

Redundancy Protection at Core Switches



Article Overview

Core switch redundancy ensures continuous network availability by using backup switches and protocols like HSRP, VRRP, VSS, or vPC to automatically take over if the primary switch fails.

Core Switch Redundancy Overview

Redundancy at the core layer is critical for maintaining high availability in enterprise networks. Core switches act as the backbone, aggregating traffic from distribution or access layers and routing it efficiently across the network. A failure at this layer can disrupt the entire network, so redundancy ensures that a secondary switch can immediately take over without downtime .

Key Redundancy Methods

1. Redundancy Protocols (Layer 3)

- HSRP (Hot Standby Router Protocol) and VRRP (Virtual Router Redundancy Protocol) create a virtual IP gateway shared between two or more core switches. If the primary switch fails, the backup automatically assumes the virtual IP, maintaining uninterrupted routing .
- These protocols are typically configured on SVIs (Switched Virtual Interfaces) for each VLAN, with a Layer 2 trunk link serving as a heartbeat between switches .

Multi-Chassis Solutions

- VSS (Virtual Switching System) and vPC (Virtual Port Channel) allow two physical switches to operate as a single logical switch, simplifying management and providing...

Article Content

Dec 25, 2025

How to Configure Redundant Switches in Cisco Networks

Through understanding, implementing, and maintaining redundant configurations in Cisco

Aug 24, 2025

core switch redundancy

hi all, i want to know something about core switch redundancy, when we connect two core switch with stack cable and

Jun 23, 2026

Understanding Switch Redundancy: Ensuring Network

Switch redundancy is a crucial aspect of modern network design, but it requires careful

Apr 26, 2026

redundancy of 2 core switches

Hi, im new to this. If i got 3 switches , i need to use 1 as a layer 3 switch so that data vlan can communicate with

Apr 17, 2026

FortiSwitchOS Switching Reference Architecture Guide

By design, it therefore provides resiliency because it will always be deployed in pairs of switches and comes with a recommendation

Aug 06, 2025

Solved: Is redundancy in a single core switch practical for a small ...

We wonder if we should go back to the original collapsed core model with two cores, or, just building a single core with

Sep 17, 2025

Redundancy and Resiliency in Cisco Networks

This article explores the core concepts of redundancy and resiliency in Cisco networks, their significance, and how

Jun 04, 2026

An Overview of High Availability in UniFi – Ubiquiti Help Center

UniFi enables High Availability across your deployment by building redundancy into every part of the network—from Gateways to

Aug 02, 2025

What Is a Core Switch? Network Backbone Architecture Guide

Discover what a core switch does in a 3-tier network model. Learn about ASIC routing, collapsed core vs dedicated

Oct 10, 2025

Solved: redundancy in core layer

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

Oct 09, 2025

Ethernet Ring Redundancy

If media redundancy is employed, only one path can be active at a time. One solution is to have a redundant cable left

Oct 20, 2025

The Complete Solutions Guide to a Redundant Switched Topology –

We provide the reasons for implementing a redundant network, the benefits, the side effects, and the solution for avoiding Layer 2

Sep 22, 2025

Recommendations: Dual Core Switch for redundancy.

Hi Experts, May I ask for your recommendations for this kind of setup. Best practices and other routing and switching

Jul 24, 2025

FS Community

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Dec 20, 2025

Understanding Switch Redundancy: Ensuring Network

It's clear that investing in robust switch redundancy measures is not just about preventing

Feb 07, 2026

Network design question. Core redundancy.

Hi there, I currently have a network which consists of one 2970G as a core switch and a number of 2950T and 2970G

Feb 19, 2026

Best way to create redundancy with 2x layer 2 Cisco switches

Hi, I have the below set up that and I'm trying to work out the best way to make the switches redundant so if one fails,

May 31, 2026

How to Configure Redundant Switches in Your Network

With the completion of these detailed software configurations, your redundant switches

Jun 23, 2026

Question About Core Redundancy Best Practice : r/networking

Our current headquarters core is a chassis switch (Cat 4507), with port-channels to other buildings for layer 2 redundancy.

Jul 24, 2026

Redundancy for Core Switch Stack : r/networking

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

Oct 17, 2025

How to Configure Redundant Switches in Your Network

Let's dive into a detailed, step-by-step guide on setting up redundant switches, covering both

Dec 03, 2025

Understanding Redundant Switches: What Are They

Understanding what redundant switches are, their profound impacts on network reliability

Oct 14, 2025

Controller Redundancy Under the Hood

Controller redundancy provides many benefits as part of any high-availability strategy for factory

Aug 23, 2025

Help with core switch redundancy | Wired Networks

Currently have one gigabit core switch (dying) per main building connected via fibre (OM4 x 12 pairs). I'm after some

Dec 03, 2025

Redundant Core switches and Single Router Design

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

Dec 12, 2025

Core layer | FortiSwitch 7.4.0 | Fortinet Document Library

Core layer With the Fortinet solution for integrated networking using FortiLink, the core layer always comprises a set of two to four

May 24, 2026

LAN Redundancy

Redundancy at OSI Layers 1 and 2 (2.1.1.1) The three-tier hierarchical network design that uses core, distribution, and access layers

Jun 16, 2026

Solved: core switch redundancy

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

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

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