

Communication between VLANs on the aggregation switch



AI Overview

To enable communication between two VLANs, you need to configure inter-VLAN routing using either a Layer 3 switch or a router with trunking and VLAN interfaces.

Step 1: Define VLANs on the SwitchFirst, create the VLANs on your aggregation switch and assign ports to the appropriate VLANs. For example, VLAN10 for clients and VLAN20 for servers. Ensure that each access port is assigned to the correct VLAN and that the VLANs exist on all switches in the network if multiple switches are involved.

Step 2: Configure Trunk PortsIf multiple switches are connected, configure the uplink ports as trunk ports to allow multiple VLANs to traverse the link. Trunk ports carry traffic for all VLANs between switches, maintaining VLAN segmentation while enabling inter-switch communication.

Step 3: Enable Inter-VLAN RoutingThere are two common methods:

1. Using a Layer 3 Switch (Multilayer Switch)Enable IP routing on the switch with the command `ip routing`. Create Switch Virtual Interfaces (SVIs) for each VLAN and assign an IP address to each SVI. These IPs act as the default gateways for devices in their respective VLANs.
Example:
`CodeCopyinterface vlan 10 ip address 10.0.10.1 255.255.255.0`
`interface vlan 20 ip address 10.0.20.1 255.255.255.0` Once SVIs are configured and IP routing is enabled, devices in VLAN10 can communicate with devices in VLAN20 through the switch.
2. Using a Router-on-a-StickConnect a single physical router interface to a trunk port on the switch. Configure subinterfaces on the router, each associated with a VLAN and assigned an IP address.
Example:
`CodeCopyinterface Gig0/0.10 encapsulation dot1Q 10 ip address 10.0.10.1 255.255.255.0`
`interface Gig0/0.20 encapsulation dot1Q 20 ip address 10.0.20.1 255.255.255.0` The router routes traffic between VLANs, allowing inter-VL...

Article Content

Managed Network Switches | Industrial Managed Switches

A managed network switch allows Ethernet devices to communicate and interact with one another within the same network. Managed switches provide the tools necessary for configuring and monitoring

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.

InterVLAN Routing

In this lesson you will learn about the different options there are for routing between VLANs: Router on a stick, SVI interface or L3 interfaces.

Troubleshooting virtual machine network connection issues

Virtual machines (VMs) are experiencing network connectivity issues. The problem is isolated to one or more VMs and includes symptoms such as: A VM can't ping/connect to certain IPs,

UniFi Switch Settings – Ubiquiti Help Center

UniFi Switch Settings UniFi Switch Settings let you configure how your network switches handle traffic, VLANs, port behavior, and Layer 3 isolation. These

Aggregation Switch

An aggregation switch refers to a type of switch used to connect multiple ToR switches to a core switch/router in a cloud data center network. It enables high-bandwidth aggregation ports to be

Sage Journals: Your gateway to world-class journal research

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

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

What a Layer 3 switch adds A Layer 3 switch does everything an L2 switch does, plus routing — moving traffic between networks (VLANs/subnets) using IP addresses, in hardware, at

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

Difference between layer-2 and layer-3 switches

Layer 2 switches operate at the data link layer, forwarding data based on MAC addresses, while layer 3 switches route traffic using IP addresses.

Inter-VLAN Routing: Connect VLAN-to-VLAN

This article provides a step-by-step walkthrough, including configuring VLANs on a Cisco switch, setting up trunk ports, creating router sub

LAN Switching Configuration Guide

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

Overview of VLAN Aggregation

The switch assigns IP addresses to hosts in sub-VLANs according to the number of hosts. This ensures that each sub-VLAN acts as an independent broadcast domain, conserves IP addresses, and

Understanding VLAN Aggregation

Although VLAN aggregation allows different VLANs to use IP addresses on the same subnet, it creates a Layer 3 forwarding problem between sub-VLANs. In common VLAN mode, hosts in different

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

VLAN vs VRF Network Segmentation Explained

VLAN vs VRF - Understanding the Foundation of Network Segmentation Continuous learning is essential in the networking field. Today, I explored the key differences between VLAN (Virtual Local ...

What Is a Layer 3 Switch? Definition, How It Works,

A Layer 3 switch (multilayer switch) combines Layer 2 Ethernet switching with Layer 3 IP routing. It switches traffic within the same VLAN/subnet

Wiley Online Library

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Ethernet Switching..(7) Flashcards

Study with Quizlet and memorize flashcards containing terms like What is Ethernet?, Why did Ethernet become the dominant networking technology?, What media did early Ethernet use? and more.

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

Camera VLAN Setup Guide 2025 | Secure IP Camera Network

Yes, you need a VLAN-capable router or firewall to enable communication between the camera VLAN and other network segments. A managed switch isolates camera traffic at Layer 2, but without a

VLAN Aggregation

Using VLAN aggregation, a superVLAN is defined with the desired IP address. The subVLANs use the IP address of the superVLAN as the default router address. Groups of clients are then assigned to

Routing Between VLANs Overview [Networking

Just as switches isolate collision domains for attached hosts and only forward appropriate traffic out a particular port, VLANs provide complete isolation

Deploying MCLAG topologies | FortiSwitch 8.0.0

Configuring FortiSwitch VLANs and ports Configuring VLANs Configuring ports using the GUI Configuring port speed and status Configuring flap guard Configuring PoE Adding 802.3ad link

Contact Us

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

Website: <https://www.tomor.eu>

Email: info@tomor.eu

Phone: +49 69 2381 5497

Address: Am Hauptbahnhof 10, 60329 Frankfurt am Main, Germany

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

