Huawei Access Switch Redundancy



Overview

Mastering Huawei switch stacking requires meticulous planning, adherence to best practices, and proactive troubleshooting.

Key Takeaways

Huawei access switch redundancy can be achieved using stacking, link aggregation, Smart Link, and VRRP to ensure high availability and fast failover. 1.

Switch Stacking

Huawei supports stacking technologies such as iStack and CSS, which allow multiple physical switches to operate as a single logical device. In a stack: Master switch manages the stack and configuration. Standby switch takes over if the master fails (CSS supports 1: N redundancy).

Member switches operate under the master's control. Ring topology is recommended for redundancy, providing dual-link paths to prevent a single point of failure. Best practices include using certified stack cables, uniform VRP versions, bidirectional links, and setting member IDs and priorities before connecting stack cables.

2. Link Aggregation (Eth-Trunk)Link aggregation combines multiple physical links into a single logical link to increase bandwidth and provide redundancy. Key points: Can operate in manual mode or LACP mode.

All member interfaces must have the same Ethernet type, rate, duplex, and flow control. Both ends of the link must have matching member interfaces. Provides load balancing and failover if one link fails.

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LAC

P allows dynamic negotiation of active links and automatic failover. 3.

Smart Link

Smart Link is a Huawei feature for access layer redundancy: Configures master and slave interfaces to prevent loops and enable fast convergence. Supports revertive switching, allowing traffic to return to the original active link after recovery. Uses Flush packets to synchronize link status across switches.

Typically deployed in dual-homing scenarios to enhance reliability without creating loops. 4.

VRR

P (Virtual Router Redundancy Protocol)For Layer 3 redundancy: VRRP allows multiple switches to share a virtual IP address. One switch acts as master, others as backup. If the master fails, a backup switch automatically takes over, ensuring uninterrupted gateway access for connected devices.

5.

Best Practices for Redundant Access Switches

Stack access switches when possible to simplify management and provide seamless failover. Use LAG/Eth-Trunk to connect servers or uplinks to multiple switches for load balancing and redundancy. Deploy Smart Link for dual-homed access switches to prevent loops and enable fast link recovery.

Enable VRR

P if Layer 3 gateway redundancy is required. Test failover scenarios to ensure proper operation and minimal downtime. Maintain consistent firmware versions and configuration backups across all switches.

By combining these mechanisms, Huawei access switches can provide high availability, fast convergence, and resilient connectivity for enterprise networks.

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Article Content

Huawei S3700, S5700 and S6700 Switches Support Guide, Manuals

S3700&S5700&S6700 Series: Access product manuals, HedEx documents, product images and visio stencils.

Example for Configuring Link Redundancy in a Smart Link Group

Figure 7-17 Link redundancy in a Smart Link group. The configuration roadmap is as follows: Create VLANs and configure related interfaces to allow packets of these VLANs to pass

How to Master Huawei Switch Stacking: Best Practices and ...

Mastering Huawei switch stacking requires meticulous planning, adherence to best practices, and proactive troubleshooting. By leveraging ring topologies, uniform firmware, and

MLAG High Availability Explained – How Link Aggregation Plus Works

MLAG allows two switches to act as one logical device, providing both link-level and device-level redundancy. This article explains how MLAG works, its architecture, and how it

Enterprise High-Availability: VRRP, MLAG & ECMP

VRRP (Virtual Router Redundancy Protocol): A Layer 3 protocol providing a redundant default gateway. Traditionally operates in an Active/Standby mode.

S SERIES SWITCHES STACK DEPLOYMENT BEST PRACTICES

Therefore, master switch election can be controlled based on the switch startup time and stack priority. When switches can be powered on and off separately, you can power on the switch that is expected

WLAN Access controller (AC6508) Huawei & AP Configuration

Today I will explain WLAN Enterprise Networks like Access points (AP), Access controllers (AC), Switches, and firewall configurations, as this is a complete enterprise project step by

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How to Configure Stacking on Huawei S5700LI Switches

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In this article, we''ll walk you through the step-by-step process of configuring stacking on Huawei S5700LI switches, along with best practices to ensure a smooth implementation.

RES05-01 Ensuring High Availability of Network Connections

Dual-VPN redundancy: Your on-premises data center connects to a Huawei Cloud VPC over two VPN connections to ensure reliability. If one VPN connection is faulty, the system can

Huawei CloudEngine S5735-S-V2 Series 2.5GE Switches Datasheet

It implements millisecond-level protection switching based on traditional Ethernet MAC and bridging functions. CloudEngine S5735-S-V2 supports Smart Link, which implements backup of uplinks. One

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S Series Switches Stack Deployment Best Practices

S Series Switches Stack Deployment Best Practices This document describes the best practices for stack deployment, including device selection, deployment, networking deployment, stack setup

Configuring MSTP and VRRP to Implement Redundancy

Networking Requirements Access switches are dual-homed to core devices on a data center network. The requirements are as follows: To ensure service reliability, deploy link

What Is Stacking? Why Do We Need Stacking?

Why Do We Need Stacking? Traditional campus networks use device and link redundancy to ensure high reliability. However, this brings about problems, such as low link utilization and high

Choose the Right Enterprise Switch in 2026: A

Confused about enterprise switch selection? This technical buyer''s guide explains Layer 3, PoE, buffer, latency, and throughput for Huawei, Ruijie & NSComm.

Example for Configuring Link Redundancy in a Smart Link Group

Networking Requirements As shown in Figure 6-17, a dual-homing networking is used to enhance network reliability. The customer wants to eliminate loops on the network while implementing link

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Storage Switch Recommended Configurations and Configuration

Why Do I Need to Switch from a Stack to an M-LAG? As two horizontal virtualization technologies that are widely used at the access layer of data center networks, stacking and M-LAG

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

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