

# IPv6 Information

As we all know, technology changes daily. The number and types of devices using the Internet have increased dramatically in recent years and, as a result, address space for these devices is being rapidly exhausted. Today's technology for IP addresses is referred to as IPv4 (Internet Protocol version 4). The IP addresses aligned with IPv4 are expected to be depleted at some point in the future. The next generation of IP address space is IPv6, which contains more features than IPv4 and has the capacity to provide a virtually limitless number of addresses. However, it will likely be years before most servers and other Internet devices speak IPv6, and in the meantime, IPv4 will continue to function as the primary standard for internet communications.

To best serve our customers during this time, where IPv6 addresses are available, Verizon is rolling them out in a "dual stack" mode – customers will be assigned both IPv4 and IPv6 addresses for use on their routers. The dual stack approach applies to both existing and to new Verizon customers.

## Frequently asked questions

### **Q: What is IPv6?**

IPv6 is the latest industry standard for Internet communications, adopted by the Internet Engineering Task Force (IETF) in 2017, being rolled out across the industry over a period of years. The main reason for introducing it is to expand the number of IP addresses available to connect the billions of devices around the world. The new standard also delivers other benefits including enhanced efficiency.

### **Q: Does Verizon support IPv6?**

Yes, for Dynamic IP addressing, which most of our Fios Business Internet customers use, we support both IPv4v and IPv6, often referred to as "dual stack". Support for Static IPv6 addresses is in the process of being rolled out across our footprint. Please note that not all routers support IPv6.

### **Q: If I order Fios Business Internet, will I get IPv6 addresses?**

Where Static IPv6 is supported, once you order Fios Business Internet, we will assign these addresses – either Dynamic IP or Static IP, depending on what you selected – to your service and communicate the address information to you, regardless of which router you are using.

Please note that not all routers support IPv6.

If you have purchased or are leasing the Wi-Fi Access Point (models CHR30A/B), Verizon Router (models CR1000A/B), or Fios Router (model G3100) you can find support and router configuration information in our user guides accessible from [verizon.com/business/support/equipment-devices-services](https://www.verizon.com/business/support/equipment-devices-services).

If you are using a different Verizon-provided router, IPv6 is not supported.

If you elected to bring your own router, check with your router's manufacturer for further information.

**Q: What are the benefits of using IPv6**

Adopting IPv6 can vastly expand the availability of IP addresses, which allows an ever-growing number of internet connected devices to be accommodated. When new devices and servers begin to emerge that use only IPv6, then users will need their own routers to support IPv6 in order to connect to these devices and to visit those sites and applications. In addition, the IPv6 standard brings networking benefits including more efficient routing, more efficient packet processing, the ability to send packets to multiple destinations simultaneously, and automatic IP assignments for simplified network configuration.

**Q: What if I don't want to use IPv6?**

If you don't need to connect to IPv6-only devices and don't want to use IPv6, you can disable it on your Wi-Fi Access Point (models CHR30A/B), Verizon Router (models CR1000A/B) or Fios Router (model G3100). Consult the router User Guide, available on our [Support pages](#), for instructions. If IPv6 is disabled, the router will continue to connect to devices that use IPv4 addressing. If you elected to bring your own router, please check with your router's manufacturer for further information.

## Pricing

**Q: Do I have to pay extra for IPv6?**

No. When you order Fios Business Internet, we will assign IPv4 addresses as well as IPv6 addresses where they are available. There are no additional charges for IPv6.

**Q: Why is the cost for Fios Business Internet with Static IP more than the cost of Fios Business Internet with Dynamic IP?**

Fios Business Internet with Static IP has a higher monthly fee to cover the costs of assigning, configuring and maintaining specific addresses for individual customers.

**Q: Can I get blocks of Static IPv6 addresses?**

When Verizon assigns Static IPv6 addresses to your Fios Internet service, we assign a "/56" subnet that includes quintillions of individual IPv6 addresses, so there is no need for additional blocks. This is different than Static IPv4, where we assign the specific number of IP addresses that you order (up to our largest block size of 125 addresses).

## How does it work?

### Q: Do IPv6 addresses look different than IPv4 addresses?

Yes. The IPv6 addresses are longer and are alphanumeric. An IPv4 IP address is a 32-bit number (32 1s and 0s) normally shown as four sets of numbers separated by dots, for example: 192.168.0.1. An IPv6 IP address is a 128-bit number normally shown as eight sets of alphanumeric characters separated by colons, for example 2001:0db8:0000:0042:0000:8a2e:0370:7334. IPv6 prefixes can appear even more compactly, such as 2600:4040:ff00:0100::/.

### Q: What IP addresses do I get when I order Fios Internet with Dynamic IP?

A: When you order Fios Internet with Dynamic IP, Verizon will provide both IPv4 and IPv6 addresses to you. As the name “dynamic” implies, these addresses – both IPv4 and IPv6 – may change from time to time. When you reboot your router, Verizon will provide new addresses at that time.

### Will I need to change my Fios Business Internet router equipment for IPv6?

To access an IPv6-only website or connect to an IPv6-only device, you will need an IPv6 compatible router. Current and recent Fios Internet routers support IPv6 but older routers do not, per the table below. If your router does not support IPv6, you can contact Verizon at 800-Verizon to upgrade your router (rental or purchase) or you purchase one on our [Accessory site](#).

Fios Business Internet Router Name	Model Number (Manufacturer)	IPv6 Capable?
Wi-Fi Access Point	CHR30A, CHR30B	Yes
Verizon Router	CR1000A, CR1000B	Yes
Fios Router	G3100	Yes
Fios Quantum Gateway	G1100	No
Fios Advanced Wi-Fi Router	MI424WR Rev G, I (Actiontec)	No
Fios Router	MI424WR Rev A-F (Actiontec)	No
Fios Router	9100VM, 9100EM (Westell)	No

If you elected to bring your own router, please check with your router’s manufacturer for further information.

### Q: How can I use IPv6 addresses?

To better understand IPv6 configuration options, consult your router user guide. For current Verizon-provided routers, review the Network Connections and Security Configuration sections, especially. Fios router user guides can be downloaded from our [Support pages](#).

### Can Fios customers test IPv6 from their Verizon network?

Yes, you can visit third-party site test-ipv6.com to check your full IPv6 connectivity.