Contents

VLAN mapping commands

The following features are mutually exclusive with one another on a Layer 2 Ethernet interface or Layer 2 aggregate interface:

- EVB.
- VLAN mapping.
- Binding an Ethernet service instance to a VSI or to an MPLS L2VPN cross-connect.

Do not configure these features simultaneously on the same interface. Otherwise, the features cannot take effect.

display vlan mapping

Use **display vlan mapping** to display VLAN mapping information.

Syntax

display vlan mapping [**interface** *interface-type interface-number*]

Views

Any view

Predefined user roles

network-admin

network-operator

Parameters

interface *interface-type interface-number*: Specifies an interface by its type and number. If you do not specify an interface, the command displays VLAN mapping information on all interfaces.

Examples

Display VLAN mapping information on all interfaces.

```
<Sysname> display vlan mapping
Interface Ten-GigabitEthernet1/0/1:
  Outer VLAN    Inner VLAN    Translated Outer VLAN    Translated Inner VLAN
  10            N/A           120                      N/A

Interface Ten-GigabitEthernet1/0/2:
  Outer VLAN    Inner VLAN    Translated Outer VLAN    Translated Inner VLAN
  1024-4094     N/A           100                      N/A

Interface Ten-GigabitEthernet1/0/3:
  Outer VLAN    Inner VLAN    Translated Outer VLAN    Translated Inner VLAN
  12            N/A           110                      12

Interface Ten-GigabitEthernet1/0/4:
  Outer VLAN    Inner VLAN    Translated Outer VLAN    Translated Inner VLAN
  11            30            130                      40
```

Table 1 Command output

Field	Description
Outer VLAN	Original outer VLAN. This field indicates the original VLAN for one-to-one VLAN mapping, many-to-one VLAN mapping, and one-to-two VLAN mapping.
Inner VLAN	Original inner VLAN. This field displays **N/A** for one-to-one VLAN mapping, many-to-one VLAN mapping, and one-to-two VLAN mapping.
Translated Outer VLAN	Translated outer VLAN. This field indicates the translated VLAN for one-to-one VLAN mapping and many-to-one VLAN mapping.
Translated Inner VLAN	Translated inner VLAN. This field displays **N/A** for one-to-one VLAN mapping and many-to-one VLAN mapping.

Related commands

vlan mapping

vlan mapping

Use **vlan mapping** to configure VLAN mapping on an interface.

Use **undo vlan mapping** to cancel the VLAN mapping configuration.

Syntax

vlan mapping { *vlan-id* **translated-vlan** *vlan-id* | **nest** { **range** *vlan-range-list* | **single** *vlan-id-list* } **nested-vlan** *vlan-id* | **nni** | **tunnel** *outer-vlan-id inner-vlan-id* **translated-vlan** *outer-vlan-id inner-vlan-id* | **uni** { **range** *vlan-range-list* | **single** *vlan-id-list* } **translated-vlan** *vlan-id* }

undo vlan mapping { *vlan-id* **translated-vlan** *vlan-id* | **all** | **nest** { **range** *vlan-range-list* | **single** *vlan-id-list* } **nested-vlan** *vlan-id* | **nni** | **tunnel** *outer-vlan-id inner-vlan-id* **translated-vlan** *outer-vlan-id inner-vlan-id* | **uni** { **range** *vlan-range-list* | **single** *vlan-id-list* } **translated-vlan** *vlan-id* }

Default

No VLAN mapping is configured on an interface.

Views

Layer 2 Ethernet interface view

Layer 2 aggregate interface view

Predefined user roles

network-admin

Parameters

vlan-id **translated-vlan** *vlan-id*: Specifies the original VLAN and translated VLAN for a one-to-one VLAN mapping. The value range for the *vlan-id* argument is 1 to 4094. The original VLAN and the translated VLAN cannot be the same.

uni range *vlan-range-list* **translated-vlan** *vlan-id*: Specifies the original VLAN ranges and the translated VLAN for a many-to-one VLAN mapping on the customer-side port. The *vlan-range-list* argument specifies a space-separated list of up to 10 VLAN items. Each item specifies a VLAN ID or a range of VLAN IDs in the form of *vlan-id1* **to** *vlan-id2*. The value range for VLAN IDs is 1 to 4094. The value for the *vlan-id2* argument must be greater than the value for the *vlan-id1* argument. The

value range for the *vlan-id* argument is 1 to 4094. Different VLAN ranges cannot overlap. Any of the original VLANs cannot be the same as the translated VLAN.

uni single *vlan-id-list* **translated-vlan** *vlan-id*: Specifies the original VLANs and the translated VLAN for a many-to-one VLAN mapping on the customer-side port. The *vlan-id-list* argument specifies a space-separated list of up to 10 VLAN IDs, each of which is in the range of 1 to 4094. The value range for the *vlan-id* argument is 1 to 4094. Any of the original VLANs cannot be the same as the translated VLAN.

nni: Configures the network-side port to use the original VLAN tags of the many-to-one mapping to replace the VLAN tags of the packets destined for the user network.

nest range *vlan-range-list* **nested-vlan** *vlan-id*: Specifies the CVLAN ranges and the SVLAN for a one-to-two VLAN mapping. The *vlan-range-list* argument specifies a space-separated list of up to 10 CVLAN items. Each item specifies a CVLAN ID or a range of CVLAN IDs in the format of *vlan-id1* **to** *vlan-id2*. The value range for CVLAN IDs is 1 to 4094. The value for the *vlan-id2* argument must be greater than the value for the *vlan-id1* argument. Different CVLAN ranges cannot overlap. The *vlan-id* argument specifies the SVLAN ID in the range of 1 to 4094.

nest single *vlan-id-list* **nested-vlan** *vlan-id*: Specifies the CVLANs and the SVLAN for a one-to-two VLAN mapping. The *vlan-id-list* argument specifies a space-separated list of up to 10 CVLAN IDs, each of which is in the range of 1 to 4094. The *vlan-id* argument specifies the SVLAN ID in the range of 1 to 4094.

tunnel *outer-vlan-id inner-vlan-id* **translated-vlan** *outer-vlan-id inner-vlan-id*: Specifies the original outer VLAN ID, original inner VLAN ID, translated outer VLAN ID, and translated inner VLAN ID for a two-to-two VLAN mapping. The value ranges for the *outer-vlan-id* argument and the *inner-vlan-id* argument are both 1 to 4094.

all: Deletes all VLAN mapping configurations from the interface.

Usage guidelines

VLAN mapping takes effect only on VLAN-tagged packets received on an interface.

The original and translated VLANs in VLAN mappings on an interface must meet the following requirements:

- Different types of VLAN mapping entries cannot include the same original VLANs or translated VLANs.
- Different one-to-one or two-to-two VLAN mapping entries cannot include the same translated VLANs. If you configure multiple one-to-one or two-to-two VLAN mapping entries for the same original VLANs, the most recent configuration takes effect.

When you configure many-to-one VLAN mappings, following these restrictions and guidelines:

- For many-to-one VLAN mapping to take effect, configure many-to-one VLAN mapping in pairs on both the customer side and the network side.
- An interface cannot be configured as the customer-side port and network-side port of many-to-one VLAN mapping at the same time.
- After you configure an interface as the network-side interface of many-to-one VLAN mapping, do not configure the other types of VLAN mapping on the interface.
- To ensure correct traffic forwarding from the service provider network to the customer network, do not configure many-to-one VLAN mappings together with uRPF. For more information about uRPF, see *Security Configuration Guide*.

The configuration restrictions between QinQ and VLAN mappings are as follows:

- Before you enable or disable QinQ on a port, you must remove all VLAN mappings on the port.
- You cannot configure two-to-two VLAN mappings on a QinQ-enabled port.

If you use both transparent VLANs and VLAN mappings on an interface, the transparent VLANs cannot be the following VLANs:

- Original or translated VLANs of one-to-one, many-to-one, and one-to-two VLAN mappings.

- Original or translated outer VLANs of two-to-two VLAN mappings.

The MTU of an interface is 1500 bytes by default. After a VLAN tag is added to a packet, the packet length is added by 4 bytes. As a best practice, set the MTU to a minimum of 1504 bytes for ports on the forwarding path of the packet on the service provider network.

Examples

Configure a one-to-one VLAN mapping on Ten-GigabitEthernet 1/0/1 to map VLAN 1 to VLAN 101.

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/1
[Sysname-Ten-GigabitEthernet1/0/1] vlan mapping 1 translated-vlan 101
```

Configure many-to-one VLAN mappings on the customer-side port (Ten-GigabitEthernet 1/0/2) to map VLANs 1 through 50 and VLAN 80 to VLAN 101. Configure the network-side port (Ten-GigabitEthernet 1/0/3) to use the original VLAN tags of the many-to-one mappings to replace the VLAN tags of the packets destined for the user network.

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/2
[Sysname-Ten-GigabitEthernet1/0/2] vlan mapping uni range 1 to 50 translated-vlan 101
[Sysname-Ten-GigabitEthernet1/0/2] vlan mapping uni single 80 translated-vlan 101
[Sysname-Ten-GigabitEthernet1/0/2] quit
[Sysname] interface ten-gigabitethernet 1/0/3
[Sysname-Ten-GigabitEthernet1/0/3] vlan mapping nni
```

Configure one-to-two VLAN mappings on Ten-GigabitEthernet 1/0/4 to add SVLAN tag 101 to packets carrying VLAN tags 1 through 10 and VLAN tag 80.

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/4
[Sysname-Ten-GigabitEthernet1/0/4] vlan mapping nest range 1 to 10 nested-vlan 101
[Sysname-Ten-GigabitEthernet1/0/4] vlan mapping nest single 80 nested-vlan 101
```

Configure a two-to-two VLAN mapping on Ten-GigabitEthernet 1/0/5 to map SVLAN 101 and CVLAN 1 to SVLAN 201 and CVLAN 10.

```
<Sysname> system-view
[Sysname] interface ten-gigabitethernet 1/0/5
[Sysname-Ten-GigabitEthernet1/0/5] vlan mapping tunnel 101 1 translated-vlan 201 10
```

Related commands

display vlan mapping