

How to configure the primary and backup core switches

Article Overview

Primary and backup core switches are configured to ensure network redundancy, with the backup automatically taking over if the primary fails.

Understanding Primary and Backup Roles

A primary core switch is the main switch responsible for forwarding traffic and acting as the root bridge in Spanning Tree Protocol (STP) for all VLANs. The backup switch is configured to take over automatically if the primary fails, ensuring minimal network disruption. In modern Cisco networks, technologies like Virtual Switching System (VSS) allow two physical switches to operate as a single logical switch, simplifying redundancy.

Spanning Tree Configuration

To configure primary and backup switches for STP:

- o Set the primary root bridge for each VLAN:

`CodeCopyspanning-tree vlan root primary` This automatically lowers the switch priority to make it the root bridge.

- o Set the secondary root bridge for failover:

`CodeCopyspanning-tree vlan root secondary` This sets a slightly higher priority than the primary, so it becomes root only if the primary fails.

- o Verify configuration:

`CodeCopyshow spanning-tree` This command confirms which switch is currently the root bridge for each VLAN.

Link Aggregation and Redundancy

For core switches connected with multiple links:

- o Use EtherChannel to bundle multiple physical links into a single logical link, maximizing bandwidth and providing redundancy.

- o Protocols:

- o PAgP (Cisco proprietary)

- o LACP (open standard)

- o Without EtherChannel, STP will block redundant links, wasting bandwidth.

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Stack-Based Redundancy

For switches that support stacking:

- o Designate slot 1 as primary and slot 2 as backup during initial setup or using the easy setup configuration .
- o Additional switches can be configured as primary-capable to take over if both primary and backup fail.
- o Consider switch capabilities and speed when assigning roles, as the most capable switch should be primary.

Verification and Best Practices

- o Always verify the root bridge and backup using show spanning-tree.
- o Ensure all VLANs are accounted for when configuring primary and secondary root bridges.
- o For non-stacked switches, ensure proper LAG configuration and STP cost adjustments to control traffic flow in case of link failure .
- o Regularly test failover scenarios to confirm backup switch takes over seamlessly. By combining STP root bridge configuration, EtherChannel for link redundancy, and stack or VSS-based primary/backup assignment, you can achieve a resilient core network that maintains connectivity even during switch or link failures.

For details on which switches in a mixed Virtual Chassis we recommend or require you to configure into the primary or backup

In this sample chapter from CCNP and CCIE Enterprise Core ENCOR 350-401 Official Cert Guide, you will review techniques for

Prerequisites for Configuring Backup Switchs and Failover Priority for Access Points o You can configure primary and secondary

As far as I am aware, the switch is supposed to change its priority number depending on the Bridge IDs of other switches. If the

This tutorial explains basic switch configuration commands in detail with examples.

Hello everyone, In my campus network i have cisco 2960x as access switches and one cisco 3750 as core switch

Explore the core switch's role as the backbone of your network. Discover key differences,

How Do I Set A Switch As Primary For Consistent Network Performance? Understanding how to effectively

How to configure the primary and backup core switches

set a

Discover what a Core Switch is, its pivotal role in network architecture, and how it boosts performance and reliability in

Restrictions for Configuring Backup Switchs and Failover Priority for Access Points switch failure detection time, you can configure

The config of the new core could be very similar to the config of the original core, the

This lesson explains how to configure the spanning-tree root bridge on Cisco IOS using root primary/secondary or priority.

In this lab, we will use HSRP protocol to create high availability for our topology using two core switches as primary

This article provides instructions on how to configure stack settings through the Command Line Interface (CLI) on

We now want to switch over to the backup ISP as the primary for all outgoing internet traffic. However we currently

Solved: hi guys . i have a network with below topology. In the core layer, I want to have redundancy, which means that

Web: <https://bssoda.pl>

