



# How to Use IPv6

The Barracuda NextGen Firewall F-Series supports IPv6 along with its predecessor IPv4. By default, IPv6 is disabled and only traffic from IPv4 networks is accepted. When IPv6 is enabled, the Barracuda NextGen Firewall F-Series accepts both IPv4 and IPv6 traffic. IPv6 addresses can only be used via Barracuda NextGen Admin and not via command line tools. To configure IPv6 services, you must first assign non-link-local IPv6 addresses to the interfaces. IPv6 is supported for the following services:

- Firewall Service
- Virus Scanner
- DNS Service
- DHCP Service
- DHCP Relay
- Dynamic Routing: OSPF/RIP/BGP
- SNMP Service
- Mail Gateway
- NextGen Firewall F-Series Management

## In this article:

### IPv6 Advantages and Address Notation

The main advantage of IPv6 is that it provides a larger address space than IPv4.

- IPv6 uses 128-bit IP addresses, compared to 32-bit IP addresses used by IPv4.
- IPv6 supports varied addressing types (unicast, anycast, multicast, link-local, sitelocal, and global).
- IPv6 addresses can be associated with one or more interfaces.

IPv6 addresses are represented as eight 16-bit hexadecimal blocks separated by colons (:).

For example:

```
FEDC:0000:0000:0000:FEDC:E4BF:0100:0010
```

You can omit leading zeros within each 16-bit hexadecimal block. For example, you can write *0* instead of *0000*, *100* instead of *0100*, and *10* instead of *0010*. You can compress the zeros further with double colons (::).

However, you can only use double colons once to compress an IPv6 address, either in the beginning, middle, or end of the address.

For example:

```
FEDC::FEDC:E4BF:100:10 is equivalent to FEDC:0000:0000:0000:FEDC:E4BF:100:10
```

### Enabling IPv6

By default, IPv6 is disabled. To enable IPv6:

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. Click **Lock**.
3. In the **IPv6** section, set **Enable IPv6** to **Yes**.
4. Click **Send Changes** and **Activate**.
5. **Reboot** your Barracuda NextGen Firewall F-Series.



To synchronize the IPv6 configuration for firewalls that are part of a cluster in the Barracuda NextGen Control Center, you must enable IPv6 on all of the systems in the cluster.

## Assigning IPv6 Addresses

Before configuring IPv6 services, you must assign IPv6 addresses to the interfaces.

1. Go to **CONFIGURATION > Configuration Tree > Box > Network**.
2. In the left menu, select **IP Configuration**.
3. Click **Lock**.
4. From the **Configuration Mode** menu in the left navigation pane, click **Switch to Advanced View**.
5. In the **Additional IPv6 Addresses** table, add an entry for the interface. In the entry settings, specify the interface name and its IPv6 address.
6. Click **Send Changes** and **Activate**.
7. Activate the network changes on the **CONTROL > Box** page.

You can now connect to an IPv6 network.

