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-group.

aggregator-group id mode {lacp [active | passive] | static }

no aggregator-group

Parameters

Parameters	Description
id	Stands for the ID of a logistic port. Value range: none.
lacp active	Enables LACP negotiation. Active mode (Default)
lacp passive	Enables LACP negotiation. Passive mode
static	Disables port negotiation. Value range: N/A

Default Value

The port is not aggregated.

Command Mode

Uplink port configuration mode

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 static aggregation is used, you have to make sure that the attributes of ports are same.

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.

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

1.1.2. aggregator-group load-balance

Syntax

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.

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

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.
dst-ip	Means taking the destination IP address as the standard.
src-ip	Means taking the source IP address as the standard.
both-ip	Means taking the destination/source IP address as the standard.
l4-sport	Means taking the source port of layer-4 protocol as the standard.
l4-dport	Means taking the destination port of layer-4 protocol as the standard.
both-l4port	Means taking the source port and the destination port of layer-4 protocol as the standard.

Default Value

dst-mac

Command Mode

Global configuration mode

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 destination MAC address 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 source MAC address as the standard.

The command is suggested not to use as there is no policy form in the document.

Example

The following example shows how to change the load balance mode of port-aggregator 1 to the src mode.

Switch_config#aggregator-group load-balance src-mac

Switch_config#

1.1.3. show aggregator-group

Syntax

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

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

Parameters

Parameters	Description
id	ID of a specific logic port

Default Value

None

Command Mode

Other modes except the user mode

Usage Guidelines

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

Example

Switch_config_p1# **show aggregator-group**

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 logic port

Default Value

None

Usage Guidelines:

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

Command Mode

Other modes except the user mode

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

  Ifindex is 2113

 Hardware is PortAggregator, Address is 00e0.0fbe.595c(00e0.0fbe.595c)

 MTU 1500 bytes, BW 10000 kbit, DLY 2000 usec

 Encapsulation ARPA

 Members in this Aggregator:

 5 minutes input rate 0 bits/sec, 0 packets/sec

 5 minutes output rate 0 bits/sec, 0 packets/sec

     Received 0 packets, 0 bytes 0 broadcasts, 0 multicasts

     0 discard, 0 error, 0 PAUSE

    0 align, 0 FCS, 0 symbol, 0 fragment

     0 jabber, 0 oversize, 0 undersize

   Transmited 0 packets, 0 bytes

0 broadcasts, 0 multicasts

0 discard, 0 error, 0 PAUSE

0 collision, 0 indisc, 0 deferred

0 single, 0 multiple, 0 excessive, 0 late

Usage Guidelines

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

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

debug lacp errors

no debug lacp errors

Parameters

None

Default Value

None

Command mode

Other modes except the user mode

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 error

Switch#

1.1.6. debug lacp state

Syntax

To export the information about the LACP state machine, run debug lacp state.

debug lacp state

no debug lacp state

Parameters

None

Default Value

None

Command Mode

EXEC

Usage Guidelines

None

Example

Switch# debug lacp state

1.1.7. debug lacp packet

Syntax

To export the information about LACP receiving or transmitting packets, run debug lacp packet.

debug lacp packet

no debug lacp packet

Parameters

None

Default Value

None

Command Mode

EXEC

Usage Guidelines

None

Example

Switch# debug lacp packet

1.1.8. debug lacp interface

Syntax

To filter port and output lacp debug information in the designated port, run the following command. To return to the default setting, use the no form of this command.

debug lacp interface *diID*

no debug lacp interface

Parameter

Parameters	Description
diID	DESIGNATE DIID NUMBER OF THE FILTER PORT. THE VALUE RANGES FROM 1 TO 300.

Default Value

None

Command mode

Management configuration mode

Example

Switch# debug lacp interface

Switch#

1.1.9. debug lacp record

Syntax

To display the record information of aggregation port negotiation success or failure, run the following command. To return to the default setting, use the no form of this command.

debug lacp record

no debug lacp record

Parameter

None

Default value

None

Command mode

Management configuration mode

Example

Switch# debug lacp record

Switch#