

Link Aggregation Configuration Commands

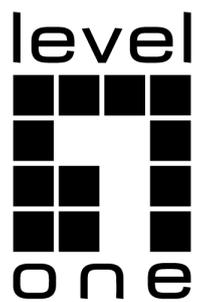


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Chapter 1 Link Aggregation Configuration Commands

1.1 Link Aggregation Configuration Commands

1.1.1 aggregator-group

Syntax

To configure interface aggregation, use the **aggregator-group** command. Use the **no** form of this command to restore the default value.

aggregator-group *id* mode {lacp |static }

no aggregator-group

Parameter

Parameter	Description
<i>id</i>	ID number of the logical port. Value range: 1 to 8.
lacp	Uses LACP negotiation.
static	Negotiation is not used on an port.

Default

Disabled

Usage Guidelines

Port link aggregation is to bind several ports with the familiar attribute to one logical port. LACP negotiation can be used to form binding process. Also the binding process can be forced to be formed without any LACP negotiation .

If the static aggregation is used, please make sure the port is link up and the VLAN attribute of the ports to be binded is the same.

You can select LACP negotiation mode when configuring port aggregation. Active—Places a port into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets. Passive—Places a port into a passive negotiating state, in which the port responds to LACP packets it receives but does not initiate LACP negotiation.

Switches of partial models doesn't support dynamic negotiation mode, therefore relevant configuration commands are not provided.

Command Mode

Interface configuration

Example

The following example shows how to bind g0/1 and port g0/2 to logic port port-aggregator 3, and then to use LACP negotiation.

```
Switch(config)# interface g0/0/1
Switch(config-g0/0/1)# aggregator-group 3 mode lacp
Switch(config-g0/0/1)# interface g0/0/2
Switch(config-g0/0/2)# aggregator-group 3 mode lacp
```

1.1.2 aggregator-group load-balance

Syntax

To configure the load balance after port aggregation, use the **aggregator-group load-balance** command. Use the no form of this command to restore the default value.

aggregator-group load-balance { dst-mac| src-mac| both-mac| dst-ip| src-ip| both-ip| src-port| l4-sport| l4-dport| both-l4port }

no aggregator-group load-balance

Parameter

Parameter	Description
dst-mac	Sets destination mac address as standard.
src-mac	Sets source mac address as standard.
both-mac	Sets source and destination mac address as standard.
dst-ip	Sets destination ip address as standard.
src-ip	Sets source ip address as standard.
both-ip	Sets source and destination ip address as standard.
src-port	Sets source port as standard.
l4-sport	Sets source port + ip as standard.
l4-dport	Sets destination port + ip as standard.
both-l4port	Sets source and destination port + ip as standard.

Default

scr-mac

Usage Guidelines

To ensure load balance of each physical port after port aggregation, use this command to equably distribute data flow on each physical port.

When `dst-mac` mode is selected, the distribution of data flow sets destination MAC address of the data packet as standard. The same MAC address is only sent out on a certain physical interface. The `src-mac` uses source MAC address as standard.

The supporting capability in load balance policy varies according to different models of switches. The command prompt only shows the sharing policy that the switch supports. If the switch doesn't support any sharing policy or just supports one of them, the relevant subcommands will not be displayed.

Command Mode

EXEC

Example

The following command modifies load balance of the port-aggregator to `src-mac` mode:

```
Switch(config)# interface p1
Switch(config-p1)#exit
Switch(config)# aggregator-group load-balance src-mac
```

1.1.3 show aggregator-group

Syntax

show aggregator-group [*id*] {detail|brief|summary}

To show the concrete information of aggregator-group, run the above command.

Parameter

Parameter	Parameter description
<i>id</i>	ID of a specific logic port.

Default

None

Usage Guidelines

This command is used to display the information about port aggregation.

Command Mode

EXEC

1.1.4 show interface port-aggregator

Syntax

show interface *pid*

To show the concrete information of aggregator-group, run the above command.

Parameter

Parameter	Description
<i>id</i>	ID of a specific port.

Default

None

Usage Guidelines

This command is used to display the information about port aggregation.

Command mode

EXEC

Example

The following example show how to display the information about the port-aggregator 1:

```
Switch#show interface p1
Port-aggregator1 is down, line protocol is down
  Hardware is PortAggregator, Address is 0000.0000.0000(0000.0000.0000)
  MTU 1500 bytes, BW 1000 kbit, DLY 2000 usec
  Encapsulation ARPA, loopback not set
  Members in this Aggregator:
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
  Received 0 broadcasts, 0 multicasts
  0 input errors, 0 input discards
  0 CRC, 0 frame, 0 overrun, 0 ignored
```

0 packets output, 0 bytes, 0 underruns
Transmitted 0 broadcasts, 0 multicasts
0 output errors, , 0 discards
0 output buffer failures, 0 output buffers swapped out

Description: Members in this Aggregator, means to aggregate to the physical port of the logical port.

The statistics values are explained as follows:

Packets input means the input of all packets, including broadcast packets, multicast packets and unicast packets.

Bytes means the byte volume of all packets.

Broadcasts means received broadcast packets.

Multicasts means received multicast packets.

Input errors means received error packets.

Input discards means that the received packets are dropped, such as the received packets when the interface protocol is down.

Packets output means the output of all packets, including broadcast packets, multicast packets and unicast packets.

Bytes means the byte volume of all transmitted packets.

Broadcasts means transmitted broadcast packets.

Multicasts means transmitted multicast packets.

Output errors means transmitting error packets.

Output discards means that the transmitted packets are dropped, such as the transmitted packets when the interface protocol is down.

1.1.5 debug lacp errors

Syntax

To debug LACP errors information, use the **debug lacp errors** command.

debug lacp errors

no debug lacp errors

Parameter

None

Default

None

Usage Guidelines

This command is used to debug all errors information during lacp operation to locate the error.

Command Mode

EXEC

Example

```
Switch# debug lacp errors
Switch#
```

1.1.6 debug lacp state

Syntax

To debug lacp state, use the **debug lacp state** command.

debug lacp state

no debug lacp state

Parameter

None

Default

None

Command Mode

EXEC

Example

```
Switch# debug lacp state
Switch#
```

1.1.7 debug lacp packet

Syntax

To debug lacp packet information, use the **debug lacp packet** command.

debug lacp packet

no debug lacp packet

Parameter

None

Default

None

Command Mode

EXEC

Example

```
Switch# debug lacp packet  
Switch#
```