How to Configure an ISP with Static IP Addresses

https://campus.barracuda.com/doc/96025993/

If your Internet connection is using static IP addresses or entire network ranges assigned by your ISP, you must create routing entries on box level and then assign the IP address(es) to the box. Choose the network type **Untrusted** to automatically create a default route (0.0.0.0/0) for the connection.
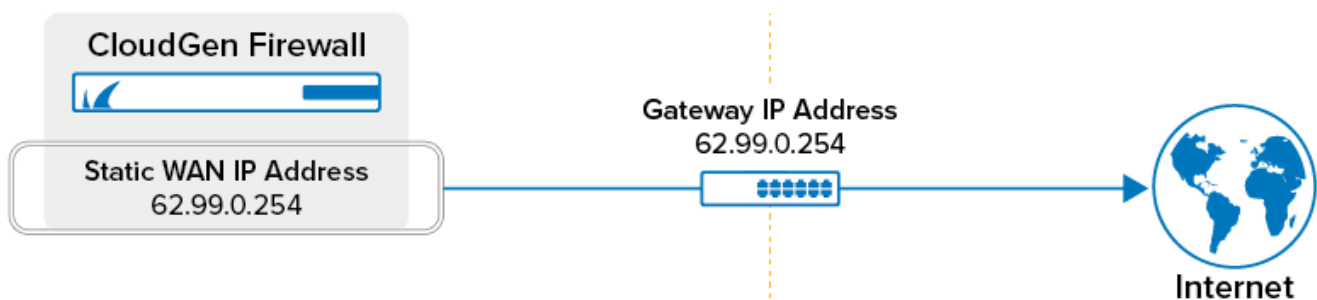
Before You Begin

Connect the network equipment installed by your provider to an unused port (not the management port) of your Barracuda CloudGen Firewall.

Step 1. Add the Static IP Address and a Direct Route

Configure the individual WAN IP address you want to use as a shared IP address. Be sure to create the route on the port the ISP is plugged into. In an HA cluster, these IP addresses will be transferred over to the secondary box in case of a failover.

1. Go to **CONFIGURATION > Configuration Tree > Network > IP Configuration**.
2. Scroll down to the section **Shared Networks and IPs**.
3. Click **Lock**.
4. For **Shared Network and IPs**, click **+** to add the relevant IP addresses.
5. The **Shared Networks and IPs** window is displayed.
6. Enter the name for the entry.
7. The configuration window for **Shared Networks and IPs** is displayed.
8. For **Interface**, select the interface for the static IP address, e.g., `eth1`.
9. For **Network Address**, enter the network address of the attached network, e.g., `62.99.0.0/24`.
10. Click **+**.

11. The **Shared IPs in this Network** window is displayed.
12. For **IP Address**, enter the static IP address assigned by your ISP, e.g., `62.99.0.221`.
13. For **Responds to Ping**, select **yes**.
14. Click **OK**.
15. For **Direct Internet Access**, select the check box.
16. For **Trust Level**, select **Untrusted**.
17. For **Default Gateway**, enter the IP address of the gateway, e.g., `62.99.0.254`.
18. If the default route will be introduced in an environment where multiple dynamic links are available, specify a **Route Metric**.

Shared Network and IPs			
Interface	eth1	☐ Other	
Network Address	62.99.0.0/24		
Shared IPs in this Network		✏ + ✕ 🗐 📥	
	IP Address	Alias for this IP	Responds to
	62.99.0.221	None	yes
Direct Internet Access	☑		
Trust Level	Untrusted		
Default Gateway	62.99.0.254		

19. Click **OK**.
20. Click Send **Changes / Activate**.

Step 1a. (Optional) Configure Link Monitoring

Configure link monitoring for the static Internet connection. This is important for cases where e.g., the ISP router in front of the firewall does not go down but the uplink beyond does.

> To ensure proper functionality of monitoring via ICMP, it is strongly recommended to use a hosted, secured IP address or an address provided by your ISP. Do not use a common public address such as google.com, etc.

1. Go to **CONFIGURATION > Configuration Tree > Network > IP Configuration**.
2. Scroll down to the section **Shared Networks and IPs**.
3. In the **Configuration Mode** menu, select **Switch to Advanced View**.
4. Click **Lock**.
5. Edit the entry for the ISP in the **Shared Network and IPs** section.
6. In the **Reachable IPs** table, add one or more target IP addresses of hosts that should be reachable for probing.
7. Enter commands to be run when the gateway or none of the reachable IP addresses is reachable.
8. Click **OK**.

9. Click **Send Changes** and **Activate**.

Step 2. Perform a Network Activation

After you create or change the basic network configurations such as routing, you must activate your new network configurations.

1. Go to **CONTROL > Box**.
2. In the left menu, expand the **Network** section and click **Activate new network configuration**.
3. Select **Failsafe**.

Verify the Network Configuration

Open the **CONTROL > Network** page to verify that all network routes have been introduced successfully. Verify that the WAN IP addresses are displayed with a green status icon. In addition, verify that the newly introduced routes are available in the tables Main and Default and that the default route is directing traffic through your ISP connection.

Barracuda CloudGen Firewall

DASHBOARD	CONFIGURATION	**CONTROL**	FIREWALL	LOGS	STATISTICS	EVENTS	SSH

Server   Network   Resources   Licenses   Box   Sessions

Interfaces/IPs	IPs	Interfaces	Proxy ARPs	ARPs	Statistics	OSPF	RIP	BGP	Switch Info	IPv6 ND Cache

Interface/IP	Label	Ping	MAC of duplicate IP	Info
dhcp				
eth0, Speed=1000Mb/s, Duplex=Full				
10.0.8.220/24	mip0	ok	-	
10.0.8.221/32	S1	ok	-	
eth1, Speed=1000Mb/s, Duplex=Full				
62.99.0.221/32	S1	ok	-	
eth2, Speed=1000Mb/s, Duplex=Full				
172.16.0.221/32	S1	ok	-	
lo				
pvpn0				
tap0				
tap1				

TABLES   ALL

Table / Src Filter	State	Type	Interface	Src IP	Pref	Gateway	Name
Table vpnlocal, From all							
Table dhcp1, From 0.0.0.0							
Table main, From all							
10.0.8.0/24	up	direct-boot	eth0	10.0.8.220	0	-	boxnet
127.0.1.0/24	up	direct-kernel	tap0	127.0.1.1	0	-	
127.0.2.0/24	up	direct-kernel	tap1	127.0.2.1	0	-	
127.0.3.0/24	up	direct-kernel	pvpn0	127.0.3.1	0	-	
127.0.3.0/24	up	direct-kernel	tap2	127.0.3.1	0	-	
172.16.0.0/24	up	direct-boot	eth2	172.16.0.221	0	-	DMZ-direct
62.99.0.0/24	up	direct-boot	eth1	62.99.0.221	0	-	ISP1
Table default, From all							
0.0.0.0/0	up	gateway-boot		62.99.0.221	100	62.99.0.254	default-isp1

Figures

1. st_wan.png
2. add_static_ISP_address.png
3. routing_static_01.png