

# How to implement dual-machine operation for core switches



## Article Overview

Dual-machine operation for core switches ensures high availability and redundancy by using paired switches with synchronized configurations, link aggregation, and redundant routing protocols.

### Core Principles

Dual-machine operation involves deploying two core switches that act as a redundant pair, ensuring that if one switch fails, the other continues to handle traffic without service disruption. This setup is critical in high-performance networks where uptime and reliability are essential, such as enterprise campuses, data centers, or service provider networks .

### Key Implementation Strategies

#### 1. Virtual Switching Systems (VSS) or Stacking

- VSS (Cisco) or switch stacking allows two physical switches to operate as a single logical switch, simplifying management and eliminating the need for spanning tree recalculations during failover .
  - Each access switch can connect to both core switches using port-channel links, ensuring traffic continues even if one core switch fails.
- #### 2. Multi-Chassis Link Aggregation (MLAG)
- MLAG enables dual-homing of devices to two separate core switches while presen...

## Article Content

Jan 26, 2026

### Configuring Multiple Switches

I am currently researching the best way to configure 4 switches. I am still learning the finer points of networking and

May 12, 2026

### Connecting two core switches : r/networking

Both Office and Lab network have switches in spine (access layer) where servers or desktops are connected. As Edge core is

Nov 09, 2025

Recommendations: Dual Core Switch for redundancy.

Make sure you designate the primary root bridge and the secondary on your core switches and configure the

Mar 11, 2026

### How to Connect Two Switches Together: A Comprehensive Guide

How to connect two switches together? Are you looking to expand your network infrastructure and connect multiple

Jun 29, 2026

### Two uplinks in core switch

Hi Expert Team, i had two uplink from location\_1 core switch to location\_2 core switch. And i want to configure these

Aug 09, 2025

### Guide to Basic Switch Configuration | Auvik

Switch configuration on your own can seem like a daunting task. Use this handy guide to get your network switch up

Oct 05, 2025

### Core Switch vs. Distribution Switch vs. Access Switch

What is a Core Switch? A core switch is the primary switch installed at the backbone of a layered or hierarchical network. These data

Mar 20, 2026

Stack or separate core switching (x690)

We're going to install two 48 port SFP+ switches at a co-location facility that will house all of our primary servers and

Dec 10, 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.

Jun 22, 2026

What is a Core Switch | Functions and Difference over Normal Switch

What is a core switch and how it works? This article builds the basics of this kind of switch for the ones who don't

Jul 09, 2026

Core, Aggregation, or Access Switches? Choose the Perfect Fits

Selecting between core, aggregation, and access switches is not only technical — it's strategic. Once you know what

Jul 10, 2026

How to configure redundant core switch in collapsed core?

With a routed access design, you'd configure a default gateway per access switch then route the connections to both cores. The

Oct 12, 2025

Edge switch redundancy to two core switches

I want to provide best redundancy for an access switch (Cisco 3650) when connecting to two core switches (Cisco

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What Is a Core Switch? Network Backbone Architecture Guide

In a large enterprise, the core switch aggregates data from multiple distribution switches and routes it rapidly across

May 19, 2026

Core Switch

Core switches are defined as high-capacity switches located at the top of a cloud data center network, connecting aggregation

Feb 08, 2026

Choosing Your Core Switches - Majornetwork

When dual-homing everything it may not be so big deal after all. Also, when comparing Nexus 5500 L3 features with

Jun 21, 2026

Solved: core switch redundancy

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

Sep 25, 2025

Replacing one core switch with two new core switches

I will have to replace our old core Cisco switch C4506-E with two new core switches C9500 that will be located in two

Jan 20, 2026

Difference between a core switch and "normal" switch?

What's the difference between a Core Switch and a normal switch? I have 4 switches in a stack that everything connects to. This is

May 24, 2026

Understanding the Core Switch: Key Differences and Uses

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

Feb 28, 2026

Core layer | FortiSwitch 7.4.0 | Fortinet Document Library

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

Apr 08, 2026

HAconfig.mif

About High Availability The Cisco MDS 9500 Series of multilayer directors support application restartability and nondisruptive

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Solved: core switch redundancy

If it was me i would look for something VSS capable, that way each of the HP switches

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#### FortiSwitchOS Switching Reference Architecture Guide

The proposed designs in this guide aim for seamless operation for high availability, taking into consideration multiple hardware

Oct 11, 2025

#### 4.2. Dual Configuration Intel FPGA IP Core

This section provides the guideline to implement the Dual Configuration Intel FPGA IP core.

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#### Embedded Switch Technology Reference Architectures

With embedded switch technology, IACS end-devices can be directly connected to each other without the need for additional IES

Mar 18, 2026

#### Two-tier and three-tier switch architectures

Two-tier and three-tier switch architectures When structuring the logical architecture of an enterprise network, decisive factors

Jun 01, 2026

#### 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 the hardware setup and

Sep 16, 2025

#### Features and Applications of Core Switches

Core Switches typically employ redundant designs, such as dual power supplies and dual engines, ensuring quick

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#### Solved: DHCP ON CORE SWITCHES

Hi, Can we enabled DHCP on both core switches ? how would redundancy will take place please explain if its

## Contact Us

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