

Interconnection between the two core switch network segments



Summary of Content

Core switch interconnections can be implemented using Layer 2 or Layer 3 links, with each approach affecting broadcast domains, routing, and redundancy.

Layer 2 vs Layer 3 Interconnection

Layer 2 (L2) links between core switches allow VLANs to span across switches, enabling devices in the same VLAN on different switches to communicate directly. This setup is useful when deploying VRRP or firewall redundancy across core switches, as it maintains a single broadcast domain for the VLANs involved. However, L2 links can propagate broadcast traffic across both switches, potentially increasing network congestion and limiting scalability. Layer 3 (L3) links use routed interfaces between core switches, isolating broadcast domains and allowing for IP summarization and efficient routing. L3 interconnections are recommended for high-availability designs, as they prevent broadcast storms from affecting multiple core switches and simplify network management. The trade-off is that L2-dependent features like VRRP across switches may not function without additional configuration.

Routing and Network Segmentation



Article Content

Can switches interconnect different network segments? (with ...

To sum up, Layer 2 switches need to be paired with routers to realize the purpose of interconnection between

Network switch

A switch operating as a network bridge may interconnect otherwise separate layer 2 networks. The bridge learns the MAC address of

L3 or L2 Link between Core Switches

You can keep a routed interconnection between your core routers to carry the core-to-core traffic, and at the same

OSI model

The model allows transparent communication through equivalent exchange of protocol data units (PDUs) between two parties,

Core Switch

For example, it is possible for a pair of network interface cards (NICs) to be dual-homed into a pair of access switches (using NIC

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How do all of these network types and requirements fit together? A packet switch consists of a routing engine (table look-up), a

What Is a Core Switch in Networking?

A core switch in networking serves as the high-capacity backbone, italic centralizing data flow and ensuring efficient

Interconnectivity between Switches

In this setup switch-1 & switch-2 don't have inter-connectivity. In the new setup we also want inter-connectivity

Can Switches Interconnect Different Network Segments? (With

Layer 2 switches work at the data link layer and forward data frames based on MAC addresses, and they must use

Example for Configuring Communication Between Different Network ...

In addition to configuring an IP address for a VLANIF interface, you need to configure a static route or a dynamic routing protocol

Contact Us

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