

Huawei Aggregation Switch Layer 3



Overview

Standalone AC Solution: Aggregation Switches Function as Gateways Aggregation switches set up stacks to implement device-level backup and increase the inte.

Key Takeaways

Huawei aggregation switches with Layer 3 capabilities provide high-performance routing, link aggregation, and VLAN management for campus and enterprise networks.Overview

Huawei aggregation switches, such as the S6730-H series, are designed to serve as aggregation or core switches in campus networks, offering high-density 10GE downlinks, 40/100GE uplinks, and robust Layer 3 routing capabilities . These switches support OSPF, BGP, RIPng, IS-IS, VRRP, and ECMP, enabling efficient routing and redundancy across large-scale networks . They also integrate WLAN AC functions, allowing centralized management of up to 1,024 APs and unified wired-wireless policies .

Layer 3 Link Aggregation (Eth-Trunk)

Huawei switches implement link aggregation through Eth-Trunk, which bundles multiple physical interfaces into a single logical interface to increase bandwidth and provide redundancy . For Layer 3 configurations:

- Create a Layer 3 Eth-Trunk and assign an IP address to the logical interface.
- Add member Ethernet interfaces to the Eth-Trunk to participate in routing and forwarding.

- Configure routing protocols on the Eth-Trunk interface to enable Layer 3 connectivity between switches or routers . This setup improves link reliability, load balancing, and bandwidth utilization, while allowing the aggregated interface to function as a Layer 3 gateway for VLANs and routed networks .

VLAN and IP Configuration

Aggregation switches handle VLAN segmentation and Layer 3 IP routing:

- Assign VLANs to interfaces and configure IP addresses on Layer 3 interfaces to enable inter-VLAN routing .
- Avoid using VLAN 1 as a management or service VLAN to prevent service interruptions .
- Configure DHCP services on aggregation switches to assign IP addresses to wired and wireless clients .
- Implement VRRP and HSB for high availability and seamless failover in Layer 3 networks .

Advanced Features

Huawei aggregation switches support:

- VXLAN with BGP-EVPN for multi-tenant segmentation and cloud-scale designs .
- Logical stacking and Ethernet ring protection (SEP/ERPS) with sub-50 ms fault recovery for resilient campus networks .
- Security and monitoring features including ECA, DoS protection, DHCP spoofing prevention, and real-time telemetry via iPCA and CampusInsight .

Summary

Huawei Layer 3 aggregation switches combine high-density connectivity, advanced routing, link aggregation, and centralized wireless management. They are ideal for campus backbone, enterprise core, and high-performance aggregation layers, providing scalability, reliability, and efficient traffic management for modern digital infrastructures .

Article Content

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Layer 3 Switching

This document describes the configuration of Ethernet services, including configuring link aggregation, VLANs, Voice VLAN, VLAN

Huawei S6730 Switch – 10GE Aggregation & Core

Positioned perfectly as an Aggregation Switch or Core Switch, the S6730-H delivers

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A practical, no-fluff guide to selecting a Huawei Layer 3 switch—covering models, configuration essentials, real-world

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CloudEngine S12700H Series Switches

CloudEngine S12700H series switches are Huawei's next-generation modular core/aggregation switches designed for high-end

Cost-Effective Layer 3 Aggregation Switches: HUAWEI eKitEngine

Cost-optimized, high-performance enterprise networking: HUAWEI eKitEngine S310S Series switches deliver.

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It also provides enhanced Layer 3 features and mature IPv6 features. The CloudEngine S5331-S can be

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Huawei S6720S Switch – Compact 10GE + 40GE Aggregation

Enterprise and campus networks seek compact yet powerful switches for demanding aggregation layers. The Huawei

Three-Layer Networking Design

Three-Layer Networking Design Large and medium-sized campus networks typically use the following two networking modes:

Example for Configuring a Layer 3 Switch to Work with a Router for ...

Layer 3 Switch Layer 3 switches provide the routing function, which indicates a network-layer function in the OSI

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Huawei S Series Switches fully accommodate metro core, aggregation, edge aggregation, and access networking requirements, and

Example for Configuring Layer 3 Link Aggregation to Improve the Link ...

Example for Configuring Layer 3 Link Aggregation to Improve the Link Bandwidth and Reliability Applicability This example applies to

Example for Configuring Layer 3 Link Aggregation to Improve the Link ...

When there are a large number of users, you can deploy multiple links or link aggregation to increase link bandwidth. In addition, link

Switches

These switches accommodate cloud data center, large metro core, aggregation, edge aggregation, and access networking

CloudEngine S5736-S Series Switches | Huawei

CloudEngine S5736-S Series Switches are standard multi-GE access switches for the Wi-Fi 6 era,

CloudEngine S5731-S Series Switches | Huawei

The CloudEngine S5731-S series multi-GE switches are next-generation gigabit access switches that offer

CloudEngine S5732-H Series Switches | Huawei

Huawei CloudEngine S5732-H Series Multi-GE Switches are designed for the Wi-Fi 6 era with 2.4 Tbit/s

Example for Configuring a Layer 3 Switch to Work with a Router for ...

Example for Configuring a Layer 3 Switch to Work with a Router for Internet Access Layer 3 Switch Layer 3 switches provide the

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Deploying an S Series Switch as a Layer 3 Switch on a LAN

4. Configuring Redirection for Policy Routing on S Series Switches 5. Configuring Floating Static Routes on S Series Switches 6.

Example for Switching an Interface to Layer 3 Mode

Example for Switching an Interface to Layer 3 Mode Networking Requirements In Figure 2-12, PC1, PC2, and PC3 are

Comparison Between Implementations of Link Aggregation on Huawei

The implementation mechanism of link aggregation in manual load balancing mode and LACP mode on Huawei switches is similar to

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Layer 3 Switching

Layer 3 Switching Background of Layer 3 Switches In early stage of network deployment, most local area networks (LANs) were

Huawei Ethernet Switch & Network Switches Solutions

Thunder link offers various models of Huawei Ethernet switches and network switches, including the S5720, S6720, S6730, CE6800

Huawei S3700 Series Switches Product Datasheet

Product Overview The S3700 series enterprise switches (S3700s) are next-generation energy-saving Layer 3 switches. The S3700

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Configuring Link Aggregation in LACP Mode

Configure Link Aggregation in LACP Mode on the Huawei CX320 Switch Module to increase bandwidth and improve

Link Aggregation Configuration

Link Aggregation Configuration This chapter describes how to configure link aggregation. Link aggregation bundles multiple Ethernet

Layer 3 Switching

The following is the detailed Layer 3 switching process. As shown in Figure 1-7, the source and destination hosts connect to the

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