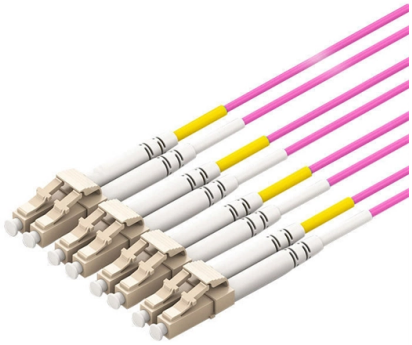
Core switches do not need to be configured with VLANs



Overview

Do I need to create all VLANS on all switches?

Yes, if you plan to not use VTP, you will need to create all VLANs on all switches.In your case, this would.

Key Takeaways

Core switches must be configured with VLANs to enable network segmentation, inter-VLAN routing, and proper traffic isolation.

Why VLA

Ns Are Essential on Core SwitchesVLANs (Virtual Local Area Networks) logically segment a network into isolated broadcast domains, even if devices are physically connected to the same switch.

Without VLA

Ns on core switches: Traffic is not segmented, leading to unnecessary broadcast traffic across the entire network. Inter-VLAN routing cannot occur, preventing devices in different logical networks from communicating. Security and access control are compromised, as sensitive data may traverse unintended paths.

Network management and scalability are limited, making it difficult to add new departments or services without physical reconfiguration.

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Common Issues When VLA

Ns Are Missing

Devices may receive IP addresses but cannot reach other subnets. Core switch interfaces may not forward traffic correctly, causing "Destination net unreachable" errors. Trunk links between switches may fail to carry multiple VLANs, leading to connectivity problems for downstream devices.

Steps to Configure VLA

Ns on Core SwitchesCreate VLANs: Assign a unique VLAN ID and name for each logical network. For example, on Cisco switches: CodeCopyvlan 10name Financevlan 20name HR Assign Ports to VLANs: Configure access ports for end devices and trunk ports for inter-switch links.

Code

Copyinterface GigabitEthernet1/0/1switchport mode accessswitchport access vlan 10interface GigabitEthernet1/0/24switchport mode trunkswitchport trunk allowed vlan 10,20 Configure SVIs (Switched Virtual Interfaces): Enable Layer 3 routing for each VLAN by assigning IP addresses to SVIs.

Code

Copyinterface vlan 10ip address 10. 10. 10.

1 255. 255. 255.

0no shutdown Verify Connectivity: Test inter-VLAN routing and ensure that each VLAN can reach its gateway and other VLANs as required.

Best Practices

Use IEE

E 802. 1Q tagging for trunk links to carry multiple VLANs.

Audit VLA

N assignments regularly to prevent misconfigurations. Ensure consistent VLAN IDs and names across all switches in the network.

Consider SD

M templates on Cisco switches to optimize resources for VLAN-heavy deployments.

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Proper VLA

N configuration on core switches ensures efficient traffic management, security, and scalability, forming the foundation for a stable and segmented network.

Article Content

Do I need to create all VLANS on all switches?

Yes, if you plan to not use VTP, you will need to create all VLANs on all switches your case, this would mean that VLAN66 needs to be on switches 1 through 8.

Best place to configure VLANs: Core Switch vs Peplink 3?

Best practice is to create VLANs on the core switch (if it''s Layer 3 capable) so inter-VLAN traffic is handled at line speed, and only internet/WAN traffic goes through the Peplink.

Can a switch pass VLAN traffic without knowing about the said VLANs

All devices in the IOT and Guest VLANs are wireless only and will not require a hard wire connection. In other words, they will only connect directly to the AP which also supports VLANs. In

Bridging and VLANs | Junos OS | Juniper Networks

Transparent bridging uses five mechanisms to create and maintain Ethernet switching tables on the switch: The key bridging mechanism used by LANs and VLANs is learning. When a

Configuring VLAN Routing Using Engage

In this guide we will be going over how to configure multiple VLANs with routing so that each VLAN has Internet access. We will be using a M4300-8X8F as the core switch with two M4250-8G2FX-PoE+

Best practices when configuring an Access switch stack to Core

Inter-switch trunks should be an LACP bundle of at least two links for redundancy. Spread them across stack members so you don''t lose a closet if one member goes down. Build your topology as a tree,

MS Layer 3 Switching and Routing

Layer 3 routing capabilities are available on most Cisco Meraki switches. This allows the switches to route traffic between VLANs in a campus network without the need for an additional layer

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Solved: Configure Core Switch | Experts Exchange

The core switch should get the routes for the VLANs on the edge. If you''re licensed for OSPF/EIGRP on the core and edge switches, then you can skip the statics and just let the routing

VLans on small sites with no core switch

Don''t do multiple vlans: If you''re just going to have a couple phones at a small site (you mention about 6 machines), you don''t have to do multiple vlans. Having a voice vlan is highly recommended, but not

L2 vs L3 switching explained (and when you need each)

Layer 2 vs Layer 3 switching in plain English — what each does, VLAN routing, and how to decide which your network needs.

Redundant Network Design: Build High Availability with STP

The reason is simple: faster convergence and better VLAN scaling. Cisco''s switching documentation and the IEEE 802.1D/802.1w model both reinforce the same core idea: redundancy

How to Set Up VLANs for Smart Home Security | Isolate

Learn how to isolate smart home devices on a separate VLAN to protect your personal computers and files. Step-by-step VLAN setup guide for

Unable to ping switch : r/Cisco

If it''s not, then unless the switch has a way to route inter-VLAN traffic, you''re not going to be able to ping it. As a test, I would connect a computer to a free switchport (assign VLAN 1 to that access switch

Why is our failover not happening when Core Sw1 loses power

Hello, Recently I''ve configured HSRP on our core switches. Because of the physical limitations of our fiber connections, we only have one trunk interface as the heartbeat interface between the two core

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Understand Spanning Tree PortFast and BPDU Guard

This document describes the PortFast and Bridge Protocol Data Unit (BPDU) guard enhancement feature of the Spanning Tree Protocol (STP).

Camera VLAN Setup Guide 2025 | Secure IP Camera Network

What Equipment Do You Need to Create a VLAN for IP Cameras? The equipment you need to create a VLAN for IP cameras includes a managed network switch, a VLAN-capable router or firewall, and

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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