

Multiple VLANs on the core switch



AI Overview

To implement multiple VLANs on a core switch, configure VLANs on the core, use trunk ports to connect to other switches, and optionally use VTP for centralized VLAN management.

VLAN Creation and Assignment Start by creating VLANs on the core switch using the `vlan` command in global configuration mode. Each VLAN should have a unique VLAN ID and name. Assign VLANs to switch ports using `switchport access vlan` for access ports connected to end devices. For ports connecting to other switches, configure them as trunk ports using `switchport mode trunk` to carry multiple VLANs across switches.

Trunking Between Switches Trunk ports allow multiple VLANs to traverse a single link between switches. Ensure that all inter-switch links are set to trunk mode and allow the necessary VLANs. This enables devices in the same VLAN on different switches to communicate seamlessly. Use Gigabit ports for uplinks to improve bandwidth and stability, and standard Cat5e or better cables are sufficient for these connections.

VLAN Propagation with VTP For Cisco switches, you can use VLAN Trunking Protocol (VTP) to centralize VLAN management. Configure the core switch as the VTP server and other switches as VTP clients. This ensures that any VLAN changes on the core switch automatically propagate to all client switches in the same VTP domain.

Inter-VLAN Routing If devices in different VLANs need to communicate, configure a Layer 3 interface (SVI) on the core switch for each VLAN. Assign an IP address to each SVI to act as the default gateway for devices in that VLAN. Ensure that the trunk ports carry the VLANs to the core switch so routing can occur centrally.

DHCP Considerations For multiple VLANs, DHCP requests are broadcast within a VLAN. To provide IP addresses across VLANs, either configure a DHCP server on the core switch or use a router with DHCP relay (IP helper) to forward requests from each VLAN to the DHCP server. Each VLAN should have its own subnet to avoid conflicts.

Best Practices Enable Spanning Tree Protocol (STP) to prevent loop...

Article Content

VLAN Configuration Guide

If the number of VLANs on the device exceeds the number of supported spanning-tree instances, we recommend that you configure the IEEE 802.1s Multiple STP (MSTP) on your device

Managed Industrial Switches: What Are the Differences ...

In the technical data of the Managed Industrial Switches, L2, L2+, and L3 are the most frequently used in switch management level. Many people always easy to confuse them and after

Chapter 14 Configuring VLANs

This chapter describes how to configure VLANs on HP routing switches using the CLI and the Web management interface.

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

Switch Port VLAN Assignment (Trunk & Access Ports)

This article explains how to apply VLANs to switch ports, focusing on trunking/trunk ports and access ports. Trunk ports allow traffic for multiple VLANs, while access

Ethernet Switch Port Types Explained 2026: RJ45,

A complete engineering guide to Ethernet switch port types: RJ45, SFP, SFP+, SFP28, QSFP+, QSFP28, Combo, Stack, PoE, access/trunk/hybrid

UniFi Cloud Gateway Ultra Review: Best Value for

UCG-Ultra: full UniFi controller, IDS/IPS, and multi-WAN failover for \$129. Deployed across client sites. Here's exactly who should buy it in 2026.

Solved: SVI VLANs

Solved: Hello Expert, I want to enable DHCP for multiple VLANs This Lab aims to create multiple SVI-enabled, DHCP and add more switches to the core switch, and create HSRP.

crisstophergonza/cisco-multi-vlan-architecture

Multi-VLAN Enterprise Campus Network with Dynamic DHCP Allocation  Architectural Overview This deployment engineers a scalable, secure, and production-ready Local Area Network (LAN)

Configure DHCP Server for multiple VLANs on the Switch

This tutorial explains how to configure and run the DHCP service on a Cisco switch to support multiple VLANs.

Inter-VLAN Routing Configuration

Configuring inter-VLAN routing typically involves setting up VLAN interfaces, assigning IP addresses to each VLAN, and enabling routing on the network device.

Setting up VLANs on Netgear Switch : r/homelab

Got two managed switches, both Netgear, GS305E (5-port) and GS724T (24-port). managed to connect them with a trunk port (port 5 on GS305E and port 20 on

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

Building a Multi-Switch VLAN Network: A Successful

Recently, I built a multi-switch VLAN network in Cisco Packet Tracer, connecting different departments while ensuring seamless communication within

What is MSTP (Multiple Spanning Tree Protocol)?

What core architectural advantages does Multiple Spanning Tree Protocol (MSTP) provide when mapping thousands of logical VLANs to a limited number of physical spanning tree instances?

1x10Gb or Multiple ports on LAGG : r/PFSENSE

I have 2 NETGATE 7100 for a building to manage about 500 unique devices, 10 VLANs and about 15 WAPs. Right now, I setup my VLANS via multiple ports of the 8-port 1Gbps switch but I am

Guide

- Split switch routing between switches, for different use cases in each VLAN - Enables EDGE routing for all client types, and Core Routing for

cisco-multi-vlan-architecture/README.md at main

Below is the verified structural topology map showing the collapsed core switching layer aggregating multi-floor traffic up to the corporate gateway router:

Static routes and switches : r/networking

Can you use a L3 switch to route between subnets? Sure. If all of the VLANs are local to the switch, no static routes are needed since "connected" networks are already added to the routing table. If there

How to Create and Configure VLANs on a Cisco Switch with Example

This post will deal with creating Layer 2 VLANs on Cisco switches and performing all relevant configurations. Up to 4094 VLANs can be configured on Cisco catalyst switches.

Layer 2 vs Layer 3 Switches in 2026: Optimizing

Introduction Planning a new network or upgrading an existing one inevitably raises a critical question: Should you deploy Layer 2 switches, Layer 3 switches, or a

VLAN Configuration Commands Step by Step Explained

This tutorial explains VLAN configuration commands. Learn how to configure, test, and verify VLANs on Cisco switches.

Secure VLAN configuration: a practical guide and best

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

Verify VLAN Routing and Gateway Before Replacing Network

##Always Before replacing network equipment, check the fundamentals. Many connectivity issues are caused by incorrect VLANs, routing, or gateway configuration rather than hardware failures. Here ...

Creating Virtual Networks (VLANs) - Ubiquiti Help Center

Advanced/Dynamic VLAN Assignments Dynamic VLAN assignments allow greater flexibility by using authentication mechanisms to assign VLANs based on user

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.mr-security.co.za>

Email: info@mr-security.co.za

Phone: +33 1 45 23 67 81

Address: 10 Rue de la Paix, 75002 Paris, France

This document is for informational purposes only. Specifications subject to change without notice.

