Chapter 39: Monitorlink

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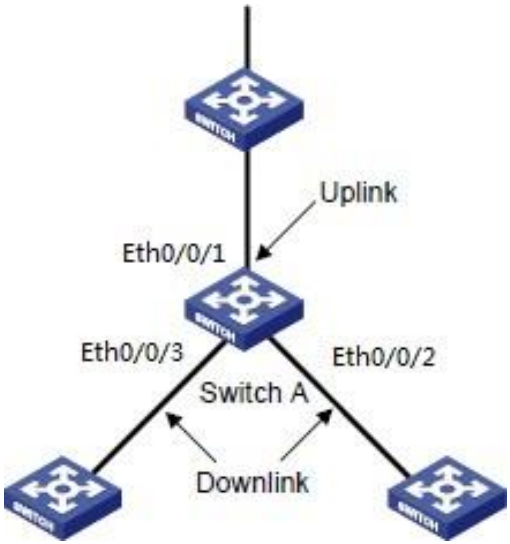
Chapter 39 Monitorlink

39.1 Monitorlink Overview

Monitor Link is developed to complement the Flex Link feature. By monitoring the uplink, and synchronizing the downlink with the uplink, Monitor Link triggers the switch over between the primary and backup links in a Flex link group, thus perfecting the link redundancy mechanism ofFlex Link.

39.1.1 Monitor Link Group

A monitor link group is a set of uplink and downlink ports. Downlink ports adapt to the statechanges of uplink ports.



As shown in the figure, ports GigabitEthernet 0/0/1, GigabitEthernet 0/0/2, and GigabitEthernet0/0/3 of GPON A form a monitor link group.

1. Uplink Port

An uplink port is a monitored port in a monitor link group. It is a port role specified using commands. It can be an Ethernet port (electrical or optical), or an aggregate interface.

As shown in the figure, GigabitEthernet 0/0/1 of GPON A is the only uplink port of the monitorlink group configured on the device.

For a monitor link group that has multiple uplink ports, as long as at least one of its uplink portsis in the forwarding state, the monitor link group is up. However, when all uplink ports of the monitor link group fail, the monitor link group goes down, shutting down all the downlink ports.

If no uplink port is specified in a monitor link group, the system considers the monitor link group's uplink ports to be faulty, and thus shuts down all the downlink ports in the monitor linkgroup.

2. Downlink Port

A downlink port is a monitoring port in a monitor link group. It is another port role specified using commands. It can be an Ethernet port (electrical or optical), or an aggregate interface.

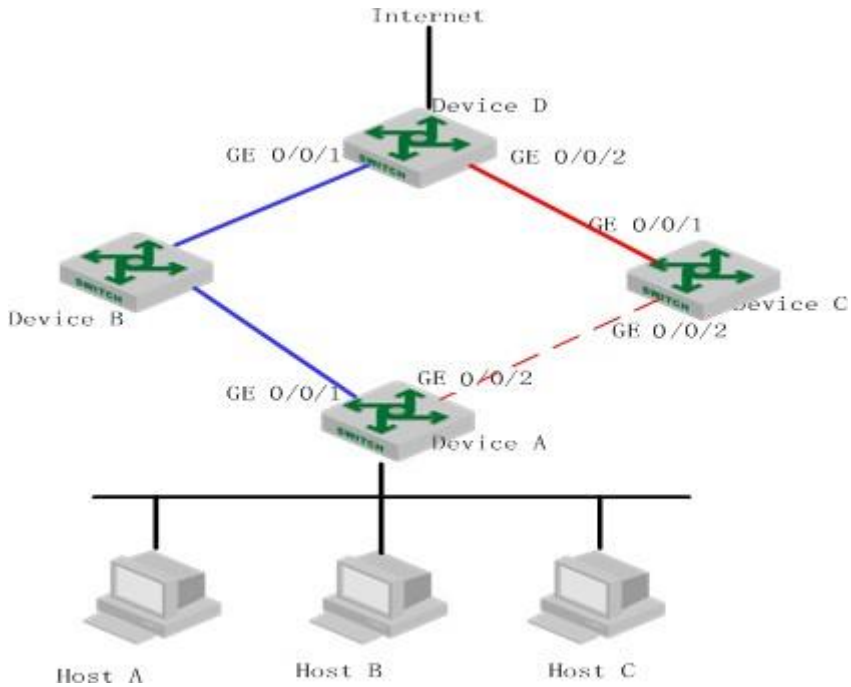
As shown in the figure, GigabitEthernet 0/0/2 and GigabitEthernet 0/0/3 of GPON A are two downlink ports of the monitor link group configured on the device.

Note:

When a monitor link group's uplink ports recover, only downlink ports that were blocked due touplink port failure will be brought up. Downlink ports manually shut down will not be brought upautomatically. The failure of a downlink port does not affect the uplink ports or other downlink ports.

39.1.2 Monitor Link Mechanism

As shown in the below figure, to provide reliable access to the Internet for the hosts, a Flex linkgroup is configured on GPON A. GigabitEthernet 0/0/1 is the master port of the Flex link group,and is in the forwarding state. GigabitEthernet 0/0/2 is the slave port.



To avoid traffic interruption due to the failure of the link on which GigabitEthernet 0/0/1 of GPON B resides, configure a monitor link group on GPON B, and specify GigabitEthernet 0/0/1 as the uplink port, and GigabitEthernet 0/0/2 as the downlink port.

When the link on which GigabitEthernet 0/0/1 of GPON B resides fails, the monitor link group shuts down its downlink port GigabitEthernet 0/0/2, triggering a link switch over in the Flex linkgroup configured on GPON A.

When the link on which GigabitEthernet 0/0/1 of GPON B resides recovers, the downlink port GigabitEthernet 0/0/2 is also brought up, triggering another link switch over in the Flex link group if role preemption is configured in the Flex link group on GPON A.

Collaboratively, Monitor Link and Flex Link deliver reliable link redundancy and fast convergence for dual-uplink networks.

39.2 Configure Monitor Link

39.2.1 MonitorLink Configuration List

Configuration Task	Description	Detailed Configuration
Configure MonitorLink Group	Required	39.2.2
Monitor Link monitor and maintenance	Optional	39.2.3

39.2.2 Configure MonitorLink Group

If the port is Ethernet port, configuration should be in interface configuration mode; if port is channel-group member, configuration should be in global configuration mode.

Operation	Command	Remarks
Enter global configuration mode	**system-view**	
Monitor Link for channel-group	**channel-group** *channel-group-number* **monitor-link-group** *group-ID* { **uplink** | **downlink** }	
Delete channel-group from Monitor Link group	**undo channel-group** *channel-group-number* **monitor-link-group** *group-ID* { **uplink** | **downlink** }	
Enter interface configuration mode	**interface ethernet** *device/slot/port*	
Monitor Link for port	**port monitor-link-group** *group-ID* { **uplink** | **downlink** }	
Delete port from Monitor Link group	**undo port monitor-link-group** *group-ID* { **uplink** | **downlink** }	

39.2.3 MonitorLink Monitor and Maintenance

After finishing above configuration, user can check the configurations by command below.

Operation	Command	Remarks
Display Monitor Link group	**display monitor-link-group**	