

Article Overview

Huawei access layer switches can be stacked using iStack or CSS technology to form a single logical device, improving management, redundancy, and bandwidth.

Overview of Huawei Switch Stacking

Huawei switch stacking virtualizes multiple physical switches into one logical device, providing a unified control plane, synchronized forwarding plane, and inter-device link aggregation. This simplifies network management, enhances reliability, and prevents Layer 2 loops . At the access layer, low-cost CE8800, CE7800, CE6800, and CE5800 series switches are commonly deployed in stacks, allowing terminals like servers or other devices to be dual-homed for high availability .

Stack Technologies

- o iStack (Intelligent Stack): Used for fixed switches, enabling multiple devices to operate as a single logical switch with synchronized configurations and forwarding information .
- o CSS (Cluster Switch System): Used for modular switches, supporting 1:N redundancy where a standby switch can take over if the master fails .

Supported Models and Requirements

- o Verify that the switch models support stacking (e.g., S5700, S6700, CE8800 series) and check the stacking capability of service ports or stack cards .
- o Ensure uniform VRP software versions across all stack members and enable stacking licenses if required .
- o Some S-Series models, such as S2700SI, do not support stacking, while S2710SI, S2720EI, S2750EI, and S3700EI/S3700SI do .

Stack Topologies

- o Ring topology: Recommended for redundancy, providing dual-link paths and preventing single points of failure .
- o Chain topology: Simple but less reliable, as a single failure can disrupt the stack .
- o Inter-device link aggregation: Links between stack members can be aggregated into a single Eth-Trunk interface for downstream connectivity .

Configuration Best Practices

- o Pre-stacking preparation: Assign member IDs and priorities before connecting stack cables, and confirm stack port support .

Huawei Access Layer Switch Stacking

- o Cable selection: Use certified stack cables (e.g., QSFP-40G-Stack for CSS) and prioritize dedicated stack ports over regular uplinks .
- o Firmware synchronization: Enable auto-upgrade to ensure all stack members run the same software version .
- o Redundancy: Use bidirectional links and ring topology to maximize reliability .
- o Management: The master switch manages the stack, while member switches operate under its control. Standby switches can take over in case of master failure .

Benefits of Access Layer Stacking

- o Simplified management: Single IP address for the entire stack.
- o High availability: Redundant links and dual-homed terminals.
- o Scalability: Expands port capacity and bandwidth without complex configuration.
- o Loop-free topology: Prevents Layer 2 loops and improves link efficiency .

Troubleshooting Tips

- o Verify stack cable integrity and bandwidth.
- o Check stack member IDs and priorities.
- o Ensure all switches are running compatible VRP versions.
- o Monitor inter-device synchronization for MAC addresses, routes, and multicast forwarding . By following these guidelines, Huawei access layer switch stacking can provide a robust, scalable, and easily managed network infrastructure suitable for enterprise and data center environments.

Fixed switches are often deployed at the aggregation layer and access layer. Unlike modular switches, fixed switches have a fixed

We're sorry but web site doesn't work properly without JavaScript enabled. Please enable it to continue.

Switch stacking is a method of binding multiple switches so that they can act as a single switch. This method is

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

If a switch is currently using the service port connection mode, correctly connect stack cards and stack cables and clear the existing

Increases the number of ports. When the port density of a switch is insufficient for an increasing number of access users, you can

Scenario 2: The Stack System Operates on Access Switches This is the most common scenario when Layer 2 access switches set

What Is Stacking and What Are Its Functions? Definition of Stacking As shown in Figure 1-1, multiple switches are connected through

As we know, switch stacking deployment has some special requirement or limitation, this blog will share the software version and

This test uses two identical Huawei S-Series switches for stacking (a maximum of 9 switches can be stacked).
Table 1

On the access layer, low-cost CE8800&7800&6800&5800 series switches are deployed to set up a stack. Terminals, such as servers

This article explains how stacking works on Huawei S6730-H Series Switches, and why it is widely used in campus and aggregation

Summary of Stack Configuration Tasks When a stack is set up, basic functions of the stack are available. To enhance system

Example for Establishing a Stack of Two Switches (Configuring Software and Then Connecting Cables,

When a link in an Eth-Trunk fails, traffic can be switched to other links in the Eth-Trunk for forwarding.

After the stack finishes startup, the switch with stack ID 1 becomes the master switch, the switch with stack ID 2 becomes the

Web: <https://www.supremeacademicresearch.co.za>

