

How to transfer IPv4 addresses to IPv6

With the development of information technology, IPv6 addresses are widely used and replaced for IPv4 address versions. So are there any ways to move from IPv4 to IPv6 and vice versa?

IPv4 addresses (Internet Protocol Address version 4) have a string of 32 bits in length, displayed by a 4-part string separated by 4 dots. Each part is called an octet and has 8 data bits. And according to the time of use that the IPv4 source gradually depleted, as well as the development of information technology, the new Internet address version IPv6 was designed to replace the IPv4 version. IPv6 came into being, which partly solved the exhaustive IPv4 problem to continue Internet activities, and overcome the current disadvantages of IPv4 addresses.

IPv6 address is 128 bits long, represented as hexa number cluster separated by ::. as sequence number 2001:0DC8 :: 1005:2F43:0BCD:FFFF. So what if I want to change from IPv4 to IPv6 address?

1. What is special about Facebook's IPv6 address?
2. How to change DNS Google IPv4 and IPv6 on Windows 10 Fall Creators
3. Instructions for configuring IPv6 on Windows Server

How to convert IPv4 to IPv6

1. How to switch manually

We have an **IPv4 address of 173.194.38.101** .

IPv4 addresses are divided into 4 zones, each divided by 16, record the result and the balance.

1. 173: 16 = 10 balances 13
2. 194: 16 = 12 surplus 2
3. 38: 16 = 2 surplus 6
4. 101: 16 = 6 surplus 5

When compared to the HEX value we have:

1. A = 10
2. B = 11
3. C = 12
4. D = 13
5. E = 14
6. F = 15

Based on the above calculation and the result, we will sort the result first and the balance after ADC2: 2665.

So the IPv6 address of 173.194.38.101 is ADC2: 2665 . Since IPv4 addresses have 32 bits, IPv6 addresses are 128 bits, so there are 96 bits missing. This 96 bit is a sequence of zero. Users can write in two ways:

1. Full recording is 0000: 0000: 0000: 0000: 0000: ADC2: 2665.
2. Shortened is :: ADC2: 2665.

2. Transfer IPv4 to IPv6 online

There are a number of websites that users can convert online without having to calculate according to the collection method as above.

1. ipv6.ztsoftware:

1. <http://ipv6.ztsoftware.net/ipv4-to-ipv6>

Scroll down and then click on the IPv4 address to convert and paste the IP address below.

This calculator slash converter can assist in the conversion of IPv4 type IP numbers to IPv6 notation.

IP SUBNET CALCULATOR IPV4 & IPNG (IPV6)

Convert into: IPv6 IPv6 condensed IPv6 alternative

IP: bits:

netmask:

subnet:

broadcast:

host from: to:

#hosts: #IPs:

Information

localhost 127.x.x.x

Then click IPv6 condensed to see the IPv6 address.

IP SUBNET CALCULATOR IPV4 & IPNG (IPV6)

Convert into IPv4 IPv6 condensed IPv6 alternative

IP bits

netmask

subnet

broadcast

host from to

#hosts #IPs

Information

reserved & Loopback="::1" & any="::".

2. Subnetonline:

1. <https://www.subnetonline.com/pages/subnet-calculators/ipv4-to-ipv6-converter.php>

We also imported IPv4 addresses and then **clicked IPv6 condensed** to switch to IPv6 addresses.

IP SUBNET CALCULATOR IPV4 & IPNG (IPV6)

transform into IPv4 ipv6 condensed ipv6 alternative

IP bits

netmask

subnet

broadcast

host from to

#hosts #IPs

Info

allocated IPv6 address for internet. "2000::/16" before the official begin 2001. "2001::/16" after 2001 routing IPv6 to IPv4 on the internet.

3. Tool isc.sans.edu:

1. <https://isc.sans.edu/tools/ipv6.html>

How to transfer IPv4 addresses to IPv6 addresses on isc.sans.edu simpler than the above 2 tools.

You just need to enter the IPv4 address into the white frame as shown, then **click Submit** to proceed with the conversion on the tool.

IP Entry Form
 Enter an IPv4 or IPv6 address:

This is experimental. please [contact us](#) about errors and improvements.

Interested in IPv6 training? See our course: [IPv6 Security Essentials](#) for IPv6 tra
 More IPv6 information on our [ISC Presentations page](#).

Soon we will get the IPv6 address as shown below with full style and shortened style.

IP Entry Form
 Enter an IPv4 or IPv6 address:

You entered an IPv4 address.

Long Integer Form:	2915182181
Hexadecimal Form:	adc22665
IPv6 (6-to-4):	2002:adc2:2665::adc2:2665

(note that the IPv4 -> IPv6 translation typically only makes sense for routable

4. ultratools tool:

1. <https://www.ultratools.com/tools/ipv4toipv6>

In the white frame below the interface, we enter the IPv4 address and then press **the Go button** to proceed with the conversion.

Convert IPv4 to IPv6

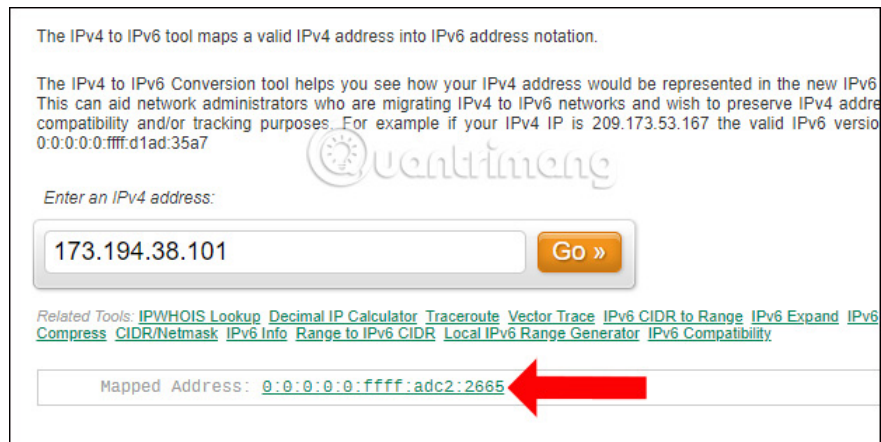
The IPv4 to IPv6 tool maps a valid IPv4 address into IPv6 address notation.

The IPv4 to IPv6 Conversion tool helps you see how your IPv4 address would be represented in the new IPv6 pr
 This can aid network administrators who are migrating IPv4 to IPv6 networks and wish to preserve IPv4 address
 compatibility and/or tracking purposes. For example if your IPv4 IP is 209.173.53.167 the valid IPv6 version
 0:0:0:0:ffff:d1ad:35a7

Enter an IPv4 address:

Related Tools: [IPWHOIS Lookup](#) [Decimal IP Calculator](#) [Traceroute](#) [Vector Trace](#) [IPv6 CIDR to Range](#) [IPv6 Expand](#) [IPv6 Compress](#) [CIDR/Netmask](#) [IPv6 Info](#) [Range to IPv6 CIDR](#) [Local IPv6 Range Generator](#) [IPv6 Compatibility](#)

The results for the IPv6 address will be in the **Mapped Address** line as shown below.



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Enter an IPv4 address:

173.194.38.101

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Mapped Address: [0:0:0:0:ffff:adc2:2665](#)

Above are the tools for converting IPv4 addresses to IPv6 addresses online for free. Besides, we also show you how to convert IPv4 to IPv6 manually. With these tools you can easily switch to IPv6 address.

See more:

1. What to prepare to move to IPv6?
2. Instructions for configuring IPv6 on Windows Server
3. What is an IP address?

I wish you all success!

You finished reading the article "**How to transfer IPv4 addresses to IPv6**" edited by the [TipsMake](#) team. We hope this article has provided you with many useful tech tips and tricks. You can search for similar articles on tips and guides. Thank you for reading and for following us regularly.