

How to Deploy the CloudGen Firewall in the Google Cloud via Google Launcher

<https://campus.barracuda.com/doc/72515759/>

You can deploy the Barracuda CloudGen Firewall to the Google Cloud as a gateway or remote connectivity device. The firewall is deployed into a dedicated subnet (public subnet) in the Google Cloud network, and the instances for your cloud-based applications are deployed into backend or private subnets of the network. Each subnet is automatically assigned a dedicated gateway IP address and default route that allow the instances to connect to the Internet via the default Google Cloud gateway. An additional tag-based Google Cloud route is introduced to use the firewall as the default gateway. This route is applied automatically to all backend instances with this tag. Google Cloud firewall rules must be created to allow traffic between the firewall and the backend instances, as well as from the Internet to the firewall. By default, the Google Cloud firewall blocks all traffic, even between two instances in a subnet. The firewall has only a single DHCP network interface with a private IP address. Assign a static or ephemeral (dynamic) external IP address to your firewall to be able to connect to the Google Cloud network, even from outside the network.

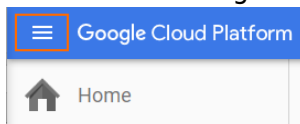
Before You Begin

- Google Cloud account is required.

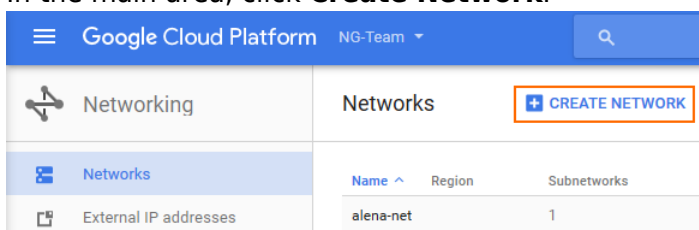
Step 1. Create a Network in the Google Cloud

Create the virtual network you are deploying your firewall to.

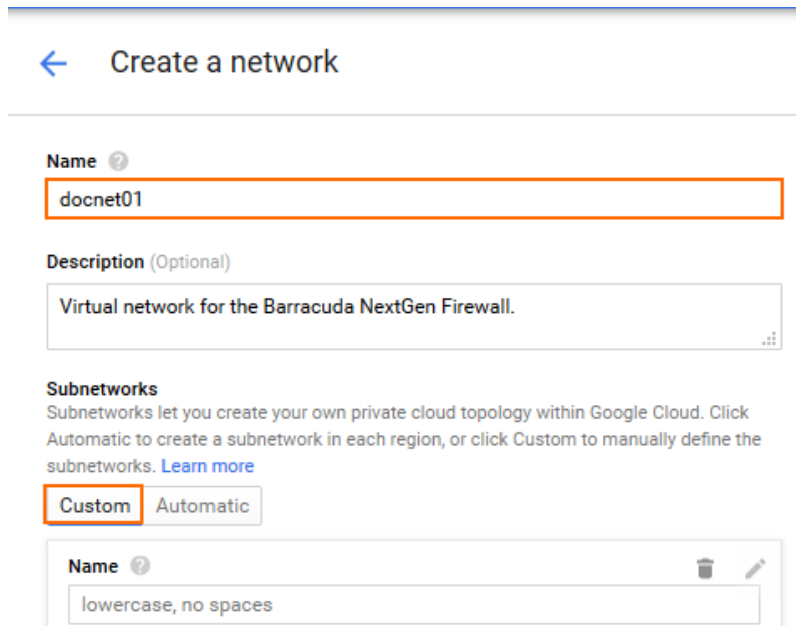
1. Go to <https://console.cloud.google.com>.
2. Click the hamburger menu in the upper-left corner.



3. In the **Compute** section, click **Networking**.
4. In the main area, click **Create Network**.



5. Enter the **Name**.
6. In the **Subnetworks** section, click **Custom**.



← Create a network

Name [?]
docnet01

Description (Optional)
Virtual network for the Barracuda NextGen Firewall.

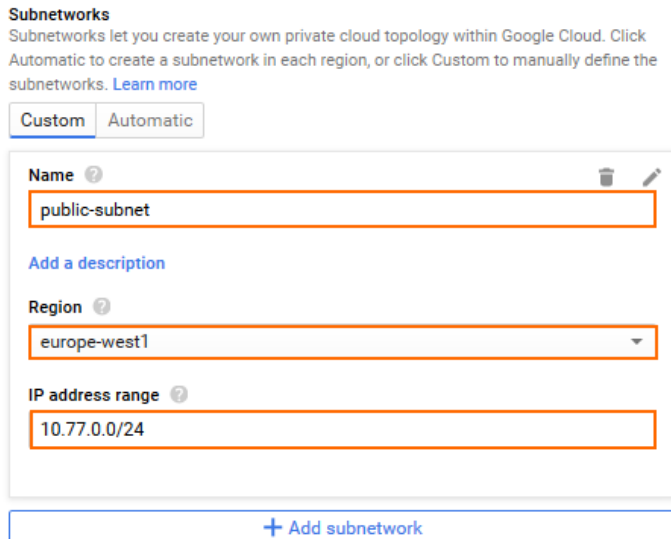
Subnetworks
Subnetworks let you create your own private cloud topology within Google Cloud. Click Automatic to create a subnetwork in each region, or click Custom to manually define the subnetworks. [Learn more](#)

Custom Automatic

Name [?]
lowercase, no spaces

7. Create the public subnet:

- **Name** - Enter **public-subnet**
- **Region** - Select your region.
- **IP address range** - Enter the network in CIDR format. If possible, do not use a network that overlaps with your on-premises network.



Subnetworks
Subnetworks let you create your own private cloud topology within Google Cloud. Click Automatic to create a subnetwork in each region, or click Custom to manually define the subnetworks. [Learn more](#)

Custom Automatic

Name [?]
public-subnet

Add a description

Region [?]
europe-west1

IP address range [?]
10.77.0.0/24

+ Add subnetwork

8. Click **Add subnetwork** and create the private subnet:

- **Name** - Enter **private-subnet**
- **Region** - Select your region.
- **IP address range** - Enter the network in CIDR format. If possible, do not use a network that overlaps with your on-premises network.

Subnetworks

Subnetworks let you create your own private cloud topology within Google Cloud. Click Automatic to create a subnetwork in each region, or click Custom to manually define the subnetworks. [Learn more](#)

Custom Automatic

Name	Region	IP address range
public-subnet	europe-west1	10.77.0.0/24

Name ? ✖ ✎

private-subnet

[Add a description](#)

Region ?

europe-west1

IP address range ?

10.77.1.0/24

9. Click **Create**.

The network is now listed.

Networks

[+ CREATE NETWORK](#)

Name ^	Region	Subnetworks	IP addresses ranges	Gateways	Firewall Rules
docnet01		2			0
	europe-west1	private-subnet	10.77.1.0/24	10.77.1.1	
	europe-west1	public-subnet	10.77.0.0/24	10.77.0.1	

Step 2. Create an External IP Address

Create a static external IP address for your firewall. You can also skip this step and use an ephemeral IP address when creating the firewall instance.

1. Go to <https://console.cloud.google.com>.
2. Click the hamburger menu in the upper-left corner.
3. In the **Compute** section, click **Networking**.
4. In the left menu, click **External IP addresses**.
5. In the main area, click **Reserve static address**.

External IP addresses [+ RESERVE STATIC ADDRESS](#)

<input type="checkbox"/>	Name	External Address	Region	Type v	In use by
--------------------------	------	------------------	--------	--------	-----------

6. Reserve a static address:

- **Name** – Enter a unique name for the external IP address.
- **Type** – Select **Regional**
- **Region** – Select the same region you selected for the public subnet of the network.

← Reserve a static address


Name ?
doc-external-ip01

Description (Optional)
External IP address for the NextGen Firewall F

Type
 Regional
 Global (to be used with Global forwarding rules [Learn more](#))

Region ?
europe-west1

Attached to ?
None

 Static IP addresses not attached to an instance or load balancer are billed at an hourly rate [Pricing details](#)

Reserve **Cancel**

7. Click **Reserve**.

Step 3. Create the Firewall Instance from Cloud Launcher

Deploy a new CloudGen Firewall instance from the Cloud Launcher image.

1. Go to the CloudGen Firewall solution in Cloud Launcher:
<https://console.cloud.google.com/launcher/details/barracuda-release/barracuda-nextgen-firewall-f-series>
2. Click **Launch on Compute Engine**.


Launch on Compute Engine

3. Enter the **Deployment name**.
4. From the **Zone** list, select the region for your new firewall instance.

Deployment name
barracuda-ngf

Zone ?
europe-west1-b


5. Select the **Machine type** with the number of vCPUs corresponding to your CloudGen Firewall license and performance needs. For more information, see [Public Cloud](#).

Machine type 


n1-standard-1 (1 vCPU, 3.75 GB memory) ▼

6. Change **Disk type** to SSD if you plan to use IO-intensive features like WAN Opt, Malware Protection, or HTTP Proxy. Otherwise, leave the default setting to **Standard Persistent Disk**.

Boot Disk

Disk type 

Standard Persistent Disk ▼

Disk size in GB 

20

7. In **Networking**, choose network and subnetwork names for the public subnet you created in Step 1.
8. Leave all default firewall positions checked. You can add more ports, protocols, and IP addresses after deployment.
9. (optional) If you want to use a reserved static address as created in Step 2:
 1. Click **More** to expand the advanced options.
 2. Select your **External IP** from the list.
10. Click **Deploy** to start the deployment.

A window opens, displaying the details. The auto-generated password must later be used for logging into the firewall.

Step 4. (optional) Create Instances in the Private Subnet

Deploy an instance into the private subnet. The backend instances must be tagged to be able to assign routes and firewall rules to them. Do not assign a public IP address to the backend instances.

Step 5. Create a Default Route for Backend Instances

A default route for each subnet with a metric of 1000 is created for each subnet. For the backend instances to use the firewall as the default gateway, create a default route with a metric lower than 1000. Configure the firewall instance as the next-hop, and add the tags identifying the backend instances. The route is automatically applied to all instances with the same tags as listed in the route.

1. Go to <https://console.cloud.google.com>.
2. Click the hamburger menu in the upper-left corner.
3. In the **Compute** section, click **Networking**.

4. In the left menu, click **Routes**.

Routes + CREATE ROUTE 🗑️ DELETE

5. Click **Create route** to create the default route for the backend instances:

- **Name** - Enter a name for the route.
- **Network** - Select the network created in Step 1.
- **Destination IP range** - Enter 0.0.0.0/0.
- **Priority** - Enter a priority lower than 1000. If two routes for the same destination exist, the route with the lower priority is used.
- **Instance tags** - Enter the tags used for each instance that should be routed over the CloudGen Firewall.
- **Next hop** - Select **Specify an instance**.
- **Next hop instance** - Select the firewall instance created in Step 4 from the list.

← Create a route

Name ?

Description (Optional)
⬆️
⬇️
⬆️

Network ?

Destination IP range ?

Priority ?

Instance tags (Optional) ?

Next hop ?

Next hop instance ?

Equivalent [REST](#) or [command line](#)

6. Click **Create**.

Step 6. Create Google Cloud Firewall Rules

Create firewall rules to allow traffic into your virtual network and from the firewall to the backend instances. By default, all traffic is blocked.

1. Go to <https://console.cloud.google.com>.
2. Click the hamburger menu in the upper-left corner.
3. In the **Compute** section, click **Networking**.
4. In the left menu, click **Firewall rules**.
5. In the main area, click **Create firewall rule**.

Firewall rules + CREATE FIREWALL RULE 🗑️ DELETE

6. Create a firewall rule to allow incoming traffic to your firewall instances:
 - **Name** - Enter the firewall rule name.
 - **Network** - Select the network created in Step 1.
 - **Source filter** - Select **Allow from any source (0.0.0.0/0)**.
 - **Allowed protocols and ports** - Enter a semicolon-delimited, lower-case list of protocols and ports in the following format. tcp:807 is required to be able to connect via Barracuda Firewall Admin. E.g., Use `tcp:0-65535;udp:0-65535;icmp` to allow all TCP, UDP, and ICMP traffic to the firewall.
 - **Target tags** - Enter the tag assigned to the firewall in Step 3.

← Create a firewall rule

By default, incoming traffic from outside your network is blocked. To allow incoming traffic, set up a firewall rule. Firewall rules regulate only incoming traffic to an instance. When a connection is established with an instance, traffic is permitted in both directions over that connection. [Learn more](#)

Name ?

Description (Optional)

Network ?

Source filter ?

Allowed protocols and ports ?

Target tags (Optional) ?

Create Cancel


Equivalent [REST](#) or [command line](#)

7. Create a firewall rule to allow all traffic from selected subnets to the firewall:
 - **Name** - Enter the firewall rule name.
 - **Network** - Select the network created in Step 1.
 - **Source filter** - Select **Subnetworks**.


- **Subnetworks** – Select the public subnet and all private subnets with instances that are using the firewall as the default gateway.
- **Allowed protocols and ports** – Enter a semicolon-delimited, lower-case list of protocols and ports. E.g., `tcp:0-65535;udp:0-65535;icmp` to allow all TCP, UDP, and ICMP traffic between instances in these subnets.


← Create a firewall rule


By default, incoming traffic from outside your network is blocked. To allow incoming traffic, set up a firewall rule. Firewall rules regulate only incoming traffic to an instance. When a connection is established with an instance, traffic is permitted in both directions over that connection. [Learn more](#)


Name 


Description (Optional)

Network 

Source filter 

Subnetworks 

Allowed protocols and ports 

Target tags (Optional) 

Equivalent [REST](#) or [command line](#)

8. Click **Create**.

You can now log in to your firewall instance running in the Google Cloud using Barracuda Firewall Admin:

- **IP address** – Enter the external IP address created in Step 2.
- **User** – Enter root
- **Password** – Enter the auto-generated password.



Firewall Control Center SSH

IP Address / Name

Username

Password

Serial Console

The Google Cloud Platform allows you to enable and connect to the serial port of your firewall instance. This feature allows you to troubleshoot your CloudGen Firewall in case of a misconfiguration in a web-based serial console.

For more information, see [How to Access the Serial Console on the CloudGen Firewall in the Google Cloud](#).

Next Steps

- You can now license and start using your firewall. For more information, see [Getting Started](#).

Figures

1. gcc_networking01.png
2. gcc_networking02.png
3. gcc_networking03.png
4. gcc_networking04.png
5. gcc_networking05.png
6. gcc_networking06.png
7. gcc_externalIP_01.png
8. gcc_externalIP_02.png
9. google_launcher_01.png
10. google_launcher_02.png
11. google_launcher_03.png
12. google_launcher_04.png
13. gcc_routes_01.png
14. gcc_routes_02.png
15. gcc_firewall_rule01.png
16. gcc_firewall_rule02.png
17. gcc_firewall_rule03.png
18. gcc_done.png

© Barracuda Networks Inc., 2019 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.