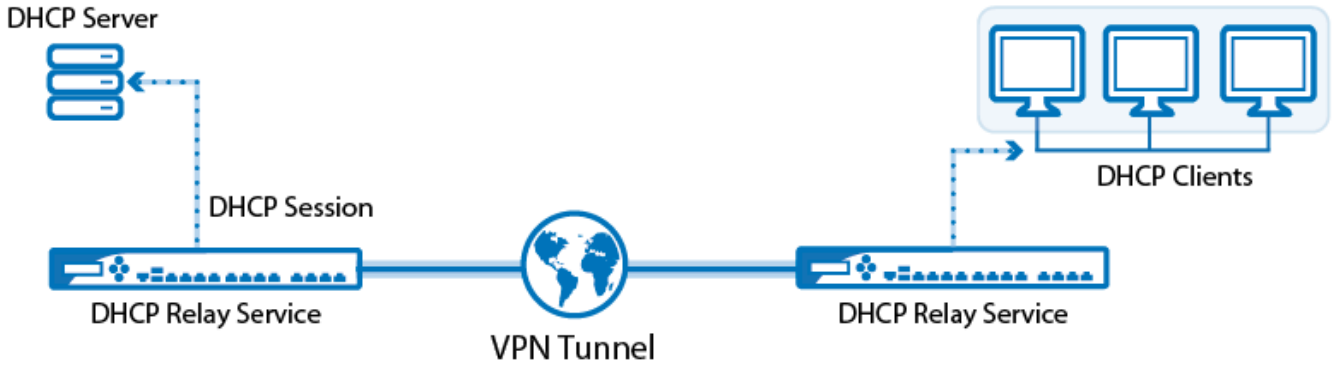
How to Configure a DHCP Relay over a VPN Tunnel

https://campus.barracuda.com/doc/48203182/

To use the same DHCP server in two different networks that are connected by a VPN tunnel, configure DHCP relays on both the local and remote Barracuda NextGen F-Series Firewalls.



Before you begin

- Create a Site-to-Site VPN tunnel between both locations.
- Use a separate DHCP server, such as the DHCP server on Windows Servers in your network. It is not possible to use the DHCP service on the NextGen Firewall F-Series in this scenario.

Step 1. Create an access rule on the local firewall

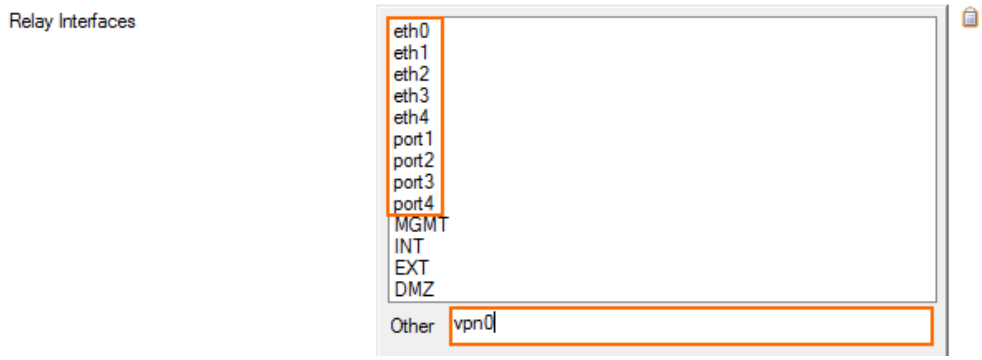
Create a PASS access rule allowing the management IP address of the remote NextGen Firewall F-Series access to the DHCP server.

1. Go to **CONFIGURATION** > **Configuration Tree > Box** > **Virtual Servers** > ***your virtual server*** > **Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Right-click in the main are and select **New** and **Rule**. The **Edit Rule** window opens.
4. Create the following access rule:
   - **Action** – Select **PASS**.
   - **Source** – Enter the management IP address of the remote NextGen Firewall F-Series.
   - **Service** – Create and select a Service object for UDP Port 67.
   - **Destination** – Enter the IP address of the DHCP server.
   - **Connection** – Select **No SNAT**.
5. Click **OK**.
6. Click **Send Changes** and **Activate**.

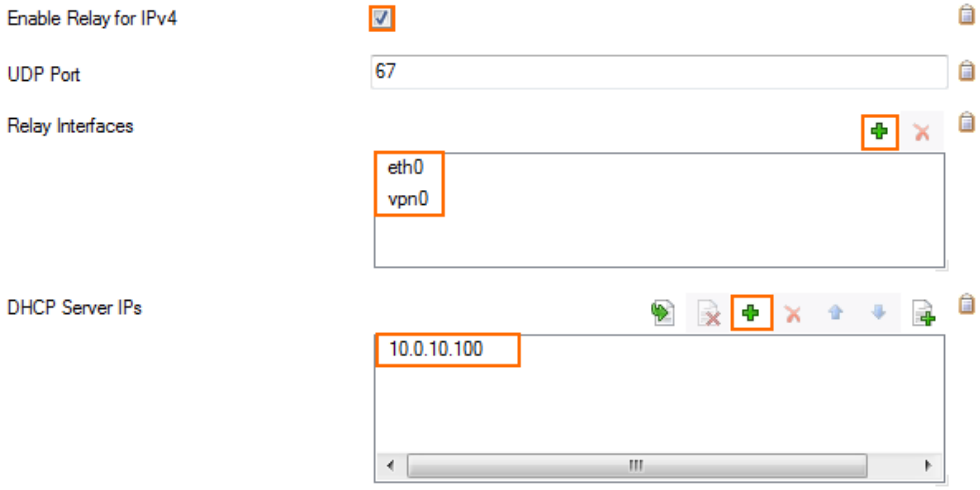
Step 2. Create a DHCP relay on the remote firewall

Configure DHCP Relay on the remote NextGen Firewall F-Series to pass along

1. Go to **CONFIGURATION** > **Configuration Tree > Box** > **Virtual Servers** > ***your virtual server*** > **Assigned Services > DHCP Relay > DHCP Relay Settings**.
2. Click **Lock**.
3. Check the **Enable Relay for IPv4** checkbox.
4. Click **+** for each **Relay Interface** the DHCP Relay listens on:
    1. Select the internal interface used to connect to the DHCP server from the list. E.g., **eth0**
    2. Enter the VPN interface used for the Site-to-Site tunnel in the **Other** textbox. E.g., vpn0



5. Click **+** and add the **DHCP Server IPs**. E.g., 10.0.10.100



6. Click **Send Changes** and **Activate**.

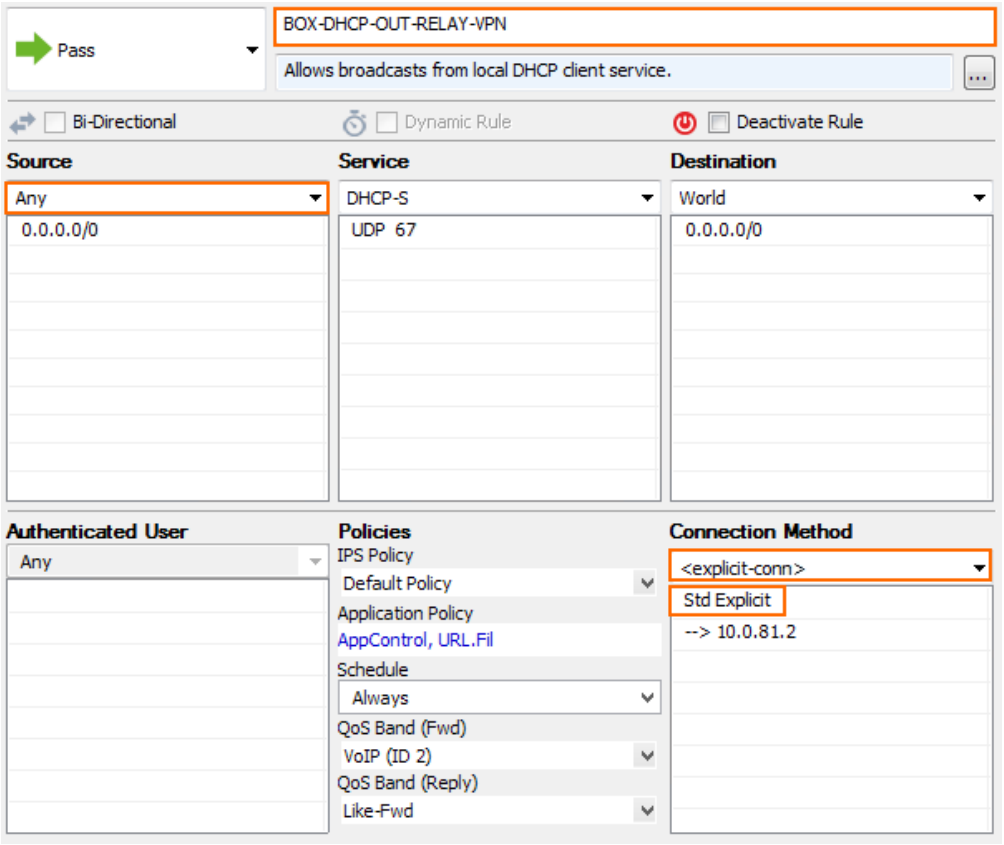
Step 3. Create a host firewall rule on the remote firewall

Create an access rule to allow the traffic of the DHCP Relay service into the VPN tunnel.

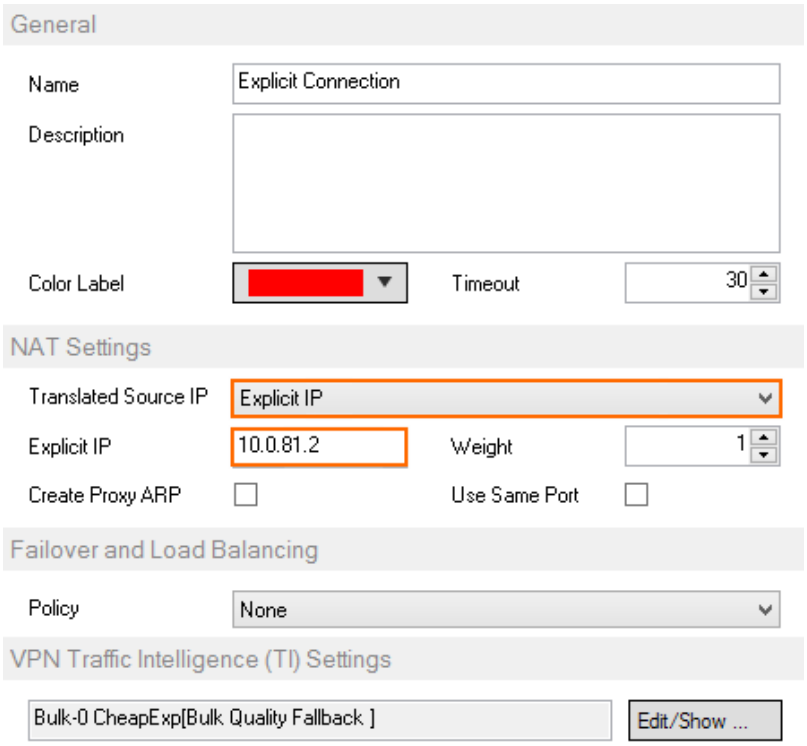
1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Host**

Firewall Rules.

2. Click **Lock**.
3. Click on the **Outbound** rule set.
4. Create a new PASS access rule. The **Edit Rule** window opens.
5. Enter the **Name** of the rule. E.g., BOX-DHCP-OUT-RELAY-VPN
6. Use the following settings for the access rule:
   - **Action** – Select **PASS**.
   - **Source** – Select **Any**.
   - **Service** – Select **DHCP-S**.
   - **Destination** – Select **World**.
7. Select **<explicit-conn>** from the **Connection Method** list.
8. Double-click on **Std Explicit** in the **Connection Method** section. The **Edit / Create a Connection Object** window opens.



9. From the **Translated Source IP** list select **Explicit IP**.
10. Enter the management IP address of the NextGen Firewall F-Series as the **Explicit IP**.



11. Click **OK**.
12. Click **OK**.
13. Place the access rule above the **BOX-DHCP-OUT** rule.
14. Click **Send Changes** and **Activate**.

Clients in the remote network can now receive DHCP leases from the DHCP server in the local network.

Figures

1. DHCP_Relay_VPN_Tunnel.png
2. relay01.png
3. relay02.png
4. relay05.png
5. relay06.png