DHCPv6 Configuration and Monitoring on RV32x VPN Router Series

Objective

This article guides you through the setup of the DHCP IPv6 settings and explains the *DHCP IPv6 Status* page on the RV32x VPN Router Series. DHCP is a network protocol that allows a server, in this case the router, to assign IP addresses to devices connected on its networks from a pool of valid addresses. It is an efficient way for devices on a network to automatically acquire IP addresses. These settings can be configured and are explained in the *DHCP Setup* section. The *DHCP Status* section gives an explanation of the DHCP information that this feature displays.

Applicable Device

• RV320 Dual WAN VPN Router
• RV325 Gigabit Dual WAN VPN Router

Software Version

• v1.1.0.09

DHCP Setup

Step 1. Log in to the Router Configuration Utility and choose **DHCP > DHCP Setup**. The *DHCP Setup* page opens:

DHCP Setup

IPv4 | IPv6

◉ VLAN ○ Option 82

VLAN ID:	1 ▼
Device IP Address:	192.168.1.1
Subnet Mask:	255.255.255.0 ▼

DHCP Mode:	◉ Disable ○ DHCP Server ○ DHCP Relay
Remote DHCP Server:	0.0.0.0
Client Lease Time:	1440 min (Range: 5 - 43200, Default: 1440)
Range Start:	192.168.1.100
Range End:	192.168.1.149
DNS Server	Use DNS Proxy ▼
Static DNS 1:	0.0.0.0
Static DNS 2:	0.0.0.0
WINS Server:	0.0.0.0

TFTP Server and Configuration Filename (Option 66/150 & 67):

TFTP Server Host Name:	
TFTP Server IP:	0.0.0.0
Configuration Filename:	

Save | Cancel

Step 2. Click the **IPv6** tab to configure the DHCP IPv6 settings.

Note: The IPv6 tab is only available if Dual-Stack IP is enabled on the *Network Setup* page.

DHCP Setup

IPv4 | **IPv6**

IPv6 Address:	2001:0db8:3c4d:0015:0000:0000:abcd:ef1
Prefix Length:	64

DHCP Mode:	○ Disable ◉ DHCP Server ○ DHCP Relay
Client Lease Time:	750 min (Range: 5 - 43200, Default: 1440)
DNS Server 1:	2001:4860:4860::8888
DNS Server 2:	2001:4860:4860::8844

Step 3. Enter the IPv6 address for the router in the IPv6 Address field. The IPv6 address is

the 128-bit identification address used so that devices can communicate with each other.

Step 4. Enter the prefix length for the IPv6 address of the router in the Prefix Length field to establish the subnet of the IPv6 address.

Step 5. In the DHCP Mode field, click the desired radio button to choose the mode of DHCP to use.

- Disable — Disables DHCP on the router. No other parameters are editable.

- DHCP Server — Router acts as DHCP server. Handles the DHCP request from clients and designates IPv6 addresses.

- DHCP Relay — Router passes DHCP requests and replies to another DHCP server. It does not do any IPv6 addressing to other devices. No other parameters are editable.

Step 6. Enter time, in minutes, for lease duration in the Client Lease Time field. It is the amount of time a client is allowed to connect to the router with the IP address it was given through the DHCP process.

Step 7. (Optional) Static entered DNS servers are able to provide faster DNS queries than dynamically assigned DNS servers since they do not have to look around for a server. Enter the IPv6 address of static DNS servers in the DNS 1 and DNS 2 fields if desired. The DNS 2 server is used in the case that the DNS 1 server is not available.

Note: The IPv6 Address Pool Table shows the range of IPv6 addresses that can be assigned through DHCP. This can be added to or modified.

IPv6 Address Pool Table		
☐ Start Address	End Address	Prefix Length
0 results found!		
Add Edit Delete		

Step 8. Click **Add** to enter an address range. The Start Address, End Address, and Prefix Length fields in the IPv6 Address Pool Table become editable.

IPv6 Address Pool Table		
☐ Start Address	End Address	Prefix Length
2001:0db8:3c4d:0015:0000:0000:abcd:ef2		
Add Edit Delete		

Step 9. Enter the starting IPv6 address, the ending IPv6 address, and prefix length of such range in their respective fields.

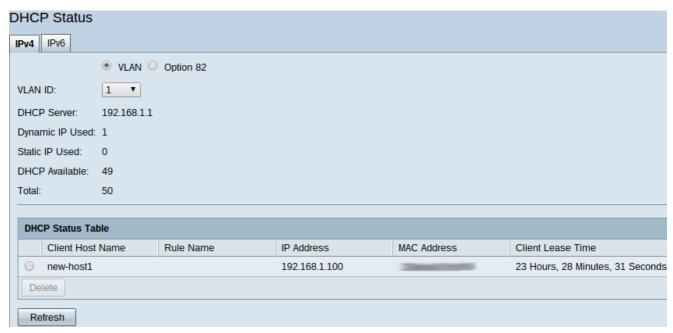Step 10. Click **Save** to save additions to the IPv6 Address Pool Table.

IPv6 Address Pool Table		
☐ Start Address	End Address	Prefix Length
☑ 2001:0db8:3c4d:0015:0000:0000:abcd:ef2	2001:0db8:3c4d:0015:0000:0000:abcd:ef8	16
Add Edit Delete		

Step 11. To modify an IPv6 Address Pool Table range, check the check box of the desired range.

Step 12. Click **Edit** to edit an entry - the range input fields become editable - or click **Delete** to delete an IPv6 Address Pool Table range.

Step 13. Click **Save** to finish configuring the IPv6 DHCP settings.

DHCP Status

Step 1. Log in to the Router Configuration Utility and choose **DHCP > DHCP Status.** The *DHCP Status* page opens:

DHCP Status

| IPv4 | IPv6 |

      ◉ VLAN ◯ Option 82

VLAN ID: 1 ▼

DHCP Server: 192.168.1.1

Dynamic IP Used: 1

Static IP Used: 0

DHCP Available: 49

Total: 50

DHCP Status Table

	Client Host Name	Rule Name	IP Address	MAC Address	Client Lease Time
◯	new-host1		192.168.1.100		23 Hours, 28 Minutes, 31 Seconds

Delete

Refresh

Note: DHCP Status displays information on the DHCP server and its clients.

Step 2. Click the **IPv6** tab to display IPv6 information.

DHCP Status

| IPv4 | IPv6 |

Prefix: 2001:: ▼

DHCP Server: 2001:0db8:3c4d:0015:0000:0000:abcd:ef1

Dynamic IP Used: 1

Static IP Used: ---

DHCP Available: 6

Total: 7

DHCP Status Table

Client Host Name	IP Address	Client Lease Time
new-host1	2001:db8:3c4d:15::abcd:ef8	4 Minutes, 34 Seconds

Refresh

Step 3. Choose the IPv6 prefix about which you wish to view information from the Prefix drop-down list.

The following statuses are displayed:

• DHCP Server — Displays the IPv6 address of the DHCP server the router utilizes.

- Dynamic IP Used — Displays the number of dynamic IPv6 addresses that are currently used.

- Static IP Used — Not applicable for IPv6.

- DHCP Available — Displays the number of available dynamic IPv6 addresses that the DHCP server has.

- Total — Displays the total number of IPv6 addresses that the DHCP server manages.

Note: The DHCP Status Table displays DHCP client information. It displays the following client information:

- Client Host Name — The name of a device on the network.

- IP Address — The dynamic IPv6 address that the DHCP server assigns to the client for a period of time.

- Client Lease Time — The exact amount of time that a network user can have the IPv6 address that was assigned by the DHCP server.

Step 4. (Optional) To update the data displayed click **Refresh.**