Core Switch Controls Aggregation Switches

Overview

Core, Aggregation, or Access Switches?

Choose the Discover the crucial differences between core, aggregation, and access switches. Find out Core vs Aggrega.

Key Takeaways

Core switches act as the high-speed backbone, managing and routing traffic from aggregation switches to ensure network stability, high throughput, and redundancy.Hierarchical Relationship

In a typical three-tier network architecture, aggregation switches sit between the access layer (end devices) and the core layer. They consolidate traffic from multiple access switches and forward it to the core switches, which serve as the network backbone . Core switches are responsible for high-speed data forwarding, fault tolerance, and maintaining overall network performance .

Traffic Management

Core switches control aggregation switches by:

• Routing and Forwarding: Core switches handle Layer 3 routing for traffic coming from aggregation switches, ensuring efficient delivery across VLANs and subnets .

© 2026 RIVO MULTITRADE OPTICAL SYSTEMS - All rights reserved

• Link Aggregation: Multiple physical links from aggregation switches can be combined into a single logical link using protocols like LACP, increasing bandwidth and providing redundancy .

• Quality of Service (QoS): Core switches enforce QoS policies to prioritize critical traffic, such as voice or video, coming from aggregation switches .

• Load Balancing and Failover: Core switches distribute traffic evenly and provide failover paths if an aggregation switch or link fails, maintaining network stability .
Redundancy and High Availability

Core switches are designed to be highly available and fault-tolerant, often featuring redundant power supplies, modules, and routing protocols like HSRP or VRRP . This ensures that even if an aggregation switch or link experiences issues, the core layer continues to route traffic without interruption.

Layer 2 and Layer 3 Features

While aggregation switches may operate at Layer 2 or Layer 3, core switches typically provide advanced Layer 3 capabilities with high port density and throughput . They also support VLAN segmentation, multicast control, and network isolation, which helps manage traffic from multiple aggregation switches efficiently.

Summary

Core switches control aggregation switches by acting as the central routing and management point, consolidating traffic, enforcing policies, and providing redundancy. This hierarchical design ensures scalability, high performance, and reliability in enterprise, campus, or data center networks .

Article Content

Ethernet switches:5 networking methods

Let''s elaborate on the role of the aggregation layer: The aggregation layer serves as a focal point for multiple access layer switches,

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

© 2026 RIVO MULTITRADE OPTICAL SYSTEMS - All rights reserved

Contact Us

Continue your research online:

Website: https://rivomultitrade.co.za
Technical inquiry: https://rivomultitrade.co.za/contact.html

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

© 2026 RIVO MULTITRADE OPTICAL SYSTEMS - All rights reserved