocol bpdu](#)
- [l2protocol-tunnel enable](#)
- [show l2protocol-tunnel](#)

1.6 l2protocol-tunnel enable

Function

Run the **l2protocol-tunnel enable** command to enable the layer-2 protocol tunneling function on an interface.

Run the **no** form of this command to disable the layer-2 protocol tunneling function on an interface.

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

The layer-2 protocol tunneling function is disabled on an interface by default.

Syntax

```
l2protocol-tunnel { stp | gvrp } enable
```

```
no l2protocol-tunnel { stp | gvrp } enable
```

```
default l2protocol-tunnel { stp | gvrp } enable
```

Parameter Description

stp: Enables the STP BPDU tunneling function.

gvrp: Enables the GVRP BPDU tunneling function.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

The layer-2 protocol tunneling function takes effect only when it is enabled globally and on the interface at the same time.

You can run the **show l2protocol-tunnel { gvrp | stp }** command to display the configuration.

Examples

The following example enables the layer-2 protocol STP BPDU tunneling function on an interface.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-GigabitEthernet 0/1)# l2protocol-tunnel stp enable
Hostname(config-if-GigabitEthernet 0/1)# exit
Hostname(config)# l2protocol-tunnel stp
```

The following example enables the layer-2 protocol GVRP BPDU tunneling function on an interface.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-GigabitEthernet 0/1)# l2protocol-tunnel gvrp enable
Hostname(config-if-GigabitEthernet 0/1)# exit
Hostname(config)# l2protocol-tunnel gvrp
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [l2protocol-tunnel](#)
- [bridge-frame forwarding protocol bpdu](#)
- [show l2protocol-tunnel](#)

1.7 l2protocol-tunnel tunnel-dmac

Function

Run the **l2protocol-tunnel tunnel-dmac** command to configure a layer-2 protocol tunnel address.

Run the **no** form of this command to delete the layer-2 protocol tunnel address.

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

The default BPDU tunnel address of STP packets is 01d0.f800.0005, and that of GVRP packets is 01d0.f800.0006.

Syntax

```
l2protocol-tunnel { stp | gvrp } tunnel-dmac mac-address  
no l2protocol-tunnel { stp | gvrp } tunnel-dmac mac-address  
default l2protocol-tunnel { stp | gvrp } tunnel-dmac mac-address
```

Parameter Description

stp *mac-address*: Configures the BPDU tunnel address of STP packets. The value is 01d0.f800.0005, 011a.a900.0005, 010f.e200.0003, 0100.0ccd.cdd0, 0100.0ccd.cdd1, or 0100.0ccd.cdd2.

gvrp *mac-address*: Configures the BPDU tunnel address of GVRP packets. The value is 01d0.f800.0006 or 011a.a900.0006.

Command Modes

Global configuration mode

Default Level

14

Usage Guidelines

You can run the **show l2protocol-tunnel** { **gvrp** | **stp** } command to display the configuration.

Examples

The following example sets the BPDU tunnel address of layer-2 protocol (GVRP) to 011a.a900.0006 globally.

```
Hostname> enable  
Hostname# configure terminal  
Hostname(config)# l2protocol-tunnel gvrp tunnel-dmac 011a.a900.0006
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show l2protocol-tunnel](#)

1.8 show dot1q-tunnel

Function

Run the **show dot1q-tunnel** command to display the dot1q-tunnel configuration of an interface.

Syntax

```
show dot1q-tunnel [ interface interface-type interface-number ]
```

Parameter Description

interface *interface-type interface-number*: Specifies the interface of which the dot1q-tunnel configuration will be displayed. If this parameter is not specified, the dot1q-tunnel configuration of all interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the dot1q-tunnel configuration of all interfaces.

```
Hostname> enable
Hostname# show dot1q-tunnel
Ports  Dot1q-tunnel
-----
Gi0/1  Enable
Gi0/2  disable
```

Table 1-1 Output Fields of the show dot1q-tunnel Command

Field	Description
Ports	Indicates the interface name.
Dot1q-tunnel	Indicates the configuration status of dot1q-tunnel function: <ul style="list-style-type: none"> ● Enable: Indicates that the function is enabled. ● Disable: Indicates that the function is disabled.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.9 show frame-tag tpid

Function

Run the **show frame-tag tpid** command to display the TPID configuration of an interface.

Syntax

```
show frame-tag tpid [ interface interface-type interface-number ]
```

Parameter Description

interface *interface-type interface-number*: Specifies the interface of which the TPID configuration will be displayed. If this parameter is not specified, the TPID configuration of all interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the TPID configuration of all interfaces.

```
Hostname> enable
Hostname# show frame-tag tpid
Ports      Tpid
-----
Gi0/1      0x9100
```

Table 1-1 Output Fields of the show frame-tag tpid Command

Field	Description
Ports	Indicates the interface name.
tpid	Indicates the TPID value.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.10 show inner-priority-trust

Function

Run the **show inner-priority-trust** command to display the priority replication configuration of an interface.

Syntax

```
show inner-priority-trust [ interfaces interface-type interface-number ]
```

Parameter Description

interfaces *interface-type interface-number*: Specifies the interface of which the priority replication function will be displayed. If this parameter is not specified, the priority replication configuration of all the interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the priority replication configuration of all interfaces.

```

Hostname> enable
Hostname# show inner-priority-trust
Ports          Inner-priority-trust
-----
Gi0/1          Disable
Gi0/2          Enable
Gi0/3          Disable
Gi0/4          Disable

```

Table 1-1 Output Fields of the show inner-priority-trust Command

Field	Description
Ports	Indicates the interface name.
inner-priority-trust	Indicates whether priority replication is enabled on the interface: <ul style="list-style-type: none"> ● Enable: Indicates that the function is enabled. ● Disable: Indicates that the function is disabled.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.11 show interfaces dot1q-tunnel

Function

Run the **show interfaces dot1q-tunnel** command to display the configuration of allowed VLANs and native VLANs of a dot1q-tunnel port.

Syntax

```
show interfaces [ interface-type interface-number ] dot1q-tunnel
```

Parameter Description

interface-type interface-number: Specifies the dot1q-tunnel port of which the configuration of allowed VLANs and native VLANs will be displayed. If this parameter is not specified, the configuration of allowed VLANs and native VLANs of all dot1q-tunnel ports will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the configuration of allowed VLANs and native VLANs of all dot1q-tunnel ports.

```
Hostname> enable
Hostname# show interfaces dot1q-tunnel
=====Interface Gi0/1=====
Native vlan: 10
Allowed vlan list:1,10,
Tagged vlan list:

=====Interface Gi0/2=====
Native vlan: 20
Allowed vlan list:1,20,
Tagged vlan list:
```

Table 1-1 Output Fields of the show interfaces dot1q-tunnel Command

Field	Description
Interface	Indicates the interface name.
Native vlan	Indicates the native VLAN of the interface.
Allowed vlan list	Indicates the list of VLANs that packets are allowed to pass through.
Tagged vlan list	Indicates the list of VLANs where the output packets carry tags.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.12 show interfaces remark

Function

Run the **show interfaces remark** command to display the priority mapping configuration of an interface.

Syntax

```
show interfaces [ interface-type interface-number ] remark
```

Parameter Description

interface-type interface-number. Specifies the interface of which the priority mapping configuration will be displayed. If this parameter is not specified, the priority mapping configuration of all interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the priority mapping configuration of all interfaces.

```
Hostname> enable
Hostname# show interfaces remark
```


Ports	From COS	To COS
Gi0/1	3	5
Gi0/2	4	2

Table 1-1 Output Fields of the show interfaces remark Command

Field	Description
Ports	Indicates the interface name.
Type	Indicates the type of priority mapping.
From value	Indicates the priority of the inner tag.
To value	Indicates the priority of the outer tag.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.13 show l2protocol-tunnel

Function

Run the **show l2protocol-tunnel** command to display the configuration of layer-2 protocol transparent transmission.

Syntax

```
show l2protocol-tunnel { gvrp | stp }
```

Parameter Description

gvrp: Displays the configuration of a GVRP BPDU tunnel.

stp: Displays the configuration of an STP BPDU tunnel.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the configuration of STP transparent transmission.

```

Hostname> enable
Hostname# show l2protocol-tunnel stp
L2protocol-tunnel: stp Disable
L2protocol-tunnel destination mac address: 01d0.f800.0005

```

The following example displays the configuration of GVRP transparent transmission.

```

Hostname> enable
Hostname# show l2protocol-tunnel gvrp
L2protocol-tunnel: Gvrp Enable
L2protocol-tunnel destination mac address:01d0.f800.0006
GigabitEthernet 0/1 l2protocol-tunnel gvrp enable
GigabitEthernet 0/2 l2protocol-tunnel gvrp enable

```

Table 1-1 Output Fields of the show l2protocol-tunnel Command

Field	Description
L2protocol-tunnel	Indicates the enabling status of layer-2 protocol tunneling. <ul style="list-style-type: none"> ● Enable: Indicates that layer-2 protocol tunneling is enabled. ● Disable: Indicates that layer-2 protocol tunneling is disabled.
L2protocol-tunnel destination mac address	Indicates the MAC address of layer-2 protocol tunneling.
l2protocol-tunnel gvrp enable	Indicates the port on which layer-2 protocol tunneling is enabled.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.14 show registration-table

Function

Run the **show registration-table** command to display the policy of adding the outer VID based on the inner VID of packets.

Syntax

```
show registration-table [ interface interface-type interface-number ]
```

Parameter Description

interface *interface-type interface-number*: Specifies the interface of which the policy of adding the outer VID based on the inner VID of packets will be displayed. If this parameter is not specified, the policy of outer VID based on the inner VID of packets on all interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the policy of adding the outer VLAN based on the inner VLAN tag on all the interfaces.

```

Hostname> enable
Hostname# show registration-table
Ports      Type           Outer-VID      Inner-VID-list
-----
Gi0/1      Add-outer      10             1-3,5-10
Gi0/1      Add-outer      20             11-20

```

Table 1-1 Output Fields of the show registration-table Command

Field	Description
Ports	Indicates the interface name.
Type	Indicates the type of the protocol-based selective QinQ policy.
Outer-VID	Indicates the added outer VLAN.
Inner-VID-list	Indicates the list of inner VLANs complying with the policy.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.15 show translation-table

Function

Run the **show translation-table** command to display the inner and outer VID modification policy.

Syntax

```
show translation-table [ interface interface-type interface-number ]
```

Parameter Description

interface interface-type interface-number: Specifies the interface of which the inner VID and outer VID modification policy will be displayed. If this parameter is not specified, the inner VID and outer VID modification policy on all interfaces will be displayed.

Command Modes

All modes except the user EXEC mode

Default Level

2

Usage Guidelines

N/A

Examples

The following example displays the inner VID and outer VID modification policy.

```

Hostname> enable
Hostname# show translation-table
Ports          Type          Relay-VID  Old-local  Local\inner-VID-list
-----
Gi0/1          Inner-CVID 8          N/A        10-20
Gi0/1          Local-SVID 1001         N/A        30-60
Gi0/1          In+Out      8            20         50

```

Table 1-1 Output Fields of the show translation-table Command

Field	Description
Ports	Indicates the interface name.
Type	Indicates the type of the protocol-based selective QinQ policy.
Relay-VID	Indicates the VLAN ID after the outer/inner tag of input packets is modified.
Old-local	Indicates the VLAN ID of outer tag before modification.
Local\inner-VID-list	Indicates the outer/inner VLAN list before modification.

Notifications

N/A

Platform Description

N/A

Related Commands

N/A

1.16 switchport dot1q-tunnel allowed vlan

Function

Run the **switchport dot1q-tunnel allowed vlan** command to configure allowed VLANs of the dot1q-tunnel port.

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

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

The allowed VLAN of dot1q-tunnel port is untagged VLAN 1.

Syntax

```
switchport dot1q-tunnel allowed vlan { [ add ] tagged svid-list | [ add ] untagged svid-list | remove svid-list }
```

```
no switchport dot1q-tunnel allowed vlan
```

```
default switchport dot1q-tunnel allowed vlan
```

Parameter Description

svid-list: VLANs on the SP network. It can contain one or more VLANs. Multiple VLANs are separated by commas. You can also specify a VLAN range by connecting the start VLAN ID and end VLAN ID using an en dash (–).

[**add**] **tagged** *svid-list*: Configures a tagged VLAN allowed by the interface. When output from the interface, packets of this VLAN carry the SP's VLAN tag. No matter whether the **add** parameter is added, the function is consistent.

[**add**] **untagged** *svid-list*: Configures an untagged VLAN allowed by the interface. When output from the interface, packets of this VLAN do not carry the SP's VLAN tag. No matter whether the **add** parameter is added, the function is consistent.

remove *svid-list*: Deletes a VLAN allowed by the interface.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

Run the **show interface dot1q-tunnel** command to display the configuration.

Examples

The following example configures GigabitEthernet 0/1 as dot1q-tunnel port, native VLAN of the interface as VLAN 8. The allowed VLANs of GigabitEthernet 0/1 are untagged VLAN 8 and tagged VLANs 3–6.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel native vlan 8
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel allowed vlan
untagged 8
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel allowed vlan
tagged 3-6
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [switchport mode dot1q-tunnel](#)
- [switchport dot1q-tunnel native vlan](#)
- [show interfaces dot1q-tunnel](#)

1.17 switchport dot1q-tunnel native vlan

Function

Run the **switchport dot1q-tunnel native vlan** command to configure the native VLAN of dot1q-tunnel.

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

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

The default native VLAN of the dot1q-tunnel port is VLAN 1.

Syntax

switchport dot1q-tunnel native vlan *svid*

no switchport dot1q-tunnel native vlan

default switchport dot1q-tunnel native vlan

Parameter Description

svid: Specifies a VLAN in the SP network as the native VLAN of the dot1q-tunnel port. The value range is from 1 to 4094. Only one native VLAN can be configured.

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

Run the **show interface dot1q-tunnel** command to display the configuration.

Examples

The following example configures GigabitEthernet 0/1 as dot1q-tunnel port, native VLAN of the interface as VLAN 8. The allowed VLANs of GigabitEthernet 0/1 are untagged VLAN 8 and tagged VLANs 3–6.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel native vlan 8
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel allowed vlan
untagged 8
Hostname(config-if-GigabitEthernet 0/1)# switchport dot1q-tunnel allowed vlan
tagged 3-6
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [switchport mode dot1q-tunnel](#)
- [switchport dot1q-tunnel allowed vlan](#)
- [show interfaces dot1q-tunnel](#)

1.18 switchport mode dot1q-tunnel

Function

Run the **switchport mode dot1q-tunnel** command to configure an interface as a dot1q-tunnel port.

Run **no switchport mode** command to remove this configuration.

Run the **default switchport mode** command to restore the default configuration.

The interface is an access port by default.

Syntax

switchport mode dot1q-tunnel

no switchport mode

default switchport mode

Parameter Description

N/A

Command Modes

Interface configuration mode

Default Level

14

Usage Guidelines

All frames entering the QinQ edge device, regardless of whether they carry IEEE 802.1Q tags, will be encapsulated with one layer of tag. This process is called QinQ encapsulation. The ingress of QinQ edge device is called dot1q-tunnel port, or tunnel port for short. In the basic QinQ, the VLAN ID of an outer tag is the native VLAN of the dot1q-tunnel port. In the selective QinQ, outer tag encapsulation can be implemented according to different encapsulation policies.

Before configuring an encapsulation policy, you need to configure an edge interface as dot1q-tunnel port, and configure native VLAN and allowed VLAN for it.

- If the mode of a layer-2 interface is **dot1q-tunnel**, only one native VLAN is available, and it is VLAN 1 by default. You can use the **switchport dot1q-tunnel native vlan** command to configure the native VLAN as SP VLAN.
- By default, only one allowed VLAN exists and it must be VLAN 1. You can use the **switchport dot1q-tunnel allowed vlan { [add] tagged *vlan-list* | [add] untagged *vlan-list* | remove *vlan-list*}** command to configure allowed VLANs. The value range is 1 to 4094. The list can contain one or more allowed VLANs. When the packets of all the client VLANs are marked with a unified outer tag, only one allowed VLAN is required; when client VLANs need to be divided into different groups and client packets in different groups are to be marked with different outer tags, multiple allowed VLANs need to be configured.
- The native VLAN must be added to the allowed VLAN list of the interface in an untagged form so that the packets of the SP network can be sent back to the client network after the SP VLAN tags are stripped.
- In the basic QinQ application, the VLANs of the client network do not need to be added to the allowed VLAN list of the tunnel port. In the selective QinQ application, the VLANs of the client network are added to the allowed VLAN list of the interface in the tagged or untagged form.

Run the **show vlan** command to display the configuration.

Examples

The following example configures GigabitEthernet 0/1 as a dot1q-tunnel port.

```
Hostname> enable
Hostname# configure terminal
Hostname(config)# interface gigabitethernet 0/1
```



```
Hostname(config-if-GigabitEthernet 0/1)# switchport mode dot1q-tunnel
```

Notifications

N/A

Common Errors

N/A

Platform Description

N/A

Related Commands

- [show vlan](#)
- [switchport dot1q-tunnel native vlan](#)
- [switchport dot1q-tunnel allowed vlan](#)