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Configuring VLANs on Aggregation Switches

AI Overview

VLANs on an aggregation layer switch are configured by creating VLANs, assigning ports as access or trunk, and optionally aggregating VLANs into a super-VLAN for Layer 3 communication.Step 1: Plan VLANsBefore configuration, determine the VLAN IDs, purpose, and which devices or departments will belong to each VLAN. Decide which VLANs require inter-VLAN routing and whether a super-VLAN (VLAN aggregation) is needed to reduce IP address usage and simplify Layer 3 communication .Step 2: Create VLANsOn most switches, VLANs are created in global configuration mode. For example, on a Huawei switch:CodeCopy vlan 2[Switch-vlan2] quit vlan 3[Switch-vlan3] quit This creates VLAN 2 and VLAN 3 for different departments or segments .Step 3: Assign PortsAccess ports connect end devices to a single VLAN:CodeCopy interface gigabitethernet 1/0/1[Switch-GigabitEthernet1/0/1] port link-type access[Switch-GigabitEthernet1/0/1] port default vlan 2 Trunk ports carry multiple VLANs between switches:CodeCopy interface gigabitethernet 1/0/5[Switch-GigabitEthernet1/0/5] port link-type trunk[Switch-GigabitEthernet1/0/5] port trunk allow-pass vlan 2 3 This allows VLAN 2 and VLAN 3 traffic to pass between aggregation and access switches .Step 4: Configure VLAN Interfaces (Layer 3)For inter-VLAN communication, configure a VLAN interface (VLANIF) with an IP address:CodeCopy interface vlanif 2[Switch-Vlanif2] ip address 10.1.1.1 255.255.255.240 If using a super-VLAN, sub-VLANs share the same subnet and communicate via proxy ARP on the VLANIF interface .Step 5: Enable Proxy ARP (Optional)When using VLAN aggregation, enable proxy ARP on the super-VLAN to allow sub-VLANs to communicate at Layer 3 without separate subnets:CodeCopy interface vlanif 4[Switch-Vlanif4] arp proxy enable This is useful when multiple VLA...

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Article Content

How to Configure VLAN on Cisco Switch in Cisco Packet Tracer

How to Create and Configure VLANs on Cisco Switch with Packet Tracer In a physical network environment, you can allocate users in a specific location to logical areas with VLANs. For

Port Aggregation FAQs

LACP (Link Aggregation Control Protocol): LACP is an industry-standard protocol (802.3ad) that dynamically manages link aggregation, provides automatic failover, and helps prevent

Cisco Catalyst 1300 and 1300X Series Switches

The Cisco Catalyst™ 1300/X Series Switches are affordable, simple-to-use switches designed and built for enterprise branch offices as well as SMB networks. Managed through the

Example for Configuring 802.1X Authentication (CLI)

The port isolation configuration is recommended on the ports of the device directly connected to APs. Without port isolation, a VLAN may have a large number of unnecessary broadcast packets,

Wired Aggregation | Validated Solution Guide

In this procedure, point-to-point routed-only ports (ROPs) are configured on aggregation switches connected to the core, and a routed-transit VLAN is configured between each aggregation

Securing Your Home Network with VLANs | manuel laggner

Securing Your Home Network with VLANs Learn how to secure and optimize your home network using VLANs, OPNsense, managed switches, Proxmox, and VLAN-aware access points.

Multi-chassis Link Aggregation Group | RouterOS Manual

Multi-chassis Link Aggregation Group Introduction MLAG (Multi-chassis Link Aggregation Group) implementation in RouterOS allows configuring LACP bonds on two separate devices, while the

Network Switches

Cisco network switches deliver performance, flexibility, and security. Cisco switches are scalable and cost-efficient and meet the demands of hybrid work.

How to configure VLAN and NIC Teaming step by step

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Learn how to configure VLAN and NIC Teaming on Windows, VMware, and Linux, with clear examples, aggregation modes, and network best practices.

LAN Switching Configuration Guide

It describes the encapsulation protocols used for routing between VLANs and provides some basic information about designing VLANs. This module contains tasks for configuring routing

Example for Configuring VLAN Aggregation

Configure VLANs and interfaces on Switch A and Switch B, add hosts from different departments to different VLANs, and configure interfaces to transparently transmit packets from VLANs to Switch B.

Cisco Catalyst 3750 Series Switches Data Sheet

For mid-sized organizations and enterprise branch offices, the Cisco Catalyst 3750 Series Switches ease deployment of converged applications and

What is Link Aggregation (LAG) in Networking?

Link aggregation is a technique used in networking to bundle multiple physical ports on a network device to operate as a single link. The aggregated link acts as a

Data Center Aggregation Layer Design and Configuration with ...

Cisco has provided the ability to separate data plane traffic broadcast domains by using VLANs. While VLANs provide data plane security, they do not provide any segmentation at the control plane level.

Creating Virtual Networks (VLANs) – Ubiquiti Help Center

This method simplifies VLAN segmentation without requiring configuration on switches or access points. This also requires a UniFi Gateway, and is a simplified method of assigning VLANs based on MAC

The Network DNA: Networking, Cloud, and Security Technology Blog

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VLAN Aggregation Configuration

VLAN aggregation, also called super-VLAN, partitions a broadcast domain on a physical network into multiple VLANs (sub-VLANs) and aggregates them into a single logical VLAN (super-VLAN).

Port and VLAN Configuration

Options available for configuring ports and VLANs on a switch. Everything from STP, speed and duplex, to voice VLANs and port aggregation.

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VLAN Mapping Configuration

S1720, S2700, S5700, and S6720 V200R011C10 Configuration Guide - Ethernet Switching This document describes the configuration of Ethernet services, including configuring link aggregation,

How to Configure Inter-VLAN Routing in Packet Tracer | Easy!

Learn how to configure Inter-VLAN Routing with Cisco Packet Tracer with our guide. Easily set up your network if you''re a beginner!

How to Configure a Switch to Support Multiple VLANs?

Configuring a switch to support multiple VLANs isolates network traffic, improving security and performance. This guide provides a step-by-step process for implementing Virtual Local Area

Getting Started — HPE VM Docs documentation

Six network interfaces One VLAN for management N VLANs for compute Two VLANs for storage Management and compute interfaces bonded on the hosts MLAG bonding on switches for

Secure VLAN configuration: a practical guide and best practices

Learn how to configure secure VLANs, segment your network, and avoid common failures. A practical guide with best practices for security and performance.

Cisco Catalyst 4500 Series Switches

Find software and support documentation to design, install and upgrade, configure, and troubleshoot Cisco Catalyst 4500 Series Switches.

Virtual LAN (VLAN)

VLAN 1006 to VLAN 4094 (Extended VLAN Range): Designed for large-scale networks requiring a high number of VLANs. VLANs in this range are stored in the running configuration and typically require

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