

Configure IP Source Guard on the RV34x Series Router

Objective

When a router is not physically secured, the network is left in a vulnerable position. To prevent unauthorized access to the network by means of unplugging an Ethernet cable from a network device and plugging it back, it is important to register a list of allowed hosts to directly connect to the router with their respective IP and MAC addresses.

IP Source Guard allows an administrator to physically secure ports by binding IP addresses and MAC addresses.

The objective of this article is to show you how to configure the IP Source Guard on the RV34x Series Router.

Applicable Devices

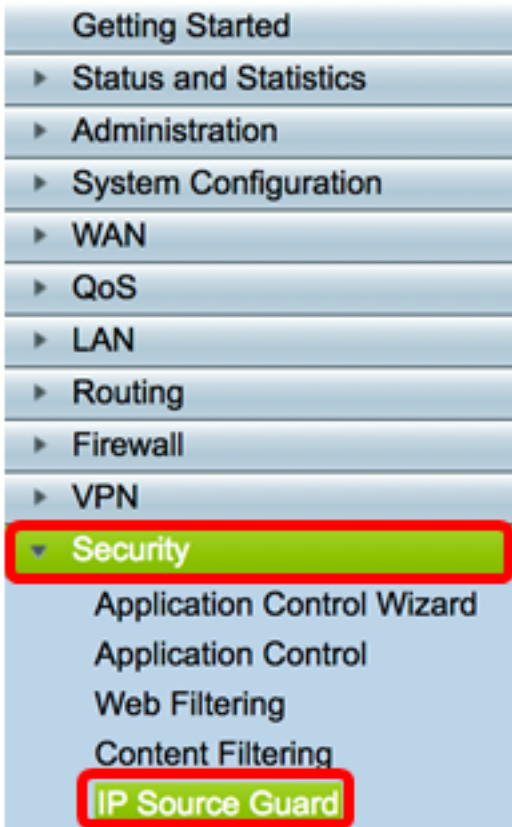
- RV34x Series

Software Version

- 1.0.00.33

Configure IP Source Guard

Step 1. Log in to the web-based utility and choose **Security > IP Source Guard**.



Step 2. Check the **Enable IP Source Guard** check box to enable the feature. This feature is disabled by default.

Note: A line of red text will appear in the IP Source Guard area panel to inform you that enabling IP Source Guard and Block Unknown MAC Address will block all the LAN hosts except the ones added in the binding table.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 0)

Static IPv4 Address	MAC Address

Add Edit Delete

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	Add to IP&MAC Binding Table

Apply Cancel

Step 3. (Optional) Check the Block Unknown MAC Address check box to block any hosts that attempt to connect to the network through a port. This feature is disabled by default.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 0)

Static IPv4 Address	MAC Address

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 4. Click **Apply**.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 0)

Static IPv4 Address	MAC Address

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 5. Under the IP & MAC Binding Table, click **Add** to create an entry to bind a statically assigned IP address and MAC address.

Note: A maximum of 45 entries can be created.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 0)

<input type="checkbox"/> Static IPv4 Address	MAC Address
<input type="button" value="Add"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>	

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 6. In the *Static IPv4 Address* field, enter the statically assigned IP address of the host to be registered on the router.

Note: For this example, 192.168.1.122 is used.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 1)

<input checked="" type="checkbox"/> Static IPv4 Address	MAC Address
<input checked="" type="checkbox"/> 192.168.1.122	<input type="text"/>
<input type="button" value="Add"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>	

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 7. In the *MAC Address* field, enter the MAC address of the statically assigned host to bind.

Note: In this example, 80:e8:6f:0a:d5:aa is used.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 1)

Static IPv4 Address	MAC Address
<input checked="" type="checkbox"/> 192.168.1.122	<input checked="" type="checkbox"/> 80:e8:6f:0a:d5:aa

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 8. Click **Apply**.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 1)

Static IPv4 Address	MAC Address
<input checked="" type="checkbox"/> 192.168.1.122	<input checked="" type="checkbox"/> 80:e8:6f:0a:d5:aa

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Step 9. (Optional) To bind a host with a dynamically assigned IP address to its respective MAC address, click on the **Add to IP&MAC Binding Table** button in the DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server).

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 1)

<input checked="" type="checkbox"/> Static IPv4 Address	MAC Address
<input type="checkbox"/> 192.168.1.122	80:e8:6f:0a:d5:aa

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
192.168.1.106	80:e8:6f:0a:5d:ee	<input type="button" value="Add to IP&MAC Binding Table"/>

Note: For this example, the dynamic host used has an IP of 192.168.1.106 with a MAC address of 80:e8:6f:0a:5d:ee. It will then appear in the IP & MAC Binding Table.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 2)

<input type="checkbox"/> Static IPv4 Address	MAC Address
<input type="checkbox"/> 192.168.1.106	80:e8:6f:0a:5d:ee
<input type="checkbox"/> 192.168.1.122	80:e8:6f:0a:d5:aa

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
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Step 10. Click **Apply**.

IP Source Guard Notice: Enabling IP Source Guard/Block Unknown MAC address will block all the LAN Hosts except the ones added in the binding table.

Enable IP Source Guard
 Block Unknown MAC Address

IP & MAC Binding Table (Max Entry Number: 45, Current Entry Number: 2)

<input type="checkbox"/> Static IPv4 Address	MAC Address
<input type="checkbox"/> 192.168.1.106	80:e8:6f:0a:5d:ee
<input type="checkbox"/> 192.168.1.122	80:e8:6f:0a:d5:aa

DHCP Lease Table (Static DHCP & Dynamic lease from DHCP server)

IPv4 Address	MAC Address	Action
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Step 11. (Optional) To save the configuration permanently, go to the Copy/Save Configuration page or click the  icon at the upper portion of the page.

You should now have successfully configured the IP Source Guard on the RV34x Series Router.