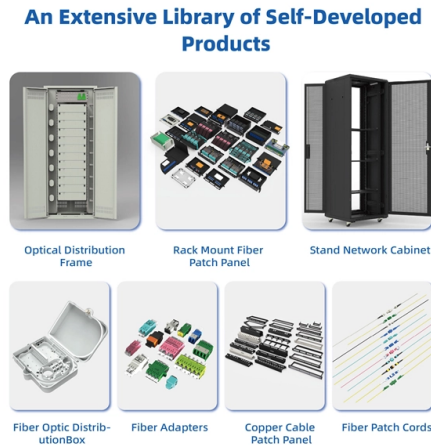


Firewall to Core Switch



Overview

Solved: Hello, I am asking myself what others recommend for the connection between core switch and Firewall.

Key Takeaways

Best practice is to use dedicated LACP port channels with 802.1Q trunks for VLANs, leveraging VRFs for segmentation and keeping routing on the core switch for performance while the firewall enforces security. Physical and Logical Connectivity

For high availability (HA) firewalls, establish two separate LACP port channels from the core switch: one to the active firewall and one to the standby firewall. Each port channel should be configured as an 802.1Q trunk carrying all required VLANs, including transit VLANs for VRFs and any Layer 2 VLANs routed on the firewall. If the firewall is performing inter-VLAN routing for certain VRFs, extend those VLANs at Layer 2 from the core to the firewall.

VLAN and VRF Considerations

- **Transit VLANs:** For each VRF routed on the core switch, define a dedicated transit VLAN to the firewall. This allows the firewall to act as the next-hop for static routes while maintaining logical separation.
- **Trunking:** Core switch interfaces connecting to the firewall should be trunks, allowing all VLANs to pass. Subinterfaces on the firewall can then handle routing per VLAN.

- VRFs: Use VRF-lite to segment traffic for internal, guest, or cloud services. This ensures isolation without duplicating physical hardware .

Routing Strategy

- Core Switch Routing: Perform Layer 3 routing on the core switch for high-throughput east-west traffic. This reduces the load on the firewall and avoids bottlenecks .
- Firewall Routing: Delegate routing to the firewall only for traffic requiring inspection, security enforcement, or inter-VRF routing that the core does not handle .
- Default Routes: Avoid placing default routes on the core for all traffic unless necessary; instead, use static routes pointing to the firewall for specific VRFs .

Management Access

- Out-of-Band Management: Connect firewall management ports to a dedicated management VLAN to separate administrative traffic from production traffic .
- FMC or FDM: Depending on whether the firewall is centrally managed (FMC) or locally managed (FDM), configure access accordingly to ensure secure and reliable management.

Performance and Resilience

- High-Speed Links: Use 10G, 40G, or 100G links between core switches and firewalls to handle high-throughput traffic .
- HA Considerations: Ensure each firewall in an HA pair has independent physical connections to the core to prevent single points of failure .
- Simplified Troubleshooting: Dedicated port channels for each firewall reduce complexity and improve failover response times .

Summary

The optimal design balances performance and security: the core switch handles high-speed routing and VLAN segmentation, while the firewall enforces security policies and inspects traffic. Using trunked LACP port channels, VRFs, and dedicated management VLANs ensures a resilient, scalable, and secure integration between the core switch and firewalls .

Article Content

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Network Segmentation

You will only need a transit VLAN/subnet between the firewall and the core. If you can do that with a 10 Gbps interconnect between

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We have a school network currently running on a Cisco ASA 5516-X connected to a 9200L acting as a core switch, with VLAN

Single firewall connect to 2 core switches

Yes, firewall will create an aggregation port and assign an ip address, and connect to 2x layer 2 switches (Cisco

networking

Router port facing to Core switch is running trunk mode allowed vlan 200 & 300. I am placing a firewall between the

Connection Between Core and Firewall

Dears, Please find the attached Please suggest when 6509 are in VSS mode how the connection should be. The

Connecting Layer 3 Switch to Firewall

How to connect Layer 3 Switch to Firewall on Huawei products. You also can contact

Single firewall with 2 core switches

Hi All Following is my requirement. Two different WAN links get connected to the firewall via two routers.(Different ip

Firewall to Network Switch Implement

My firewall is Fortigate 201F. So, with the HA failover I only have to configure on my firewall site? Why I want to do

Can I place a firewall behind the core switch with a public ip

I had a client with 3 locations and Comcast Metro E homerunning between the sites and their HQ, which had the

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The core layer is critical, yet very simple to design, and allows for network evolution quite easily. Point-to-point links are used

Firewall or Switch for routing?

Replacing UTM and Switches. Firewall/UTM is Watchguard XTM 515 Switches are HP1910 48G (core) and HP 1910

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A firewall is a type of network security device component that is used to keep track of incoming and outgoing network

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Connecting internet uplink to switch or firewall

We can add more resiliency by adding another core switch so 1 firewall and 1 internet connection to one core switch and the other

What is the best practices for Users Getaway! Core Switch or Firewall

Dear Experts, I am wondering what is the best practices for the user getaway. is Core Switch preferred to be the

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What's the general purpose of having your core switch connect

What's the general purpose of having your core switch connect to a firewall for internet AND directly to the internet on a different port

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