Core switch re-partitioning VLANs

Overview

This lab simulates a real-world enterprise network upgrade involving the replacement and configuration of core switches, port migration, ACL deployment, and rollback planning.

Key Takeaways

To partition VLANs, a core switch must create VLANs, assign ports to them, and optionally enable inter-VLAN routing for controlled communication. Creating and Assigning VLANsA core switch partitions a network into VLANs by creating separate VLANs and assigning switch ports to each VLAN.

Each VLA

N acts as a distinct broadcast domain, isolating traffic from other VLANs and improving security and performance. Steps include: Create VLANs using the global configuration mode with a VLAN number and optional name.

If the VLA

N already exists, the switch enters VLAN configuration mode for that VLAN. Assign ports to VLANs using the switchport mode access vlan command. Devices connected to these ports become members of the specified VLAN.

Configure trunk ports for links between switches to carry multiple VLANs using IEEE 802. 1Q tagging. This ensures VLAN traffic is correctly identified across switches.

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Enabling Inter-VLAN CommunicationBy default, devices in separate VLANs cannot communicate. To allow controlled communication, the core switch can perform inter-VLAN routing: Layer 3 Switch Method: Modern core switches with routing capabilities can route traffic between VLANs directly.

Each VLA

N is assigned an IP interface (SVI – Switched Virtual Interface), and routing is enabled on the switch.

Router-on-a-

Stick Method: If the switch is Layer 2 only, a router with subinterfaces for each VLAN can route traffic between VLANs. The switch ports connecting to the router are configured as access or trunk ports.

Additional Considerations

Access Control: Administrators can use access control lists (ACLs) to restrict communication between VLANs, enhancing security.

VLA

N Management: VLAN Trunking Protocol (VTP) can be used to maintain consistent VLAN configurations across multiple switches. Resource Planning: Ensure the switch has sufficient MAC address table and STP resources to handle the number of VLANs and trunk ports. By following these steps, a core switch effectively partitions the network into isolated VLANs while providing the flexibility to route traffic where necessary.

This setup improves network performance, security, and manageability.

Article Content

serenalindquist99/server-core-switch-lab

This lab simulates a real-world enterprise network upgrade involving the replacement and configuration of core switches, port migration, ACL deployment, and rollback planning.

Core Switch & VLANNING

I think you will need to renumber your VLANs to a somewhat manageable size. /24 VLANs are usually a good size, but what you can do to be more specific is work out how many hosts

Configuring the Core Switch

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Configure interfaces for interconnecting the core switch with firewalls. # Create interconnection VLANs on the core switch and add interfaces to the interconnection VLANs.

Configuring new core network, but having VLAN issues | Network

So I''m in the process of upgrading my network core from a non-Aruba switch pair to a CX8325 VSX pair. Downstream I''ll have a mix of CX01K pairs, CX6300M stacks, my main corporate

Migrating Cisco core switch to a new one

We have an existing core switch with multiple VLANS, we are trying to move each of the VLANs to a new core stack one at a time. Here is the topology, I have created the trunk between the

How do I create a new VLAN within my core? | Wired Intelligent Edge

What I need is to set up another VLAN in my core, which I want to call VLAN 810* Once I have the VLAN, I need three 810-native ports on three of my switches. The first of these will be

how to configure vlan on cisco core switch

Pleas help me 100K sub / @tankirivann Hi everyone, in this video we are going to pratice on cisco vlan configuration. we create vlan on our core switch and using VTP protocol to share all...

Best practices when configuring an Access switch stack to Core

I''m planning out a potential upgrade and restructure of the network switches for a small sized organization, upgrading from Aruba to Cisco switches and changing how the switches connect to

How to configure redundant core switch in collapsed core?

I want a second core switch (Core 2) to be able to take/distribute load while acting like a backup switch if Core1 goes down. Each access switch should have a redundant link to both Core1 and Core2.

where would a logical vlan be configured on the Core switch, or

Configuring local Vlans I have learned to configure the vlan interfaces on the core switch- and then configure the access switch with the desired vlan and assign the switch port to that vlan! If I

Segmenting a Network Using VLANs

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s are assigned to a switch port. However, when a network is separated using VLANs, the devices are logically separated by Switches with VLAN capability can assign the tagged frames to specific

Making VLAN with core switch

If not using AD then any of the switches you mention have DHCP server capability. Add a DHCP scope, VLAN and SVI config to any switch (preferably the core switch) and add the VLAN to

creating Vlans at Core layer switches ?

Is there a need to create vlans at core layer switches ? If yes what are the pros and cons for this practice ? Actually i have seen some networks doing that!

Solved: learn Vlans from the core!

Solved: Hi Experts! I will deploy a distribution switch (4507R).what is the Preferred way to let this switch learn about the vlans already created on the CORE,IS it Via put this switch as a vtp

Best place to configure VLANs: Core Switch vs Peplink 3?

Hi everyone, I have a question regarding VLAN setup in a network. In my infrastructure, I have a core switch and a Peplink 3 (router/firewall). Should the VLANs be created and configured on

What Is a VLAN? A Beginner''s Guide to Smarter Network Design

The traffic among devices split across two or more physical networks is usually handled by a network''s core routers. With a VLAN, that traffic is handled more efficiently by network switches.

Configuring the Core Switch

Configuring the Core Switch Context In this scenario, IP addresses of the interfaces connecting the core switch to the BRASs and firewalls and OSPF need to be configured on the core

serenalindquist99/server-core-switch-lab

server-core-switch-lab Simulated enterprise switch replacement lab with VLANs, ACLs, firmware upgrades, rollback planning, and network diagrams.

Related Video Reference

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

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