

Article Overview

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 VLANs

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

Interface Types

Huawei switches support four main interface types for VLAN configuration :

- o Access Interface: Connects end devices; carries traffic for a single VLAN.
- o Trunk Interface: Connects switches; carries traffic for multiple VLANs using VLAN tags.
- o Hybrid Interface: Can carry both tagged and untagged traffic; suitable for mixed environments.
- o QinQ Interface: Supports VLAN stacking for service provider networks.

Basic VLAN Configuration Steps

- o Enter System View: Access the CLI via console, SSH, or Telnet and enter system view.
- o Create VLANs: Use the `vlan` command to create VLANs individually or in batch. Optionally, add a description for clarity.
- o Configure Ports:
 - o Set port type: `port link-type access` for end devices or `port link-type trunk` for inter-switch links.
 - o Assign ports to VLANs: `port default vlan` for access ports or `port trunk allow-pass vlan` for trunk ports.
- o Bind VLAN Interfaces (Optional): Assign an IP address to a VLAN interface for management or inter-VLAN routing:

```
interface Vlanif1ip address 172.20.99.38 255.255.255.0ip route-static 0.0.0.0 0.0.0.0 172.20.99.1quit
```
- o Configure Interface Ranges: For multiple ports, use `interface range GigabitEthernet 0/0/1 to 0/0/25` to apply VLAN settings simultaneously.

Advanced VLAN Assignment

Huawei Core Switch Configuration and Management VLANs

- o IP 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`.
- o MAC Address-Based VLANs: Assign VLANs based on device MAC addresses for mobility and security.
- o Policy-Based VLANs: Use policies to dynamically assign VLANs based on protocols or user-defined rules.

Best Practices

- o Use access ports for end devices and trunk ports for switch-to-switch links.
- o Document VLAN IDs and port assignments to simplify management.
- o Consider hybrid interfaces for ports connecting multiple VLANs or mixed devices.
- o 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.

Context After devices to be managed are added to campus network sites, iMaster NCE-Campus needs to establish

VLAN Switch `switch-vlan` VLAN Switch `switch-vlan` requires a pre-configured static forwarding path along switching nodes on a

Creating a VLAN on a Huawei switch isn't just a technical task--it's a strategic move. From blocking hackers with

How to configure the Huawei Switch configuration Learn the configure Huawei switch

The text covers tasks such as creating a user, VLAN configuration, port settings, enabling SSH and Telnet

Huawei VLAN Routing with Layer 2 Switch is done with the help of a Layer 3 device, a router. Mainly, in the router, in layer 3,

Knowing the CLI commands for VLAN configuration, such as those used on a Huawei S5720 switch, aids in efficient network

In Figure 4-24, to simplify configurations, switches are connected through the trunk link, and switches and user terminals are

In this lesson we will learn Layer 3 VLAN Routing with VLAN Routing Huawei Configuration Example. We do not need any other

Huawei Core Switch Configuration and Management VLANs

Assign VLANs on Switch_1 and Switch_2, configure Switch_1 and Switch_2 to transparently transmit VLAN packets to the Layer 3

The document provides configuration instructions and commands for basic switch configuration using Huawei switches. It covers

To meet this requirement, configure interface-based VLAN assignment on the switches and add interfaces connected to PCs with the

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In the modern network environment, switches, as the core equipment of the network, are

After configuring VLAN switching, you can use the `display vlan-switch` command to verify the configuration. This command displays

This document describes all the configuration commands of the device, including the command function, syntax, parameters, views,

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