

Connecting the OLT to the aggregation switch

Article Overview

Use link aggregation (LAG) to connect the OLT to the aggregation switch, combining multiple physical ports into a single logical interface for higher bandwidth and redundancy.

Overview of Link Aggregation

Link aggregation allows multiple physical Ethernet ports on the OLT to be grouped into a logical interface, increasing bandwidth and providing backup links in case one port fails . This is especially important for uplinks to aggregation switches, ensuring stable and high-speed connectivity. The aggregation can be static (manual configuration) or dynamic using LACP (Link Aggregation Control Protocol), which automatically negotiates the active links between devices .

Key Configuration Considerations

- o Port Consistency: All member ports in the aggregation group must have consistent configurations, including:
 - o Speed and duplex mode (full duplex required)
 - o VLAN settings (PVID and permitted VLANs)
 - o STP parameters (enable/disable, priority, cost)
 - o Link type (trunk, hybrid, or access) for Layer 2 aggregation
- o Aggregation Modes:
 - o Static (ON mode): Ports are manually added to a group; no LACP negotiation is required. Up to 8 ports can be aggregated .
 - o Dynamic (Active/Passive LACP): Ports negotiate automatically using LACP. Active mode initiates negotiation, passive mode responds. Up to 12 ports can be in a dynamic group, with 8 active and 4 backup .
- o Member Port Selection: In LACP, a reference port is used to compare configurations. Only ports matching the reference port are selected to forward traffic; others remain unselected .

Steps to Connect OLT to Aggregation Switch

- o Identify Ports: Choose multiple uplink ports on the OLT and corresponding ports on the aggregation switch.
- o Configure Aggregation on OLT:
 - o Create a link aggregation group (LAG) and assign member ports.
 - o Set the aggregation mode (static or LACP dynamic).
 - o Ensure all member ports have consistent speed, duplex, VLAN, and STP settings .
- o Configure Aggregation on Switch:
 - o Mirror the aggregation group configuration on the aggregation switch.

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- o If using LACP, ensure the switch ports are set to active or passive mode to match the OLT configuration .
- o Verify Connectivity:
- o Check that all selected member ports are forwarding traffic.
- o Monitor for backup ports in case of link failure.
- o Use CLI or EMS tools to confirm the LAG status and bandwidth aggregation .

Best Practices

- o Use LACP dynamic aggregation for automatic failover and easier management.
- o Keep port configurations synchronized to avoid unselected ports.
- o Monitor the LAG for link failures and ensure backup ports are functional.
- o Document the aggregation group IDs and member ports for maintenance and troubleshooting. By following these steps, the OLT can be reliably connected to the aggregation switch, providing increased bandwidth, redundancy, and stable network performance .

EPON OLT 8 Port - High-performance 1U OLT with 8 PON ports, 8 uplinks, and advanced Layer 2/3 features. Ideal for FTTH/FTTB

An aggregation switch is a network device that consolidates traffic from multiple access switches, wireless access

Terms Conventions OLT: It is the Optical Line Terminal, included the switch and uplink port. PON: It stand for PON protocol process

This Article Applies to All GPON OL T Products and all Omada Switches with optical ports. 1. Application Scenario An

I see many people on here posting pictures of their racks where they have an aggregation switch with only one or two access

The primary reason is that today"s aggregation switches provide abundant high-speed ports, making it easier and more

You can either create an aggregation ID under global configuration mode or you can add a port to an aggregation group to

Port aggregation of the OLT supports following operation modes and functions: (1) Static aggregation control

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After the settings of

OLT is short for optical line terminal, which is a device used to connect olt fiber and transfer signals. PON OLT is the

On Huawei SmartAX MA5683T, the aggregation setup is completed, most likely there will be no interruptions in traffic

4. Mode switching resets the system, clears configuration data (including saved configuration data), and interrupts the

Example for Configuring Link Aggregation in Manual Mode When Switches Are Directly Connected
Overview Ethernet link

An optical line termination (OLT), also called an optical line terminal, is a device which serves as the service provider endpoint of a

On the test, I will configure aggregation on two ports of Huawei SmartAX MA5683T and Cisco Catalyst 6509-E. Let's

The OLT serves as the main aggregation point in a PON, managing communication

I call bs! To answer your question: What makes an OLT different from a normal SFPx switch is that it contains specialized hardware

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