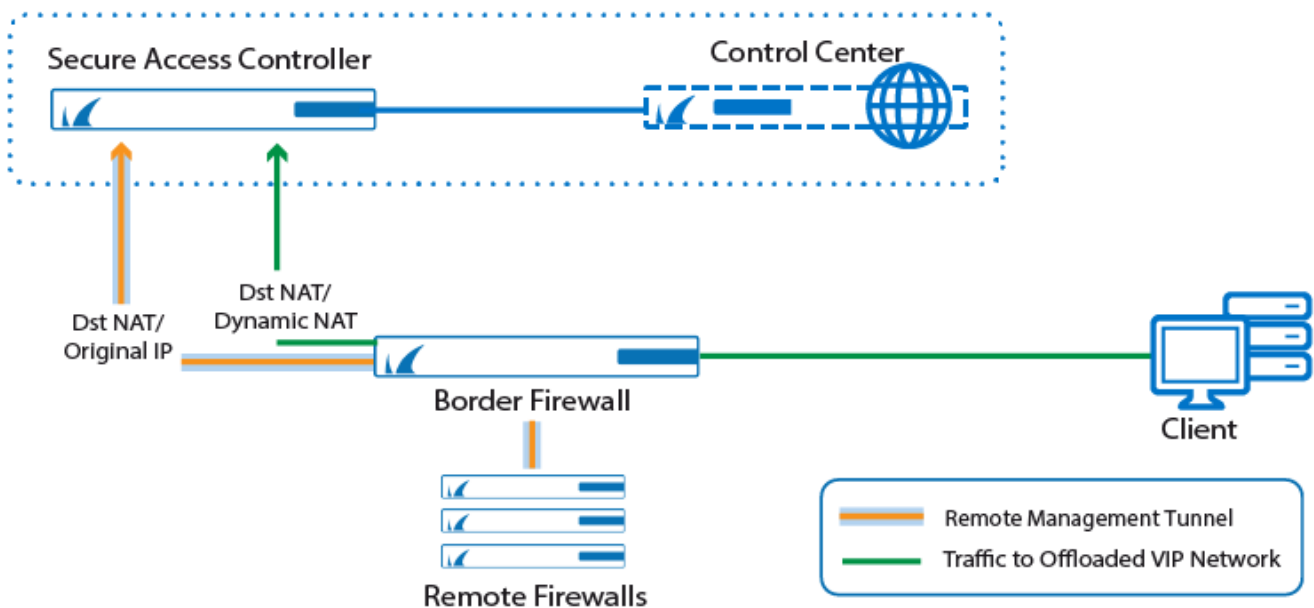


## How to Configure Management Tunnel Offloading using an Access Controller

<https://campus.barracuda.com/doc/73719476/>

For large deployments, you can reduce the load on the Control Center by configuring one or more Secure Access Controllers (VACC) to handle the remote management tunnels. The VACC must be managed by the Control Center and be in the same subnet as the Control Center.



### Before You Begin

- Deploy a Secure Access Controller. Note: The Access Controller must be managed by the Control Center.
- Assign a free network to be used as the VIP network.
- Remove the VIP networks to be offloaded from the Control Center.

### Step 1. Deploy a CloudGen Firewall Image to be Used as the VACC

Deploy a virtual or public cloud CloudGen Firewall. Verify that the number of CPU cores, storage, and RAM are sized according to your VACC model. If your VACC is deployed in Azure or AWS, see [Secure Access Controller in Azure and AWS](#) for more information on how to integrate the VACC with your existing cloud resources.

Barracuda Secure Connector	Model	Number of Licensed Cores	Minimum Storage [GB]	Minimum Memory [GB]
SC 400	VACC400	2	80	2
SC 600	VACC610	4	80	2
SC 800	VACC820	8	80	2

For more information, see [Virtual Systems \(Vx\)](#), [Microsoft Azure Deployment](#), [Amazon AWS Deployment](#)

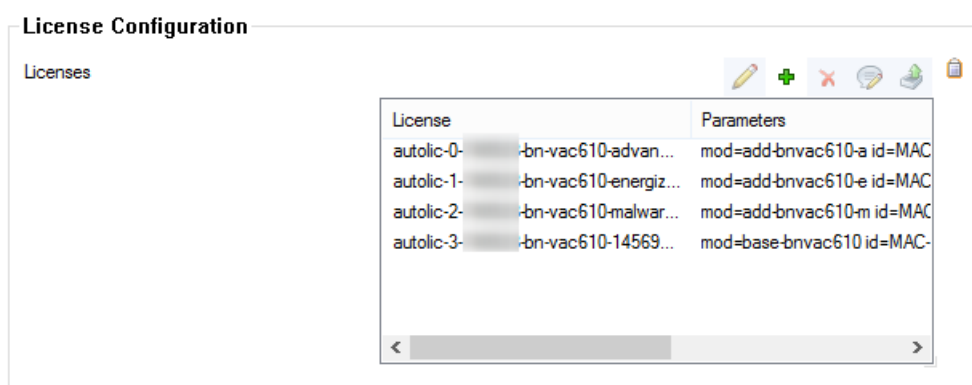
## Step 2. Import the VACC Into the Control Center

The VACC must be managed by the same Control Center that is managing the CloudGen Firewalls.

For more information, see [How to Import an Existing CloudGen Firewall into a Control Center](#).

## Step 3. License the Secure Access Controller

License and activate the VACC using Barracuda Activation on the Control Center. The licenses are automatically downloaded and assigned to the VACC. Go to **your VACC** > **Box Licenses** and verify that the licenses are installed.

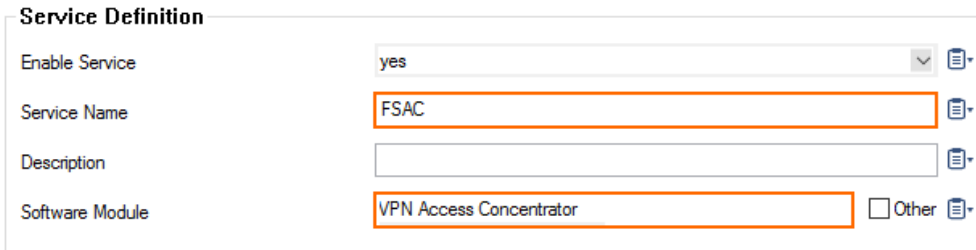


For more information, see [How to Assign and Activate Single Licenses on a Control Center](#).

## Step 4. Create the VACC VPN Service

Create the Access Controller VPN service.

1. Go to **your Cluster > Virtual Servers > your virtual server > Assigned Services**.
2. Right-click **Assigned Services** and select **Create Service**.
3. Enter a **Service Name**. The name must be unique and no longer than six characters. The service name cannot be changed later.
4. From the **Software Module** list, select **VPN Access Controller**.



5. (optional) Change the **Service IPs**. For more information, see [How to Configure Services](#).
6. Click **Finish**.
7. Click **Activate**.

## Step 5. Add VIP Networks to the Access Controller

Add the VIP network to the Access Controller.

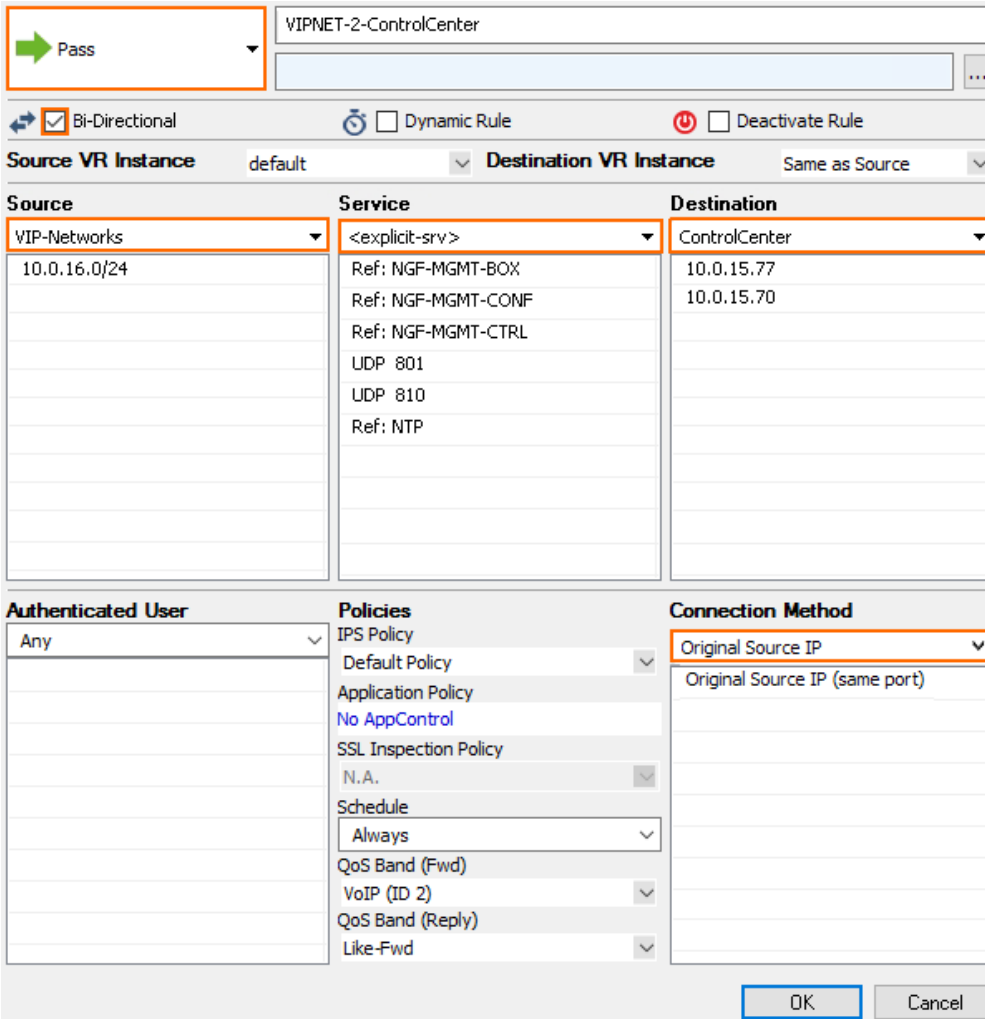
1. Go to **your virtual server > Assigned Services > VPNAC > SAC VPN Settings**.
2. Click **Lock**.
3. Click **+** to add a **VIP Network**. The **VIP Networks** window opens.
4. Enter a **Name** and click **OK**.
5. Enter the network address of the VIP network in **Network Address**. E.g., 10.0.16.0
6. Select the **Netmask**. E.g., **24-bit**
7. Click **OK**.
8. Click **Send Changes** and **Activate**.

## Step 6. Configure an Access Rule to Allow Traffic to the Control Center

Create an access rule allowing management traffic to and from the Access Controller to the Control Center.

1. Go to **CONFIGURATION > Configuration Tree > your Access Controller > your virtual server > Assigned Services > Firewall > Forwarding Rules**.
2. Click **OK**.
3. Right-click in the ruleset and click **New** and **Rule** in the context menu.
4. Create the following access rule:

- **Action** – Select **Pass**.
- **Name** – Enter a name.
- **Bi-Directional** – Enable **Bi-Directional**.
- **Source** – Select a network object containing the offloaded VIP networks.
- **Service** – Select **Explicit** and add **NGF-MGMT-BOX, NGF-MGMT-CONF, NGF-MGMT-CTRL, NTP**, UDP Port 801, UDP Port 810 and authentication services as needed (E.g., **LDAP**).
- **Destination** – Select a network object containing both the box level and CC level IP address of the Control Center.
- **Connection Method** – Select **Original Source IP**.



The screenshot shows the configuration for a rule named "VIPNET-2-ControlCenter". The rule is configured with the following settings:

- Action:** Pass
- Name:** VIPNET-2-ControlCenter
- Bi-Directional:**
- Dynamic Rule:**
- Deactivate Rule:**
- Source VR Instance:** default
- Destination VR Instance:** Same as Source
- Source:** VIP-Networks (10.0.16.0/24)
- Service:** <explicit-srv> (Ref: NGF-MGMT-BOX, NGF-MGMT-CONF, NGF-MGMT-CTRL, UDP 801, UDP 810, Ref: NTP)
- Destination:** ControlCenter (10.0.15.77, 10.0.15.70)
- Authenticated User:** Any
- Policies:**
  - IPS Policy: Default Policy
  - Application Policy: No AppControl
  - SSL Inspection Policy: N.A.
  - Schedule: Always
  - QoS Band (Fwd): VoIP (ID 2)
  - QoS Band (Reply): Like-Fwd
- Connection Method:** Original Source IP

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

## Step 7. Create a Gateway Route on the Box Level of the Control Center

If the Control Center and the SAC are in the same subnet, you must create a gateway route for the VIP network using the IP address the VPNAC is listening on as the gateway. If the SAC can be reached via

the default gateway of the Control Center, the gateway route is not needed.

Add a gateway route to the VIP network and activate the network changes:

- **Target Network Address** - Enter the VIP network. E.g., 10.0.16.0/24
- **Route Type** - Select **gateway**.
- **Gateway** - Enter the IP address the VPNAC service is listening on.

Route Configuration	
Target Network Address	<input type="text" value="10.0.16.0/24"/>
Route Type	<input type="text" value="gateway"/>
Interface Name	<input type="text"/> <input type="checkbox"/> Other
Gateway	<input type="text" value="10.0.15.8"/>
Route Metric	<input type="text"/>
Source Address	<input type="text"/>
Trust Level	<input type="text" value="Unclassified"/>
Default Gateway	<input type="text"/>
Route Origin	<input type="text" value="User created"/>
Active	<input type="text" value="yes"/>

For more information, see [How to Configure Gateway Routes](#).

## Step 8. Configure a Gateway Route and Access Rules on the Border Firewall

If the border firewall also acts as the default gateway in your network, create a gateway route for the VIP network and an access rule to allow traffic to the VIP network. The second access rule redirects incoming management tunnel traffic from the remote CloudGen Firewalls to the Access Controller.

### Step 8.1 Add a Gateway Route

Add a gateway route to the VIP network and activate the network changes:

- **Target Network Address** - Enter the VIP network. E.g., 10.0.16.0/24
- **Route Type** - Select **gateway**.
- **Gateway** - Enter the IP address the VPNAC service is listening on.

**Route Configuration**

Target Network Address	<input type="text" value="10.0.16.0/24"/>	
Route Type	<input type="text" value="gateway"/>	
Interface Name	<input type="text" value=""/>	<input type="checkbox"/> Other
Gateway	<input type="text" value="10.0.15.8"/>	
Route Metric	<input type="text" value=""/>	
Source Address	<input type="text" value=""/>	
Trust Level	<input type="text" value="Unclassified"/>	
Default Gateway	<input type="text" value=""/>	
Route Origin	<input type="text" value="User created"/>	
Active	<input type="text" value="yes"/>	

For more information, see [How to Configure Gateway Routes](#).

### Step 8.2. Add an Access Rule to Allow Traffic to the VIP Network

Create an access rule to allow traffic from the LAN to the VIP network:

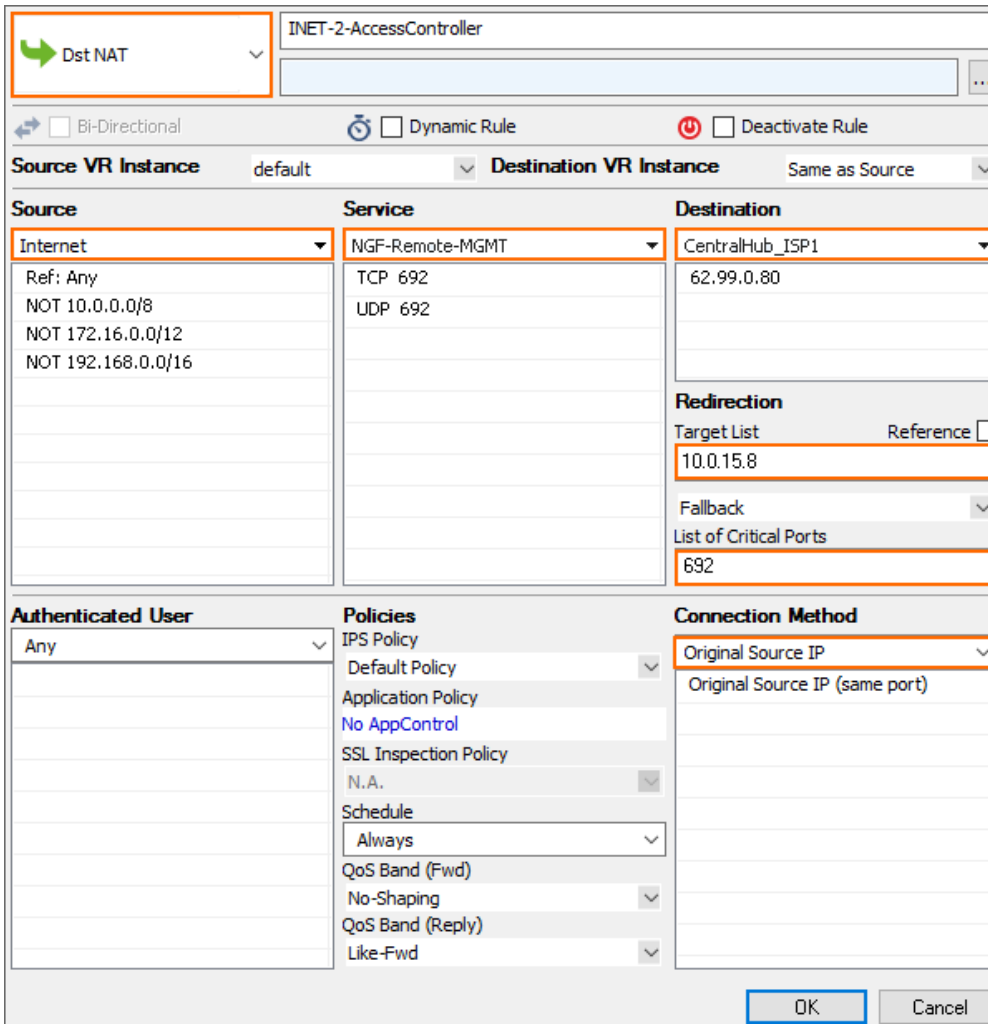
- **Action** - Select **Pass**.
- **Name** - Enter a name.
- **Source** - Select **Trusted Network**.
- **Service** - Select all services you need to access on the remote CloudGen Firewall.
- **Destination** - Enter the VIP network. E.g., 10.0.16.0/24
- **Connection Method** - Select **Dynamic NAT**.

<input type="checkbox"/> Pass			LAN-2-VIPNetwork		
<input type="checkbox"/> Bi-Directional			<input type="checkbox"/> Dynamic Rule		
<input type="checkbox"/> Deactivate Rule					
Source VR Instance		default	Destination VR Instance		Same as Source
<b>Source</b>	<b>Service</b>	<b>Destination</b>			
Trusted LAN	NGF-MGMT-BOX	VIP-Networks			
Ref: Trusted LAN Networks Ref: Trusted Next-Hop Networks	Ref: NGF-MGMT-CONF Ref: NGF-MGMT-CTRL Ref: NGF-MGMT-DHCP Ref: NGF-MGMT-EVENT Ref: NGF-MGMT-FW Ref: NGF-MGMT-LOG Ref: NGF-MGMT-MAIL Ref: NGF-MGMT-STAT	10.0.16.0/24			
<b>Authenticated User</b>	<b>Policies</b>	<b>Connection Method</b>			
Any	IPS Policy Default Policy Application Policy No AppControl SSL Inspection Policy N.A. Schedule Always QoS Band (Fwd) VoIP (ID 2) QoS Band (Reply) Like-Fwd	Dynamic NAT			
		Dynamic NAT			
		OK		Cancel	

### Step 8.3 Add a Dst NAT Access Rule for Incoming MGMT Tunnel Traffic

Incoming management tunnel traffic must be redirected to the Access Controller.

- **Action** – Select **Dst NAT**.
- **Name** – Enter a name.
- **Source** – Select **Internet**.
- **Service** – Select **Explicit** and add a service entry for TCP traffic on port 692.
- **Destination** – Select **Service IPs**.
- **Target List** – Enter the IP address the CC-VPN service is listening on.
- **List of Critical Ports** – Enter 692.
- **Connection Method** – Select **Original IP**.



**Dst NAT** INET-2-AccessController

Bi-Directional  Dynamic Rule  Deactivate Rule

Source VR Instance: default Destination VR Instance: Same as Source

Source	Service	Destination
Internet Ref: Any NOT 10.0.0.0/8 NOT 172.16.0.0/12 NOT 192.168.0.0/16	NGF-Remote-MGMT TCP 692 UDP 692	CentralHub_ISP1 62.99.0.80

**Redirection**  
 Target List Reference   
 10.0.15.8  
 Fallback  
 List of Critical Ports  
 692

Authenticated User	Policies	Connection Method
Any	IPS Policy Default Policy Application Policy No AppControl SSL Inspection Policy N.A. Schedule Always QoS Band (Fwd) No-Shaping QoS Band (Reply) Like-Fwd	Original Source IP Original Source IP (same port)

OK Cancel

#### Step 8.4. Add an Access Rule on the Access Controller to Allow Traffic to the VIP Network

Create an access rule to allow traffic from the IP address of the border firewall to the VIP networks:

- **Action** – Select **Pass**.
- **Name** – Enter a name.
- **Source** – Enter the IP address of the border firewall.
- **Service** – Select **NGF-MGMT-BOX**.
- **Destination** – Enter the VIP network. E.g., 10.0.16.0/24
- **Connection Method** – Select **Original IP**.



Pass
LAN-2-OffloadVIPs

Bi-Directional    
  Dynamic Rule    
  Deactivate Rule

Source VR Instance default    
 Destination VR Instance Same as Source

Source	Service	Destination
<div style="border-bottom: 1px solid #ccc; padding: 2px;">&lt;explicit-src&gt;</div> <div style="padding: 2px;">10.0.15.3</div>	<div style="border-bottom: 1px solid #ccc; padding: 2px;">NGF-MGMT-BOX</div> <div style="padding: 2px;">                     Ref: NGF-MGMT-CONF                      Ref: NGF-MGMT-CTRL                      Ref: NGF-MGMT-DHCP                      Ref: NGF-MGMT-EVENT                      Ref: NGF-MGMT-FW                      Ref: NGF-MGMT-LOG                      Ref: NGF-MGMT-MAIL                      Ref: NGF-MGMT-STAT                 </div>	<div style="border-bottom: 1px solid #ccc; padding: 2px;">VIP-Networks</div> <div style="padding: 2px;">10.0.16.0/24</div>

Authenticated User	Policies	Connection Method
<div style="border-bottom: 1px solid #ccc; padding: 2px;">Any</div>	<div style="padding: 2px;">                     IPS Policy                      Default Policy                      Application Policy                      No AppControl                      SSL Inspection Policy                      N.A.                      Schedule                      Always                      QoS Band (Fwd)                      No-Shaping                      QoS Band (Reply)                      Like-Fwd                 </div>	<div style="border-bottom: 1px solid orange; padding: 2px;">Original Source IP</div> <div style="padding: 2px;">Original Source IP (same port)</div>

## Troubleshooting

- If the remote CloudGen Firewalls are not connecting to the Firewall Control Center, verify that you can ping the VIP assigned to the firewall from the Control Center box level. It may take some time for the CloudGen Firewall to be on the Status Map of the Control Center.
- Verify that the IP address of the border firewall routing the VIP network traffic to the Access Controller is listed as a **Remote Network** of the remote management tunnel. If this IP address is missing, traffic will not be sent through the remote management tunnel.
- Depending on the number of managed firewalls, exporting the PAR file for the Access Controller can take some time.

## Figures

1. CC\_VPN\_Offloading.png
2. deploy\_SAC\_01.png
3. deploy\_SAC\_02.png
4. CC\_VPNOffloading\_04.png
5. CC\_VPNOffloading\_05.png
6. CC\_VPNOffloading\_05.png
7. CC\_VPNOffloading\_07.png
8. CC\_VPNOffloading\_06.png
9. CC\_VPNOffloading\_08.png

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