Araziyah Safety Infrastructure (Pty) Ltd

ASG Internet Access Management Access Layer 3 Switch

AI Overview

Layer 3 switches at the access layer provide both high-speed switching and routing capabilities, enabling efficient inter-VLAN traffic management, security enforcement, and scalable network access for enterprise users.Role of Layer 3 Switches in Access LayerIn enterprise networks, the access layer connects end devices—such as desktops, IP phones, and wireless access points—to the network. Deploying a Layer 3 (L3) switch at this layer allows the network to handle both MAC-based switching within VLANs and IP-based routing between VLANs, improving performance and reducing reliance on aggregation or core routers for inter-VLAN traffic . L3 switches are particularly beneficial when:The network has more than 300–500 users or multiple VLANs with frequent inter-VLAN communication .Access control lists (ACLs), QoS policies, or security rules need to be applied close to end users .Aggregation switches are becoming a performance bottleneck due to high routing loads .Key Features for ASG Internet Access ManagementLayer 3 access switches provide several features that enhance Internet access management:Inter-VLAN Routing: Efficiently routes traffic between different VLANs without requiring a separate router .High Port Density: Supports multiple Gigabit or 10G ports to connect desktops, servers, and uplinks to aggregation or core switches .Security and Policy Enforcement: Supports ACLs, 802.1X authentication, MAC-based security, and port isolation to control user access .Scalability and Redundancy: Technologies like IRF (Intelligent Resilient Framework) allow multiple switches to operate as a single logical device, simplifying management and improving reliability .PoE Support: Provides power to IP phones, cameras, and wireless APs directly from the switch .Management Options: Web GUI, CLI, SNMP, SSH, and centralized management tools allow admini...

Article Content

Fixed Port L3 Managed Ethernet Switches

Designed for reliable, simple, and secure access, this switch family provides a convenient and cost-effective wired access solution for networks supporting Internet of Things (IoT), mobile, and cloud

Intervlan routing (Layer 3 switch) and internet access.

Intervlan routing (Layer 3 switch) and internet access. Hi All, I was just wondering how to setup hosts for internet access in a layer 3 intervlan routing environment.

Understanding Layer 3 Switches: A Comprehensive Guide

By understanding the features, applications, and best practices for deploying Layer 3 switches, network administrators can design and manage robust, scalable, and secure networks that

Everything You Need to Know About Aggregation Switch

Without an aggregation switch, managing and directing network traffic from the access layer would be challenging, leading to congestion, slow network

Cisco Switch Layer2 Layer3 Design and Configuration

One simple and popular switch design scenario will be shown in the following tutorial. This scenario will fit most SMB networks (or even bigger ones) that have a few layer 2 VLANs and consequently a few

What is an Aggregation Switch?

The aggregation switch is located in the middle of the network architecture, which is equivalent to a middle-level manager of a company. It

Configuring Cisco Layer 3 Switch InterVLAN Routing

In some cases, using these switches eliminates the need for external routers. Additionally, Layer 3 switches also support advanced features like

Build Your Skills: The three-layer hierarchical model

The Access layer is typically composed of many switches or hubs that service a particular floor of a building or a department within the building; however, OSI model Layer 3 devices

What does a layer 3 access design look like? : r/networking

I often hear it''s advantageous to utilize layer 3 at the access layer devices to avoid having broadcasts spanning the network and not having to deal with huge STP topologies. But what exactly does this

Best Layer 3 Switch in 2026: Tested and Reviewed

In this guide, we''ve tested and reviewed some of the top Layer 3 switches available today to help you make an informed decision.

Layer 3 Switch Example

This article will cover a basic example of how layer 3 routing functionality on MS series switches could be implemented. Before proceeding, please refer to theLayer 3 Switch Overview for general

Example for Configuring a Layer 3 Switch to Work with a Router for ...

In Figure 2-4, a company has multiple departments that belong to different network segments, and each department needs to access the Internet. It is required that users access the Internet through the

What is Switch Aggregation, Its Role and Selection Advice

The final determination depends on the upstream port speed of the access switches and the downstream port speed of the core switch. 4. Functional management: Unlike core switches,

Enable Inter-VLAN routing with Cisco SG series SMB

I have recently fell in love with the Cisco SG line of switches. They are high powered and easy to administer. This guide will show you how to

Example for Configuring a Layer 3 Switch to Work with a Firewall for ...

Layer 3 switches provide the routing function, which indicates a network-layer function in the OSI model. Layer 3 switches can work at Layer 2 and Layer 3 and be deployed at the access layer or

Understanding the Hierarchical Switch Layers: Access

Understanding the Hierarchical Switch Layers: Access, Distribution, and Core Explained Modern enterprise networks face two conflicting pressures:

Policy Layers description and Policy Tracing introduction

Admin Access Layer: Determines who can access the appliance to perform administration tasks and the level of privilege they have on the device (Read or Read/Write). A policy

Cisco Data Center Infrastructure 2.5 Design Guide

Cisco recommends implementing access layer switches logically paired in groups of two to support server redundant connections or to support

Example for Configuring a Layer 3 Switch to Work with a Router for ...

Example for Configuring a Layer 3 Switch to Work with a Router for Internet Access Layer 3 Switch Layer 3 switches provide the routing function, which indicates a network-layer function in the OSI

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

What Are Aggregation Service Routers (ASR)?

Aggregated services routers (ASR) are used for edge routing. They combine traffic to increase speed, security, and access for internal and external networks.

L2 vs L3 Switch: How to Choose for Your Access Layer

This article breaks down the differences between L2 and L3 switches in the access layer, analyzes key decision factors like network scale and complexity, and finally provides a practical

Data Center Access Layer Design

Some access layer designs permit a larger number of access layer switches per aggregation module than others. • Inter-switch link bandwidth

High Availability Campus Network Design--Routed

For campus designs requiring simplified configuration, common end-to-end troubleshooting tools and the fastest convergence, a distribution block

Contact Us

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