

Article Overview

Huawei core switches can be integrated with routers by configuring Layer 3 interfaces, VLANs, and routing to enable inter-VLAN communication and Internet access.

Overview

When adding routers to Huawei core switches, the goal is typically to allow multiple VLANs or network segments to communicate with each other and access external networks. The core switch often functions as the gateway for internal users, while the router handles egress traffic to the Internet or other external networks.

Step 1: Prepare Network Data

Before configuration, gather the following information:

- o Management IP for the core switch (e.g., 10.10.1.1/24)
- o Router public interface IP and gateway (e.g., 1.1.1.2/30 and 1.1.1.1/30)
- o VLAN IDs for each department or subnet
- o DNS server addresses for internal users
- o Interface mapping between the switch and router

Step 2: Configure VLANs on the Core Switch

- o Log in to the switch via SSH or console.
- o Create VLANs for each network segment:

```
vlan 10[Switch-vlan10] quit vlan 20[Switch-vlan20] quit
```

```
o Assign ports to VLANs:  
  
interface GigabitEthernet0/0/1[Switch-GigabitEthernet0/0/1] port link-type  
access[Switch-GigabitEthernet0/0/1] port default vlan 10
```

```
o Configure VLAN interfaces (VLANIF) for Layer  
3 routing:  
  
interface Vlanif10[Switch-Vlanif10] ip address 192.168.10.1 255.255.255.0  
interface Vlanif20[Switch-Vlanif20] ip address 192.168.20.1 255.255.255.0
```

Step 3: Configure the Router

- o Assign IP addresses to the router interfaces connected to the core switch:

```
interface GigabitEthernet0/0 ip address 192.168.10.254 255.255.255.0 no shutdown  
o Configure the router's default route to the Internet gateway:
```

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ip route 0.0.0.0 0.0.0.0 1.1.1.1 o Ensure the router can communicate with all VLANs on the core switch.

Step 4: Enable DHCP and Security Features

o If the core switch is the DHCP server, configure it to assign IPs to VLANs:

```
dhcp enable ip pool vlan10[Switch-dhcp-pool-vlan10] network 192.168.10.0 24[Switch-dhcp-pool-vlan10] gateway-list 192.168.10.1
```

o Enable IP Source Guard (IPSG) to prevent unauthorized IP changes:

```
interface Vlanif10[Switch-Vlanif10] ip source check user-bind enable
```

Step 5: Verify Connectivity

o Use ping tests between PCs in different VLANs to ensure Layer 2 and Layer 3 connectivity.

o Test Internet access through the router.

o Check interface status and routing tables:

```
display ip routing-table display interface brief
```

Step 6: Save Configuration

```
save
```

This ensures that all VLAN, interface, and routing configurations persist after a reboot .

Additional Tips

o For multiple routers, connect each router to a separate VLAN or use subinterfaces for trunk links.

o Use static routes or dynamic routing protocols (e.g., OSPF) if the network has multiple core switches or routers.

o Always verify software versions and compatibility between Huawei switches and routers before deployment . By following these steps, Huawei core switches can effectively integrate with routers to provide inter-VLAN routing, DHCP services, and Internet access for campus or enterprise networks.

So how are Huawei's routers and switches connected in a network? Today, Linknewnet engineers teach you 2 ways.

Aggregation switches set up stacks to implement device-level backup and increase the interface density and

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forwarding bandwidth.

"Gateway + Core Switch + Access Switch + AP + AR180" Networking: Huawei eKit Cloud Management "Gateway + Core Switch +

Small- and Mid-Sized Campus Networks This section uses the S2750 as an access switch (ACC1), S5700 as a core switch (CORE),

Huawei Technical Support

Typical Free Mobility Configuration Example for Deploying the NGFW Module and IPS Module on a Switch
Typical Configuration for

This text is a guide detailing Basic Command Line Interface (CLI) Commands on Huawei brand switches. It provides step-by-step

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

This document provides typical configuration examples for interoperation between Huawei switches and mainstream IP phones,

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Configuration Notes Switch configurations used in this example apply to all versions of all S series switches (except the S5751-L,

In this video, we will learn about the Huawei switch and router's basic configuration step by

Routing Table Each router maintains a local core routing table (namely, an IP routing table), and each routing protocol maintains its

Context On a large or midsize campus network, switches running V600 (such as the S8700) can function as core

Configuration Roadmap Manually add information about aggregation and access switches to the site. If the

On an IPv4 network, configuring BFD for IPv4 static routes on the public network can speed up route convergence and improve

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