

VLAN partitioning rules for aggregation switches

Article Overview

VLAN aggregation (super-VLAN) allows multiple VLANs to share a single IP subnet on an aggregation switch, reducing IP address waste while isolating broadcast domains.

Overview of VLAN Aggregation

VLAN aggregation, also called super-VLAN technology, partitions a physical network into multiple sub-VLANs and aggregates them under a single super-VLAN. Each sub-VLAN isolates a broadcast domain, but all sub-VLANs share the same IP subnet, default gateway, and directed broadcast address. This approach conserves IP addresses and allows hosts in different broadcast domains to communicate using the same subnet without requiring separate Layer 3 interfaces for each VLAN .

- **Super-VLAN:** A logical Layer 3 entity that represents a subnet. It does not contain physical interfaces but provides the Layer 3 interface for all associated sub-VLANs.
- **Sub-VLAN:** Contains physical interfaces and isolates broadcast domains. Hosts in a sub-VLAN use the super-VLAN's Layer 3 interface for external communication.

Benefits

- **IP Address Efficiency:** Sub-VLANs share the same subnet, reducing the number of subnet IDs, default gateways, and broadcast addresses required .
- **Flexible Addressing:** Hosts in different sub-VLANs can be assigned IP addresses from the same subnet, eliminating unused IP addresses in small VLANs .
- **Simplified Layer 3 Configuration:** Only one Layer 3 interface is needed per super-V...

Article Content

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Data Center Aggregation Layer Design and Configuration with ...

Introduction This chapter covers the design recommendations for a data center design deployment consisting of a Cisco Nexus®

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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)

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LAN Switching Configuration Guide

Where an aggregation route performs inter-VLAN routing for multiple VLANs, traffic can be switched autonomously on

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Fundamental Concepts in TCP/IP Networking Virtual Local Area Network (VLAN)

VLAN Definitions Ø VLAN (virtual LAN) is a logical partition of a layer 2 network Ø Multiple partition can be created, allowing for

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VLAN Best Practices

VTP transparent switches differ from VTP client switches in that VLANs can be configured manually on these switches. If configured

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Overview of VLAN Aggregation

S1720, S2700, S5700, and S6720 V200R011C10 Configuration Guide - Ethernet Switching This document describes the

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Overview of VLAN Aggregation

Definition VLAN aggregation, also called super-VLAN, partitions a broadcast domain on a physical network into multiple VLANs (sub

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VLAN Aggregation Configuration

This chapter describes how to configure VLAN aggregation. VLAN aggregation allows for communication between hosts on the same

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VLAN can be thought of as a broadcast domain that exists within a defined set of switches. A VLAN consists of a number of end

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Configuring VLAN

Information About Configuring VLAN A Virtual Local Area Network (VLAN) is a switched network that is logically segmented by

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Example for Configuring VLAN Aggregation

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Example for Configuring VLAN Aggregation

Configure VLAN aggregation on Switch B to add VLANs of different departments to a super-VLAN so that PCs in different

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Routing Between VLANs Overview [Networking Software (IOS & NX

Routing Between VLANs Overview What Is a VLAN? LAN Segmentation Security Broadcast Control Performance Network

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VLAN Aggregation

Using VLAN aggregation, a superVLAN is defined with the desired IP address. The subVLANs use the IP address of the superVLAN

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VLAN Configuration for 2.5G Managed Switch and OpenWrt

Role of 2.5G Managed Switches Managed switches differ from unmanaged ones in that they provide configurable network features,

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Port Aggregation Configurations

Port Aggregation Port aggregation allows you to group multiple physical ports into one unit. Port aggregation is useful for

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VLAN Configuration Guide

VLANs allow you to separate network devices into distinct groups, even if those devices connect to the same physical

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What is VLAN? How to Implement, Secure, and Manage

What are the differences between VLAN and WLAN? Virtual Local Area Network (VLAN) is a logical subnetwork that

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VLANs Explained: Network Segmentation for Beginners

Learn VLANs and network segmentation basics to organize traffic, improve security, and reduce broadcasts. Follow

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Overview of VLAN Aggregation

To solve the preceding problem, VLAN aggregation can be used. VLAN aggregation maps each sub-VLAN to a broadcast domain,

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Understanding VLAN Aggregation

Implementation VLAN aggregation technology, also known as super VLAN technology, uses multiple VLANs to isolate broadcast

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What Is Super VLAN?

Super VLAN, also called VLAN aggregation, partitions a broadcast domain on a physical network into multiple VLANs

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Segmenting a Network Using VLANs

s are assigned to a switch port. However, when a network is separated using VLANs, the devices are logically separated by

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VLAN Aggregation Configuration

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Understanding VLAN Aggregation

In VLAN aggregation, sub-VLANs can belong to the same subnet instead of different subnets, and the required number of IP

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How To Set Up Switch Link Aggregation

Managed switches provide many advantages for a growing network, including support for VLANs, QoS, and Trunking. I touched on

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All About VLANs: A Simple Guide to Network Segmentation

If you've ever wondered how large networks manage to operate efficiently without data packets colliding into a digital

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What are Link Aggregation Groups (LAGs) and how do they work with

What are Link Aggregation Groups (LAGs) and how do they work with my managed switch? Link aggregation lets a

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01-05 VLAN AGGREGATION CONFIGURATION

VLAN aggregation allows the switch to assign IP addresses to hosts in sub-VLANs according to the actual number of hosts. For

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