

Switching Redundancy to the Test Core Switch

Article Overview

To switch redundancy to a test core switch, implement dual-core connectivity with STP and VRRP to maintain uninterrupted network operations.

Key Concepts for Core Switch Redundancy

Redundancy ensures that if one core switch fails, another can take over without disrupting network traffic. In Cisco networks, this is typically achieved using:

- o Spanning Tree Protocol (STP): Prevents Layer 2 loops when multiple paths exist. Rapid Per-VLAN Spanning Tree (RPVST) is recommended for faster convergence and minimal downtime .
- o Virtual Router Redundancy Protocol (VRRP): Provides a virtual IP address shared between core switches, allowing access layer devices to failover seamlessly if the active core switch goes down .
- o Dual Supervisors or VSS (Virtual Switching System): For high-end switches like Cisco 6500/4500 series, dual supervisors or VSS allow two physical switches to operate as a single logical unit, maintaining port-channel connections and reducing reconvergence time .

Steps to Switch Redundancy to a Test Core Switch

- o Plan and Document the Network: Map all devices, VLANs, and critical links. Identify which access and distribution switches will connect to the test core switch.
- o Enable STP on All Switches: Configure RPVST on the test core switch and ensure it integrates with the existing STP topology. Set the test core switch priority appropriately if it should act as the root bridge .
- o Configure VRRP: Assign a virtual IP to the test core switch and configure the backup core switch to take over if the primary fails. Ensure the access layer switches point to the VRRP virtual IP for default gateway routing .
- o Port-Channel Connections: Connect access and distribution switches to both the primary and test core switches using EtherChannel or port-channel links. This ensures traffic can flow through either core switch without manual intervention .
- o Test Failover: Simulate a failure of the primary core switch and verify that traffic seamlessly transitions to the test core switch. Monitor STP convergence and VRRP failover times to ensure minimal disruption .
- o Monitor and Adjust: After testing, review logs and network performance. Adjust STP priorities, port-channel configurations, or VRRP timers as needed to optimize failover behavior.

Best Practices

- o Avoid Single Points of Failure: Ensure all critical links have redundant paths and that power supplies are duplicated.

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- o Use Logical Grouping: VSS or switch stacking simplifies management and reduces convergence complexity.
- o Gradual Testing: Introduce the test core switch in a controlled manner, starting with non-critical VLANs or segments.
- o Documentation and Backup: Keep configuration backups and document all changes to facilitate rollback if needed. By following these steps, you can safely switch redundancy to a test core switch while maintaining network availability and minimizing downtime .

Retail Store Network specifications regarding location and redundancy options. (e.g., DIA, Broadband, LTE) - Network Topology

So when one of the "new core" switches goes down, anything connected to it will still be offline. You can design around this by

In the modern enterprise campus network, the core switch is the systemic heart. A single forwarding decision error or power plane

Hello Everyone, I am working on one design and need support for connectivity between two core switches and router.

To allow the standby switch to join the stack if a configuration mismatch occurs between the active and standby switches, use the

The cores will only route to other access switches and shouldn't encounter issues with spanning tree if configured with routed ports

Through understanding, implementing, and maintaining redundant configurations in Cisco

This document describes how to determine why a port or interface experiences problems.

To test supervisor redundancy on a switch running dual sup 720s, you can try the command "redundancy force

Switch Redundancy and Management-Some links below may open a new browser window to display the document you selected.

In the core layer, I want to have redundancy, which means that if the main core switch of my network has a problem,

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Hi all we have just installed some 9606 switches in stakwise and dual sups. we ran a failover test in chassis and I was

Does the core have 2 sups that would provide some level of redundancy once it had to power suppls with separate

Clients: I have redundant "core" switches with single controllers, with 4 additional switches connected to each "core"

In conclusion, meticulous ongoing maintenance and preparedness to troubleshoot are just

Hi, school with around 800 users having one core switch 6509-E sup-720 (inter-vlan routing) collapsed core design

Web: <https://morwarreconst.co.za>

