

Connecting the switch's optical port to the OLT's uplink port



Overview

Add the port connected to OLT as a tagged port (Here is port 9), and add the port connected to the IPTV as an untagged port (Here is port 4).

Key Takeaways

To connect a switch's optical port to an OLT's uplink port, use compatible SFP/SFP+ modules, ensure proper fiber cabling, and configure VLANs and service profiles on both devices. Physical Connection SFP/SFP+ Modules: Insert a GPON-compatible SFP module (e.g., UF-GP-B+ / UF-GP-C+) into the OLT uplink port and a matching SFP/SFP+ module into the switch's optical port. Ensure both modules support the same speed (1G or 10G) and fiber type (single-mode or multi-mode).

Fiber Cabling: Use SC/UPC or SC/APC fiber cables to connect the OLT uplink port to the switch optical port. For short distances, DAC cables may be used if supported.

Optical Splitters: If connecting multiple ONUs downstream, ensure the OLT is connected to the distribution network via a PLC splitter, but for direct uplink to a switch, a single fiber link suffices.

Configuration Steps VLAN Setup: Configure service VLANs on the OLT uplink interface and the switch port to separate traffic types (e.g., Internet, VoIP, IPTV). Tag the uplink port on the switch and OLT with the corresponding VLANs. Port Mode: Set the switch optical port as a tagged port for all service VLANs.

On the OLT

T, ensure the uplink port is configured to forward GEM frames as Ethernet packets to the switch. Bandwidth Allocation: Assign DBA profiles on the OLT to manage upstream traffic efficiently. This ensures proper bandwidth distribution for multiple services.

Service Verification: After connecting, verify the link status and service operation. Check that ONTs/ONUs are registered and receiving the correct VLANs and bandwidth allocations.

Best Practices

Compatibility Check: Ensure the SFP/SFP+ modules on both devices are compatible in terms of wavelength, speed, and connector type. Distance Consideration: Verify the fiber length does not exceed the supported distance for the modules used (typically 20–30 km for GPON),.

Management VLA

N: Keep a separate management VLAN for monitoring and configuration access to avoid service disruption. Testing: Use optical power meters or switch diagnostics to confirm signal integrity and link stability. By following these steps, the switch's optical port can reliably connect to the OLT's uplink port, enabling proper traffic flow for Internet, VoIP, and IPTV services while maintaining network segmentation and performance.

Article Content

[How to configure Optical Line Terminal \(OLT\) and Omada Switch with ...](#)

[Add the port connected to OLT as a tagged port \(Here is port 9\), and add the port connected to the IPTV as an untagged port \(Here is port 4\). Configure the corresponding PVIDs for](#)

[Cisco Catalyst PON Series Switches Hardware Installation Guide](#)

[Using the uplink ports on the Cisco Catalyst PON Series ONT, these signals are converted into electrical signals and transmitted over optical fibers to the Cisco Catalyst PON Series](#)

[How to Connect OLT to OLT□](#)

[Here is a step-by-step technical breakdown of how to achieve a successful OLT-to-OLT connection, including the physical setup, configuration logic, and important vendor considerations.](#)

[Getting Started With OLT Network Configuration, Cisco Catalyst PON ...](#)

In the downstream direction, the OLT strips the default VLAN of the service flow from the uplink port and forwards it to the ONT through the corresponding GEM port. Only one default VLAN

Netronixbd/OLT-and-Switch-Config-Troubleshooting

It contains configuration commands, troubleshooting methods, power-check commands, and best practices for multiple OLT brands. Whether you're managing a large ISP or setting up a lab,

Configuring OLT and ONT in CLI (XGS-PON diagram)

Two segments will be reviewed: connecting one subscriber with home router via ONT and connecting an access switch with multiple subscribers via NTX-SFP.

U®Fiber UF-OLT Quick Start Guide

Remove the protective plug covering a PON port. Insert the GPON SFP Transceiver into the PON port. Connect a fiber optic cable to the GPON SFP Transceiver. Then connect the other end of the cable

What is GPON ONU(ONT) and GPON OLT?

Examples of GPON OLT: The VSOL GPON OLT series has 4/8/16 ports with supporting Cloud BS-EMS OLT management software. It adopts Layer

Cudy switch poe gigabit 4poe + 1gbe + sfp port 120w gs1005pts1

The Cudy GS1005PTS1 4.0 is a robust 5-Port Gigabit PoE+ Unmanaged Switch equipped with an additional dedicated 1G SFP uplink slot, meticulously engineered for professional installations and

ONU vs Router vs Switch: Key Differences in Fiber Network Devices

Key Difference Between ONU, Router, and Switch While ONUs, routers, and switches may be used together, they differ in several fundamental ways: 1. Functionality and Role The ONU

The Ultimate Guide to Huawei MA5800 OLT Configuration:

The high-end models also support 2 x 100GE uplink ports, providing massive uplink bandwidth for enterprise core routing and carrier-grade routing reliability .

Deployment Scenarios and Configuration

Managed switch 8 port-AliExpress

A managed switch 8 port offers advanced control for small to medium networks, supporting VLANs, QoS, and remote monitoring. This guide explains its uses, how to choose the right model, and the

OLT to OLT Configuration | How to connect OLT to OLT using UpLink

Hi Friends, How are you ? I Hope you are fine. Today we will see how to Connect 2nd OLT with 1st one using Uplink Port.

Uplink Port vs Normal Port on Network Switch

The uplink port on a network switch is designed to connect the switch to a higher-level network device, like a router, core switch, or another network switch. This connection helps to

How to configure Optical Line Terminal (OLT) and Omada Switch with ...

This Article Applies to All GPON OLT Products and all Omada Switches with optical ports. 1. Application Scenario An apartment wants to use the XM60A to enable Omada equipment to

Read the Features Optical Line Terminal (OLT)

Learn about the optical line terminal (OLT): its features, applications, and importance in fiber optic networks. Explore high-speed data transmission and network management.

Optical Access Architecture Reference Document: Huawei vs ZTE

depending on the specific model . ZTE ZXA10 C650 and C69E-15 OLT platforms similarly support redundant supplies, main control and switching boards, uplink ports, and fans, support for multiple

Cisco Nexus 93180YC-FX NX-OS Mode Switch Hardware Installation

Connecting the Switch to the Network Overview of Network Connections Creating the Initial Switch Configuration Setting Up the Management Interface Connecting Interface Ports to Other

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