

Two routers connected to a Layer 3 switch



Article Overview

Two routers can be connected to a Layer 3 switch by assigning each router to a separate VLAN or subnet, with the switch performing inter-VLAN routing to enable communication and internet access.

Understanding the Setup

A Layer 3 switch combines the high-speed switching of a Layer 2 switch with routing capabilities, allowing it to forward packets between different IP subnets or VLANs without requiring an external router. In this scenario, each router can serve a different subnet or network segment, while the Layer 3 switch handles routing between them.

Configuration Steps

- Assign VLANs to Each Router
- Create separate VLANs on the Layer 3 switch for each router connection.
- Assign the switch ports connected to Router A and Router B to their respective VLANs.
- Example: VLAN 10 for Router A (192.168.10.0/24) and VLAN 20 for Router B (192.168.20.0/24), .
- Configure IP Addresses
- Each router interface connected to the switch should have a static IP within its VLAN subnet....

Article Content

Sep 30, 2025

Here's Why Your Network Might Need a Layer 3 Switch

Network switches operate at Layer 2 (data link) of the OSI model, while network routers operate at Layer 3

Jan 10, 2026

Connectivity of two routers with layer3 switch in between

A layer 3 switch is a de facto router. Both switch ports have to be configured to the same VLAN, else they won't be

Nov 05, 2025

Cisco Switch Layer2 Layer3 Design and Configuration

Network Diagram The diagram above shows one Layer 3 switch used for Aggregation, three Layer 2 switches used for access

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How To Use A Layer 3 Switch In A Small Network

This is where a Layer 3 switch comes in handy. A Layer 3 switch can perform IP routing tasks as well as Layer 2 tasks such as

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InterVLAN routing using Layer 3 switch | NetworkAcademy.IO

In this lesson, we will learn to configure a multilayer switch (also called Layer 3 switch) to perform inter-VLAN routing, which was

Apr 13, 2026

How to configure static routing between two layer 3 switches?

I have two Cisco layer 3 switches. In switch 1, I created two vlans, 10.10.1.0/24 and 10.10.2.0/24. The connection is shown in the

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Router to Router Connection: Expand Your Home Network

You need an Ethernet cable to connect two routers in your home network. If your routers are wireless, use different Wi

Mar 06, 2026

How to Connect Two Routers (with Pictures)

Bridging two routers on one network isn't as common as it used to be (thanks to mesh Wi-Fi)

Dec 11, 2025

Inter-VLAN Routing using Layer 3 Switches (4.3)

In this section, you configure inter-VLAN routing using Layer 3 switches. Modern enterprise networks rarely use router-on-a-stick

Aug 12, 2025

connecting two routers to the same switch

Hi i have two routers connected to the same switch(layer2 or layer3) and i have run on both routers ospf protocols,

Oct 29, 2025

Difference between layer-2 and layer-3 switches

Layer 2 switches operate at the data link layer, forwarding data based on MAC addresses, while layer 3 switches route

Dec 13, 2025

Learn the Key Differences Between Layer 3 Switch and Router

Layer 3 switches excel in high-performance LAN environments, offering cost effectiveness and efficient traffic

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Differences Between Layer 2 Switches, Layer 3

Layer 3 switches do both switching and routing, letting data move between different parts of a network.

Jan 09, 2026

InterVLAN routing using Layer 3 switch | NetworkAcademy.IO

InterVLAN routing using Layer 3 switch In this lesson, we will learn to configure a multilayer switch (also called Layer 3 switch) to

May 23, 2026

2 Routers connected to a switch in a single network

At home I have the following setup - a tp-link switch modem connected to the internet and 2 routers (both AX53 3000),

Dec 24, 2025

Difference Between Router and Layer-3 Switch

Layer-3 switches were developed to enhance the performance of routers, especially in large local area networks

Mar 11, 2026

Layer 2, Layer 3, and Layer 4 Switches

Layer 2, Layer 3, and Layer 4 Switches What Is a Layer? A network switch connects devices and switches data between ports.

Dec 17, 2025

Difference Between Routers and Switches in TCP/IP Networks

Some routers have an embedded switch (some of the interfaces act as layer 2 switch ports). If this router is one of

Mar 27, 2026

Routing between two layer 3 switches

Hi, I've got two layer 3 switches, each of which have their own set of vlans and hosts, the network ip range however is

Jul 29, 2025

How To Use A Network Switch With 2 Routers

Learn how to effectively use a network switch with 2 routers to expand your network and optimize connectivity.

Oct 28, 2025

Connecting two layer 3 switches together

That is very much possible, but you would need to talk to your ISP to change your connection in both locations from

Oct 10, 2025

Solved: 3 routers connected with 3 switches

I'm new to networking and currently setting up a small test lab with three Cisco routers and three Cisco switches.

Contact Us

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