

Dual broadband access via a single switch

Article Overview

You can achieve dual broadband access through a single switch using either a dual-WAN router, VLANs with separate routers, or high-availability/failover setups, but consumer-grade routers alone cannot automatically balance traffic.

Using a Dual-WAN Router

The simplest and most reliable method is to use a router or firewall that supports two WAN connections. Both broadband connections are plugged into the WAN ports, and the router handles load balancing, failover, and traffic prioritization. The LAN side of the router connects to your switch, allowing all devices to access the internet seamlessly. Popular solutions include pfSense, Untangle, Sophos, or enterprise dual-WAN routers .

Connecting Two Routers to a Switch

If you attempt to connect two separate routers to a single switch:

- o Each router must have a different public IP if using separate ISP accounts.
- o DHCP conflicts must be managed: either disable DHCP on one router or assign non-overlapping IP ranges .
- o Devices on the switch will typically use the default gateway of one router, so automatic failover is not straightforward without additional configuration .
- o VLANs can be used to segment traffic, assigning specific ports to each router, but this creates separate subnets, which may not meet the goal of a single unified network .

High-Availability (HA) and Redundancy

For true automatic failover, enterprise-grade firewalls or routers can be configured in HA mode:

- o Both routers share a virtual IP.
- o A heartbeat connection monitors the health of each router.
- o Traffic automatically switches to the active router if one fails .
- o This setup usually requires professional configuration and is not supported by typical home routers.

Practical Considerations

- o Consumer routers generally cannot perform automatic load balancing across two ISPs.
- o Static IPs or dual default routes can be manually configured on PCs for redundancy, but this does not scale to all devices like smartphones or IoT devices .

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o AP mode can be used if the goal is to extend Wi-Fi coverage while keeping a single network, but it does not provide dual broadband failover .

Summary

To achieve dual broadband access via a single switch:

- o Best option: Use a dual-WAN router or firewall that supports load balancing and failover.
- o Alternative: Connect two routers with separate subnets and manage DHCP and routing manually, but automatic failover is limited.
- o Enterprise solution: Configure HA with virtual IPs for seamless redundancy, suitable for office environments. This ensures that all devices connected to the switch can access the internet reliably, with minimal manual intervention.

In order to combine two Internet connections on your Mac without using a special router, you'll need to use an

For example, a dual-WAN load-balancing router does not transform two 3Mbps connections into a combined

Yes, that is possible. You create 2 vlans on the switch. Lets say you create vlan 100 and 200, then add port,lets say 10 to vlan 100

5. In Dual WAN Mode, select Failover. Select Failover mode to use a secondary WAN for

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

Essentially, there are two WAN connections, each with a single handover port, and the OP wants to create a redundant

In this article, we will discuss four methods for combining two Internet connections to maximize your online experience. 1. Load

I would like both broadband routers connected to the switch and the computers connect via the switch to the internet.

You can connect two routers to a switch provided you are leasing 2 public static IP addresses from your ISP. I presume your two

This is done with Vlans and 802.1Q Encap on Ethernet to separate traffic at or going via switches. Vlans will

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keep B

I suppose access switches usually have faster uplink ports to the core switches than the access ports. In my lab

Though this topology uses internal switches, it can be used with dual WAN switches. In this topology, firewall 1 is

THERE IS NO SINGLE ROUTER IN CAMPUS. THE MODEMS (not routers) of two connections respectively BSNL-A

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Yes, it is possible to combine two internet connections from different providers into a single router, as long as it

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