

Load balancing of core switches



Article Overview

Load balancing across core switches can be achieved using Layer 2 link aggregation, Layer 3 ECMP routing, or dynamic load balancing protocols to distribute traffic evenly and ensure redundancy.

Layer 2 Load Balancing

At Layer 2, link aggregation (LAG) or multi-chassis link aggregation (MC-LAG) can be used to combine multiple physical links into a single logical link between core switches and access switches. This allows traffic to be distributed across multiple links while providing redundancy in case one link fails. For example, Cisco Meraki switches use LACP to hash traffic based on source/destination IP, MAC, and port, ensuring even load distribution and rapid failure detection . Aruba's VSX solution also supports MC-LAG between two core switches, creating a resilient inter-switch link (ISL) for Layer 2 aggregation .

Layer 3 Load Balancing

For Layer 3 networks, dynamic routing protocols such as OSPF, EIGRP, or BGP can enable Equal-Cost Multi-Path (ECMP) routing. ECMP allows multiple paths to the same destination to be used simultaneously, distributing traffic across the available links. This approach provides both load balancing and redundancy, as traffic automatically reroutes if one core switch or path fails . Static routes can also be used with multiple equal-cost paths, but dynamic routing is generally preferred for scalability and automatic failover....

Article Content

What is Load Balancing Switch and features

What is Load Balancing Switch? A Load Balancing Switch is a networking device that manages and distributes incoming network

Load balancing strategy for multicore systems

To distribute tasks between cores exist different load balancing algorithms for multi-core processors, which operate on different

Preparation_Instruction

The equal distribution of work load amongst all the cores will result in enhanced utilization and increase in computing speed of

What is Load Balancing Switch and features

Scalability: Load Balancing Switches allow for easy scaling of resources by adding more servers to the network without disrupting

Load Balancing Algorithms Available for Virtual Switches

Learn to configure various load balancing algorithms on a virtual switch to determine how network traffic is distributed between the

LAG Load Balancing on Cisco 350 and 550 Series Switches

You now have a better understanding of LAG load balancing and how to configure it on your 350 or 550 series switches. You have

Load-balanced switch

A load-balanced switch is a switch architecture that guarantees 100% throughput with no central arbitration at all, at the cost of

Load-Balancing for Improving User Responsiveness on Multicore

Such aggressive load-balancing operations incur unnecessary task migrations even when the CPU cores are not fully utilized, and

A Comprehensive Study of Load Balancing Approaches in Real-Time

This research study primarily focuses on load balancing for mixed real-time tasks on a multi-core system, one of the major

Contact Us

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