

Functions of aggregation layer switches



Article Overview

Aggregation layer switches consolidate traffic from access switches, manage data flow, enforce policies, and forward traffic to the core layer while providing redundancy and high performance.

Core Functions

Traffic Aggregation: Aggregation switches collect data from multiple access layer switches, wireless access points, and other edge devices, consolidating it into high-bandwidth links for the core layer. This reduces the number of direct connections to the core and streamlines network traffic flow, preventing bottlenecks in large networks . **Routing and Forwarding:** They perform Layer 2 and Layer 3 routing, determining optimal paths for data transmission within the network. This includes inter-VLAN routing, redistribution of routing protocols, and local routing to ensure efficient communication between devices . **Traffic Filtering and Security:** Aggregation switches implement access control, source and destination address filtering, network isolation, and security policies. They can enforce firewalls, VLAN segmentation, and other security measures to protect the network . **Quality of Service (QoS) and Load Balancing:** These switches prioritize traffic based on QoS policies, ensuring critical applications receive sufficient bandwidth. They also distribute traffic across multiple links to balance load and prevent congestion . **Multicast and Broadcast Management:** Aggregation switches define multicast and broadcast domains, controlling the propagation of broadcast traffic and efficiently managing group communications . **IP Address Translation and Policy Enforcement:** They can perform NAT or other IP translation functions and enforce real-time network policies, supporting scalability and operational efficiency

Article Content

Link aggregation

Link aggregation between a switch and a server In computer networking, link aggregation is the combining (aggregating) of multiple

Designing and Configuring the Aggregation Layer

The aggregation switches are configured to act as multi-function EAPS nodes to provide L2 connectivity services. After EAPS and L2

Aggregation layer | FortiSwitch 7.6.0 | Fortinet Document Library

This model allows the aggregation switches to easily accommodate thousands of devices passing through this layer while simplifying

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Aggregation-layer platforms The most appropriate FortiSwitch unit to form the aggregation layer comprises many 10/25/40 gigabit

Aggregation Layer

The switch at the aggregation layer collects bits of communication from the edge layer, and conveys them to the core layer switch.

What is Link Aggregation (LAG) in Networking?

How Link Aggregation Works The primary function of LAG is to combine multiple network links between two devices into one logical

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Aggregation layer The aggregation (sometimes also called distribution) layer is a real crossroad. Its primary goal is to increase

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®

Aggregation Router

An "Aggregation Router" is a device located in the services aggregation layer of a data center LAN that integrates important network

Understanding the Different Layers of Routing and Switching

Routing and switching layers are integral components of an enterprise network that managers can identify and separate to optimize

Contact Us

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