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Chapter 1 Ethernet Port Configuration Commands

1.1 Ethernet Port Configuration Commands

1.1.1 broadcast-suppression

Syntax

```
broadcast-suppression { ratio | pps max-pps }  
undo broadcast-suppression
```

View

Ethernet port view

Parameter

ratio: Specifies the maximum wire speed ratio of the broadcast traffic allowed on an Ethernet port, ranging from 1 to 100. The step is 1. By default, the value is 100.

max-pps: Specifies the maximum packets per second of the broadcast traffic on an Ethernet port, ranging from 1 to 1,488,000 pps.

Description

Using **broadcast-suppression** command, you can configure the broadcast traffic size enabled on port. Once the broadcast traffic exceeds the value set by the user, the system will discard some broadcast to ensure network service so that the traffic ratio of broadcast is maintained in a proper range. Using **undo broadcast-suppression** command, you can restore the default broadcast traffic enabled on port as 100. i.e., 100% broadcast traffic is allowed to pass through.

Example

Enable 20% broadcast cast to pass, i.e. 80% broadcast storm suppression is made on broadcast traffic of port.

```
<Quidway> system-view  
System View: return to User View with Ctrl+Z.  
[Quidway] interface GigabitEthernet1/0/1  
[Quidway-GigabitEthernet1/0/1] broadcast-suppression 20
```

1.1.2 copy configuration

Syntax

copy configuration source { *interface-type interface-number* | **aggregation-group agg-id** } **destination** { *interface-list* [**aggregation-group agg-id**] | **aggregation-group agg-id** }

View

System view

Parameter

interface-type: Source port type.

interface-num: Source port number.

interface-list: Destination port list, *interface-list1* = { *interface-type interface-num* } [**to** { *interface-type interface-num* }] &<1-10>. &<1-10> indicates that the former parameter can be input 10 times repeatedly at most.

agg-id: Source or destination aggregation group ID. If it is a source aggregation group, the port with minimum port number is the source port; if it is a destination aggregation group, the configurations of all its member ports change to be consistent with that of the source.

Description

Using the **copy configuration** command, you can copy the configuration of a specific port to other ports, to ensure consistent configuration.

Such contents may involve: VLAN setting, LACP setting, QoS setting, STP setting and port setting.

- The VLAN setting includes permitted VLAN types, default VLAN ID.
- The LACP setting includes LACP enabling/disabling.
- The QoS setting includes traffic limiting, priority marking, default 802.1p priority, bandwidth assurance, congestion avoidance, traffic redirection, traffic statistics.
- The STP setting includes STP enabling/disabling, link attribute (point-to-point or not), STP priority, path cost, max transmission speed, loop protection, root protection, edge port or not.
- The port setting includes port link type, port speed, duplex mode.

Example

Copy the configuration of aggregation group 1 to aggregation group 2.

```
<Quidway> system-view
```

```
System View: return to User View with Ctrl+Z.
```

```
[Quidway] copy configuration source aggregation-group 1 destination  
aggregation-group 2
```

1.1.3 description

Syntax

description *text*
undo description

View

Ethernet port view

Parameter

text: Port description character string, with 80 characters at most.

Description

Using **description** command, you can configure the description character string for Ethernet port. Using **undo description** command, you can cancel the port description character string.

By default, the port description character string is null.

Example

Configure the description character string of Ethernet port GigabitEthernet1/0/1 as lanswitch-interface.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] description lanswitch-interface
```

1.1.4 display interface

Syntax

display interface [*interface-type* | *interface-type interface-num*]

View

Any view

Parameter

interface-type: Specifies the port type.

interface-num: Specifies the port number.

Description

Using **display interface** command, you can view the configuration information on the port.

If the port type and number are not specified when displaying the port information, the information of all the ports will be displayed. If only the port type is specified, all the information of the ports of this type will be displayed. If both port type and port number are specified, the information of the designated port will be displayed.

Example

Display configuration information of GigabitEthernet1/0/28.

```
<Quidway> display interface gigabitethernet1/0/28
GigabitEthernet1/0/28 current state : UP
  IP Sending Frames' Format is PKTFMT_ETHNT_2, Hardware address is
00e0-fc00-5600
  Media type is twisted pair, loopback not set
  Port hardware type is 1000_BASE_T_AN_SFP
  The transceiver Detail Information :
    The transceiver type : SFP
    The standard compliance : 1000BASE_T
    Transfers distance(m) :9um Fiber: 0
      50um Fiber :0
      62.5um Fiber : 0
      copper line :100
    Serial Num is P6G16UM
    Vendor Name is FINISAR CORP.
    3C Number is Not Support
  1000Mbps-speed mode, full-duplex mode
  Link speed type is autonegotiation, link duplex type is autonegotiation
  Flow-control is not enabled
  The Maximum Frame Length is 9216
  Broadcast MAX-ratio: 100%
  Unicast MAX-ratio: 100%
  Multicast MAX-ratio: 100%
  Allow jumbo frame to pass
  PVID: 1
  Mdi type: auto
  Port link-type: access
    Tagged VLAN ID : none
    Untagged VLAN ID : 1
  Last 300 seconds input:  0 packets/sec 0 bytes/sec
  Last 300 seconds output:  0 packets/sec 6 bytes/sec
  Input(total):  4 packets, 272 bytes
    0 broadcasts, 4 multicasts, 0 pauses
  Input(normal):  - packets, - bytes
    - broadcasts, - multicasts, 0 pauses
```

```

Input:  0 input errors, 0 runts, 0 giants,  0 throttles, 0 CRC
        - frame, - overruns, 0 aborts, - ignored, - parity errors
Output(total): 53 packets, 3770 bytes
           44 broadcasts, 6 multicasts, 0 pauses
Output(normal): - packets, - bytes
                - broadcasts, - multicasts, - pauses
Output: 0 output errors, - underruns, - buffer failures
        0 aborts, 0 deferred, 0 collisions, 0 late collisions
        0 lost carrier, - no carrier

```

Table 1-1 Output description of the **display interface** command

Field	Description
GigabitEthernet1/0/1 current state	The current state of Ethernet port (enabled or disabled)
IP Sending Frames' Format	Ethernet frame format
Hardware address	Port hardware address
The Maximum Transmit Unit	Maximum transmit unit
Media type	Type of media
loopback not set	Port loopback test state
Port hardware type	Port hardware type
Unknown-speed mode, unknown-duplex mode Link speed type is autonegotiation, link duplex type is autonegotiation	Both the duplex mode and the rate are set to auto-negotiation.
Flow-control is not enabled	Port flow control state
The Maximum Frame Length	Maximum length of the Ethernet frames that can pass through the port
Broadcast MAX-ratio	Port broadcast storm suppression ratio
Unicast MAX-ratio	Port unicast storm suppression ratio
Multicast MAX-ratio	Port multicast storm suppression ratio
Allow jumbo frame to pass	Jumbo frame is allowed to pass through the port
PVID	Port default VLAN ID
Mdi type	Cable type
Port link-type	Port link type
Tagged VLAN ID	The VLANs with packets tagged
Untagged VLAN ID	The VLANs with packets untagged

Field	Description
Last 300 seconds input: 0 packets/sec 0 bytes/sec Last 300 seconds output: 0 packets/sec 6 bytes/sec	The input/output rate and the passing packet number on this port in the last 300 seconds
Input(total): 4 packets, 272 bytes 0 broadcasts, 4 multicasts, 0 pauses Input(normal): - packets, - bytes - broadcasts, - multicasts, 0 pauses Input: 0 input errors, 0 runs, 0 giants, 0 throttles, 0 CRC - frame, - overruns, 0 aborts, - ignored, - parity errors Output(total): 53 packets, 3770 bytes 44 broadcasts, 6 multicasts, 0 pauses Output(normal): - packets, - bytes - broadcasts, - multicasts, - pauses Output: 0 output errors, - underruns, - buffer failures 0 aborts, 0 deferred, 0 collisions, 0 late collisions 0 lost carrier, - no carrier	The statistics information of input/output packets and errors on this port. "-" indicates that the item doesn't supported by the switch.

1.1.5 display loopback-detection

Syntax

display loopback-detection

View

Any view

Parameter

none

Description

Using **display loopback-detection** command, you can view whether the port loopback detection has been enabled. If it has been enabled, then the time interval of the detection and the current port loopback information will also be displayed.

Example

Display if the port loopback detection is enabled.

```
<Qidway> display loopback-detection
Loopback-detection is running
Detection interval time is 30 seconds
There is no port existing loopback link
```

Table 1-2 Output description of the **display loopback-detection** command

Field	Description
Loopback-detection is running	The loopback detection is enabled
Detection interval time is 30 seconds	The detection interval is 30 seconds
There is no port existing loopback link	No port is in the loopback state

1.1.6 display port

Syntax

display port { combo | hybrid | trunk }

View

Any view

Parameter

combo: Display Combo port.

hybrid: Display Hybrid port.

trunk: Display Trunk port.

Description

Using **display port** command, you can view the ports in the current system, whose link type is Hybrid or Trunk. If there is any such port, display the corresponding port name.

Example

Display the Hybrid ports in the current system.

```
<Qidway> display port hybrid
The following hybrid ports exist:
GigabitEthernet1/0/1          GigabitEthernet1/0/2
```

The above information displays that the current system has two Hybrid ports, GigabitEthernet1/0/1 and GigabitEthernet1/0/2.

1.1.7 display port vlan-vpn

Syntax

display port vlan-vpn

View

Any view

Parameter

None

Description

Use the **display port vlan-vpn** command to display the information about VLAN VPN configuration of the current system, including current IPID value, VLAN-VPN ports, VLAN-VPN uplink ports and whether the inner tag priority replication function is enabled.

Example

```
# Display the VLAN-VPN configuration of the system.  
<Quidway> display port vlan-vpn
```

1.1.8 display unit

Syntax

display unit *unit-id* interface

View

Any view

Parameter

unit-id: Specifies Unit ID, ranging from 1 to 8.

Description

Using **display unit** command, you can view the information of the port in the specific unit.

Example

```
# Display the port information of the unit1.  
<Quidway> display unit 1 interface  
Aux1/0/0 current state :DOWN  
Line protocol current state :DOWN
```

```
Internet protocol processing : disabled
Description : Aux1/0/0 Interface
The Maximum Transmit Unit is 1500
Data drive mode: interactive
    5 minutes input rate 0.0 bytes/sec, 0.0 packets/sec
    5 minutes output rate 0.0 bytes/sec, 0.0 packets/sec
    0 packets input, 1000 bytes
    0 packets output, 27317 bytes
    error: Parity 0, Frame 0, Overrun 0, FIFO 0
DCD=UP DTR=UP DSR=UP RTS=UP CTS=UP

Cascadel/2/1 current state :DOWN
Line protocol current state :DOWN
Description : Cascadel/2/1 Interface
The Maximum Transmit Unit is 1500, Hold timer is 10(sec)
(Omitted)
```

1.1.9 duplex

Syntax

```
duplex { auto | full | half }
undo duplex
```

View

Ethernet port view

Parameter

auto: Port auto-negotiation attribute.
full: Port full-duplex attribute.
half: Port half-duplex attribute.

Description

Using **duplex** command, you can configure the full-duplex/half-duplex attribute of the Ethernet port. Using **undo duplex** command, you can restore the duplex attribute of the port to default auto-negotiation mode.

By default, the duplex attribute is **auto**.

For the related command, see **speed**.

Example

```
# Configure the GigabitEthernet1/0/1 as auto-negotiation attribute.
<Qidway> system-view
```

```
System View: return to User View with Ctrl+Z.  
[Quidway] interface GigabitEthernet1/0/1  
[Quidway-GigabitEthernet1/0/1] duplex auto
```

1.1.10 flow-control

Syntax

```
flow-control  
undo flow-control
```

View

Ethernet port view

Parameter

none

Description

Using **flow-control** command, you can enable flow control feature on the Ethernet port to avoid discarding data packets due to congestion. Using **undo flow-control** command, you can disable flow control feature.

By default, flow control on the Ethernet port is disabled.

Example

```
# Enable flow control on GigabitEthernet1/0/1.  
<Quidway> system-view  
System View: return to User View with Ctrl+Z.  
[Quidway] interface GigabitEthernet1/0/1  
[Quidway-GigabitEthernet1/0/1] flow-control
```

1.1.11 interface

Syntax

```
interface { interface-type interface-num }
```

View

System view

Parameter

interface-type: Port type.

interface-num: Port number, in the format of unit ID/slot number/port number. The unit ID is in the range 1 to 8. The slot number ranges from 0 to 2. Slot 0 contains the fixed ports on the front panel; and slots 1 and 2 contains the fixed ports on the rear panel.

Description

Using **interface** command, you can enter the Ethernet port view.

If the user wants to configure the related parameters of the Ethernet port, he must first use this command to enter the Ethernet port view.

Example

Enter the GigabitEthernet1/0/1 port view.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
```

1.1.12 jumboframe enable

Syntax

jumboframe enable
undo jumboframe enable

View

Ethernet port view

Parameter

none

Description

Using **jumboframe enable** command, you can permit jumbo frame to pass through the current Ethernet port. Using **undo jumboframe enable** command, you can forbid jumbo frame to pass through.

By default, the jumbo frame with length between 1518 bytes and 9216 bytes including are permitted to pass through the Ethernet port.

Example

Permit jumbo frame to pass through GigabitEthernet1/0/1.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] jumboframe enable
```

1.1.13 loopback

Syntax

loopback { external | internal }

View

Ethernet port view

Parameter

external: External loop test.

internal: Internal loop test.

Description

Using **loopback** command, you can configure the Ethernet port to perform the loopback test to check whether the Ethernet port works normally and the loop test will finish automatically after being performed for a while.

By default, the port will not perform the loopback test.

Example

Perform the internal loop test for GigabitEthernet1/0/1.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] loopback internal
```

1.1.14 loopback-detection control enable

Syntax

loopback-detection control enable

undo loopback-detection control enable

View

Ethernet port view

Parameter

none

Description

Using **loopback-detection control enable** command, you can enable loopback detection control function on a Trunk port or Hybrid port. Using **undo**

loopback-detection control enable command, you can disable loopback detection control function on a Trunk port or Hybrid port.

This command sets control over the operating status of the port, when the loopback detection function is enabled and loopback is found on a Trunk or Hybrid port. When this function is enabled and loopback is detected on a Trunk or Hybrid port, the system begins to control the operating status of the port. When this function is disabled and loopback is found, the system just reports a Trap message but has no control over the operating status of the Trunk or Hybrid port.

By default, loopback detection controlled function on Trunk or Hybrid port is disabled.

Note that, this command has no effect on Access ports.

Example

Enable the trunk port loopback detection controlled function.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] loopback-detection control enable
```

1.1.15 loopback-detection enable

Syntax

loopback-detection enable
undo loopback-detection enable

View

System view/Ethernet port view

Parameter

none

Description

Using **loopback-detection enable** command, you can enable the port loopback detection. If there is a loopback port found, the switch will put it under control. Using **undo loopback-detection enable** command, you can disable the port loopback detection.

The loopback detection of the specified port functions only after port loopback detection is enabled in system view and Ethernet port view.

By default, port loopback detection is disabled.

For the related command, see **display loopback-detection**.

Example

```
# Enable the port loopback detection.

<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] loopback-detection enable
```

1.1.16 loopback-detection per-vlan enable

Syntax

```
loopback-detection per-vlan enable
undo loopback-detection per-vlan enable
```

View

Ethernet port view

Parameter

none

Description

Using the **loopback-detection per-vlan enable** command, you can configure that the system performs loopback detection to all VLANs on Trunk and Hybrid ports. Using the **undo loopback-detection per-vlan enable** command, you can configure that the system only performs loopback detection to the default VLANs on the port.

By default, the system performs loopback detection to the default VLAN on Trunk and Hybrid ports.

Example

```
# Configure the detection interval for the external loopback condition of each port to 10 seconds.

<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] loopback-detection per-vlan enable
```

1.1.17 multicast-suppression

Syntax

```
multicast-suppression { ratio | pps max-pps }
undo multicast-suppression
```


View

Ethernet port view

Parameter

ratio: Specifies the maximum wire speed ratio of the multicast traffic allowed on Ethernet port, ranging from 1 to 100. The step is 1. By default, the value is 100. The smaller the ratio is, the smaller the multicast traffic is permitted.

pps max-pps: Specifies the maximum packets per second of the multicast traffic on an Ethernet port, ranging from 1 to 1,488,000 pps.

Description

Using **multicast-suppression** command, you can configure the multicast traffic size enabled on port. Once the multicast traffic exceeds the value set by the user, the system will discard some multicast to ensure network service so that the traffic ratio of multicast is maintained in a proper range. Using **undo multicast-suppression** command, you can restore the default multicast traffic enabled on port as 100. i.e., 100% multicast traffic is allowed to pass through.

Example

Enable 20% multicast packets to pass, i.e. 80% multicast storm suppression is made on multicast traffic of port.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] multicast-suppression 20
```

1.1.18 port access vlan

Syntax

port access vlan *vlan_id*

undo port access vlan

View

Ethernet port view

Parameter

vlan_id: VLAN ID defined in IEEE802.1Q, ranging from 1 to 4094.

Description

Using **port access vlan** command, you can join the access port to a specified VLAN.
Using **undo port access vlan** command, you can cancel the access port from the VLAN.

The use condition of this command is the VLAN indicated in *vlan_id* must exist.

Example

Join GigabitEthernet1/0/1 port to VLAN3 (VLAN3 has existed).

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port access vlan 3
```

1.1.19 port hybrid pvid vlan

Syntax

port hybrid pvid vlan *vlan_id*
undo port hybrid pvid

View

Ethernet port view

Parameter

vlan_id: VLAN ID defined in IEEE802.1Q, ranging from 1 to 4094 and the default *vlan_id* is 1.

Description

Using **port hybrid pvid vlan** command, you can configure the default VLAN ID of the hybrid port. Using **undo port hybrid pvid** command, you can restore the default VLAN ID of the hybrid port.

The default VLAN ID of local hybrid port shall be consistent with that of the peer one, otherwise, the packet cannot be properly transmitted.

For the related command, see **port link-type**.

Example

Configure the default VLAN of the hybrid port GigabitEthernet1/0/1 to 100.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port hybrid pvid vlan 100
```

1.1.20 port hybrid vlan

Syntax

```
port hybrid vlan vlan_id_list { tagged | untagged }  
undo port hybrid vlan vlan_id_list
```

View

Ethernet port view

Parameter

vlan_id_list: *vlan_id_list* = [*vlan_id1* [to *vlan_id2*]]&<1-10> specifies which VLAN the hybrid port will be added to. It can be discrete. The *vlan_id* ranges from 1 to 4094. &<1-10> indicates that the former parameter can be input 10 times repeatedly at most.

tagged: The packet of specified VLAN will have tag.

untagged: The packet of specified VLAN will not have tag.

Description

Using **port hybrid vlan** command, you can join the hybrid port to specified existing VLAN. Using **undo port hybrid vlan** command, you can cancel the hybrid port from the specified VLAN.

Hybrid port can belong to multiple VLANs. If the **port hybrid vlan *vlan_id_list* { tagged | untagged }** command is used for many times, the VLANs carried by the hybrid port is the set of *vlan_id_list*.

This command can be used on condition that the VLAN specified with *vlan_id* must have been existed.

For the related command, see **port link-type**.

Example

Join hybrid port GigabitEthernet1/0/1 to VLAN of 2, 4 and 50-100, and these VLAN will have tags.

```
<Quidway> system-view  
System View: return to User View with Ctrl+Z.  
[Quidway] interface GigabitEthernet1/0/1  
[Quidway-GigabitEthernet1/0/1] port hybrid vlan 2 4 50 to 100 tagged
```

1.1.21 port link-type

Syntax

```
port link-type { access | hybrid | trunk | irf-fabric }  
undo port link-type
```

View

Ethernet port view

Parameter

access: Configure the port as access port.

hybrid: Configure the port as hybrid port.

trunk: Configure the port as trunk port.

irf-fabric: Configure the port as trunk port. This keyword is not supported on the S5600 series currently.

Description

Using **port link-type** command, you can configure the link type of Ethernet port. Using **undo port link-type** command, you can restore the port as default status, i.e. access port.

By default, the port is access port.

Note that you can configure four types of ports concurrently on the same switch, but you cannot switch between trunk port and hybrid port. You must turn it first into access port and then set it as other type. For example, you cannot configure a trunk port directly as hybrid port, but first set it as access port and then as hybrid port.

Example

Configure Ethernet port GigabitEthernet1/0/1 as trunk port.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port link-type trunk
```

1.1.22 port trunk permit vlan

Syntax

port trunk permit vlan { *vlan_id_list* | all }

undo port trunk permit vlan { *vlan_id_list* | all }

View

Ethernet port view

Parameter

vlan_id_list: *vlan_id_list* = [*vlan_id1* [**to** *vlan_id2*]]&<1-10> is the VLAN range joined by the trunk port. It can be discrete. The *vlan_id* ranges from 1 to 4094. &<1-10> indicates that the former parameter can be input 10 times repeatedly at most.

all: Join the trunk port to all VLANs.

Description

Using **port trunk permit vlan** command, you can join trunk port to specified VLAN. Using **undo port trunk permit vlan** command, you can cancel trunk port from specified VLAN.

Trunk port can belong to multiple VLANs. If the **port trunk permit vlan** command is used many times, then the VLAN enabled to pass on trunk port is the set of these *vlan_id_list*.

For the related command, see **port link-type**.

Example

Join the trunk port GigabitEthernet1/0/1 to VLAN 2, 4 and 50-100.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port trunk permit vlan 2 4 50 to 100
```

1.1.23 port trunk pvid vlan

Syntax

port trunk pvid vlan *vlan_id*

undo port trunk pvid

View

Ethernet port view

Parameter

vlan_id: VLAN ID defined in IEEE802.1Q, ranging from 1 to 4094 and the default *vlan_id* is 1.

Description

Using **port trunk pvid vlan** command, you can configure the default VLAN ID of trunk port. Using **undo port trunk pvid** command, you can restore the default VLAN ID of the port.

The default VLAN ID of local trunk port should be consistent with that of the peer one, otherwise, the packet cannot be properly transmitted.

For the related command, see **port link-type**.

Example

Configure the default VLAN of the trunk port GigabitEthernet1/0/1 to 100.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port trunk pvid vlan 100
```

1.1.24 reset counters interface

Syntax

reset counters interface [*interface-type* | *interface-type interface-num*]

View

User view

Parameter

interface-type: Specifies the port type.

interface-num: Specifies the port number.

Description

Using **reset counters interface** command, you can reset the statistical information on the port. and count the related information again on the port for the user.

If the port type and number are not specified when clearing the port information, information of all ports on the switch will be cleared. If only the port type is specified, all the information on the ports of this type will be cleared. If both port type and port number are specified, the information on the designated port will be cleared.

After 802.1X is enabled, the port information cannot be reset.

Example

Reset statistical information on Ethernet port GigabitEthernet1/0/1.

```
<Quidway> reset counters interface gigabitethernet1/0/1
```

1.1.25 shutdown

Syntax

shutdown

undo shutdown

View

Ethernet port view

Parameter

none

Description

Using **shutdown** command, you can disable the Ethernet port. Using **undo shutdown** command, you can enable the Ethernet port.

By default, the Ethernet port is enabled.

Example

Enable Ethernet port GigabitEthernet1/0/1.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] undo shutdown
```

1.1.26 speed

Syntax

speed { 10 | 100 | 1000 | 10000 | auto }
undo speed

View

Ethernet port view

Parameter

10: The speed on the port is 10Mbps.
100: The speed on the port is 100Mbps.
1000: The speed on the port is 1000Mbps.
10000: The speed on the port is 10000Mbps.
auto: The port speed is in peer auto-negotiation status.

Description

Using **speed** command, you can configure the port speed. Using **undo speed** command, you can restore the default speed.

By default, the speed is **auto**.

For the related command, see **duplex**.

Example

Configure Ethernet port GigabitEthernet1/0/1 port speed as 1000Mbps.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
```

```
[Quidway-GigabitEthernet1/0/1] speed 1000
```

1.1.27 unicast-suppression

Syntax

unicast-suppression { *ratio* | **pps** *max-pps* }

undo unicast-suppression

View

Ethernet port view

Parameter

ratio: Specifies the maximum wire speed ratio of the unicast traffic allowed on Ethernet port, ranging from 1 to 100. The step is 1. By default, the value is 100. The smaller the ratio is, the smaller the unicast traffic is permitted.

pps *max-pps*: Specifies the maximum packets per second of the unicast traffic on an Ethernet port, ranging from 1 to 1,488,000 pps.

Description

Using **unicast-suppression** command, you can configure the unicast traffic size enabled on port. Once the unicast traffic exceeds the value set by the user, the system will discard some unicast to ensure network service so that the traffic ratio of unicast is maintained in a proper range. Using **undo unicast-suppression** command, you can restore the default unicast traffic enabled on port as 100. i.e., 100% unicast traffic is allowed to pass through.

Example

Enable 20% unicast packets to pass, i.e. 80% unicast storm suppression is made on unicast traffic of port.

```
[Quidway-GigabitEthernet1/0/1] unicast-suppression 20
```


Chapter 2 Ethernet Link Aggregation Configuration Commands

2.1 Ethernet Link Aggregation Configuration Commands

2.1.1 debugging link-aggregation error

Syntax

```
debugging link-aggregation error  
undo debugging link-aggregation error
```

View

User view

Parameter

None

Description

Using **debugging link-aggregation error** command, you can enable link aggregation errors debugging. Using **undo debugging link-aggregation error** command, you can disable link aggregation errors debugging.

Example

```
# Enable link aggregation errors debugging.  
<Quidway> debugging link-aggregation error
```

2.1.2 debugging link-aggregation event

Syntax

```
debugging link-aggregation event  
undo debugging link-aggregation event
```

View

User view

Parameter

None

Description

Using **debugging link-aggregation event** command, you can enable link aggregation events debugging. Using the **undo debugging link-aggregation event** command, you can disable link aggregation events debugging.

Example

```
# Enable link aggregation events debugging.  
<Quidway> debugging link-aggregation event
```

2.1.3 debugging lacp packet

Syntax

```
debugging lacp packet [ interface { interface-type interface-number } [ to  
{ interface-type interface-num } ] ]  
undo debugging lacp packet [ interface { interface-type interface-number } [ to  
{ interface-type interface-num } ] ]
```

View

User view

Parameter

interface { *interface-type interface_ num* } [**to** { *interface-type interface_ num* }]:
Specifies ports. You can specify multiple sequential ports with the **to** parameter, instead of specifying only one port. *interface-type* specifies port type and *interface-num* port number. For more information, see the parameter item for the **interface** command.

Description

Using **debugging lacp packet** command, you can enable LACP packets debugging at a designated port or ports. Using the **undo debugging lacp packet** command, you can disable LACP packets debugging at a designated port or ports.

Example

```
# Enable LACP packets debugging at GigabitEthernet1/0/1.  
<Quidway> debugging lacp packet interface gigabitethernet1/0/1
```

2.1.4 debugging lacp state

Syntax

```
debugging lacp state [ interface { interface-type interface-number } [ to  
{ interface-type interface-num } ] ] { { actor-churn | mux | partner-churn | ptx | rx }* |  
all }
```

```
undo debugging lacp state [ interface { interface-type interface-number } [ to { interface-type interface-num } ] ] { { actor-churn | mux | partner-churn | ptx | rx }* | all }
```

View

User view

Parameter

interface { *interface-type interface_ num* } [**to** { *interface-type interface_ num* }]:
Specifies ports. You can specify multiple sequential ports with the **to** parameter, instead of specifying only one port. *interface-type* specifies port type and *interface-num* port number. For more information, see the parameter item for the **interface** command.

actor-churn: Debugging actor-churn state machine.

mux: Debugging MUX state machine.

partner-churn: Debugging partner-churn state machine.

ptx: Debugging PTX state machine.

rx: Debugging RX state machine.

all: Debugging all state machines.

Description

Using **debugging lacp state** command, you can enable LACP state machines debugging on a designated port or ports. Using **undo debugging lacp state** command, you can disable LACP state machines debugging on a designated port or ports.

Example

```
# Enable all LACP state machines debugging.
```

```
<Qidway> debugging lacp state all
```

2.1.5 display link-aggregation summary

Syntax

```
display link-aggregation summary
```

View

Any view

Parameter

None

Description

Using **display link-aggregation summary** command, you can view summary information of all aggregation groups, including actor system ID, aggregation group ID, aggregate group type, partner system ID, number of selected ports, number of standby ports, load sharing type and master port number.

Example

Display summary information of all aggregation information.

```
<Quidway> display link-aggregation summary
```

Aggregation Group Type: D -- Dynamic, S -- Static, M -- Manual

Loadsharing Type: Share - Loadsharing, NonS - Non-Loadsharing

Actor ID: 0x8000, 00e0-fcfc-ff04

AL ID	AL Type	Partner ID	Select Ports	Standby Ports	Share Type	Master Port
1	D	0x8000,00e0-fcfc-ff01	1	0	NonS	GigabitEthernet1/0/1
10	M	none	1	0	NonS	GigabitEthernet1/0/2
20	S	0x8000,00e0-fcfc-ff01	1	0	NonS	GigabitEthernet1/0/3

2.1.6 display link-aggregation verbose

Syntax

display link-aggregation verbose [*agg-id*]

View

Any view

Parameter

agg-id: Aggregation group ID, which must be existing ones, in the range of 1 to 464.

Description

Using **display link-aggregation verbose** command, you can view detailed information of a designated port, including aggregation group ID, aggregation group type, load sharing type, aggregation group descriptor and detailed local information (system ID, member ports, port state, port priority, LACP state flag, operation key) and detailed remote information (local port, indexes of remote ports, port priority, LACP state flag, operation key and system ID, here local and remote are in a relative sense).

Note that since the manual aggregation group cannot get the information of the peer end, every item of the peer end is displayed as 0, which does not indicate the actual state of the peer system.

Example

Display detailed information of aggregation group 1.

```
<Quidway> display link-aggregation verbose 1
Loadsharing Type: Share - Loadsharing, NonS - Non-Loadsharing

Aggregation ID: 20, AggregationType: Static, Loadsharing Type: NonS
Aggregation Description: myaggl
System ID: 0x8000, 00e0-fcfc-ff04
Port Status: S -- Selected, T -- sTandby
Local:
Port                Status  Priority  Flag    Oper-Key
-----
GigabitEthernet1/0/3 S        32768    0x3d    3

Remote:
Actor                Partner  Priority  Flag    Oper-Key  SystemID
-----
GigabitEthernet1/0/3 2        32768    0x3d    3          0x8000,00e0-fcfc-ff01
```

2.1.7 display link-aggregation interface

Syntax

```
display link-aggregation interface { interface-type interface-number } [ to
{ interface-type interface-num } ]
```

View

Any view

Parameter

interface { *interface-type interface_ num* } [**to** { *interface-type interface_ num* }]:
 Specifies ports. You can specify multiple sequential ports with the **to** parameter, instead
 of specifying only one port. *interface-type* specifies port type and *interface-num* port
 number. For more information, see the parameter item for the **interface** command.

Description

Using **display link-aggregation interface** command, you can view detailed link
 aggregation information at a designated port, including aggregation group ID for the
 port, port priority, operation key, LACP state flag, partner information (system ID, port
 number, port priority, operation key, LACP state flag, LACP packet statistics).

Note that since the manual aggregation group cannot get the information of the peer
 end, every item of the peer end is displayed as 0, which does not indicate the actual

state of the peer system, and there is no LACP packet statistics in the display information.

Example

Display detailed link aggregation information of manual link aggregation group.

```
<Qidway> display link-aggregation interface gigabitethernet1/0/1
GigabitEthernet1/0/1:
  Selected AggID: 1
  Local:
    Port-Priority: 32768, Oper key: 1, Flag: 0x00
  Remote:
    System ID: 0x0, 0000-0000-0000
    Port Number: 0, Port-Priority: 0, Oper-key: 0, Flag: 0x00
```

Display detailed link aggregation information of static or dynamic link aggregation group.

```
<Qidway> display link-aggregation interface gigabitethernet1/0/1
GigabitEthernet1/0/1:
  Selected AggID: 20
  Local:
    Port-Priority: 32768, Oper key: 2, Flag: 0x3d
  Remote:
    System ID: 0x8000, 000e-84a6-fb00
    Port Number: 2, Port-Priority: 32768 , Oper-key: 10, Flag: 0x3d
  Received LACP Packets: 8 packet(s), Illegal: 0 packet(s)
  Sent LACP Packets: 9 packet(s)
```

2.1.8 display lacp system-id

Syntax

display lacp system-id

View

Any view

Parameter

None

Description

Using **display lacp system-id** command, you can view actor system ID, including system priority and system MAC address.

For the related command, see **link-aggregation**.

Example

```
# Display local system ID.  
<Quidway> display lacp system-id  
Actor System ID: 0x8000, 00e0-fc00-0100
```

2.1.9 lacp enable

Syntax

```
lacp enable  
undo lacp enable
```

View

Ethernet port view

Parameter

None

Description

Using **lacp enable** command, you can enable LACP. Using **lacp enable** command, you can disable LACP.

Example

```
# Enable LACP at GigabitEthernet1/0/1.  
<Quidway> system-view  
System View: return to User View with Ctrl+Z.  
[Quidway] interface GigabitEthernet1/0/1  
[Quidway-GigabitEthernet1/0/1] lacp enable
```

2.1.10 lacp port-priority

Syntax

```
lacp port-priority port-priority-value  
undo lacp port-priority
```

View

Ethernet port view

Parameter

port-priority-value: Port priority, ranging from 0 to 65535. By default, it is 32768.

Description

Using **lacp port-priority** command, you can configure port priority value. Using **undo lacp port-priority** command, you can restore the default value.

For the related commands, see **display link-aggregation verbose** and **display link-aggregation interface**.

Example

Set port priority as 64.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] lacp port-priority 64
```

2.1.11 lacp system-priority

Syntax

lacp system-priority *system-priority-value*
undo lacp system-priority

View

System view

Parameter

system-priority-value: System priority, ranging from 0 to 65535. By default, it is 32768.

Description

Using **lacp system-priority** command, you can configure system priority value. Using **undo lacp system-priority** command, you can restore the default value.

For the related command, see **display lacp system-id**.

Example

Set system priority as 64.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] lacp system-priority 64
```

2.1.12 link-aggregation group agg-id description

Syntax

link-aggregation group *agg-id* **description** *aname*

undo link-aggregation group *agg-id* description

View

System view

Parameter

agg-id: Aggregation group ID, in the range of 1 to 464.

aname: Aggregation group name, character string with 1 to 32 characters.

Description

Using **link-aggregation group *agg-id* description** command, you can configure descriptor for an aggregation group. Using **undo link-aggregation group *agg-id* description** command, you can delete aggregation group descriptor.

For the related command, see **display link-aggregation verbose**.

Example

Configure myal1 as the descriptor of aggregation group 22.

```
<Quidway> system-view
```

```
System View: return to User View with Ctrl+Z.
```

```
[Quidway] link-aggregation group 22 description myal1
```

2.1.13 link-aggregation group *agg-id* mode

Syntax

link-aggregation group *agg-id* mode { manual | static }

undo link-aggregation group *agg-id*

View

System view

Parameter

agg-id: Aggregation group ID, in the range of 1 to 464.

manual: Manual aggregation group.

static: Static aggregation group.

Description

Using **link-aggregation group *agg-id* mode** command, you can create a manual or static aggregation group. Using **undo link-aggregation group** command, you can delete an aggregation group.

A manual or static aggregation group can have up to eight ports. You can use the **link-aggregation group *agg-id* mode** command to change an existent dynamic aggregation group into a manual or static one. If the port number in a group exceeds eight, this operation fails and the system prompts you about configuration failure.

For the related command, see **display link-aggregation summary**.

Example

Create manual aggregation group 22.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] link-aggregation group 22 mode manual
```

2.1.14 port link-aggregation group

Syntax

port link-aggregation group *agg-id*
undo port link-aggregation group

View

Ethernet port view

Parameter

agg-id: Aggregation group ID, in the range of 1 to 464.

Description

Using **port link-aggregation group** command, you can add an Ethernet port into a manual or static aggregation group. Using **undo port link-aggregation group** command, you can delete an Ethernet port from a manual or static aggregation group.

For the related command, see **display link-aggregation verbose**.

Example

Add GigabitEthernet1/0/1 into aggregation group 22.

```
<Quidway> system-view
System View: return to User View with Ctrl+Z.
[Quidway] interface GigabitEthernet1/0/1
[Quidway-GigabitEthernet1/0/1] port link-aggregation group 22
```

2.1.15 reset lacp statistics

Syntax

```
reset lacp statistics [ interface { interface-type interface-number } [ to { interface-type interface-num } ] ]
```

View

User view

Parameter

interface { *interface-type interface_ num* } [**to** { *interface-type interface_ num* }]:
Specifies ports. You can specify multiple sequential ports with the **to** parameter, instead of specifying only one port. *interface-type* specifies port type and *interface-num* port number. For more information, see the parameter item for the **interface** command.

Description

Using **reset lacp statistics** command, you can clear LACP statistics at a designated port. If no port is specified, then LACP statistics at all ports shall be cleared.

For the related command, see **display link-aggregation interface**.

Example

Clear LACP statistics at all Ethernet ports.

```
<Quidway> reset lacp statistics
```