How to implement VLANs in Huawei core switches



Overview

Typical VLAN Configuration Access switches are layer 2 switches, and aggregation and core switches are Layer 3 switches. The user and server need to commun.

Key Takeaways

VLANs on Huawei core switches can be configured by creating VLANs, assigning ports to VLANs, and selecting appropriate interface types such as access, trunk, or hybrid, with optional IP subnet-based VLAN assignment for advanced segmentation. Overview of VLANsVLANs (Virtual Local Area Networks) divide a physical LAN into multiple broadcast domains, improving network security, reducing broadcast traffic, and simplifying management. Hosts within the same VLAN can communicate directly, while communication between VLANs requires a router or Layer 3 switch.

VLA

Ns can be assigned based on interfaces, MAC addresses, or IP subnets.

Interface Types

Huawei switches support four main interface types for VLAN configuration: Access Interface: Connects end devices; carries traffic for a single VLAN. Trunk Interface: Connects switches; carries traffic for multiple VLANs using VLAN tags. Hybrid Interface: Can carry both tagged and untagged traffic; suitable for mixed environments.

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Qin

Q Interface: Supports VLAN stacking for service provider networks.

Basic VLAN Configuration Steps

Enter System View: Access the CLI via console, SSH, or Telnet and enter system view.

Create VLA

Ns: Use the vlan command to create VLANs individually or in batch. Optionally, add a description for clarity. Configure Ports: Set port type: port link-type access for end devices or port link-type trunk for inter-switch links.

Assign ports to VLANs: port default vlan for access ports or port trunk allow-pass vlan for trunk ports.

Bind VLA

N Interfaces (Optional): Assign an IP address to a VLAN interface for management or inter-VLAN routing: CodeCopyinterface Vlanif1ip address 172. 20. 99.

38 255. 255. 255.

0ip route-static 0. 0. 0.

0 0. 0. 0.

0 172. 20. 99.

1quit Configure Interface Ranges: For multiple ports, use interface range GigabitEthernet 0/0/1 to 0/0/25 to apply VLAN settings simultaneously.

Advanced VLA

N AssignmentIP Subnet-Based VLANs: Map IP subnets to VLANs to automatically assign devices to VLANs based on their IP addresses. Enable this on hybrid interfaces and verify with display ip-subnet-vlan vlan all.

MAC Address-

Based VLA

Ns: Assign VLANs based on device MAC addresses for mobility and security.

Policy-

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Based VLA

Ns: Use policies to dynamically assign VLANs based on protocols or user-defined rules.

Best Practices

Use access ports for end devices and trunk ports for switch-to-switch links.

Document VLAN I Ds and port assignments to simplify management. Consider hybrid interfaces for ports connecting multiple VLANs or mixed devices. Regularly verify VLAN configuration using commands like display vlan and display interface brief. By following these steps, Huawei core switches can be effectively segmented into VLANs, improving network performance, security, and manageability.

Article Content

Typical VLAN Configuration

Access switches are layer 2 switches, and aggregation and core switches are Layer 3 switches. The user and server need to communicate with each other due to service requirements.

Assigning VLANs

Interface-based VLAN assignment is the simplest and most effective method for assigning VLANs. With interface-based VLAN assignment, an interface is added to a VLAN, after which the interface can

01-04 VLAN CONFIGURATION

To reduce broadcast traffic, you can configure different network segments to isolate devices, but the drawbacks of this solution include high costs. As such, VLAN technology was introduced. VLAN

01-06 VLAN SWITCH CONFIGURATION

VLAN Switch is a forwarding method that forwards data according to the information in VLAN tags of received frames. This method requires a pre- configured static forwarding path along switching

Step-by-Step Guide to Configure VLAN and Bind Ports on a Huawei

Configuring a Huawei switch to assign an IP address to VLAN 1 and binding multiple ports to it can seem challenging, but this step-by-step guide simplifies the process.

Huawei Switch VLAN, Trunk, VLANIF Configuration Tutorial

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Learn to configure VLANs, trunks, and VLANIFs on Huawei switches. Step-by-step tutorial with examples for network configuration.

How to Create VLAN on Huawei Switch: Are You Overlooking

Creating a VLAN on a Huawei switch isn''t just a technical task—it''s a strategic move. From blocking hackers with port isolation to slashing costs through smart segmentation, every step

How to Configure VLAN on Huawei Switch | Huawei Switch VLAN

□□ In this video, I will show you step by step on how to configure VLAN on Huawei switch. We will add and remove VLAN, we will go through the port VLAN assignments and port descriptions...

How to configure VLAN on Huawei

Virtual Local Area Network (VLAN) technology divides a physical LAN into multiple broadcast domains, each of which is called a VLAN. Hosts within a VLAN can communicate with each other but cannot

Huawei VLAN Configuration on Huawei Switches ⋆ | Huawei NE40

In this lesson we will learn Huawei VLAN Configuration on Huawei Switches. VLAN Configuration is one of the key lessons for Huawei HCNA.

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Huawei CloudEngine S6730-S-V2 Series Switches Datasheet

Introduction Huawei CloudEngine S6730-S-V2 switches are next-generation enterprise-class core and aggregation switches that offer high performance, high reliability, cloud management, and intelligent

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The Core Layer (ECMP): Deploy high-performance Huawei CloudEngine or Ruijie 800G core switches. Run OSPF/BGP with ECMP to ensure massive routing capacity and Active/Active pathing to your

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Core Architecture & Switching Logic: The Hardware Foundation for Line-Rate Forwarding The Huawei AR series is engineered to achieve high-throughput and low-latency performance through a purpose

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