

Virtual VLANs on Aggregation Switches



Article Overview

Virtual VLANs on aggregation switches allow logical segmentation of network traffic, control-plane isolation, and efficient IP address utilization across multiple VLANs.

VLAN Basics on Aggregation Switches

Virtual LANs (VLANs) are Layer 2 broadcast domains that logically group devices regardless of physical location, enabling traffic isolation and improved network management . Aggregation switches, such as Cisco Nexus 7000, Arista EOS switches, or Huawei S-series, typically connect multiple access switches and provide trunking to carry multiple VLANs across a single physical link . Each VLAN is identified by a unique VLAN ID (1-4094) and can be active or suspended depending on configuration .

VLAN Aggregation (Super-VLAN)

VLAN aggregation, also called super-VLAN, allows multiple sub-VLANs to share a single IP subnet and default gateway, reducing the number of IP addresses required . This is particularly useful in large-scale networks where each VLAN does not need a dedicated subnet. Sub-VLANs are logically separated for broadcast isolation but aggregated for routing efficiency, which simplifies IP management and reduces wasted addresses .

Control Plane Isolation with VDCs

On high-end aggregation switches like Cisco Nexus 7000, Virtual Device Contexts (...)

Article Content

VLAN and LAGG Setup — OPNsense documentation

Note Not all switches support VLANs. Unmanaged Switches only provide basic functionality. Managed Switches will support features

Design and Configuration Guide: Best Practices for Virtual Port ...

At access layer, it is used for active/active connectivity from network endpoint (server, switch, NAS storage device.) to vPC domain.

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®

Virtual VLAN switch | FortiGate / FortiOS 7.6.5 | Fortinet Document

The hardware switch ports on FortiGate models that support virtual VLAN switches can be used as a layer 2 switch. Virtual VLAN

Virtual VLAN switch | FortiGate / FortiOS 7.0.13 | Fortinet Document ...

Virtual VLAN switch VXLAN General VXLAN configuration and topologies VLAN inside VXLAN Virtual wire pair with VXLAN VXLAN

Virtual Local Area Networks (VLANs)

VLANs serve two major functions: splitting up one switch into smaller virtual-switches, and extending those virtual-switches to other

How to Configure VLAN and Inter-VLAN Routing on Cisco Switches

Learn how to configure VLAN and inter-VLAN routing on Cisco switches using CLI. Step-by-step VLAN setup, trunking, router-on-a

Virtual VLAN switch

The hardware switch ports on FortiGate models that support virtual VLAN switches can be used as a layer 2 switch. Virtual VLAN

Creating Virtual Networks (VLANs) - Ubiquiti Help Center

UniFi Gateways support Virtual Network Override (VNO), which dynamically assigns VLANs based on a device's MAC address at the

Creating Virtual Networks (VLANs) - Ubiquiti Help Center

Creating Virtual Networks (VLANs) Virtual Networks (VLANs) segment networks to improve performance, security, and traffic

EOS 4.36.1F

VLAN Introduction Arista switches support industry standard 802.1q VLANs. Arista EOS provides tools to manage and extend VLANs

Contact Us

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