Huawei All-Optical Network Core Switch Configuration

Overview

Example for Configuring Passive Ethernet All-Optical Networking. This document covers interface management configurations, including interface basic conf.

Key Takeaways

Huawei AON core switches are configured using CLI commands to set up stacking, dual-uplink Eth-Trunks, and PEN central optical modules for high-reliability optical networking.

Core Switch Installation and Stacking

Device Installation: Install the PEN central optical modules on the core switches (e.g., S6730-H6FX4Y2CZ-V2) and connect them to the PEN passive aggregation module and remote optical modules according to interface numbers. Stacking: Configure the core switches as a stack, designating one switch as the stack master. This allows multiple switches to operate as a single logical device, increasing reliability and bandwidth.

Stack Port Configuration: Assign physical ports for stacking and ensure they are not used for normal service traffic. Enter system view and configure stacking ports using the CLI.

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Interface and Eth-

Trunk Configuration

Interface Mapping: Connect the PEN central optical module interfaces (e.g., 10GE1/0/1 on Device1 and 10GE2/0/1 on Device2) to the PEN passive aggregation module using optical fibers.

Eth-

Trunk Setup: Add the uplink interfaces to an Eth-Trunk (e.g., Eth-Trunk 1) and configure it in manual 1: 1 master/backup mode. The master interface forwards traffic while the backup interface provides redundancy. Access Device Connection: Connect the access switch (Device3) dual-homed to the core switches through the PEN passive aggregation module to ensure high reliability.

CLI Configuration Steps

Basic Setup: Connect to the switch via console or COM port, power on, and set the system clock and timezone using clock datetime and clock timezone commands. Interface Verification: Use commands like display interface, display ip interface brief, and display current-configuration to verify interface status and configuration.

VLAN and I

P Configuration: Assign VLANs and IP addresses to interfaces as required for the network topology. Configure management IPs for remote access. Saving Configuration: After completing the configuration, save it using save to ensure persistence across reboots.

High-

Reliability Optical NetworkingDual-Uplink Networking: Connect group interfaces of PEN central optical modules on each core switch to separate ports on the PEN passive aggregation module to implement dual-uplink redundancy. Remote Optical Module Integration: Install PEN remote optical modules on access switches and connect them to the aggregation module using dual-LC optical fibers for reliable uplinks. Monitoring: Use commands like display device wdm-port mapping to verify the mapping between access switch interfaces and PEN remote optical modules.

Additional Considerations

Ensure all core switches are running compatible VRP versions for feature support. Follow Huawei's deployment guides for PEN solutions to maintain consistency with existing network configurations. For small campus networks, similar principles apply using S5700 or S6700 series switches, with proper VLAN, IP, and routing configurations.

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This configuration ensures high availability, redundancy, and efficient traffic forwarding in Huawei All-Optical Networks, leveraging PEN central optical modules, Eth-Trunks, and switch stacking.

Article Content

Example for Configuring Passive Ethernet All-Optical Networking ...

This document covers interface management configurations, including interface basic configuration, Ethernet interface configuration, logical interface configuration, and port isolation configuration.

Example for Configuring Passive Ethernet All-Optical Networking

This document describes the Passive Ethernet Network (PEN) solution, including its introduction, typical deployment scenarios, deployment guide, typical faults, and FAQs.

Huawei S Series Quick Configuration

Small- and Mid-Sized Campus Networks This section uses the S2750 as an access switch (ACC1), S5700 as a core switch (CORE), and an AR series router as an egress router (Router) as examples

Huawei Switch Configuration Guide | PDF | Internet Protocols

The document provides configuration instructions and commands for basic switch configuration using Huawei switches. It covers topics such as changing the hostname, configuring user accounts and

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,

Huawei Switch Configuration Tutorial Basic

With hands-on experience in Huawei OLT and ONT configuration, U2000 NMS deployment, iMaster NCE-FAN Lite management systems, firmware upgrades, and advanced

The Ultimate Guide to Huawei MA5800 OLT Configuration:

The Huawei SmartAX MA5800 series, recognized as the industry''s first distributed architecture OLT with separated control and forwarding planes, represents a fundamental shift ...

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Huawei Switch Configuration | Complete Setup Guide

In this video, we''ll guide you through the process of configuring a Huawei Switch for your network. Whether you''re setting up a new switch or optimizing your existing network...

Huawei S6700 Series Switches Product Brochure

As shown in the following figure, the S9700 Terabit routing switches function as core switches in a data center and use firewall and load balancer boards to ensure security and load balancing.

Cisco SFP vs GBIC vs XFP vs SFP+: A Practical

All NS Comm optics, patch cords, and modules are multi-brand compatible, tested for Cisco, Huawei, H3C, Arista, and Alcatel-Lucent switches.

Huawei Enterprise networking product icons | PPT

This document contains icons representing various networking and telecommunications equipment for an enterprise network, including routers, switches, servers, wireless access points, and more.

Enterprise High-Availability: VRRP, MLAG & ECMP Explained

Eliminate network downtime with our 2026 High-Availability guide. Compare VRRP, MLAG, and ECMP to build a fault-tolerant multi-vendor network architecture.

Microsoft 365 Roadmap | Microsoft 365

The Microsoft 365 Roadmap lists updates that are currently planned for applicable subscribers. Check here for more information on the status of new features and updates.

LC Fiber Optics: Complete Guide 2026 to Patch Cables,

Explore LC fiber optics in depth: LC connectors, LC patch cables, uniboot designs, attenuators, breakout cables, LC adapters, patch panels, MPO-to-LC and more.

Huawei CloudEngine S6750-H Series 10GE Switches Datasheet

Datasheet Huawei CloudEngine S6750-H Series 10GE Switches Datasheet Huawei CloudEngine S6750-H series 10GE switches are next-generation enterprise-class core and aggregation switches

Network Switches | Huawei Enterprise

Huawei Ethernet Switches Turbocharge your enterprise network with high-performance, high-availability for resilient services and simplified management.

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Link Aggregation Configuration

"Campus Networks Typical Configuration Examples" provides typical campus network networking modes and a variety of deployment examples."Feature Typical Configuration Examples" provides

Campus Switches

Campus Switches Huawei S Series Switches fully accommodate metro core, aggregation, edge aggregation, and access networking requirements, and are capable of building an integrated

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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