How to Configure CloudGen Firewall and Web Application Firewall Integration

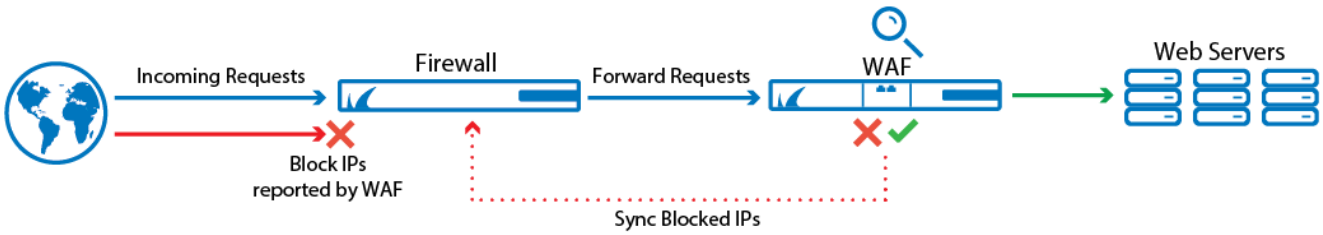
https://campus.barracuda.com/doc/96025927/

The Barracuda Web Application Firewall (WAF) and CloudGen Firewall can work in tandem to block IP addresses from which malicious activity was detected. While the WAF is very good at detecting application layer attacks, the CloudGen Firewall is more efficient on the network layer. Connections blocked by the firewall are never forwarded to the WAF, thereby freeing resources that would otherwise have to be used to block known-bad connections.

The CloudGen Firewall is located at the perimeter with the WAF behind it. IP addresses that are blocked by the WAF are synced to the fourth custom external network object on the firewall via REST API calls. For the WAF to see the public IP address of the request and to block the public IP address associated with the request, the WAF must use the firewall as the default gateway.

Blocking IP Addresses for a Detected Attack:

1. Incoming HTTP/HTTPS connections are forwarded to the WAF.
2. If an attack is detected by the WAF, the attack is blocked and the IP address is added to the CustomExternalNetworkObject4 on the CloudGen Firewall via REST API call.
3. Subsequent attacks from the blocked IP address are blocked on the firewall, freeing up resources on the WAF.
4. After the defined timeout, the IP address is removed from the blocked IP addresses on the WAF and removed from the custom external network object on the firewall via REST API call.



Limitations for High Availability Clusters in the Public Cloud

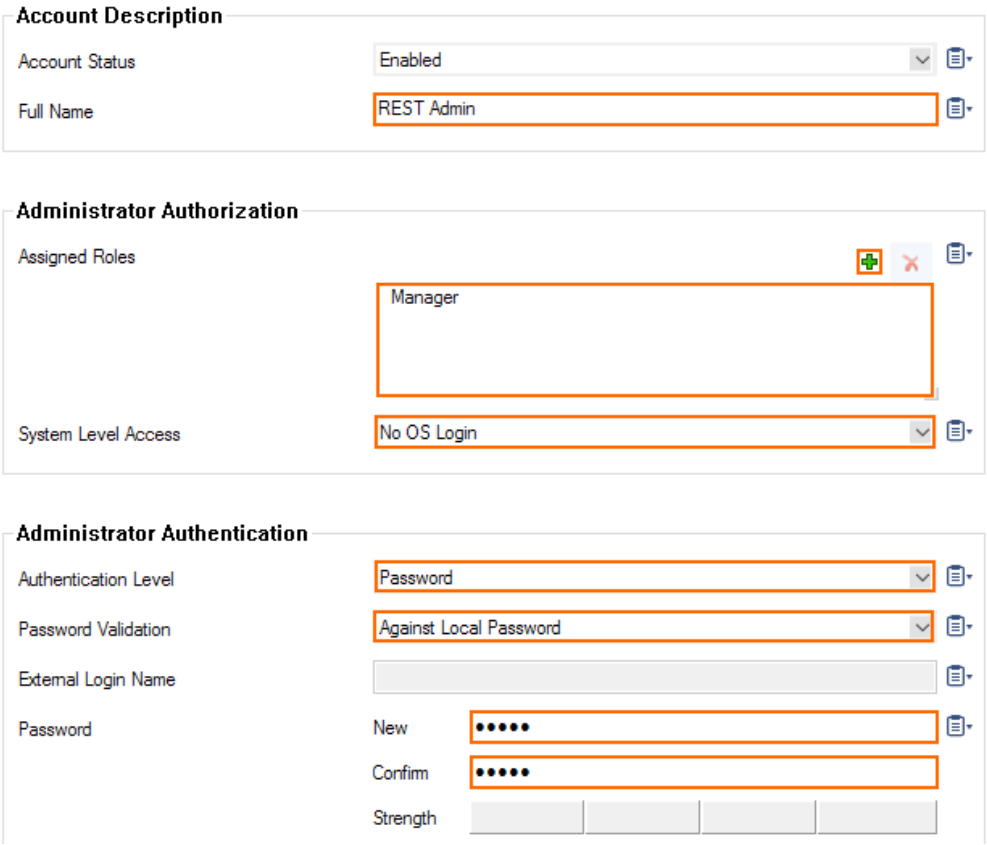
- The WAF can only send REST API calls to one firewall. High availability CloudGen Firewall clusters in the public cloud cannot be both updated by one REST API call. An internal load balancer between the WAF and the firewalls can be used to update only the active firewall.

Before You Begin

- The WAF must use the firewall as the default gateway.
- In the public cloud, the WAF and the firewall must be deployed into two different subnets.

Step 1. Configure Admin for Accessing the REST API

1. Go to **CONFIGURATION > Configuration Tree > Box > Administrators**.
2. Click **Lock**.
3. In the **Administrators** section, click **+** to add an administrator account.
4. Enter `restadmin` for the **Name** and click **OK**. The **Administrators** window opens.
5. Configure the admin:
   - **Full Name** – Enter REST `Admin`.
   - **Assigned Roles** – Select **Manager**.
   - **System Level Access** – Select **No OS Login**.
   - **Authentication Level** – Select **Password**.
   - **Password Validation** – Select **Against Local Password**.
   - **Password** – Enter the password.



   - **(optional) Peer IP Restriction** – Add the IP address of the WAF and remove the **0.0.0.0/0** entry.

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

Step 2. Enable REST API for HTTP or HTTPS

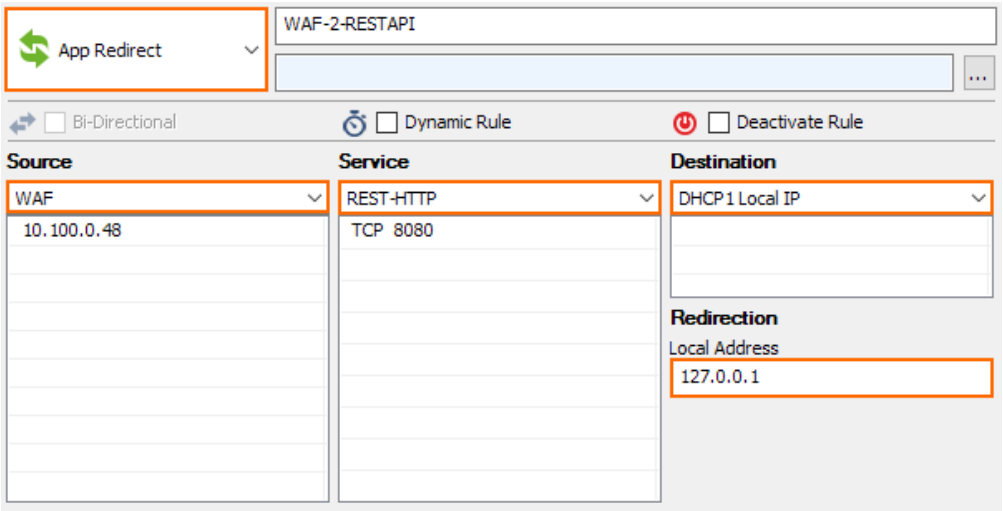
1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > REST API Service**.
2. Click **Lock**.
3. Verify that either the **HTTP** or **HTTPS Interface** of the REST API is enabled. For more information, see REST API.
4. Click **Send Changes** and **Activate**.

Step 3. Create App Redirect Rule for REST API Calls from the WAF

Allow REST API calls for HTTP or HTTPS from the WAF and redirect them to the rest daemon listening on 127.0.0.1:8080 (HTTP) or 127.0.0.1:8443 (HTTPS).

Create an access rule to redirect incoming REST API calls to the REST daemon:

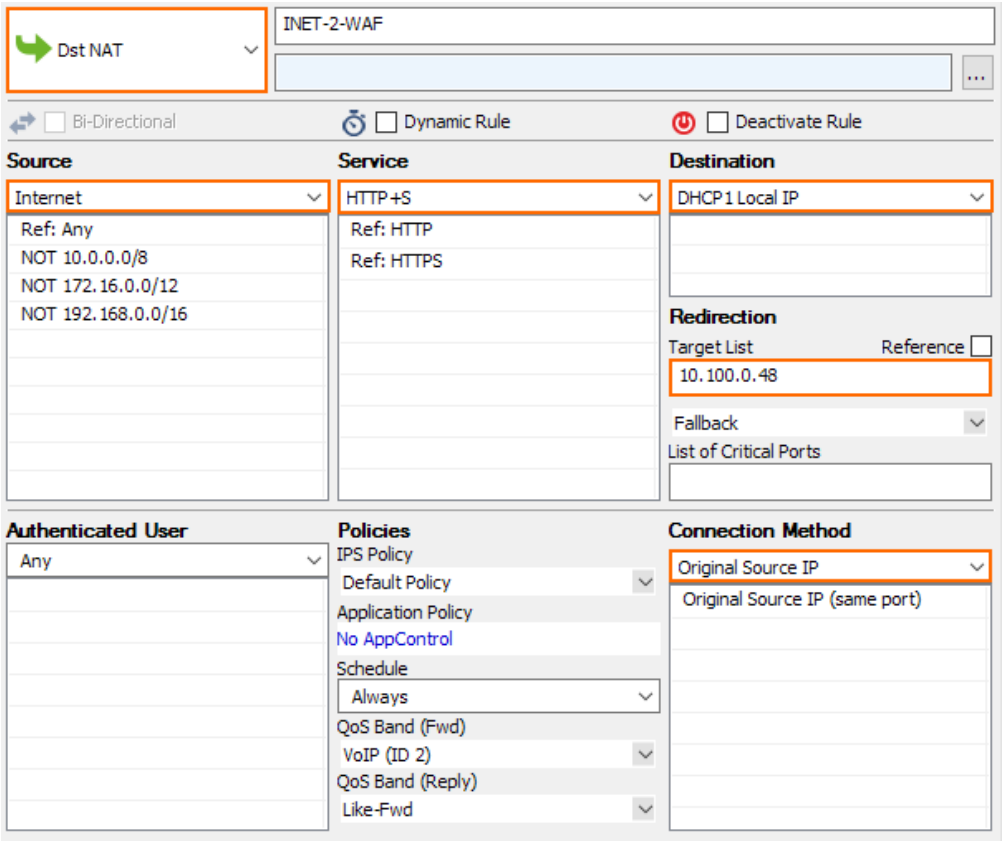
- **Action** – Select **App Redirect**.
- **Source** – Enter the IP address of the WAF.
- **Service** – Select **HTTP** or **HTTPS**.
- **Destination** – Select the box IP address the WAF uses for the REST API call. In the public cloud, select **DHCP Local IP1**.
- **Redirection** – Enter `127.0.0.1` for the HTTP REST endpoint.



Step 3. Create a DST NAT Rule to Forward Web Traffic to the WAF

Create an access rule to forward all incoming HTTP and/or HTTPS traffic to the WAF:

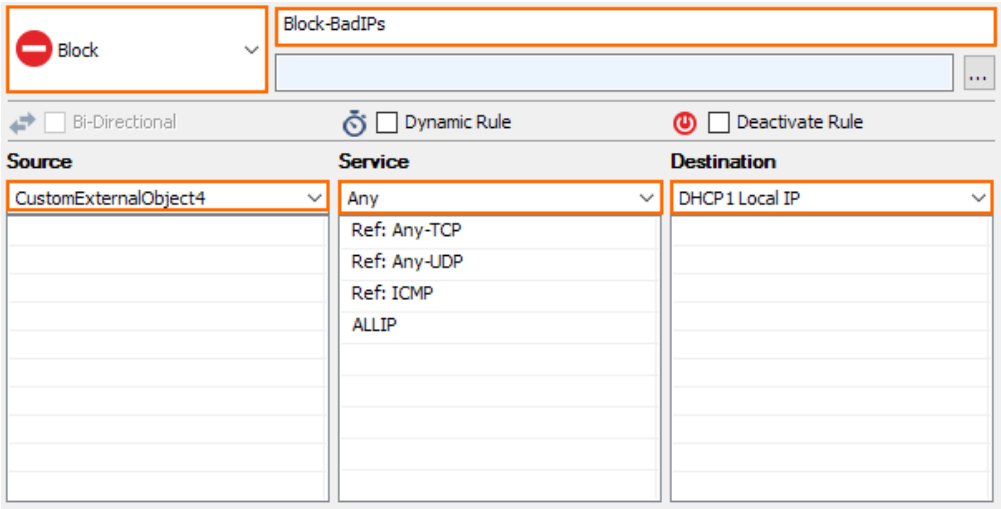
- **Action** – Select **Dst NAT**.
- **Source** – Select **Internet**.
- **Service** – Select **HTTP**, **HTTPS**, or **HTTP+S** depending on the type of web traffic forwarded to the WAF.
- **Destination** – Enter the public IP address of the firewall, or the network object for the dynamic WAN connection.
- **Redirection** – Enter the IP address for the WAF.
- **Connection Method** – Select **Original Source IP**.



Step 4. Create an Access Rule to Block Malicious IP Addresses

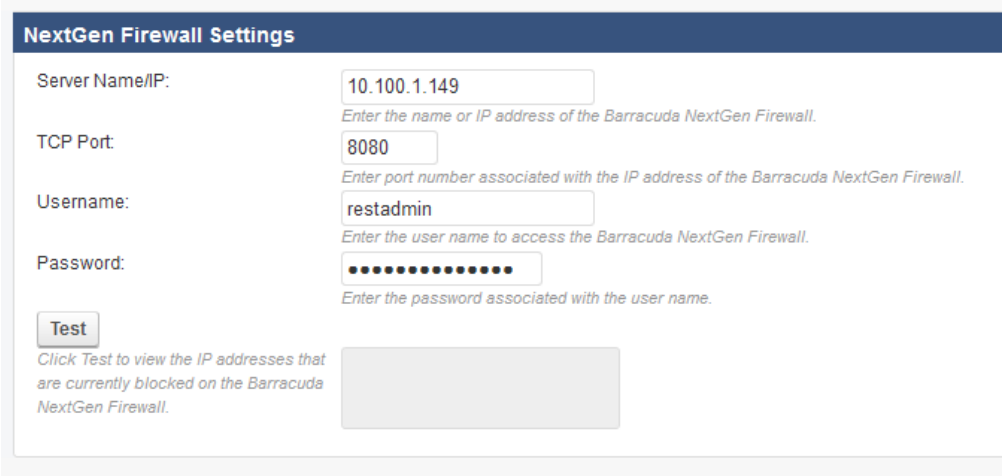
Create an access rule to block the malicious IP address stored in the custom external object number 4.

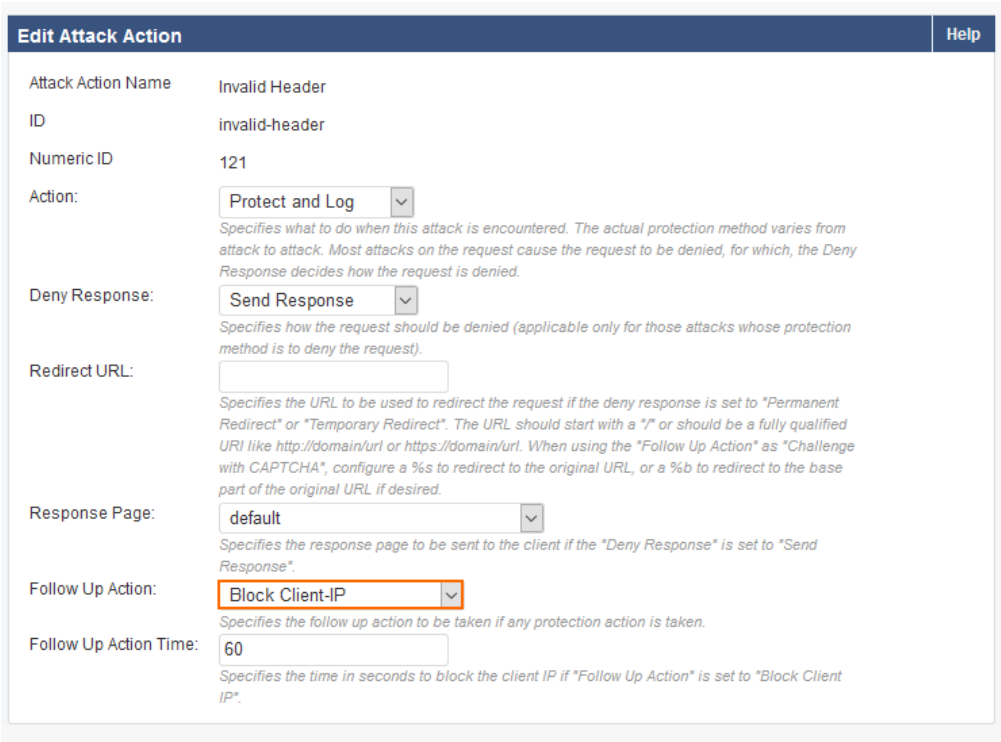
- **Action** – Select **Block**.
- **Source** – Select **CustomExternalObject4** .
- **Service** – Select **HTTP**, **HTTPS**, or **HTTP+S** depending on the type of application.
- **Destination** – Enter the public IP address of the firewall, or the network object for the dynamic WAN connection.



Step 5. Configure the Barracuda Web Application Firewall

Go to **ADVANCED > CloudGen Firewall Settings** and configure the IP address and user for the REST API calls. Go to **SECURITY POLICIES > Action Policies** to edit the Attack action for the security policies to use **Block Client-IP** as the **Follow Up Action**.





For more information, see Upstream Firewall Configuration and Security Policies.

Figures

1. ngf_waf_integration.png
2. WAF_01a.png
3. WAF_01b.png
4. WAF_02.png
5. WAF_03.png
6. WAF_04.png
7. WAF_05.png
8. WAF_06.png