Link Aggregation Configuration Commands

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Chapter 1 Port Aggregation Commands

1.1 Port Aggregation Commands

1.1.1 aggregator-group

Syntax

To configure port aggregation, run aggregator-group id mode {lacp-negotiation |static }. To resume the default settings, run no aggregator-grou.

aggregator-group *id* mode {lacp |static }
no aggregator-group

Parameters

Parameters	Description
id	Stands for the ID of a logistic port. Value range: 1-32
lacp	Enables LACP negotiation.
static	Disables port negotiation.

Default Value

The port is not aggregated.

Usage Guidelines

Port's link aggregation is to bind several ports of same attributes into a logic port. The binding process is conducted through LACP negotiation or is mandatorily conducted without any negotiation.

If the static aggregation is used, please make sure the attribute of the ports to be binded is the same and vlan attribute is consisted.

When configuring port aggregation, you can select the LACP negotiation mode. In Active mode, the port will transmit the LACP packet actively for LACP negotiation; In passive mode, the port responds to the LACP packets passively and conducts the LACP negotiation passively.

Some models of switches do not support the dynamic negotiation mode, hence, the corresponding configuration command is not provided.

Command Mode

Port configuration mode

Example

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

Switch_config_g0/1# aggregator-group 3 mode lacp

Switch_config_g0/1# interface g0/2

Switch_config_g0/2# aggregator-group 3 mode lacp

1.1.2 aggregator-group load-balance

Syntax

aggregator-group load-balance { dst-mac| src-mac| both-mac }

no aggregator-group load-balance

To configure load balance after port aggregation, run aggregator-group load-balance { dst-mac| src-mac| both-mac | src-ip | dst-ip | both-ip }. To resume the default settings, run no aggregator-group load-balance.

Parameters

Parameters	Description
dst-mac	Means taking the destination MAC address as the standard.
src-mac	Means taking the source MAC address as the standard.
both-mac	Means taking the destination/source MAC address as the standard.

Default Value

scr-mac

Usage Guidelines

To ensure each physical port to reach load balance after port aggregation, you need averagely distribute data flow on each physical port. This command can help reaching this function.

When the dst-mac mode is chosen, the distributed data flow takes the destinationmacaddress of the data packet as the standard. Packets with a same MAC address are transmitted from just one physical port. However, the SRC-MAC mode takes the sourcemacaddress as the standard.

Switches of different models have different load balance policies. Only the load balance policy is displayed in the command prompt. If no load balance policies is supported or only one load balance policy is supported, the related sub-command will not be displayed.

Command Mode

Port configuration mode

Example

The following example shows how to change the load balance mode of port-aggregator to the src-mac mode.

Switch_config# int port-aggregator 1

Switch_config_p1#

Switch_config_p1# aggregator-group load-balance src-mac

1.1.3 show aggregator-group

Syntax

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

To display the detailed information about the aggregator-group, run the following command.

Parameters

Parameters	Description
id	IDof a specific logic port

Default Value

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

To display the detailed information about the aggregator-group, run the following command.

show interface port-aggregator *id*

Parameters

Parameters	Description
id	ID of a specific port

Default Value

None

Usage Guidelines

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

Command Mode

EXEC

Example

The following example shows how to display the information about aggregated port 1.

Switch#show interface port-aggregator 1

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

    Transmited 0 broadcasts, 0 multicasts

    0 output errors, , 0 discards

0 output buffer failures, 0 output buffers swapped out

Note: Members in this Aggregator means physical ports which are aggregated to 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.

Broadcasts means received broadcast 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

debug lacp errors

no debug lacp errors

To export the LACP debugging error, run debug lacp errors.

Parameters

None

Default Value

None

Usage Guidelines

This command is used to export all error information occurred during LACP running. The error information can help locating the errors.

Command Mode

EXEC

Example

Switch# debug lacp errors
Switch#
1.1.6 debug lacp state

Syntax

debug lacp state
no debug lacp state
To export the information about the LACP state machine, run debug lacp state.

Parameters

None

Default Value

None

Command Mode

EXEC

Example

Switch# debug lacp state
Switch#
1.1.7 debug lacp packet

Syntax

debug lacp packet
no debug lacp packet
To export the information about LACP receiving or transmitting packets , run debug lacp packet.

Parameters

None

Default Value

None

Command Mode

EXEC

Example

Switch# debug lacp packet
Switch#