

Link Aggregation Configuration Commands

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1 Link Aggregation Configuration Commands

This chapter is taking about how to configure port aggregation for a switch.

1.1 Overview

Port aggregation, that is, several physical properties of the same physical port aggregation can be bound together to form a logical channel. The aggregation mode of a port can be static aggregation of several physical ports regardless of whether the ports connected to these physical ports meet the aggregation conditions. When aggregating with the LACP protocol, the aggregation of the ports must be negotiated with the peer end and the port, then the port will be aggregated into a logical channel.

Supported Features:

- Supporting static aggregation control

Bind a physical port to a logical port, regardless whether they can actually bind to a logical port.

- Supporting aggregation control of LACP dynamic negotiation

When a physical port is configured to bind to a logical port, the physical port with LACP negotiation can be bound to a logical port. Other ports cannot be bound to the logical port.

- Supporting flow balance of port aggregation

After port aggregation, the data flow of the aggregation port will be distributed to each aggregated physical port.

1.2 Port Aggregation Configuration Task List

- Configuring logical channel used for aggregation
- Aggregation of physical port
- Selecting load balance mode after port aggregation

- Monitoring the concrete condition of port aggregation

1.3 Port Aggregation Configuration Task

1.3.1 Configuring Logical Channel Used to Aggregation

You should establish a logical port before binding all the physical ports together. The logical port is used to control the channel formed by these binding physical ports.

Use the following command to configure the logical channel:

command	Description
interface port-aggregator id	Configures the logical channel of aggregation.

1.3.2 Aggregation of Physical Port

To aggregate multiple physical ports into a logical channel, you can use static aggregation or LACP protocol for negotiation.

In the case when the static aggregation is used, it is required that the link of the physical port should be up, and the VLAN attribute of aggregation port and physical port should be identical, and then this port will be aggregated to the logical channel, regardless of whether the current port accords with the conditions of port aggregation and whether the port that connects with the physical port accords with the aggregation conditions.

When using the LACP protocol, the port aggregation must be negotiated with the peer and the port connected to the port. The primary condition that the port can be aggregated is that the port must be LinkUp and the port negotiates the full-duplex mode. During the aggregation process, the Speed of all the physical member ports must be consistent. That is, if a physical port has been successfully aggregated. At this point, the Speed of the second physical port must be the same as the Speed of the physical port that has been successfully aggregated; the VALN attribute of all physical ports and aggregation ports must also be consistent.

LACP provides two aggregation methods, one is Active, the other is Passive mode. In Active mode, the switch initiates the aggregation negotiation process, and in passive mode, it is passive to accept the aggregation negotiation process. When choosing LACP polymerization, if both ports use Passive method, then the aggregation fails. This is because both sides will wait for the other side to launch aggregation negotiation process.

VALN attributes: PVID, Trunk attribute, vlan-allowed range and vlan-untagged range.

Use the following command to perform aggregation on the physical ports:

command	purpose
aggregator-group <i>agg-id</i> mode { lacp static }	Configures aggregation option of the physical port.

1.3.3 Selecting Load Balance Method After Port Aggregation

You can select the load share method to ensure that all ports can share the data traffic after the aggregation of all physical ports. The switch can provides up to six load balance strategy:

➤ **src-mac**

It is to share the data traffic according to the source MAC address, that is, the message with same MAC address attributes is to get through a physical port.

➤ **dst-mac**

It is to share the data traffic according to the destination MAC address, that is, the message with same MAC address attributes is to get through a physical port.

➤ **both-mac**

It is to share the data traffic according to source and destination MAC addresses, that is, the message with same MAC address attributes is to get through a physical port.

➤ **src-ip**

It is to share the data traffic according to the source IP address, that is, the message with same IP address attributes is to get through a physical port.

➤ **dst-ip**

It is to share the data traffic according to the destination IP address, that is, the message with same IP address attributes is to get through a physical port.

➤ **both-ip**

It is to share the data traffic according to the destination and source IP addresses, that is, the message with same IP address attributes is to get through a physical port.

Use the following command to configure load balance method:

command	purpose
aggregator-group load-balance	Configures load balance method.

Note:

The command is unavailable at the switch that does not support load balance methods or supports only one method. The switch using the command only selects the load balance strategies supported by itself.

The following table shows different switches support different kinds of load balance strategies:

Model	src-mac	dst-mac	both-mac	src-ip	dst-ip	both-ip
S2008, S2116, S2026B	x	x	x	x	x	x
S2224D	√	√	√	x	x	x
S2224M, S2226, S2448	√	√	√	√	√	√
S2516, S2524, S2524GX	√	√	x	x	x	√
S2448B, S2226C	√	√	√	x	x	x
S3224, S3224M S3424, S3448 S3512	√	√	√	√	√	√
S6508	√	x	x	x	x	x
S8500	√	√	√	√	√	√

1.3.4 Monitoring the Concrete Conditions of Port Aggregation

Use the following command to monitor port aggregation state in the management mode:

command	description
show aggregator-group	Displays port aggregation state.