

Configuration of Core Switch for Company Leased Line



Overview

What is a Core Switch? A core switch is the primary switch installed at the backbone of a layered or hierarchical network.

Key Takeaways

A core switch for a leased line network should be configured with management access, VLANs, trunking, inter-VLAN routing, and security to ensure reliable connectivity between branches and the ISP.

Initial Setup and Management

Begin by performing the basic switch setup: rack-mount the switch, connect power and uplink interfaces, and assign a management IP address on a dedicated management VLAN (avoid using VLAN 1) for secure access (). Configure a hostname to identify the switch in the network and set up local user accounts with encrypted passwords. Disable unencrypted protocols like HTTP and Telnet, and enable SSH and HTTPS for secure management ().

VLAN and Interface Configuration

Define VLANs for different departments or services. Assign access ports to the appropriate VLANs and configure trunk ports on uplinks to carry multiple VLANs between the core switch and distribution/access switches (). For each VLAN, configure a Switched VLAN Interface (SVI) to enable Layer 3 routing between VLANs if required ().

Leased Line Integration

Connect the leased line to the core switch via the router interface. Ensure the router at each branch is configured to handle the leased line, providing a point-to-point connection between offices (). The core switch should support static routes or dynamic routing protocols (e.g., OSPF or EIGRP) to direct traffic between the leased line and internal VLANs ().

High Availability and Security

Enable spanning tree protocol (STP) to prevent loops and configure link aggregation on uplinks for redundancy and higher bandwidth (). Implement DHCP on the core switch if it serves as the DHCP server for internal users, and enable DHCP snooping on access switches to prevent rogue DHCP servers (). Optionally, configure IP Source Guard (IPSG) to prevent IP spoofing.

Monitoring and Management

Enable SNMP for network monitoring and management. Verify configurations using commands like show running-config, show vlan brief, and show ip route to ensure VLANs, SVIs, and routing are correctly applied (). Regularly back up the configuration to prevent data loss. By following these steps, the core switch will provide secure, reliable, and efficient connectivity for a company's leased line network, supporting inter-branch communication and internet access through the ISP.

Article Content

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VLAN Configuration for Core Switches

The document outlines the configuration for a core switch (Sw-Core) and several access switches (Sw-HR, Sw-Acc, Sw-HelpDesk,

SME Network Solution Typical Configuration Examples

"Gateway + Core Switch + Aggregation Switch + Access Switch + WAC + AP + AR180" Networking: Local Entire Network

Leased Line Configuration Guide

What are the critical steps in commissioning a leased line, and how do these ensure reliable network connectivity? Commissioning

Support

Configure the devices to meet the following requirements: · Configure the spanning tree feature on all the switches to prevent loops. ·

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Configuring the Cisco IOS XE DHCP Server Cisco routers running Cisco IOS XE software include Dynamic Host Configuration

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Unlike access switches, which connect directly to end-user devices, the core switch focuses on aggregating and routing traffic

How to configure Cisco switch in 11 steps?

By configuring your Cisco switch, you can effectively manage its functionality, ensuring versatility, power, and optimal performance.

Internet Leased Line Installation Process Explained

Ending note Installing an internet leased line service is a meticulous process involving multiple stages, from assessing

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