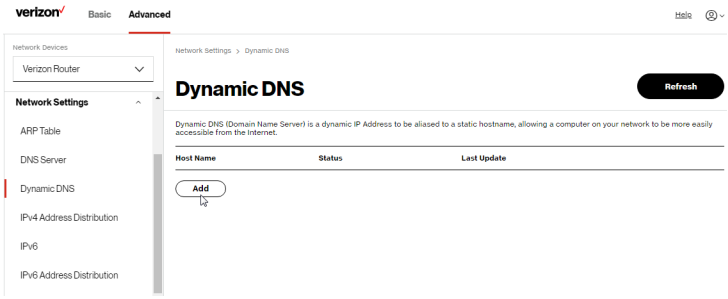
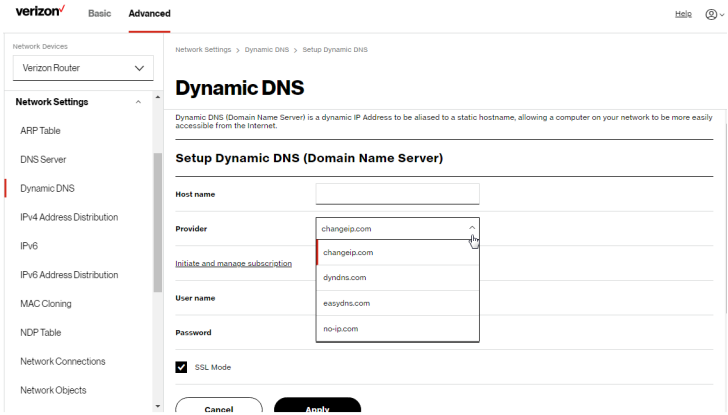
NETWORK SETTINGS



2. To set up a new entry, click the **Add** button.



3. Configure the following parameters:
   - **Host Name** – enter the full domain name for your Dynamic DNS domain.
   - **Provider** – select the Dynamic DNS account provider from the menu.
   - **User Name** – enter your user name for your Dynamic DNS account.

- **Password** – enter the password for your Dynamic DNS account.
- **SSL Mode** – select if your Dynamic DNS service supports SSL.

4. Click **Apply** to save your changes.

5.1d/ IPV4 ADDRESS DISTRIBUTION

You can easily add computers configured as DHCP clients to the network. The DHCP server provides a mechanism for allocating IP addresses to these hosts and for delivering network configuration parameters to the hosts.

For example, a client (host) sends a broadcast message on the network requesting an IP address for itself. The DHCP server then checks its list of available addresses and leases a local IP address to the host for a specific period of time and simultaneously designates this IP address as taken. At this point, the host is configured with an IP address for the duration of the lease.

The host can renew an expiring lease or let it expire. If it renews a lease, the host receives current information about network services, as it did during the original lease, allowing it to update its network configurations to reflect any changes that occurred since the first connection to the network.

If the host wishes to terminate a lease before its expiration, it sends a release message to the DHCP server. This makes the IP address available for use by other hosts.

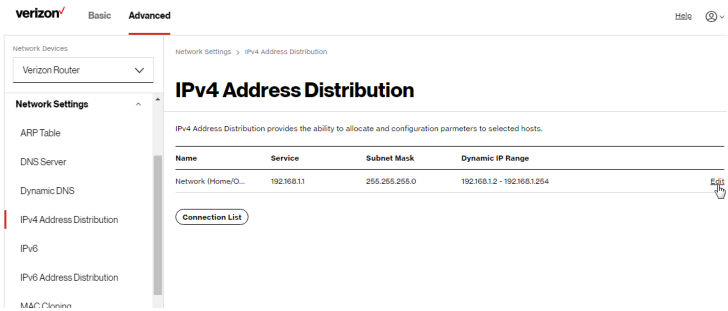
NETWORK SETTINGS

The DHCP server performs the following functions:

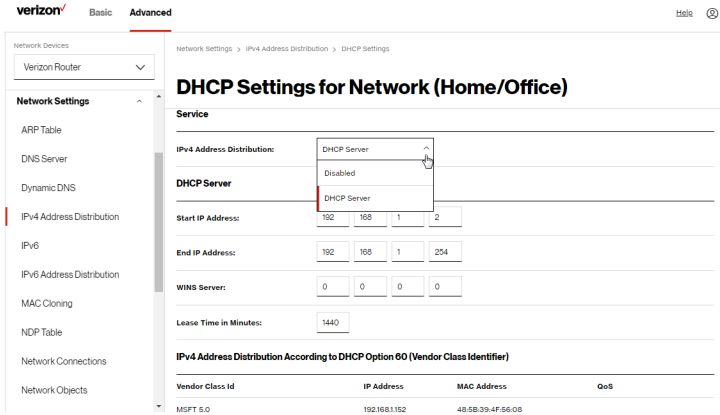
- Displays a list of all DHCP host devices connected to your Verizon Router
- Defines the range of IP addresses that can be allocated in the network
- Defines the length of time the dynamic IP addresses are allocated
- Provides the above configurations for each network device and can be configured and enabled or disabled separately for each network device
- Assigns a static lease to a network computer to receive the same IP address each time it connects to the network, even if this IP address is within the range of addresses that the DHCP server may assign to other computer
- Provides the DNS server with the host name and IP address of each computer connected to the network

To view a summary of the services provided by the DHCP server:

1. Select **IPv4 Address Distribution** in the **Network Settings** section.



2. You can edit the DHCP server settings for a device. On the **IPv4 Address Distribution** page, click the **Edit** icon on the screen. The DHCP Settings page opens with the device information displayed.
3. To enable the DHCP server, select **DHCP Server** in the **IPv4 Address Distribution** field.
4. Once enabled, the DHCP server provides automatic IP assignments (IP leases) based on the preset IP range defined below.



5. To configure the DHCP server, complete the following fields:
   - **Start IP Address** – enter the first IP address that your Verizon Router will automatically begin assigning IP addresses from. Since your Verizon Router's default IP address is 192.168.1.1, the default start IP address should be 192.162.1.2.

- **End IP Address** – enter the last IP address that your Verizon Router will stop at for the IP address allocation. The maximum end IP address range that can be entered is 192.168.1.254.
- **WINS Server** – determines the IP address associated with a network device.
- **Lease Time in Minutes** – assigns the amount of time in minutes that each device is assigned an IP address by the DHCP server when it connects to the network.

  When the lease expires, the server determines if the computer has disconnected from the network. If it has, the server may reassign this IP address to a newly connected computer.

6. Click **Apply** to save changes.

IPv4 Address Distribution According to DHCP option 60 (Vendor Class Indentifier)

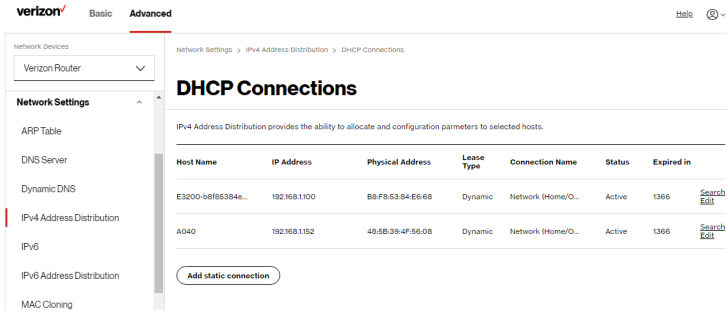
DHCP vendor class is related to DHCP option 60 configuration within the router. User can add option 60 configurations such that particular vendor can get lease from a specified pool of address. The existing vendor class ID, IP address, MAC address and QoS are shown on the screen above.

DHCP Connection List

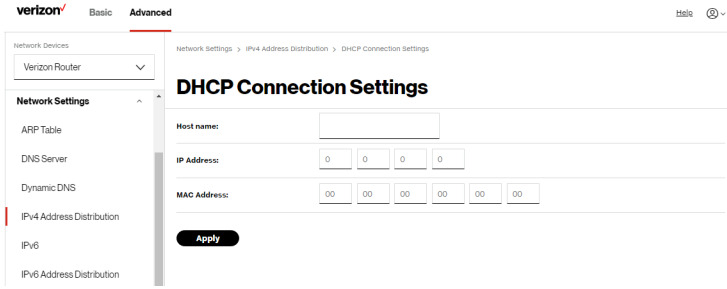
You can view a list of the connections currently assigned and recognized by the DHCP server.

To view a list of computers:

1. On the **IPv4 Address Distribution** page, click **Connection List**.



2. To define a new static connection with a fixed IP address, click **Add static connection**.



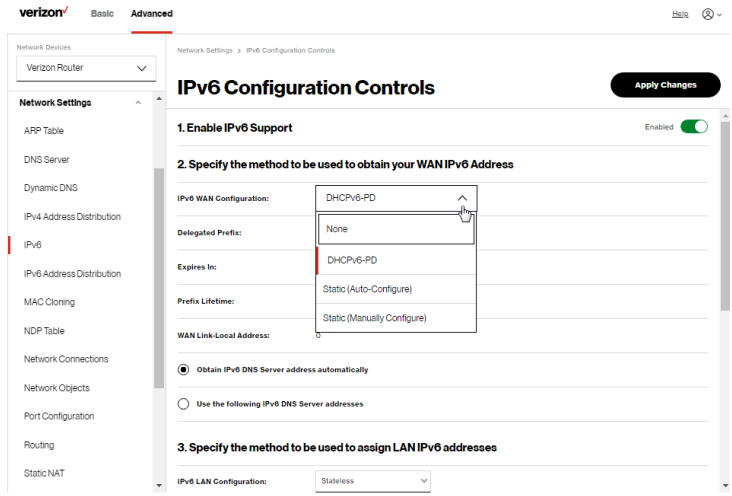
3. Enter the host name.
4. Enter the fixed IP address to be assigned.
5. Enter the MAC address of the network interface of the computer used with this DHCP static connection.
6. Click **Apply** to save changes.

NETWORK SETTINGS

5.1e/ IPV6

Use the IPv6 feature settings to enable, disable, or configure an IPv6 Internet connection and IPv6 LAN settings.

1. To configure your network to use the IPv6 Internet connection type, select **IPv6** in the **Network Settings** section to display the IPv6 service options:



2. Select **Enabled** in the **Enable IPv6 Support** field. (Once IPv6 is enabled the default setting will be IPv6 WAN as DHCPv6 and IPv6 LAN as Stateless).
3. Select the appropriate IPv6 connection method from the dropdown list (DHCPv6 or Static) to specify the method to be used to obtain your WAN IPv6 Address.

4. Click **Apply changes** to have changes take effect.

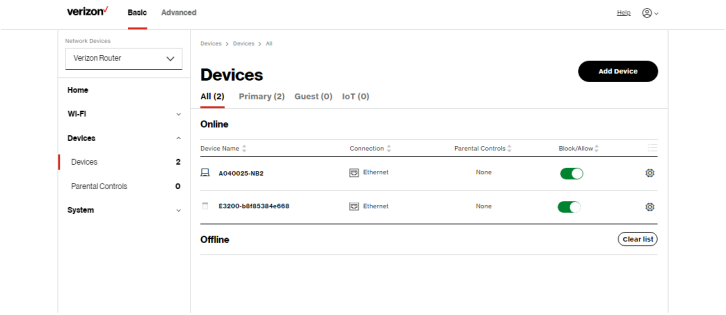
Note: The Internet IPv6 service is required for this feature to work over the internet.

5. To disable the IPv6 service, move the selector to **off** in the **Enable IPv6 Support** field.
6. Click **Apply changes** to have changes take effect.

Once configured using valid IPv6 WAN and LAN configurations, you should not see any errors when you click on the **Apply changes** button and the **Basic/System/System Status** page will reflect the router's new IPv6 address.

You should also see the IPv6 address for all IPv6 supported devices on your local network displayed on the **Basic/Devices/Devices** page by selecting the Settings icon to access the **Device Settings** page for that device.

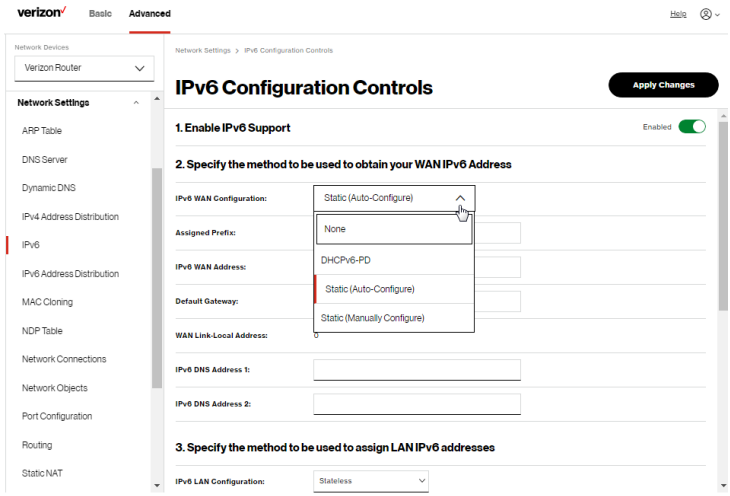
NETWORK SETTINGS



Static - WAN IPv6 Address Connection

The IPv6 WAN Static configurations are IPv6 settings that you enter manually. These specific IPv6 addresses and settings are not expected to change frequently.

1. To configure IPv6 WAN Static mode, select the **Static** option on the **IPv6 Configuration Controls** page as shown below:

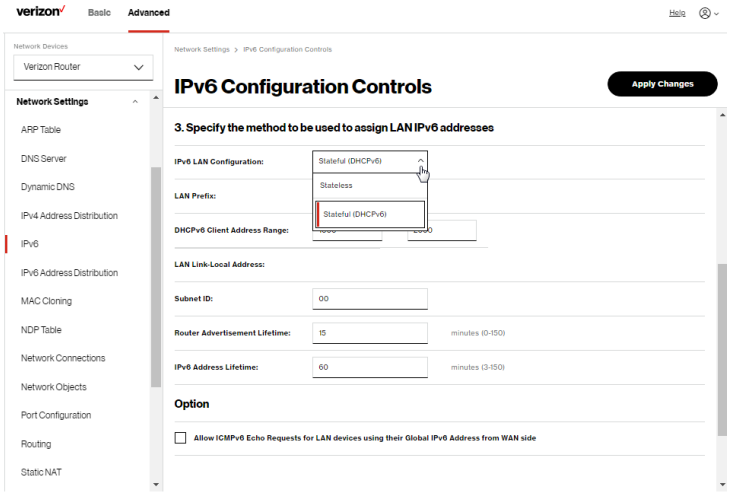


2. Specify the **Static** method to be used to obtain your WAN IPv6 Address by entering:
   - **IPv6 WAN Configuration** (select Static)
   - **Assigned Prefix** (A numeric value between 16 and 128)
   - **IPv6 WAN Address**
   - **Default Gateway**: Verizon Router
   - **IPv6** (Primary) **DNS Address 1**
   - **IPv6** (Secondary) **DNS Address 2**
3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

NETWORK SETTINGS

Static WAN with LAN IPv6 Stateful Settings

1. To configure IPv6 LAN Stateful mode with **Static** WAN, select the **Stateful (DHCPv6)** option on the **IPv6 Configuration Controls** page as shown below:



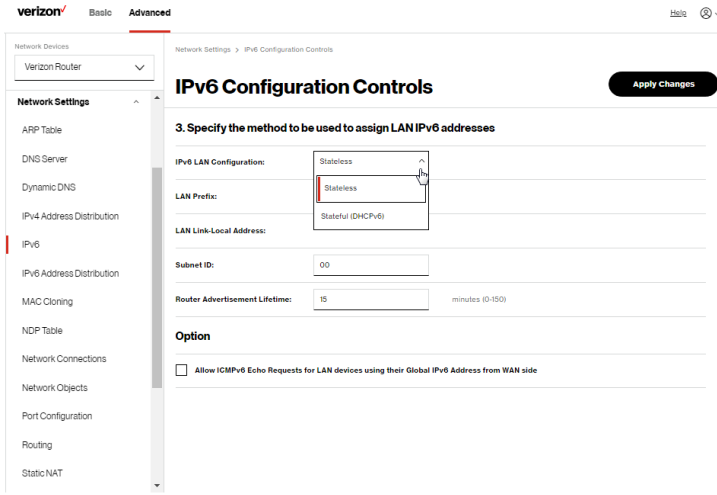
2. Specify the **Stateful (DHCPv6)** settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateful** from the dropdown list)
   - **LAN Prefix** (automatically populated)
   - **IPv6 LAN Address** (automatically populated)
   - **DHCPv6 Client Address Range** (start and end)
   - **LAN Link Local Address** (automatically populated)

- **Router Advertisement Lifetime** (minutes between 0-150)
- **IPv6 Address Lifetime** (minutes between 3-150)
- **Option: Allow ICMPv6 Echo Request for LAN devices using their Global IPv6 Address from WAN side** - requesting an IPv6 address from any available DHCPv6 servers available on the ISP

3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

Static WAN with LAN IPv6 Stateless Settings

1. To configure IPv6 LAN Stateless mode with **Static** WAN, select the **Stateless** option on the **IPv6 Configuration Controls** page as shown below:

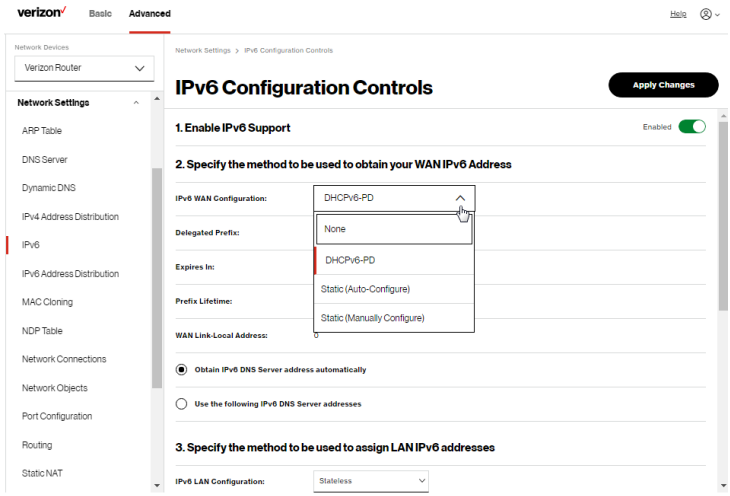


2. Specify the settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateless** from the dropdown list)
   - **LAN Prefix** (automatically populated)
   - **IPv6 LAN Address** (automatically populated)
   - **LAN Link Local Address** (automatically populated)
   - **Router Advertisement Lifetime** (minutes between 0-150)
   - **Option: Allow ICMPv6 Echo Request for LAN devices using their Global IPv6 Address from WAN side** - requesting an IPv6 address from any available DHCPv6 servers available on the ISP
3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

DHCPv6 PD - WAN IPv6 Address Connection

The IPv6 WAN DHCPv6 configurations are IPv6 settings that you enter that will allow your IPv6 connection to be updated by the ISP as needed.

1. To configure IPv6 WAN Stateful (DHCPv6) mode, select the **DHCPv6-PD** option on the **IPv6 Configuration Controls** page as shown below:

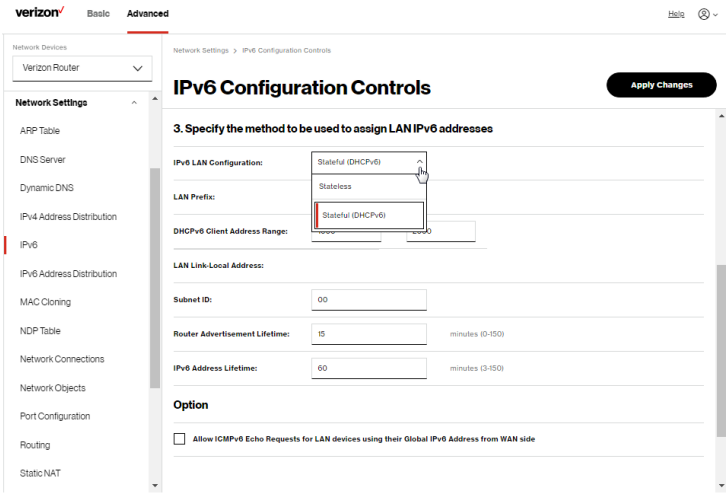


2. Check to either **Obtain IPv6 DNS Server address automatically**, or **Use the following IPv6 DNS Server addresses**
3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

DHCPv6 WAN with LAN IPv6 Stateful (DHCPv6) Settings

1. To configure IPv6 WAN Stateful (DHCPv6) mode, select the **Stateful (DHCPv6)** option on the **IPv6 Configuration Controls** page as shown below:

NETWORK SETTINGS



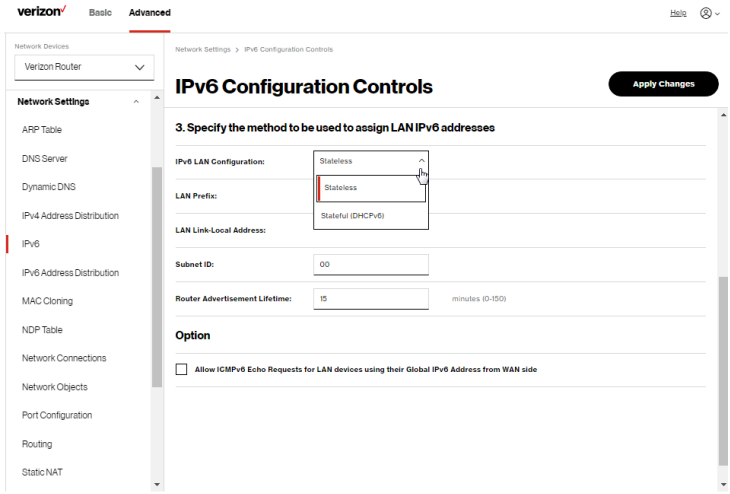
2. Specify the **Stateful (DHCPv6)** settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateful** from the dropdown list)
   - **LAN Prefix** (automatically populated)
   - **DHCPv6 Client Address Range** (start and end)
   - **LAN Link Local Address** (automatically populated)
   - **Subnet ID** - set the site topology for your internal site
   - **Router Advertisement Lifetime** (minutes between 0-150)
   - **IPv6 Address Lifetime** (minutes between 3-150)
   - **Option: Allow ICMPv6 Echo Request for LAN devices**

using their Global IPv6 Address from WAN side - requesting an IPv6 address from any available DHCPv6 servers available on the ISP

3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

DHCPv6 WAN with LAN IPv6 Stateless Settings

1. To configure IPv6 LAN Stateless mode with DHCPv6 WAN, select the **Stateless** option on the **IPv6 Configuration Controls** page as shown below:



2. Specify the settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateless** from the

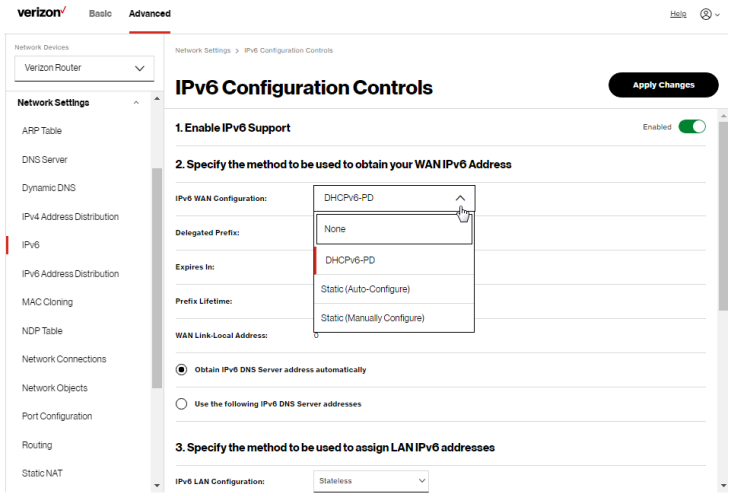
dropdown list)

- **LAN Prefix** (automatically populated)
- **LAN Link Local Address** (automatically populated)
- **Subnet ID** - set the site topology for your internal site
- **Router Advertisement Lifetime** (minutes between 0-150)
- **Option: Allow ICMPv6 Echo Request for LAN devices using their Global IPv6 Address from WAN side** - requesting an IPv6 address from any available DHCPv6 servers available on the ISP

3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

LAN IPv6 Configuration without An IPv6 WAN Connection

1. To configure IPv6 to use either the IPv6 LAN Stateful or Stateless mode without using an IPv6 Internet WAN connection, select the **None** option on the **IPv6 Configuration Controls** page.

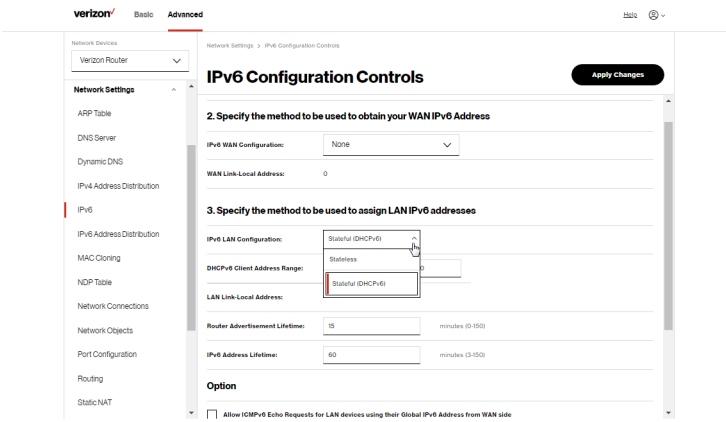


2. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

LAN IPv6 Stateful (DHCPv6) with No WAN Settings

1. To configure IPv6 LAN Stateful mode with no WAN connection, select the Stateful option on the **IPv6 Configuration Controls** page as shown below:

NETWORK SETTINGS



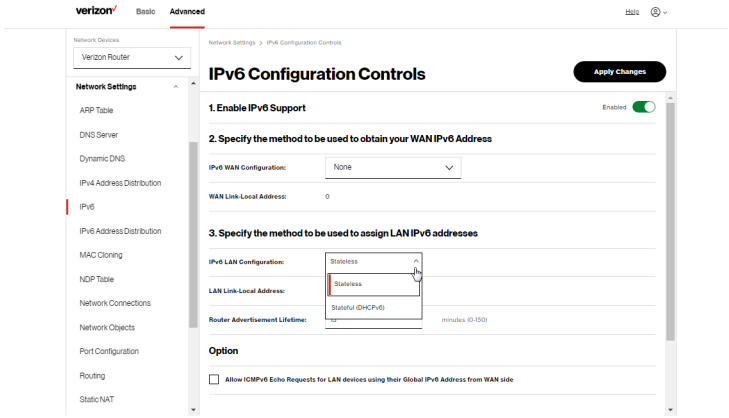
2. Specify the **Stateful (DHCPv6)** settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateful** from the dropdown list)
   - **DHCPv6 Client Address Range** (start and end)
   - **LAN Link Local Address** (automatically populated)
   - **Router Advertisement Lifetime** (minutes between 0-150)
   - **IPv6 Address Lifetime** (minutes between 3-150)
   - **Option: Allow ICMPv6 Echo Request for LAN devices using their Global IPv6 Address from WAN side** - requesting an IPv6 address from any available DHCPv6

servers available on the ISP

3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

LAN IPv6 Stateless with No WAN Settings

1. To configure IPv6 LAN Stateless mode with no WAN connection, select the **Stateless** option on the **IPv6 Configuration Controls** page as shown below:



2. Specify the settings to be used to assign LAN IPv6 addresses by entering the following details:
   - **IPv6 LAN Configuration** (select **Stateless** from the dropdown list)
   - **LAN Link Local Address** (automatically populated)

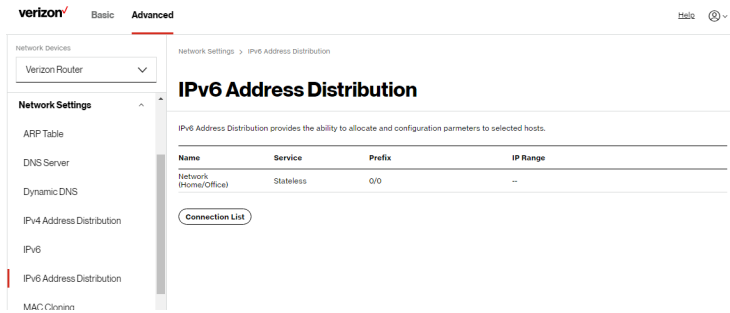
- **Router Advertisement Lifetime** (minutes between 0-150)
- **Option: Allow ICMPv6 Echo Request for LAN devices using their Global IPv6 Address from WAN side** - requesting an IPv6 address from any available DHCPv6 servers available on the ISP

3. After entering all appropriate IPv6 settings, click **Apply changes** to have changes take effect.

5.1f/ IPV6 ADDRESS DISTRIBUTION

To view a summary of the services provided by the DHCP server:

1. Select **IPv6 Address Distribution** in the **Network Settings** section.



2. You can edit the DHCP server settings for a device. On the **IPv6 Address Distribution** page, click the **Edit** icon on the screen column. The DHCP Settings page opens with the device information displayed.
3. To configure the DHCP server complete the following fields:
   - **Start IPv6 Address** – the starting IPv6 address in the consecutive list of addresses that makes up this LAN

pool for the DHCPv6 server.

- **End IPv6 Address** – the ending IPv6 address in the consecutive list of addresses that makes up this LAN pool for the DHCPv6 server.
- **Lease Time in Minutes** – assigns the amount of time in minutes that each device is assigned an IP address by the DHCP server when it connects to the network.

  When the lease expires, the server determines if the computer has disconnected from the network. If it has, the server may reassign this IP address to a newly connected computer.

4. Click **Apply** to save changes.

DHCP Connection List

You can view a list of the connections currently assigned and recognized by the DHCP server.

To view a list of computers:

1. On the **IPv6 Address Distribution** page, click **Connection List**.
2. To define a new static connection with a fixed IP address, click **Add static connection**.
3. Enter the host name.
4. Enter the fixed IP address to be assigned.
5. Enter the MAC address of the network interface of the

computer used with this DHCP static connection.

6. Click **Apply** to save changes.

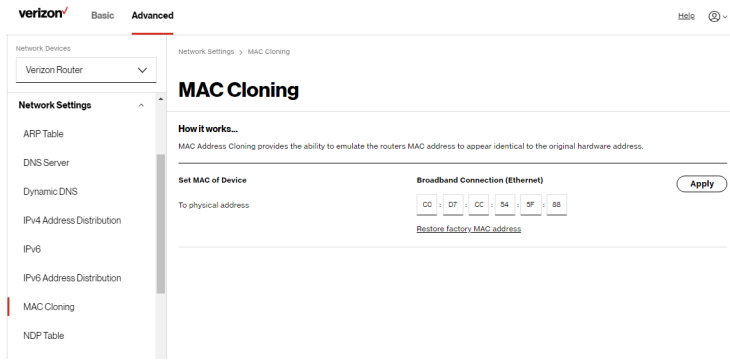
5.1g/ MAC CLONING

A MAC address is a hexadecimal code that identifies a device on a network. All networkable devices have a unique MAC address.

When replacing a network device on your Verizon Router, you can simplify the installation process by copying the MAC address of the existing device to your Verizon Router.

To copy the MAC address of the existing device:

1. Select **MAC Cloning** in the **Network Settings** section.

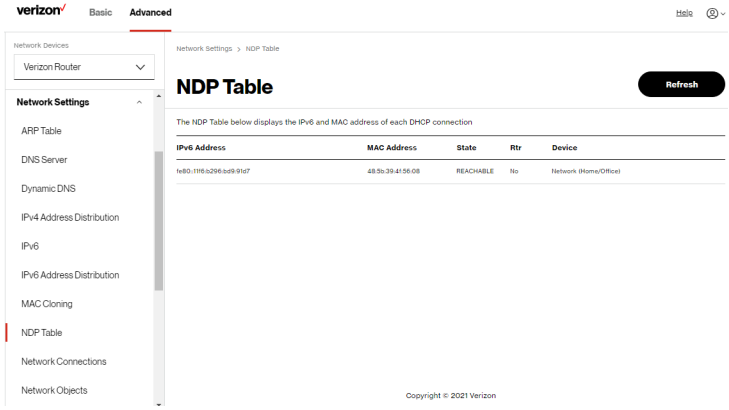


2. In the **To physical address** field, enter the MAC address of your new device.
3. To locate the MAC address, refer to the documentation from the device manufacturer.
4. Click **Apply** to save changes.

5.1h/ NDP TABLE

You can view the IPv6 and MAC addresses of each DHCP connection.

To view the IPv6 and MAC addresses for each device: select **NDP** (Neighbor Discovery Protocol) **Table** in the **Network Settings** section.



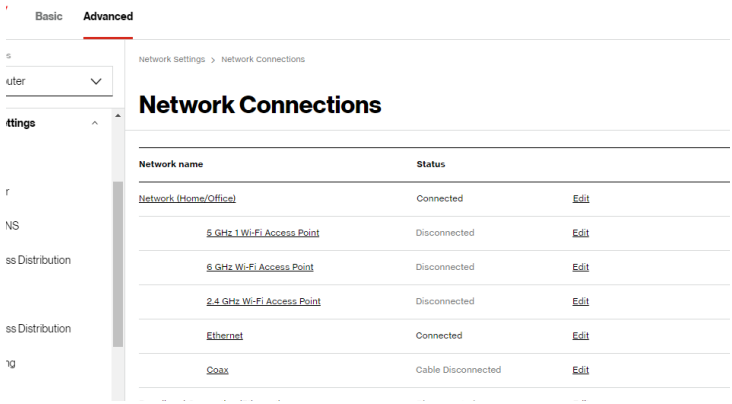
5.1i/ NETWORK CONNECTIONS

Caution: The settings described in this chapter should only be configured by experienced network technicians. Changes could adversely affect the operation of your router and your local network.

To view the network connections:

1. From the **Advanced** menu, select **Network Settings** from the

left pane and then click **Network Connections.**



2. To view and edit the details of a specific network connection, click the hyperlinked name or the action icon. The following sections detail the types of network connections that you can view.

NETWORK (HOME/OFFICE) CONNECTION

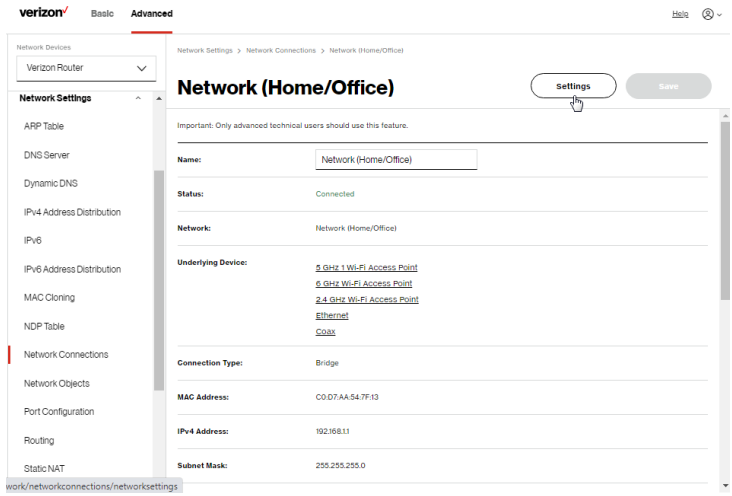
You can view the properties of your local network. This connection is used to combine several network interfaces under one virtual network. For example, you can create a home/office network connection for Ethernet and other network devices.

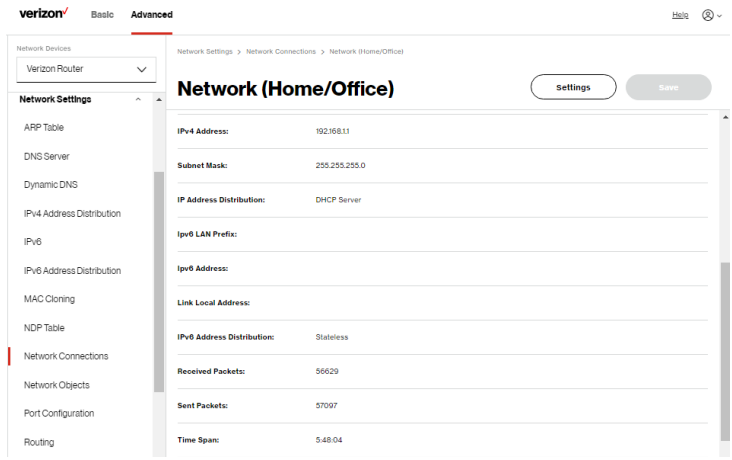
Note: When a network connection is disabled, the underlying devices formerly connected to it will not be able to obtain a new DHCP address from that Verizon Router network interface.

To view the connection:

1. On the **Network Connections** page, click the **Network**

(Home/Office) connection link. The **Network (Home/ Office) Properties** page displays.



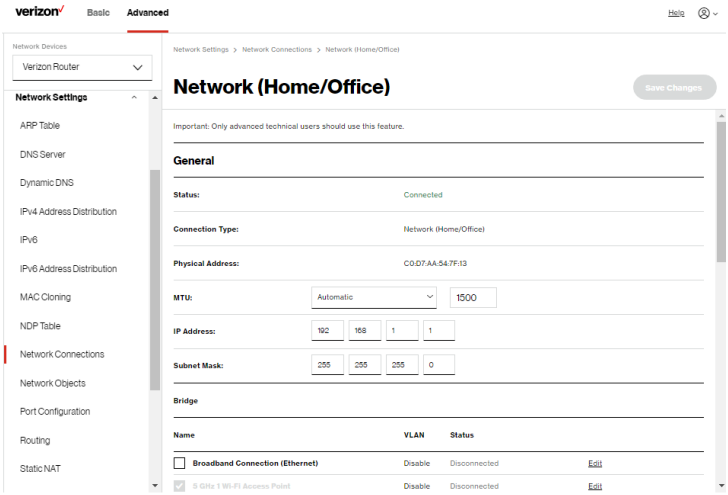


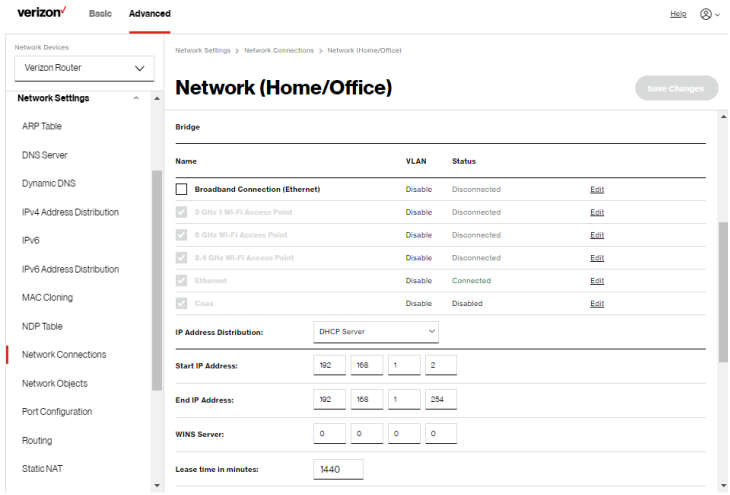
2. To rename a network connection, enter the new network name in the **Name** field.
3. Click **Save** to save the changes.

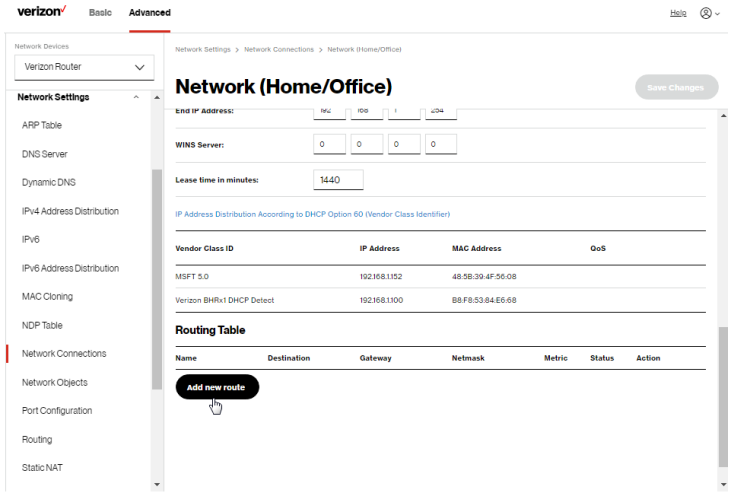
CONFIGURING THE HOME/OFFICE NETWORK

To configure the network connection:

1. In the **Network (Home/Office)** properties page, click **Settings**. The configuration page displays.







2. Configure the following sections, as needed.

NETWORK SETTINGS

General

In the **General** section, verify the following information:

- **Status** - displays the connection status of the network.
- **Connection Type** - displays the type of connection interface.
- **Physical Address** - displays the physical address of the network card used for the network.
- **MTU** - displays the Maximum Transmission Unit (MTU) indicating the largest packet size permitted for internet transmissions:
  - **Automatic**: sets the MTU (Maximum Transmission Unit) at 1500.
  - **Automatic by DHCP**: sets the MTU according to the DHCP connection.
  - **Manual**: allows you to manually set the MTU.
- **IP address** and **Subnet Mask**: the network connection uses a permanent or static **IP address** and **Subnet Mask** address, provided by Verizon or experienced network technician.

- **Bridge**

  In the **Bridge** section of the **Network (Home/Office)** properties, you can configure the various LAN interfaces.

  Caution: Do not change these settings unless specifically instructed to by Verizon. Changes could adversely affect the operation of your Verizon Router and your local network.

  Verify the following information:

  – **Status** – displays the connection status of a specific network connection.

  – **Action** – contains an **Edit** hyperlink that, when clicked, generates the next level configuration page for the specific network connection or network device.

- **IP Address Distribution**

  The **IP Address Distribution** section is used to configure the Dynamic Host Configuration Protocol (DHCP) server parameters of your Verizon Router.

  Once enabled and configured, the DHCP server automatically assigns IP addresses to any network devices which are set to obtain their IP address dynamically.

NETWORK SETTINGS

If DHCP Server is enabled on your Verizon Router, configure the network devices as DHCP Clients. There are 2 basic options in this section: **Disabled** and **DHCP Server**.

To set up the Verizon Router's network bridge to function as a DHCP server:

1. In the **IP Address Distribution** section, select the **DHCP server**. Once enabled, the DHCP server provides automatic IP assignments (also referred to as IP leases) based on the preset IP range defined below.
   - **Start IP Address** – Enter the first IP address in the IP range that the Verizon Router will automatically begin assigning IP addresses from. Since your Verizon Router's IP address is 192.168.1.1, the default Start IP Address is 192.168.1.2.
   - **End IP Address** – Enter the last IP address in the IP range that the Verizon Router will automatically stop the IP address allocation at. The maximum end IP address range that can be entered is 192.168.1.254.
2. If Windows Internet Naming Service (WINS) is being used, enter the **WINS Server** address.

3. In the **Lease time in minutes** field, enter the amount of time a network device is allowed to connect to the Verizon Router with its currently issued dynamic IP address.

- **IP Address Distribution According to DHCP option 60 (vendor class Identifier)**

  DHCP vendor class is related to DHCP option 60 configuration within the router. Adding option 60 configurations allows a particular vendor to get a lease from a specified pool of addresses.

Routing Table

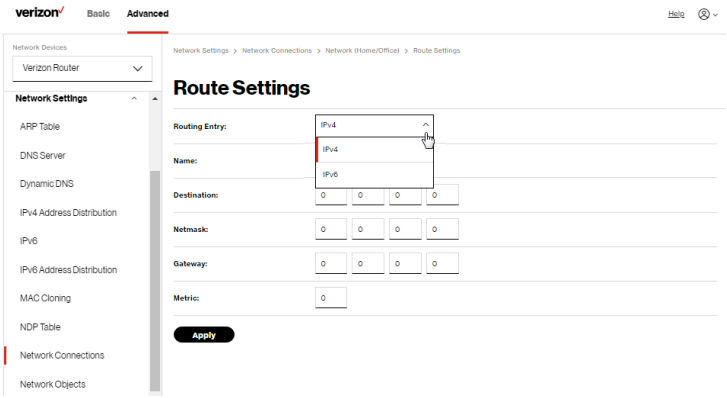
You can configure your Verizon Router to use static or dynamic routing.

- **Static routing** – specifies a fixed routing path to neighboring destinations based on predetermined metrics.
- **Dynamic routing** – automatically adjusts how packets travel on the network. The path determination is based on network/device reachability and the status of the network being traveled.

To configure routing:

1. In the **Routing Table** section, click **Add new route** button to display and modify the new route configuration page.

NETWORK SETTINGS



2. To save your changes click **Apply**.

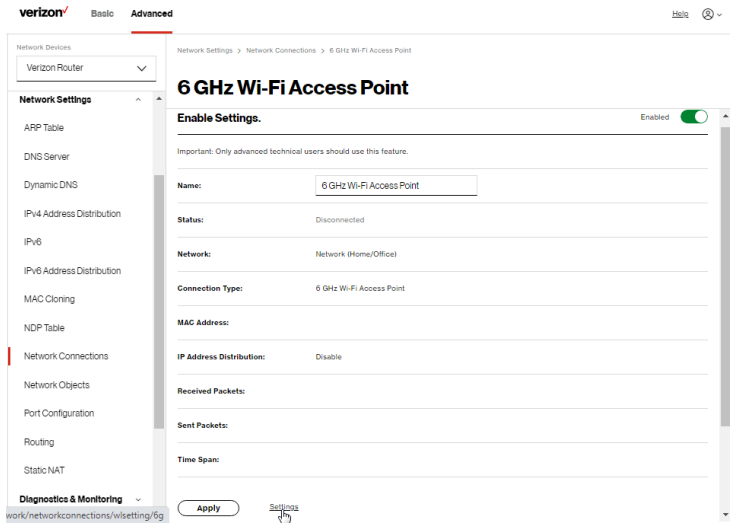
Wi-Fi ACCESS POINT CONNECTION

A Wi-Fi Access Point network connection allows Wi-Fi devices to connect to the local area network (LAN) using the 2.4 GHz or 5 GHz Wi-Fi network.

Note: Once disabled, all Wi-Fi devices connected to that Wi-Fi network will be disconnected from the LAN network and internet.

To view the connection settings:

1. From the **Advanced** menu, select **Network Settings** from the left pane and then click **Network Connections.**
2. To access the connection settings pages, click on the link of the Wi-Fi Access Point connections listed under **Network name** on the **Network Connections** page.



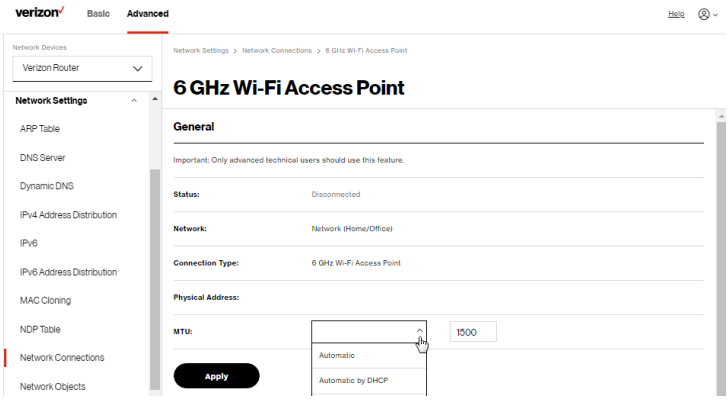
3. From the connection's **Enable Settings** page, to enable or disable the connection, move the selector to **on** or **off**.
4. To rename the connection, enter a name in the **Name** field.
5. Click **Apply** to save the changes.
6. Reboot your Verizon Router.

CONFIGURING Wi-Fi ACCESS POINT PROPERTIES

To configure the connection:

1. On the bottom of the Access Point's specific **Enable Settings** page, click **Settings**. The configuration page displays.

NETWORK SETTINGS



2. Verify the following information:

General

- **Status** - displays the connection status of the network.
- **Network** – displays the type of network connection.
- **Connection Type** - displays the type of connection interface.
- **Physical Address** - displays the physical address of the network card used for the network.
- **MTU** - specifies the largest packet size permitted for internet transmissions:
  - **Automatic**: set the MTU (Maximum Transmission Unit) at 1500.
  - **Automatic by DHCP**: sets the MTU according to the DHCP connection.

– **Manual**: allows you to manually set the MTU.

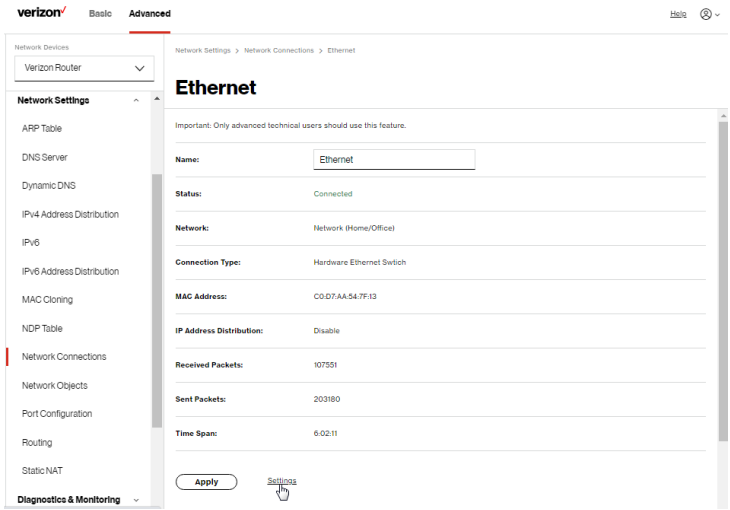
3. Click **Apply** to save changes.

ETHERNET CONNECTION

You can view the properties of your Ethernet LAN connection using an Ethernet cable inserted into one of your Verizon Router's Ethernet LAN ports.

To view the connection settings:

1. To access the **Ethernet** properties page, click the **Ethernet** link listed under **Network name** on the **Network Connections** page.

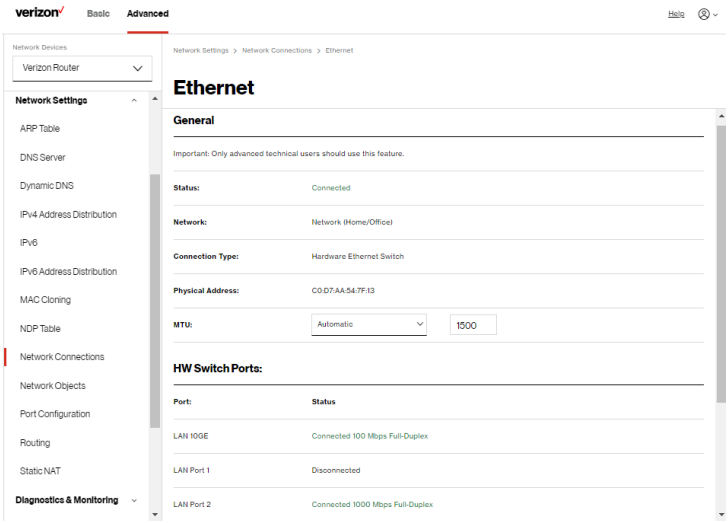


2. To rename the network connection, enter the new name in the **Name** field.
3. Click **Apply** to save changes.

CONFIGURING ETHERNET PROPERTIES

To configure the connection:

1. In the **Ethernet** page, click **Settings**. The configuration page displays.



2. Verify the following information:

General

- **Status** - displays the connection status of the network.
- **Network** – displays the type name of network connection.
- **Connection Type** - displays as **Hardware Ethernet Switch**.
- **Physical Address** - displays the physical address of the network card used for the network.
- **MTU** - specifies the largest packet size permitted for
  - **Automatic**: sets the MTU (Maximum Transmission Unit at 1500).
  - **Automatic by DHCP**: sets the MTU according to the DHCP connection.
  - **Manual**: allows you to manually set the MTU.
- **HW Switch Ports** - displays the status of each LAN port.

3. Click **Apply** to save the changes.

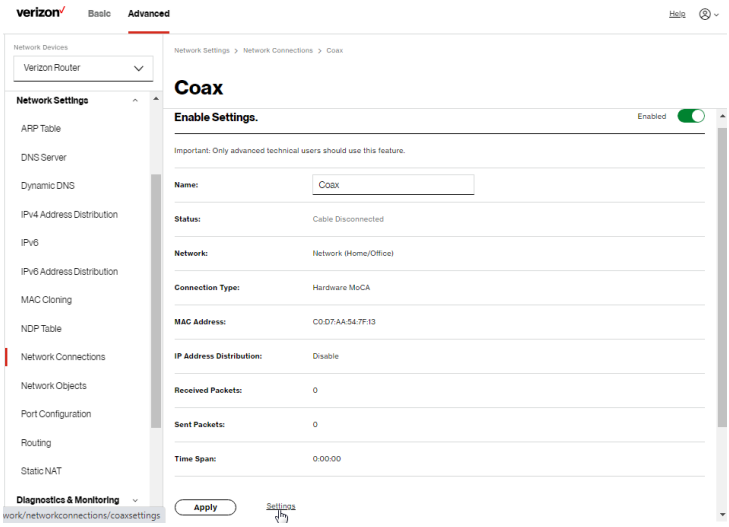
COAX CONNECTION

You can view the properties of your LAN connection using a coaxial cable.

To view the connection settings:

1. To access the **Coax** properties page, click the **Ethernet** link listed under **Network name** on the **Network Connections** page.

NETWORK SETTINGS

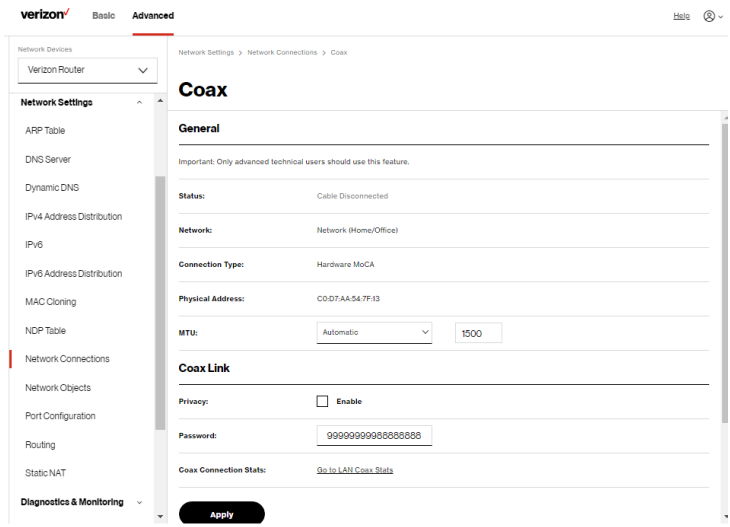


2. From the connection's **Enable Settings** page, to enable or disable the connection, move the selector to **on** or **off**.
3. To rename the network connection, enter the new name in the **Name** field.
4. Click **Apply** to save changes.

CONFIGURING COAX PROPERTIES

To configure the connection:

1. In the **Coax** page, click **Settings**. The configuration page displays.



2. Verify the following information:

General

- **Status** - displays the connection status of the network.
- **Network** – displays the type name of network connection.
- **Connection Type** - displays as **HardwareMoCA**.
- **Physical Address** - displays the physical address of the network card used for the network.

- **MTU** - specifies the largest packet size permitted for
  - **Automatic**: sets the MTU (Maximum Transmission Unit at 1500).
  - **Automatic by DHCP**: sets the MTU according to the DHCP connection.
  - **Manual**: allows you to manually set the MTU.

Coax Link

- **Privacy -** to set **Privacy**, select the **Enabled** check box. This causes all devices connected to the coaxial cable to use the same password. This is recommended.
- **Password - t**o set the privacy password, enter the Coax Link password.
- To view the devices connected using the coaxial cable, click the **Go to LAN Coax Status** link.

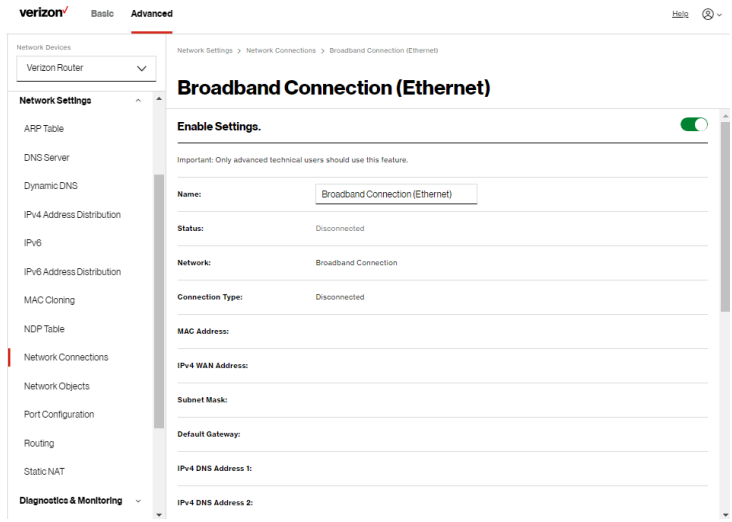
3. Click **Apply** to save changes.

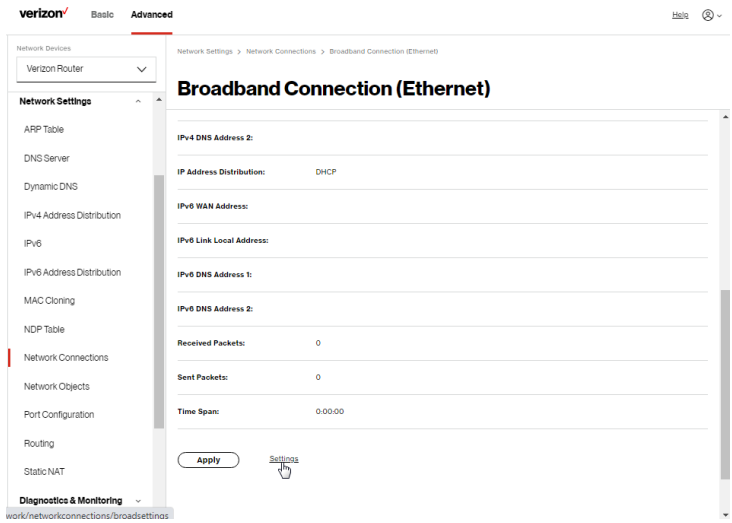
BROADBAND CONNECTION (ETHERNET/COAX)

You can view the properties of your broadband connection (your connection to the internet). This connection may be via either Ethernet or Coaxial cable.

To view the connection settings:

1. In the **Network Connections** page, click the **Broadband Connection (Ethernet/Coax)**.



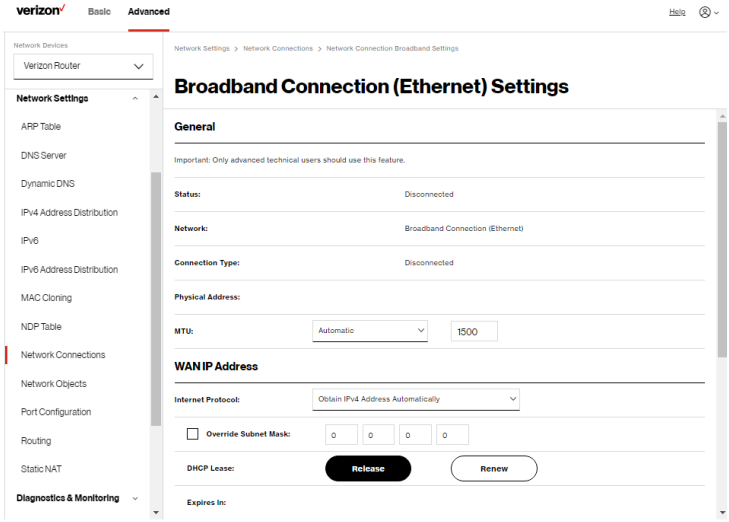


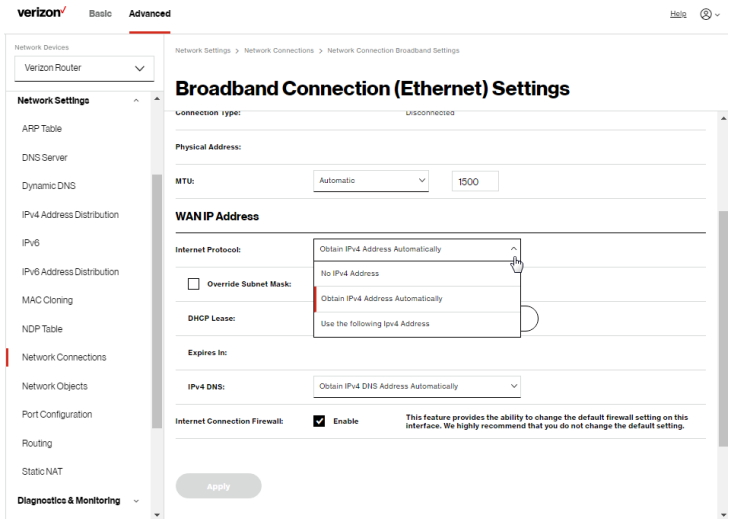
2. From the connection's **Enable Settings** page, to enable or disable the connection, move the selector to **on** or **off**.
3. To rename the network connection, enter the new name in the **Name** field.
4. Click **Apply** to save changes.

CONFIGURING THE ETHERNET/COAX CONNECTION

To configure the connection:

1. In the **Broadband Connection (Ethernet/Coax) Properties** page, click **Settings**. The configuration page displays.





2. Configure the following settings, as needed.

General

Verify the following information:

- **Status** - displays the connection status of the network.
- **Network** – displays the type of network connection.
- **Connection Type** - displays the type of connection interface.
- **Physical Address** - displays the physical address of the network card used for the network.

NETWORK SETTINGS

- **MTU** - specifies the largest packet size permitted for internet transmissions:
  - **Automatic**: sets the MTU (Maximum Transmission Unit at 1500).
  - **Automatic by DHCP**: sets the MTU according to the DHCP connection.
  - **Manual**: allows you to manually set the MTU.

Coax Link

- **Privacy -** to set **Privacy**, select the **Enabled** check box. This causes all devices connected to the coaxial cable to use the same password. This is recommended. To set the password, select **Manual entry of privacy password** and enter the Coax Link password.
- To enable or disable the Coax link, move the selector to **on** or **off**.
- To view the devices connected using the coaxial cable, click the **Go to WAN Coax Status** link.

WAN Coax Connection Speeds

- Router Tx (Mbps) - displays the transmission (Tx) rate of the router.
- Router Rx (Mbps) - displays the receiving (Rx) rate of the router.

WAN IP Address

- In the **Internet Protocol** section of **WAN IP Address**, specify one of the following:
  - **No IPv4 Address**: the connection has no IP address. This is useful if the connection operates under a bridge.
  - **Obtain an IPv4 Address Automatically**: the network connection is required by Verizon to obtain an IP address automatically. The server assigning the IP address also assigns a subnet mask address, which can be overridden by entering another subnet mask address.
  - **Use the Following IP Address**: the network connection uses a permanent or static **IP address** and **Subnet Mask** address, provided by Verizon or experienced network technician.
- To override the subnet mask, select the **Override Subnet Mask** check box, then enter the new subnet mask.
- Click **Release/Renew** in the **DHCP Lease** field to drop/get an IP address from the DHCP server.
- In the **Expires In** field, enter the amount of time a network device is allowed to connect to the Verizon Router with its currently issued dynamic IP address.

- **IPv4 DNS -** selects **Obtain IPv4 DNS Address Dynamically** for using Dynamic DNS. Each time the public IP address changes, the DNS database is automatically updated with the new IPv4 address. In this way, even though the IP address changes often, the domain name remains constant and accessible.
- **Internet Connection Firewall -** allows you to enable or disable the firewall configuration on this interface.

3. Click **Apply** to save changes.

5.1j/ NETWORK OBJECTS

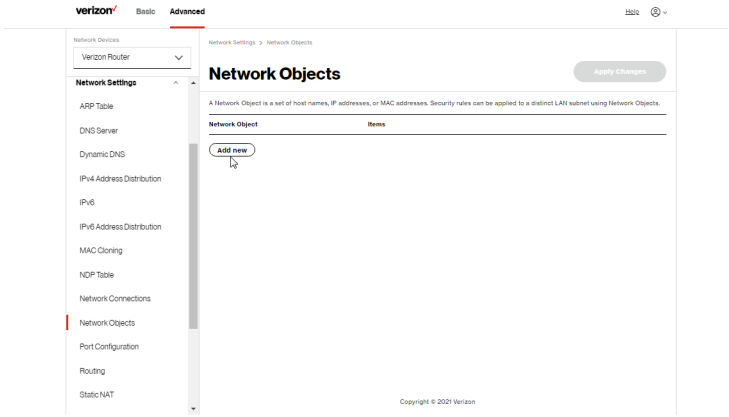
Network objects define a group, such as a group of computers, on your Verizon Router network by MAC address, IP address, and/or host name. The defined group becomes a network object. You can apply settings, such as configuring system rules, to all devices defined in the network object.

For example, instead of setting the same website filtering configuration individually to five computers one at a time, you can define the computers as a network object. Website filtering can then be simultaneously applied to all the computers.

You can use network objects to apply security rules based on host names, instead of IP addresses. This is useful since IP addresses change from time to time. In addition, you can define network objects according to MAC address to make the rule application more persistent against network configuration settings.

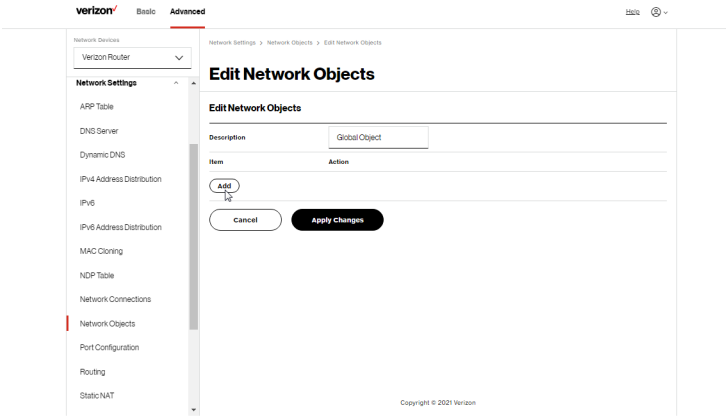
To define a network object:

1. From the **Advanced** menu, select **Network Settings.**
2. Select **Network Objects** in the **Network Settings** section.

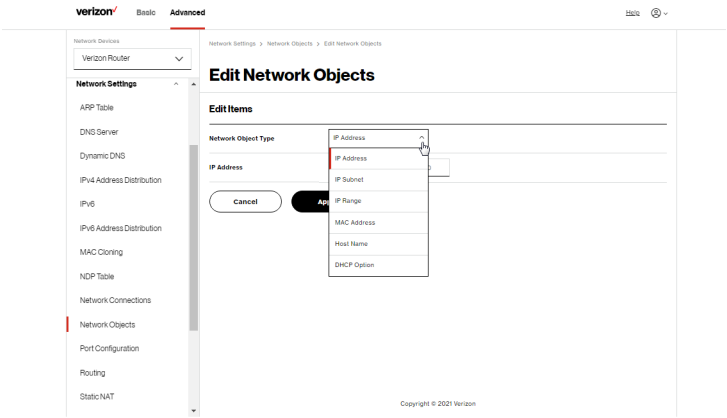


3. To define a network object, click **Add new**. The **Edit Network Objects** page displays.

NETWORK SETTINGS



4. In the **Description** field, enter a name for the network object.
5. Click **Add**. The **Edit Item** page displays.



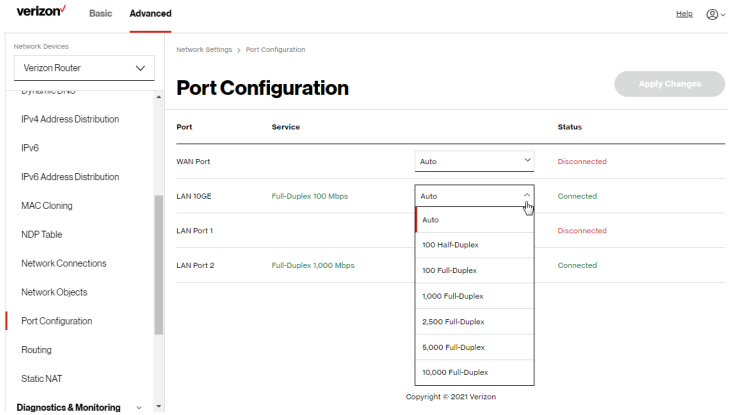
6. Select and configure the type of network object as IP address, IP subnet, IP range, MAC address, host name, or DHCP option, and click **Apply** to save changes.
7. Repeat the above steps to create additional network objects.
8. When complete, click **Apply changes** to save changes.

5.1k/ PORT CONFIGURATION

Ethernet port configuration allows you to set up the Ethernet ports as either full- or half-duplex ports, at either 10 Mbps, 100 Mbps, or 1000 Mbps.

To configure the ports:

1. Select **Port Configuration** in the **Network Settings** section.



2. To emulate the speed and duplex configuration of the port with which it's communicating, select **Auto** or select the port speed and duplicity.
3. Click **Apply changes** to save changes.

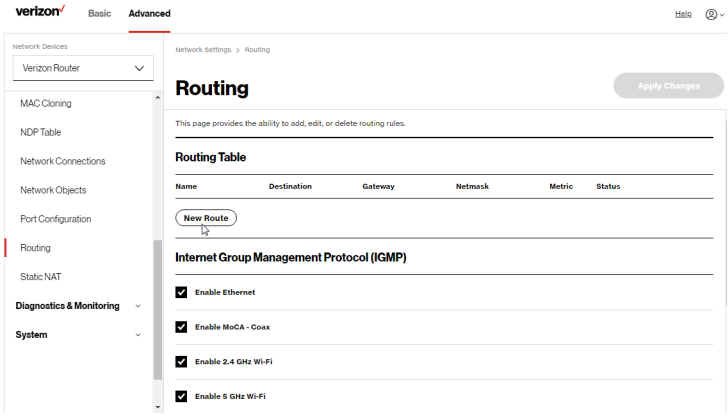
5.1l/ ROUTING

You can view the routing and IP address distribution rules as well as add, edit, or delete the rules.

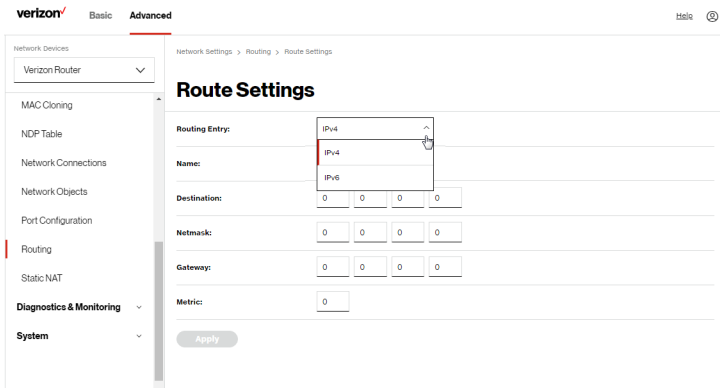
Routing Table

To view the rules:

1. Select **Routing** in the **Network Settings** section.



2. To add a new Route, click **New Route**.



3. Specify the following parameters:
   - **Routing Entry -** select the IP address type.
   - **Name** – the network connection type.
   - **Destination** - enter the destination IP of the destination host, subnet address, network address, or default route. The destination for a default route is 0.0.0.0.
   - **Netmask** – enter the network mask. This is used in conjunction with the destination to determine when a route is used.
   - **Gateway** – enter the IP address of your Verizon Router.
   - **Metric** – enter a measurement preference of the route. Typically, the lowest metric is the most preferred route. If multiple routes exist to a specific destination network, the route with the lowest metric is used.

4. Click **Apply** and **Apply changes** to save changes.

Internet Group Management Protocol (IGMP)

IGMP allows for managing a single upstream interface and multiple downstream interfaces of the IGMP/MLD (Multicast Listener Discovery)-based forwarding. This function enables the system to send IGMP host messages on behalf of hosts that the system discovers through standard IGMP interfaces. Also, IGMP snooping allows an Ethernet switch to “listen in” on the IGMP conversation between hosts and routers, while IGMP querier will send out periodic IGMP queries.

To enable this function:

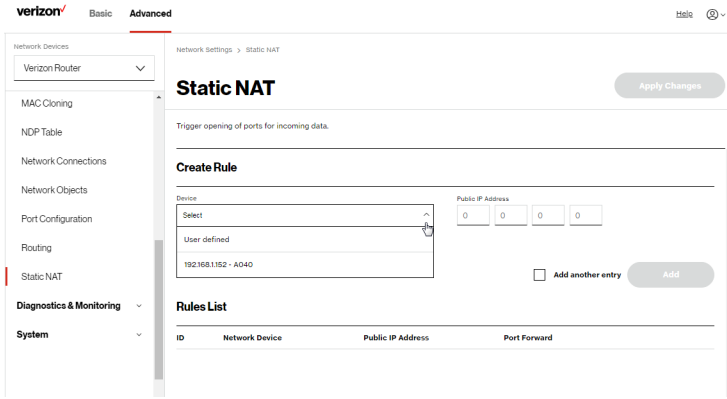
1. Choose the IGMP interfaces by clicking on the check boxes on the screen.
2. Click **Apply changes** to save changes.

5.1m/ STATIC NAT

Static NAT allows devices located behind a firewall that is configured with private IP addresses to appear to have public IP addresses to the internet. This allows an internal host, such as a web server, to have an unregistered (private) IP address and still be accessible over the internet.

To configure static NAT:

1. Select **Static NAT** in the **Network Settings** section.



2. To create a static NAT, select a source address in the **Device** field.
3. Enter the **Public IP Address**.
4. If using port forwarding, select the **Enabled Port forward** check box.
5. Click **Add**. The rule displays in the **Rules List** section.
6. Click **Apply Changes** to save changes.
7. Click **Add another entry** and repeat these steps to add additional static IP addresses.

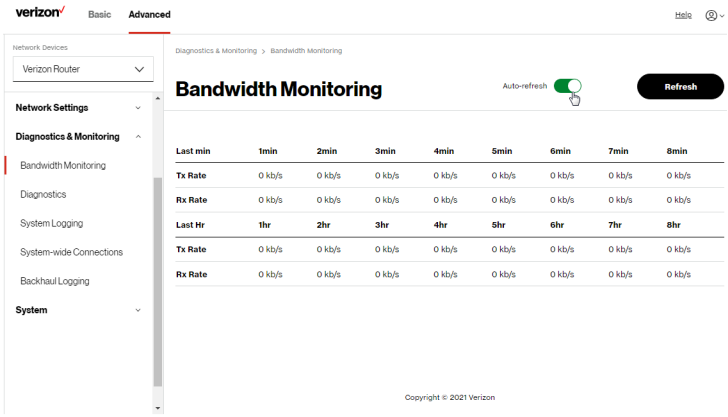
DIAGNOSTICS & MONITORING

5.2/ DIAGNOSTICS & MONITORING
5.2a/ BANDWIDTH MONITORING

You can view and monitor the recorded bandwidth usage measured in Kbps.

To view the bandwidth:

1. From the **Advanced** menu, select **Diagnostics & Monitoring.**
2. In the **Diagnostics & Monitoring** section, select **Bandwidth Monitoring**.



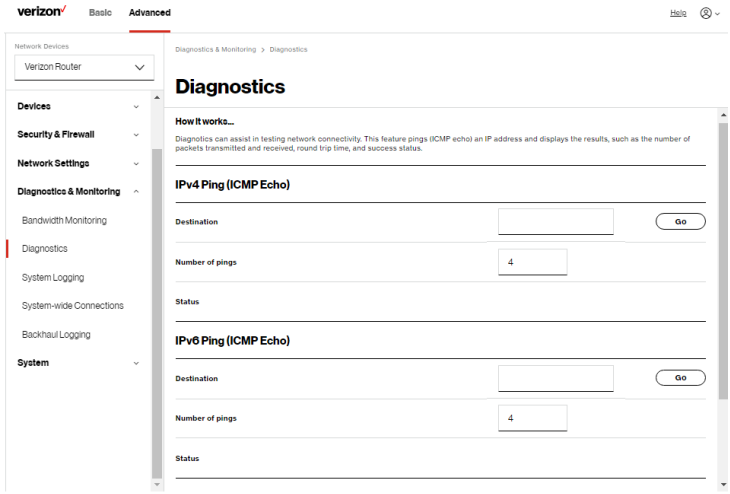
3. To refresh the page, click **Refresh**.
4. To continuously refresh the page, click **Auto-refresh on**.

5.2b/ DIAGNOSTICS

You can use diagnostics to test network connectivity.

To diagnose network connectivity:

1. Select **Diagnostics** in the **Diagnostics & Monitoring** section.
2. To ping an IP address, enter the IP address or domain name in the **Destination** field and click **Go**.



The diagnostics will display the number of pings, status, packets sent, and round trip time.

If no diagnostic status displays, click refresh in your web browser.

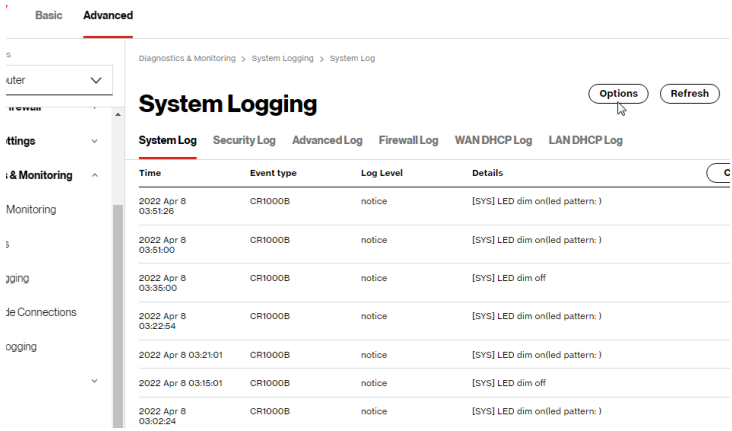
DIAGNOSTICS & MONITORING

5.2c/ SYSTEM LOGGING

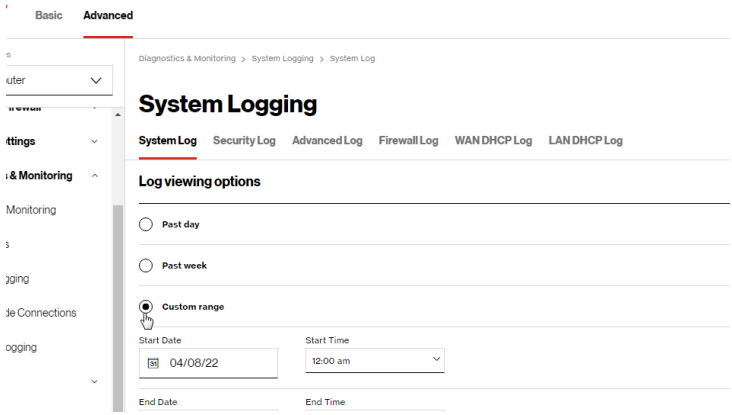
System logging provides a view of the most recent activity of your Verizon Router. In addition, you can view additional logs, such as the security, advanced, firewall, WAN DHCP and LAN DHCP.

To view the system log:

1. Select **System Logging** in the **Diagnostics & Monitoring** section.



2. To view a specific time of log event, click on the **Options** button.



3. Select your preferred logging time.
4. Click **Save** to save changes.
5. To view a specific type of log event such as Security Log, WAN DHCP Log, etc., click the appropriate link in the menu on the top.
6. To update the data, click **Refresh**.

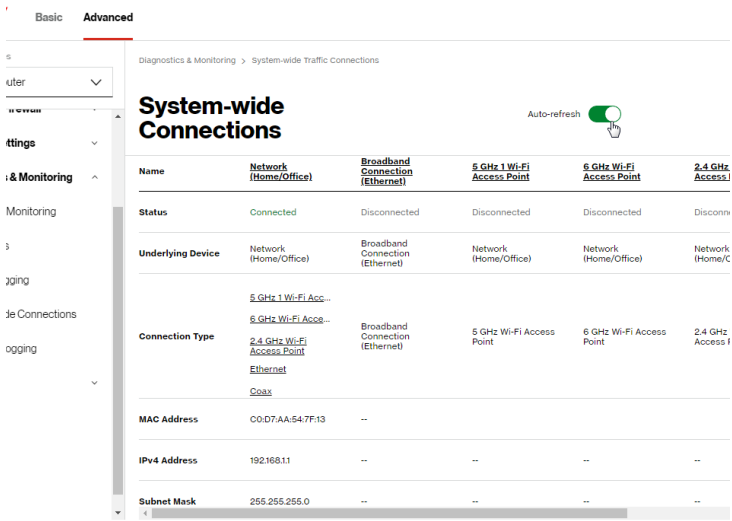
5.2d/ SYSTEM-WIDE CONNECTIONS

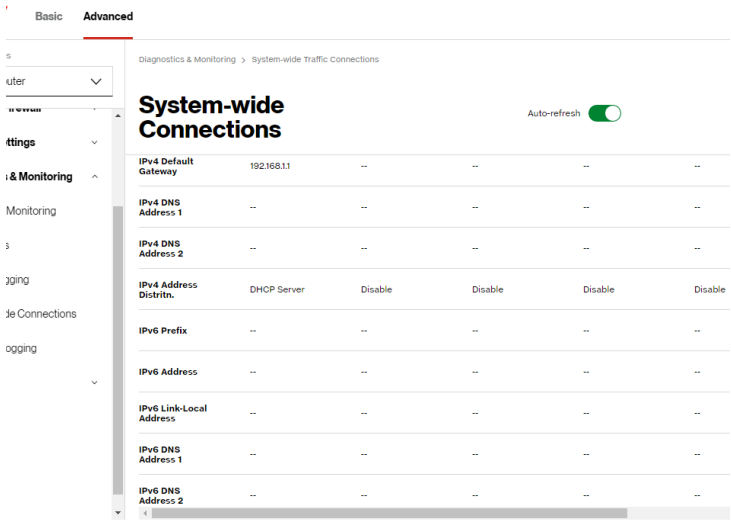
You can view a summary of the monitored data collected for your Verizon Router.

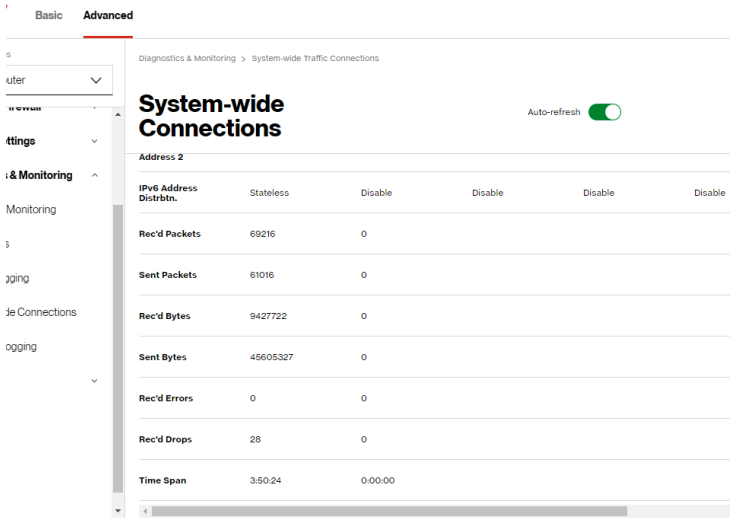
To view your Verizon Router's full system status and traffic monitoring data:

1. Select **System-wide Connections** in the **Diagnostics & Monitoring** section.

DIAGNOSTICS & MONITORING







2. To modify the connection properties, click the individual connection links.
3. To continuously refresh the page, click **Auto-refresh on**.

5.2e/ BACKHAUL LOGGING

You can view a summary of the BHM (backhaul modes: Ethernet, coax and Wi-Fi) status of your network.

To view the backhaul modes log:

1. Select **Backhaul Logging** in the **Diagnostics & Monitoring** section.

2. To refresh the page, click **Refresh**.
3. To delete the log information, click **Clear**.
4. To save the log information, click **Save**.

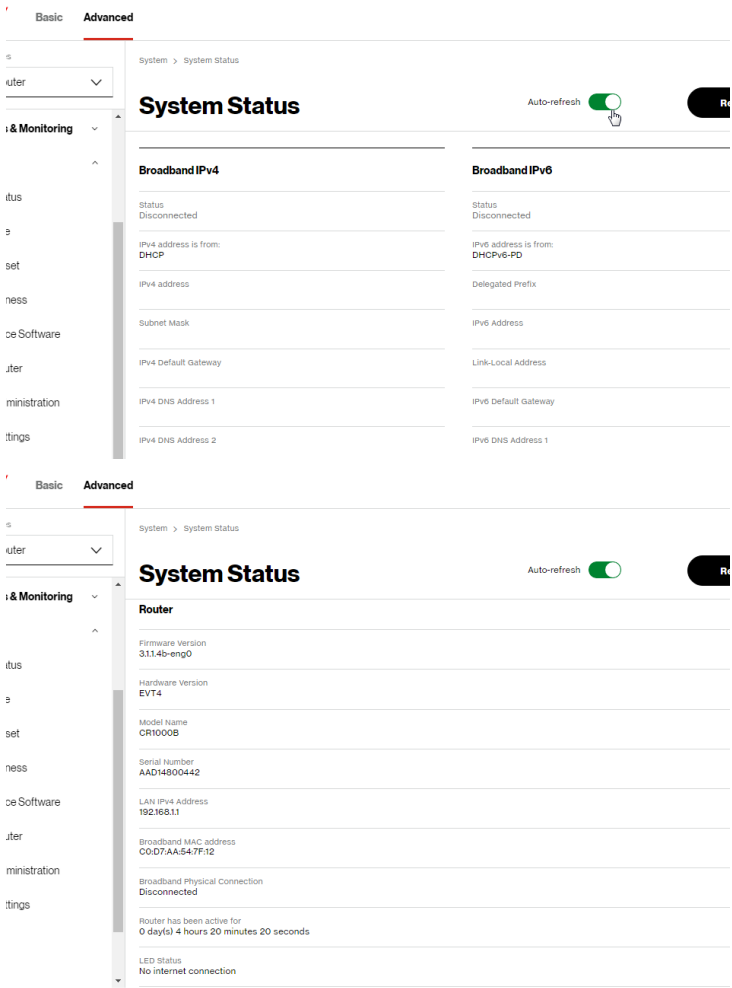
5.3/ SYSTEM

5.3a/ SYSTEM STATUS

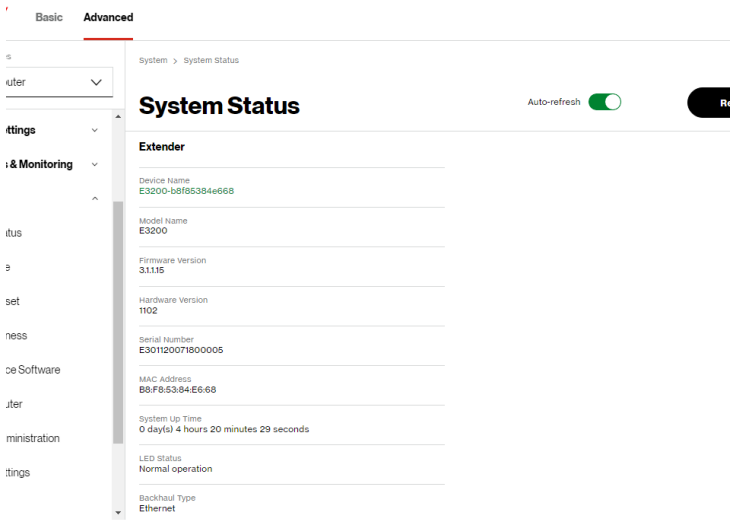
To view the status:

1. From the **Advanced** menu, select **System**.
2. You can quickly view your router's status by selecting **System Status** in the **System** section.
3. To refresh the page, click **Refresh**.

This section displays the status of your router's local network (LAN) and internet connection (WAN), firmware and hardware version numbers, MAC Address, IP settings of Verizon Router and Extender(s) (if connected).



SYSTEM

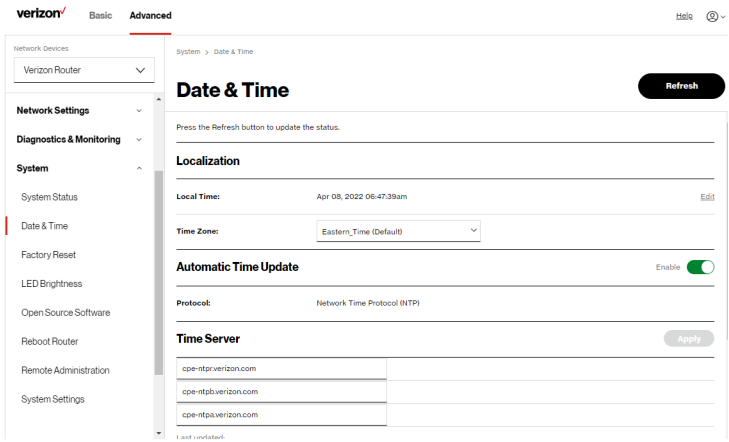


5.3b/ DATE & TIME SETTINGS

You can set the time zone and enable automatic time updates.

To configure the settings:

1. From the **Advanced** menu, select **System.**
2. Select **Date & Time** in the **System** section.



3. Select the local time zone. Your Verizon Router automatically detects daylight saving times for selected time zone.
4. In the **Automatic Time Update** section, select the **Enable** check box to perform an automatic time update.
5. Define the time server addresses.
6. Enter the IP address or domain name of the time server, then click **Apply** to save changes.

SYSTEM

5.3c/ FACTORY RESET

You can use this functionality to save and load configuration files. These files are used to backup and restore the current configuration of your Verizon Router.

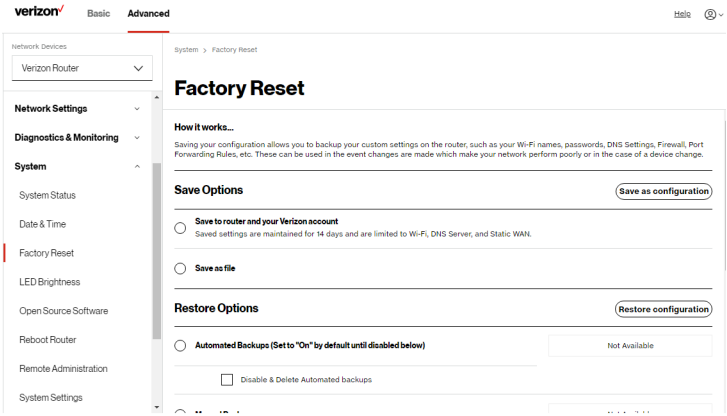
Only configuration files saved on a specific Verizon Router can be applied to that Verizon Router. You cannot transfer configuration files between Verizon Routers.

Warning: Manually editing a configuration file can cause your Verizon Router to malfunction or become completely inoperable.

Save Options

To save the configuration file:

1. From the **Advanced** menu, select **System.**
2. Select **Factory Reset** in the **System** section.



3. Select **Save to router and your Verizon account** or **Save as file** to save the current configuration, then click **Save as configuration**.
4. If you select **Save as file**, the configuration file is saved to you web browser's download folder.

Restore Options

You can restore your configuration settings to your Verizon Router factory default settings. Restoring the default settings erases the current configuration, including user defined settings and network connections. All connected DHCP clients must request new IP addresses. Your Verizon Router must restart.

Prior to restoring the factory defaults, you may want to save your current configuration to a file. This allows you to reapply your current settings and parameters to the default settings, as needed.

Note: When restoring defaults, the setting and parameters of your Verizon Router are restored to their default values. This includes the administrator password. A user-specified password will no longer be valid.

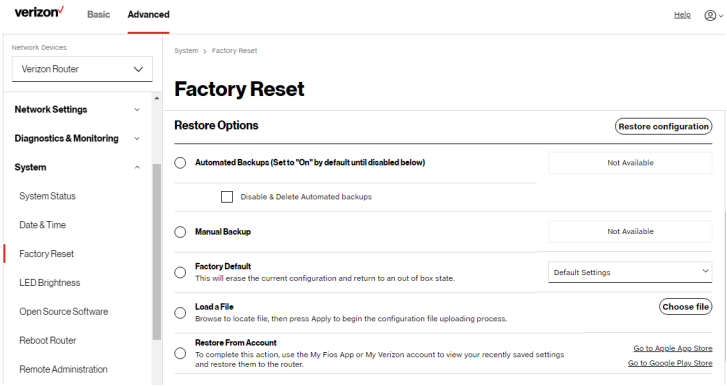
To backup your Verizon Router's settings:

1. Select **Factory Reset** in the **System** section.
2. To take a backup of the current settings, click **Automated Backups** or **Manual Backup**. You will be prompted to save a file with the extension ".enc".
3. Click **Backup** to begin the configuration backup process.

SYSTEM

To restore your Verizon Router's factory default settings:

1. Select **Factory Reset** in the **System** section.
2. Click **Factory Default**.



- **Default Settings** – will erase all router settings including user settings for SSID and Passwords.
- **Default Settings except current user settings** – will erase all router settings but will retain the user settings for SSID and passwords.

3. Click **Restore configuration** button. The factory default settings are applied and your Verizon Router restarts. Once complete, the Login page for the First Time Easy Setup Wizard displays.

To load the configuration file:

1. Select **Factory Reset** in the **System** section.
2. To load a previously saved configuration file, select **Load a File** then click **choose file**.

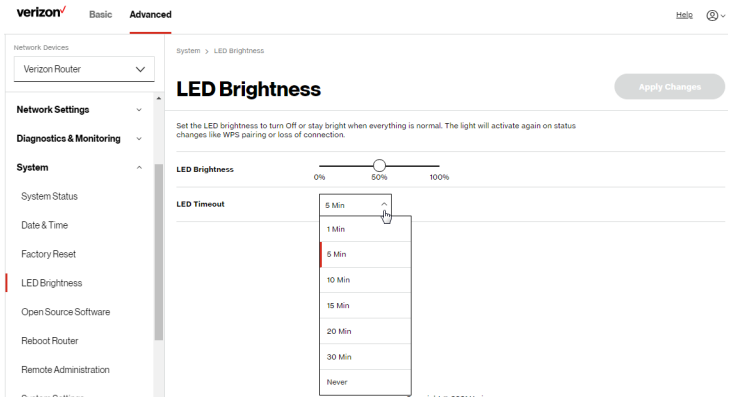
3. Browse to the location of the file, and click **Restore configuration** button to begin the configuration uploading process.
4. Accessing the **My Verizon** app or the **My Verizon** account also allows you to restore the previously saved settings. Click **Restore From Account** and select **Go to Apple App Store/ Go to Google Play Store** to restore the saved settings to the router.
5. Click **Restore configuration** button. Your Verizon Router will automatically restart with that configuration.

5.3d/ LED BRIGHTNESS

The Verizon Router allows you to set the LED brightness to turn Off (0%) or stay bright (50% or 100%) using the user interface.

To control the LED brightness:

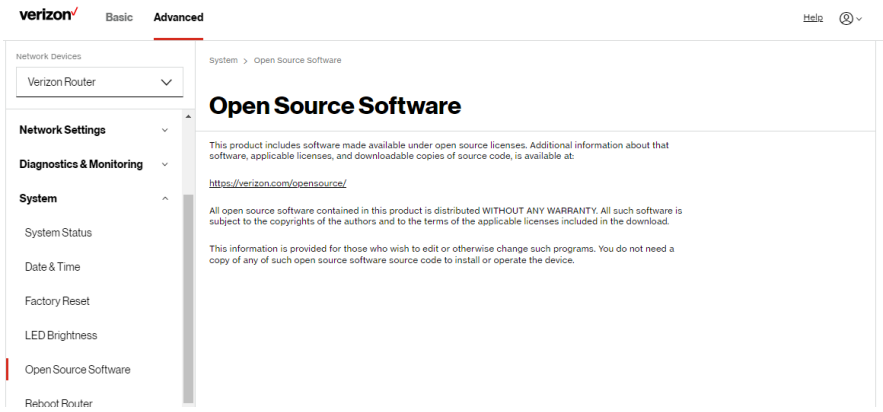
1. Select **LED Brightness** in the **System** section.



2. Slide the bar to adjust the brightness of the LED.
3. Select your preferred timeout period (in minutes) from the dropdown list for the LED dimming setting. The Status LED will automatically turn off after the timeout period.
4. Click **Apply changes** to save changes.

Note: The light will activate again on status changes like WPS pairing or loss of connection.

5.3e/ OPEN SOURCE SOFTWARE



To view: From the **Advanced** menu, select **System** from the left pane and then click **Open Source Software**.

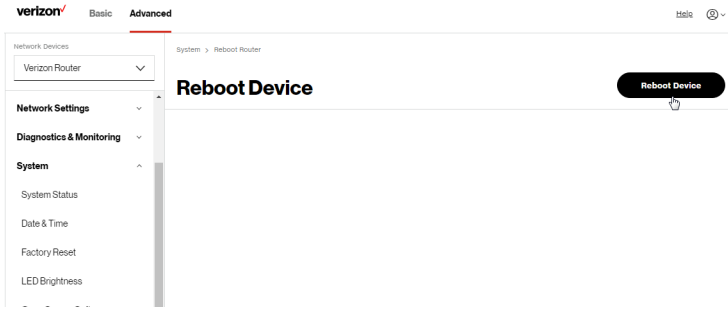
5.3f/ REBOOT VERIZON ROUTER

Warning: Only select Reboot Router if instructed to do so by Verizon support.

You can reboot your Verizon Router using the Reboot Router Only feature. Refer to 1.3a/ FRONT PANEL for power button options.

To reboot your Verizon Router using the user interface:

1. Select **Reboot Router** in the **System** section.



2. To reboot, click **Reboot Device**. Your router will reboot. This may take up to a minute.
3. To access your Verizon Router user interface, refresh your web browser.
4. After the Router Status LED on the front panel turns solid white, you will automatically be sent to the web browser login page.

SYSTEM

5.3g/ REMOTE ADMINISTRATION

Caution: Enabling Remote Administration places your Verizon Router network at risk from outside attacks.

You can access and control your Verizon Router not only from within the local network, but also from the internet using **Remote Administration**.

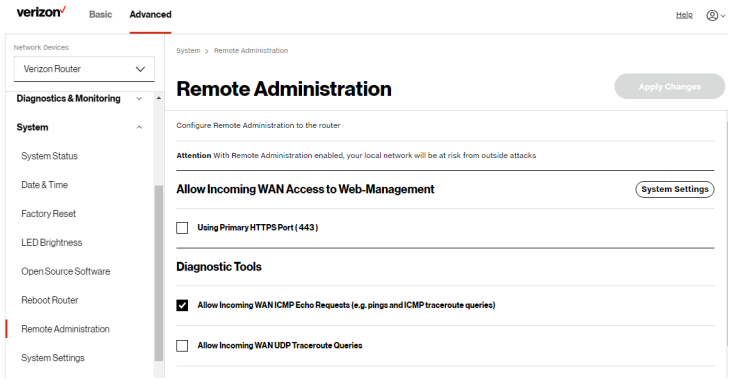
You can allow incoming access to the following:

- **Allow Incoming WAN Access to Web-Management** - used to obtain access to your Verizon Router's UI and gain access to all settings and parameters through a web browser.
- **Diagnostic Tools** - used for troubleshooting and remote system management by a user or Verizon.

Web Management remote administration access may be used to modify or disable firewall settings. Web Management services should be activated only when absolutely necessary.

To enable remote administration:

1. Select **Remote Administration** in the **System** section.



2. To enable access, select the check box.
3. To remove access, clear the check box.
4. Click **Apply changes** to save changes.

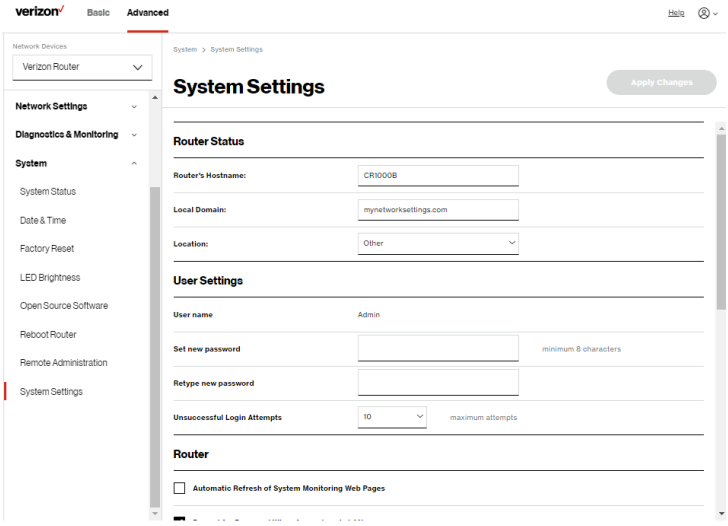
SYSTEM

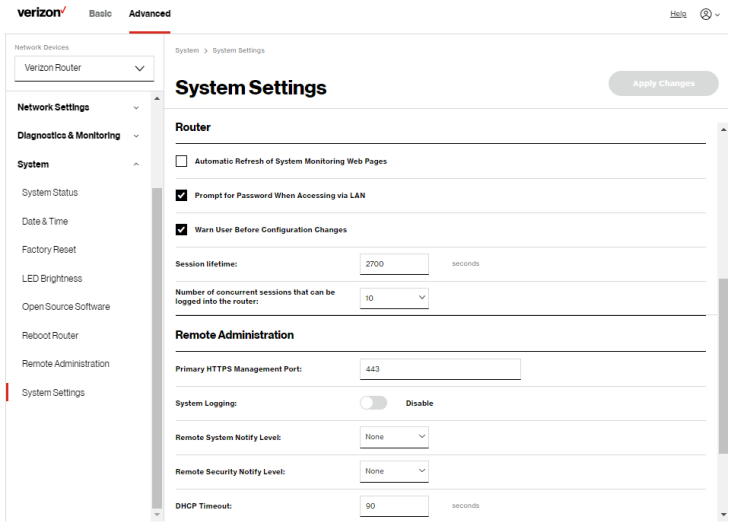
5.3h/ SYSTEM SETTINGS

You can configure various system and management parameters.

To configure system settings:

1. Select **System Settings** in the **System** section.





2. In the **Router Status** section, configure the following:
   - **Router's Hostname** – enter the host name of your Verizon Router.
   - **Local Domain** – view the local domain of the network.
   - **Location** – select your current location of the router from the dropdown list.

3. In the **User Settings** section, you can view the administration user that can currently access your Wi-Fi network. In addition, you can modify the login password and manage the number of unsuccessful login attempts the administration user can enter before your Verizon Router temporarily denies all further login attempts by the user.
4. In the **Router** section, configure the following by selecting the check box:
   - **Automatic Refresh of System Monitoring Web Pages** – activates the automatic refresh of system monitoring web pages.
   - **Prompt for Password when Accessing via LAN** – causes your Verizon Router to ask for a password when trying to connect to the network.
   - **Warn User Before Configuration Changes** – activates user warnings before network configuration changes take effect.
   - In the **Session Lifetime** field, specify the length of time required before re-entering the login password after your Verizon Router has been inactive.
   - In the **Number of concurrent sessions that can be logged into the router** field, select the number of users that can access your Verizon Router at the same time.

5. In the **Remote Administration** section, configure the following:
   - Enter the **Primary HTTP Management Port**.

     Refer to 5.3g Remote Administration for using this feature.
   - In the **System Logging** section move the selector to **on** to activate system logging.
   - **Remote System Notify Level** – specify the type of information, such as none, error, warning, and information, received for remote system logging.
   - **Remote Security Notify Level** – specify the type of information, such as none, error, warning, and information, received for remote system logging.
   - In the **DHCP Timeout** section, specify the DHCP timeout.
6. Click **Apply changes** to save changes.

06/

TROUBLE SHOOTING

This chapter lists solutions for issues that may be encountered while using your Verizon Router as well as frequently asked questions.

Although the majority of the router's internet connectivity is automatic and transparent, if an issue does occur accessing the internet (e.g. complete loss of connectivity, inability to access services, etc.), you may need to take additional steps to resolve the problem.

TROUBLESHOOTING TIPS

Note: The advanced settings should only be configured by experienced network technicians to avoid adversely affecting the operation of your Verizon Router and your local network.

6.0/ TROUBLESHOOTING TIPS

6.0a/ IF YOU ARE UNABLE TO CONNECT TO THE INTERNET:

- The first thing to check is whether your Verizon Router is powered on and is connected to the internet. Check the Router Status LED on the front of the Verizon Router. Be sure to refer to the "1.3a/ FRONT PANEL" on page 9 to determine status of the Verizon Router. Check the WAN cable connecting your Verizon Router to the internet to make sure it is properly connected on both ends.
- If the prior tips do not resolve your connection issue, try restarting (rebooting) the router portion of the Verizon Router by manually pressing the 'red' reset power button on the rear panel of the Verizon Router for 2-4 seconds (the Router Status LED should go off) to begin rebooting your Verizon Router. Your Verizon Router will begin rebooting and will return to service in 3 - 5 minutes depending on your network connection. Check Router Status LED and if it is solid white, try again to access the internet.
- If rebooting your router does not resolve your connection issue, try power cycling the Verizon Router by unplugging the power cable from the adapter or the wall and wait 2 minutes. During the 2 min. wait period, also power cycle the network device (e.g.

the computer, tablet, etc.) and then plug the power cable back into the Verizon Router. After 3-5 minutes, recheck the Router Status LED and try again to access the internet.

6.0b/ IF YOU ARE UNABLE TO CONNECT TO YOUR VERIZON ROUTER USING WI-FI:

- Be sure your Wi-Fi device is within range of your Verizon Router; move it closer to see if your connection improves.
- Check your network device's Wi-Fi settings to be sure your device's Wi-Fi is on (enabled) and that you have the correct Wi-Fi network and password (if using a Wi-Fi password) as configured on your Verizon Router.
- Be sure you are connecting to the correct Wi-Fi network; check to be sure you are using your Verizon Router's SSID. In some cases, if using a Wi-Fi password, you may need to enter the Wi-Fi password into your network device again to be sure your device accepts the password.
- Check to be sure you are running the latest software for your network device.
- Try turning your network device's Wi-Fi off and on, and try to connect.
- If you have made any changes in your network settings and turning your network device's Wi-Fi off and on does not help, try to restart your network device.
- You may need to turn the Wi-Fi settings from on to off, and back to on again and apply the changes.

TROUBLESHOOTING TIPS

- If you are still unable to access your Verizon Router, you may need to try connecting to the Verizon Router using another network device. If the issue goes away with another network device, the issue is likely with that individual network device's configuration.

6.0c/ ACCESSING YOUR VERIZON ROUTER IF YOU ARE LOCKED OUT

- If your Verizon Router connection is lost while making configuration changes, a setting that locks access to your Verizon Router's UI may have inadvertently been activated.

The common ways to lock access to your Verizon Router are:

- Scheduler - If a schedule has been created that applies to the computer over the connection being used, your Verizon Router will not be accessible during the times set in the schedule.
- Access Control - If the access control setting for the computer is set to block the computer, access to your Verizon Router is denied.

To gain access, restore the default settings to your Verizon Router.

6.0d/ RESTORING YOUR VERIZON ROUTER'S DEFAULT SETTINGS

There are two ways to restore your Verizon Router's default settings. It is important to note that after performing either

procedure, all previously save settings on your Verizon Router will be lost.

For additional information regarding the Restore Defaults feature, refer to section 6.1/ Utilities/Save And Restore.

- Using the tip of a ballpoint pen or pencil, press and hold the Reset button on the back of your Verizon Router for three seconds.
- Access the UI and navigate to the Advanced Settings page. Select the 6.1b Save and Restore option. After saving your configuration, if desired, click the Restore Factory Defaults radio button. For additional details, refer to the 6.1/ Utilities/Save And Restore section of this guide.

Note: If you reset or reboot your Verizon Router, you may also need to disconnect your Verizon Router's power supply for a few minutes (3 or more) and then reconnect the power cable. However, in order to provide full synchronization to the coaxial network, disconnecting and reconnecting the power may be required.

6.0e/ LAN CONNECTION FAILURE

To troubleshoot a LAN connection failure:

- Verify your Verizon Router is properly installed, LAN connections are correct, and that the Verizon Router and communicating network devices are all powered on.
- Confirm that the computer and Verizon Router are both on the same network segment.

TROUBLESHOOTING TIPS

If unsure, let the computer get the IP address automatically by initiating the DHCP function, then verify the computer is using an IP address within the default range of 192.168.1.2 through 192.168.1.254. If the computer is not using an IP address within the correct IP range, it will not connect to your Verizon Router.

- Verify the subnet mask address is set to 255.255.255.0.

6.0f/ TIMEOUT ERROR OCCURS WHEN ENTERING THE URL OR IP ADDRESS

Verify the following:

- All computers are working properly.
- IP settings are correct.
- Verizon Router is on and connected properly.
- Verizon Router settings are the same as the computer.

For connections experiencing lag or a slow response:

- Check for other devices on the network utilizing large portions of the bandwidth and if possible temporarily stop their current utilization and recheck the connection.
- If lag still exists, clear the cache on the computer and if still needed, unplug the Ethernet cable or disable the Wi-Fi connection to the computer experiencing the slow connection and then reconnect or enable the Wi-Fi connection and try the connection again.

In rare cases you may also need to:

- Unplug the Ethernet cable to Verizon Router and restart the Verizon Router, wait 1-2 mins. and insert the Ethernet cable again.
- Under limited circumstances you may use a port forwarding configuration on the router, based on the application you are using (refer to the 6.0d/ Port Forwarding section or Verizon's support online help for more details).

6.0g/ ROUTER STATUS LED

The Router Status LED provides a visual display of the Verizon Router's current condition. Refer to the chart below for details.

Condition Status	LED Color	Verizon Router
Normal	WHITE	Normal operation (50% solid)
		Setup complete (solid)
		Router is booting (soft blink)
		System restart (fast blink)
	BLUE	Pairing mode (hard blink)
		WPS pairing successful (fast blink)
	GREEN	Wi-Fi has been turned off (solid)

TROUBLESHOOTING TIPS

Condition Status	LED Color	Verizon Router
Issue(s)	YELLOW	No internet connection (solid)
	RED	Hardware/System failure detected (hard blink) Overheating (fast blink) WPS pairing failure (fast blink)
Power	OFF	Power off

Flash Speed

- Soft blink: 1000ms on 1000ms off
- Hard blink: 800ms on, 800ms off
- Fast blink: 200ms on, 200ms off

6.0h/ REAR LIGHTED INDICATORS

Left LED

- Solid yellow – Indicates less than 1 Gbps link
- Flash yellow – Indicates LAN/WAN activity. The traffic can be in either direction.

Right LED

- Solid white – Indicates 1/2.5/5/10 Gbps link
- Flash white – Indicates LAN/WAN activity. The traffic can be in either direction.

6.1/ FREQUENTLY ASKED QUESTIONS

6.1a/ I'VE RUN OUT OF ETHERNET PORTS ON MY VERIZON ROUTER. HOW DO I ADD MORE COMPUTERS OR DEVICES?

Plugging in an Ethernet hub or switch expands the number of ports on your Verizon Router.

- Run a straight-through Ethernet cable from the Uplink port of the new hub to the Verizon Router.

Use a crossover cable if there is no Uplink port/switch on your hub, to connect to the Verizon Router.

- Remove an existing device from the Ethernet port on your Verizon Router and use that port.

6.1b/ HOW DO I CHANGE THE PASSWORD ON MY VERIZON ROUTER UI?

To change the password:

1. On the main screen, select **Advanced**, then select **Users** in the **Utilities** section.
2. Click the **Edit** in the **Action** column. The **User Settings** page displays.
3. Edit the user name and set a new password.

FREQUENTLY ASKED QUESTIONS

6.1c/ IS THE WI-FI OPTION ON BY DEFAULT ON MY VERIZON ROUTER?

Yes, your Verizon Router's Wi-Fi option is activated out of the box.

6.1d/ IS THE WI-FI SECURITY ON BY DEFAULT WHEN THE WI-FI OPTION IS ACTIVATED?

Yes, with the unique WPA2 (Wi-Fi Protected Access II) key that is printed on the sticker on the rear panel of your Verizon Router.

6.1e/ ARE MY VERIZON ROUTER'S ETHERNET PORTS AUTO-SENSING?

Yes. Either a straight-through or crossover Ethernet cable can be used.

6.1f/ CAN I USE AN OLDER WI-FI DEVICE TO CONNECT TO MY VERIZON ROUTER?

Yes, your Verizon Router can interface with 802.11b, g, n, ac or ax devices. Your Verizon Router also can be setup to handle only
n Wi-Fi cards, g Wi-Fi cards, b Wi-Fi cards, or any combination of the three.

6.1g/ CAN MY WI-FI SIGNAL PASS THROUGH FLOORS, WALLS, AND GLASS?

The physical environment surrounding your Verizon Router can have a varying effect on signal strength and quality. The denser the object, such as a concrete wall compared to a plaster wall, the greater the interference. Concrete or metal reinforced structures experience a higher degree of signal loss than those made of wood, plaster, or glass.

6.1h/ HOW DO I LOCATE THE IP ADDRESS THAT MY COMPUTER IS USING?

In Windows 7 or Windows 10, click the Windows button and select Control Panel, then click View Network Status and Tasks. In the next window, click Local Area Connection. In the Local Area Network Connection Status window, click Details.

On Mac OS X, open System Preferences and click the Network icon. The IP address displays near the top of the screen.

To find the IP address from the router GUI:

1. From the **Basic** menu, select **Devices** from the left pane.
2. Select **Expanded List** from the dropdown list to view detailed IP address information for all connected devices.

FREQUENTLY ASKED QUESTIONS

6.1i/ I USED DHCP TO CONFIGURE MY NETWORK. DO I NEED TO RESTART MY COMPUTER TO REFRESH MY IP ADDRESS?

No. In Windows 7, Windows 10 and OSX, unplug the Ethernet cable or Wi-Fi card, then plug it back in.

6.1j/ I CANNOT ACCESS MY VERIZON ROUTER UI. WHAT SHOULD I DO?

If you cannot access the UI, verify the computer connected to your Verizon Router is set up to dynamically receive an IP address.

6.1k/ I HAVE A FTP OR WEB SERVER ON MY NETWORK. HOW CAN I MAKE IT AVAILABLE TO USERS ON THE INTERNET?

For a web server, enable port forwarding for port 80 to the IP address of the server. Also, set up the web server to receive that port. Configuring the server to use a static IP address is recommended.

For a FTP server, enable port forwarding for port 21 to the IP address of the server. Also, set up the web server to receive that port. Configuring the server to use a static IP address is recommended.

6.1l/ HOW MANY COMPUTERS CAN BE CONNECTED THROUGH MY VERIZON ROUTER?

Your Verizon Router is capable of 254 connections, but we recommend having no more than 132 connections. As the number of connections increases, the available speed for each computer decreases.

07/

SPECIFICATIONS

The specifications for your Verizon Router are as follows.

This includes standards, cabling types and environmental parameters.

GENERAL SPECIFICATIONS

Note: The specifications listed in this chapter are subject to change without notice.

7.0/ GENERAL SPECIFICATIONS

Model Number:	CR1000B
Standards:	IEEE 802.3x, 802.3u, 802.3ab, 802.3bz, 802.3 an IEEE 802.11a/b/g/n/ac/ax
IP:	IP versions 4 and 6
MoCA LAN:	1125 – 1675 MHz 2500 Mbps
Speed:	Wired: 10GE WAN Ethernet: 100 Mbps, 1/2.5/5/10 Gbps auto-sensing 10GE LAN Ethernet: 100 Mbps, 1/2.5/5/10 Gbps auto-sensing 2.5GE LAN Ethernet: 10/100 Mbps, 1/2.5 Gbps auto-sensing Wireless: 2.4 GHz - IEEE 802.11b/g/n: maximum up to 600 Mbps IEEE 802.11ax: maximum up to 1.1 Gbps

	5 GHz - IEEE 802.11a/n/ac: maximum up to 2.2 Gbps IEEE 802.11ax: maximum up to 2.4 Gbps 6 GHz - IEEE 802.11ax: maximum up to 4.8 Gbps
Cabling Type:	Ethernet 100BaseT: UTP/STP Category 5 Ethernet 1000BaseT: UTP/STP Category 5e Ethernet 2.5/5/10GBaseT: UTP/STP Category 6a
Firewall:	ICSA certified

7.1/ LED INDICATORS

Front Panel:	Router Status LED
Rear Panel:	WAN Ethernet and LAN Ethernet [3]

ENVIRONMENTAL PARAMETERS

7.2/ ENVIRONMENTAL PARAMETERS

DIMENSIONS AND WEIGHT

Verizon Router (unit only):

Size: 4.72” wide x 9.85” high x 4.72” deep

Weight: 3.682 lbs / 1.670 kg

Complete System (inc. packaging):

Size: 10.71” wide x 7” high x 8.66” deep

Weight: 6.232 lbs / 2.826 kg

Power: External, 12V, 5A

Mounting Bracket (optional):

Size: 3.97” wide x 6.86” high x 6.6” deep

Weight: 0.39 lbs / 175 g

Screws (optional): PH TP+N: 0.157” x 0.984”

PE Anchor: 0.236” x 0.984”

Certifications:	FCC, UL 62368, WFA
Operating Temperature:	5° C to 40° C (41° F to 104° F)
Storage Temperature:	-5° C to 50° C (23° F to 122° F)
Operating Humidity:	5% to 85%
Storage Humidity:	5% to 93% (non-condensing)

08/

NOTICES

This chapter lists various compliance and modification notices, as well as the NEBS requirements and GPL.

REGULATORY COMPLIANCE NOTICES

8.0/ REGULATORY COMPLIANCE NOTICES

8.0a/ Class B Equipment

Federal Communication Commission Interference Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device is restricted for indoor use.

FCC regulations restrict the operation of this device to indoor use only.

The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.

Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or Communications with unmanned aircraft systems.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 53cm between the radiator & your body.

REGULATORY COMPLIANCE NOTICES

8.0b/ Safety Warning:

The screen of the coaxial cable is intended to be connected to earth in the building installation.

The cable distribution system should be grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, Grounding of Outer Conductive Shield of a Coaxial Cable.

8.0c/ Alerte de sécurité:

L'écran du câble coaxial est destiné à être mis à la terre dans l'installation du bâtiment.

Le système de distribution par câble doit être mis à la terre conformément à ANSI / NFPA 70, Code national de l'électricité (NEC), en particulier à la section 820.93, Mise à la terre du blindage conducteur extérieur d'un câble coaxial.

8.0d/ NEBS (Network Equipment Building System) Statement

An external SPD is intended to be used with CR1000B/CME1000.

WARNING: The intra-building ports of the equipment or subassembly is suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building port(s) of the equipment or subassembly MUST NOT be metallically connected

to interfaces that connect to the OSP or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 4 ports as described in GR-1089) and require isolation from the exposed OSP cabling. The addition of Primary Protectors is not sufficient protection in order to connect these interfaces metallically to OSP wiring.

Caution: The Verizon Router must be installed inside the home. The Router is not designed for exterior installation.

8.0e/ GENERAL PUBLIC LICENSE

This product includes software made available under open source licenses. Additional information about that software, applicable licenses, and downloadable copies of source code, is available at:

https://verizon.com/opensource/

All open source software contained in this product is distributed WITHOUT ANY WARRANTY. All such software is subject to the copyrights of the authors and to the terms of the applicable licenses included in the download.

This information is provided for those who wish to edit or otherwise change such programs. You do not need a copy of any of such open source software source code to install or operate the device.