

Can a Layer 3 core switch perform NAT



Overview

It is super rare to find a L3 switch that does NAT. To do NAT requires pushing the traffic up to the CPU, as opposed to an ASIC. To do NAT you normally use a router or a firewall. I discovered that much as you can configure an IP address on the physical interface of a switch when it is running on Layer 3 mode, you cannot apply command of " IP nat inside" or "IP nat outside" on the Interface configuration mode. I tried to search about on how to do it, I found out that only. Does anyone know of a Layer3 switch that supports 1:1 NAT?

Preferably a rack mountable model?

I am trying to help an electrician friend who mainly works in manufacturing and automation. Normally they use devices like this Allen-Bradley Stratix 5700. I have a layer 3 switch no router in the Topology with 4 vlans inter vlan routing is enable all devices can communicate between vlans. I have a connection to the internet (that allows me to VPN into the network to get to my devices) that is managed by another team. Only considering IPv4 As far as my understanding goes, the modem is nothing more than a translator from HF to normal ethernet and the DHCP server running at the ISP assigns a IP adress to the router which does the NAT.

Article Content

Jun 18, 2026

What Is Network Address Translation (NAT)?

How does NAT work? Network Address Translation (NAT) is a service that operates on a router or edge platform to connect private networks to public networks like

Dec 09, 2025

Layer 3 switch supporting NAT/PAT needed

Hi all, I'm looking for a low cost switch that supports layer 3 IP routing along with NAT/PAT functionality. Ideally it will have 24 RJ45 GbEth ports. Can anyone suggest a suitable model. Also, I

Mar 23, 2026

NAT on Layer 3 switches?

Hi experts, Any work-around on how to implement NAT on layer3 switches? (e.g. 4507 with SuperEngine 5 or 4948 or 3750) Thanks in advance.

Jul 16, 2025

1:1 NAT on a Layer3 Switch

It is super rare to find a L3 switch that does NAT. To do NAT requires pushing the traffic up to the CPU, as opposed to an ASIC. To do NAT you

May 23, 2026

Understanding Layer 3 Switches: A Comprehensive Guide

How Do Layer 3 Switches Work? Layer 3 switches operate by combining the functionality of Layer 2 switching and Layer 3 routing. They can perform both MAC address-based switching

Mar 27, 2026

Layer 3 Switches in Cisco

As Layer 3 Switches are able to perform the functions of 2 different Layers of the OSI model, they are also known as Multilayer Switches. These switches are capable of taking routing

Jun 17, 2026

IP Addressing Services Configuration Guide, Cisco Catalyst IE9300 ...

Network address translations Limitations of network address translation NAT configuration recommendations and types How network address translation works NAT types and

Feb 26, 2026

Managed Switch Port Based NAT : r/networking

Your app team is dumb and need to go back to the drawing board. NAT is a layer 3 function, hard to do between switch ports without making them all separate vlans and putting a router in between. Most

Nov 10, 2025

Solved: NAT on layer 3 Switch

I have a 9300 switch and I've attached a copy of the Topology... they decided to use the layer 3 switch as the way out instead of the router I guess they

Jun 18, 2026

Can Switches Perform NAT? Exploring NAT-Capable

However, Layer 3 switches, which operate at the network layer, can perform routing functions, including NAT. These switches combine the features of traditional

Apr 28, 2026

Solved: Layer 3 switch NAT issues.

As Mark mentioned previously most of the switches dont support NAT settings unless you are using 6500 switch series model or 5500 with specific IOS, please check this link, for NAT you can

May 18, 2026

NAT in L3 CISCO switches?

I wonder if L3 CISCO switch can also perform NAT. In my proyect, I have 5 subnets that I need to route (and also provide internet access), and it is said to me that routers with many

Oct 29, 2025

Layer 3 Switch with NAT Support? : r/networking

There''s a specific limitation that most switches from the big vendors are merchant silicon and that doesn''t really support NAT from a design perspective. The obvious answer is Mikrotik in some form -

Jul 28, 2025

Layer 3 Network Address Translation

NAT addresses these issues by mapping thousands of hidden internal addresses to a range of easy-to-get Class C addresses. NAT provides a layer of security by preventing the client IP address from

Nov 26, 2025

Layer 3 Network Address Translation

You can configure NAT such that it advertises only a single address for your entire network to the outside world. The configuration effectively hides the internal network from the world, giving you

Mar 09, 2026

Solved: NAT on layer 3 Switch

Good day everyone, I have a layer 3 switch no router in the Topology with 4 vlans inter vlan routing is enable all devices can communicate between

Nov 10, 2025

NAT device on L3 Switch

Why is the Edgemax-pro (our NAT device) not directly connected on the L3 switch ? (that would be a router on a stick ?) As far as I understand, the L3

Oct 20, 2025

Solved: Layer 3 switch NAT issues.

I have a Cisco layer3 switch. I want to configure NAT on this switch.I have no router in this scenario.ISP or internet connection directly connected on L3 switch.LAN user also connected by

Nov 13, 2025

Applying NAT using Layer 3 Switch

Hello Team, I would like to use a Layer 3 switch as my gateway between my LAN and the ISP. I discovered that much as you can configure an IP address on the

Jan 08, 2026

Static NAT to Layer 3 Intervlan Switch

I have a design in mind which would implement a layer 3 switch with 3 VLANs, all vlan would point at the switch as the default gateway and then the switch would route all traffic to a ASA

Sep 21, 2025

Layer 3 switch instead of router

But how would the situation be like when using a layer 3 switch instead of a router? Switches don't do NAT as far as I know, so every device connected would receive a IP from the ISP?

Aug 28, 2025

Applying NAT using Layer 3 Switch

I discovered that much as you can configure an IP address on the physical interface of a switch when it is running on Layer 3 mode, you cannot apply command of "

May 09, 2026

What Are the Key Differences Between a Layer 3 Switch and a Router? |

A Layer 3 switch and a router both operate at the OSI network layer, routing traffic based on IP addresses. However, a Layer 3 switch is designed for high-speed local routing, especially

Apr 04, 2026

Role and Function of a Layer 3 switch

Role and Function of layer 3 switch: Packet Forwarding: Like traditional Layer 2 switches, Layer 3 switches forward data packets within a local area network

Jun 24, 2026

What is Layer 3 Switch and How Does it Works?

An introduction to Layer 3 switch and how it works within the network to further understand its benefits and capabilities.

Jan 26, 2026

Layer 3 switches explained

Layer 3 switches explained Layer 3 switches are important in enterprise networks -- particularly in designs with many subnets and virtual LANs.

Jan 22, 2026

Layer 3 Network Address Translation

A typical NAT resource allocation scheme sets aside 512 TCAM entries for performing hardware translation, which limits the number of flows that can be translated and forwarded at line-rate.

May 14, 2026

NAT in L3 CISCO switches?

Cisco claims that you need hardware to do NAT, and the hardware is not included in Cisco switches. The 6K switches are EoS, but there are replacements, and I'm not sure any of those can

Contact Us

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

Website: <https://www.moletenare-ew.co.za>

Email: info@moletenare-ew.co.za

Phone: +86 138 1658 3346

Address: Ningbo, China

This document is for informational purposes only. Specifications subject to change without notice.

