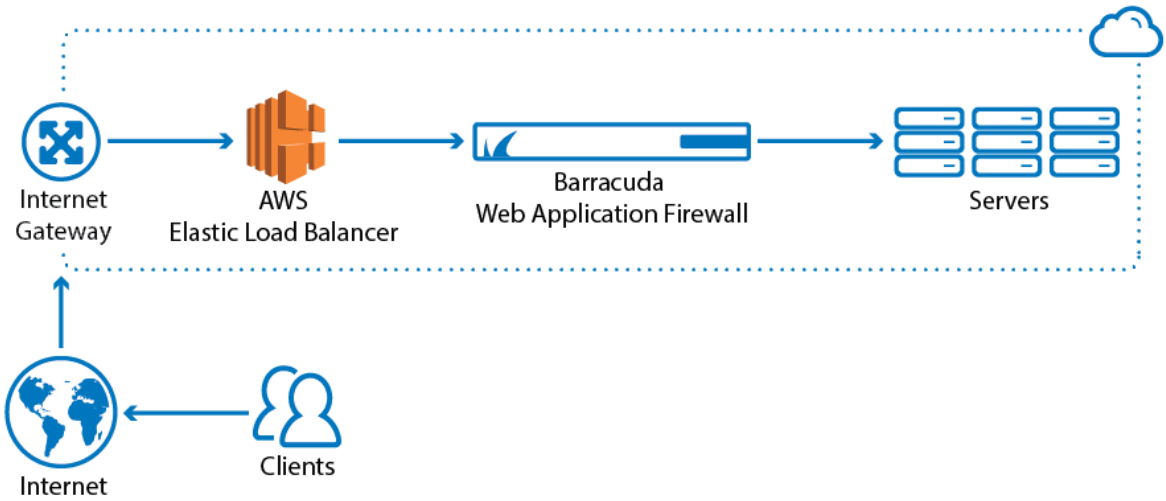
Amazon Web Services

https://campus.barracuda.com/doc/28967064/

The Barracuda CloudGen WAF for AWS provides proven application security and data loss prevention for your applications on Amazon Web Service (AWS), including:

- Detecting and blocking attacks including SQL injections, Cross-Site Scripting, malware uploads, and volumetric or application DDoS.
- Authentication and access control allowing organizations to exercise strong user control.
- Scanning of outbound traffic for sensitive data, with admin control of masking or blocking information to prevent data leakage.
- Built-in load balancing and session management, allowing organizations to manage multiple applications behind a single instance of the Barracuda CloudGen WAF.

The Barracuda CloudGen WAF on Amazon Web Services protects your applications in the cloud.



Public cloud hosted deployment of the Barracuda CloudGen WAF on Amazon Web Services currently supports One-Arm Proxy Mode.

To meet a variety of performance requirements, the M3 Medium, M3 Large, M3 Extra Large, and M3.2 Extra Large instance types are supported. Depending on the instance type, you can have:

- Up to 8 vCPUs.
- Up to 30 GB of memory.
- Up to 30 private IP addresses per network interface. To ensure that services are available over the Internet, you can allocate a public IP address, or Elastic IP address (EIP), to each private IP address.

The Barracuda CloudGen WAF is available hourly in the AWS Marketplace or you can bring your own license (BYOL).

Licensing Options

The Barracuda CloudGen WAF AMI is available on Amazon Web Services with the following options:

- Bring Your Own License (BYOL)
- Pay-As-You-Go/Hourly (PAYG)
- Usage Based/Metered

Bring Your Own License (BYOL)

With the Bring Your Own License (BYOL) option, you are required to get the Barracuda CloudGen WAF for AWS token, either by:

- Providing the required information for a free evaluation at https://www.barracuda.com/purchase/evaluation OR
- Purchasing online at https://www.barracuda.com/purchase.
  With this license option, there will be no Barracuda CloudGen WAF Software charges, but Amazon Elastic Compute Cloud (Amazon EC2) usage charges on Amazon will apply.

BYOL Models and Instance Types

For BYOL, Barracuda offers four models. The table below lists each model, the corresponding Instance Type to be used in Amazon Web Services, the default CPU and Memory for the instance, and the number of Private IP addresses that can be associated per ENI.

If you want to increase the performance of a license that you have already purchased, you can buy additional cores from Barracuda and reconfigure your VM for a larger instance type.

Barracuda CloudGen WAF Model	Supported Instance Type in Amazon Web Services	Default vCPU	Default Memory	Maximum Number of Private IP Addresses per ENI
Level 1	m3.medium	1	3.75 GB	6
Level 5	m3.large	2	7.5 GB	10
	m4.large	2	8 GB	10
Level 10	m3.xlarge	4	15 GB	15
	m4.xlarge	4	16 GB	15
Level 15	m3.2xlarge	8	30GB	30
	m4.2xlarge	8	32 GB	15

PAYG/Hourly

With the **Pay-As-You-Go (PAYG)/Hourly** licensing option, you complete the evaluation and purchase of the Barracuda CloudGen WAF entirely within the AWS Marketplace. After the Barracuda CloudGen WAF instance is launched from the marketplace, it is licensed provisioned automatically. You are charged hourly (per instance) for both the Barracuda CloudGen WAF Software and Amazon Elastic Compute Cloud (Amazon EC2) usage on Amazon. For pricing information, refer to the AWS Marketplace: Barracuda Web Application Firewall (WAF) – PAYG, Barracuda Web Application Firewall (WAF) – BYOL and Barracuda Web Application Firewall (WAF) – Metered.

PAYG/Hourly Model and Instance Types

For Hourly / PAYG licensing, Barracuda offers four models. The following table lists each instance type with its CPU, memory, and the number of Private IP addresses that can be associated per ENI.

If you want to increase the performance of an existing VM, configure it with a larger instance type on AWS and you will be charged accordingly by Amazon. The VM will automatically be reconfigured by Amazon with the resources and capabilities of the larger instance type.

Barracuda CloudGen WAF Model	Supported Instance Type in Amazon Web Services	Default vCPU	Default Memory	Maximum Number of Private IP Addresses per ENI
Level 1	m3.medium	1	3.75 GB	6
Level 5	m3.large	2	7.5 GB	10
Level 10	m3.xlarge	4	15 GB	15
Level 15	m3.2xlarge	8	30 GB	30

Usage Based/Metered

The licensing of the Usage Based/Metered option is same as Hourly/PAYG licensing option i.e. the evaluation and pricing of the Barracuda CloudGen WAF is done entirely within the AWS Marketplace. After the instance is launched, it is licensed automatically.

The Barracuda CloudGen WAF Usage Based instance has two pricing components:

- Charges based on the total bandwidth consumed across all deployed Barracuda CloudGen WAF instances.
- Standard Amazon Elastic Compute Cloud (EC2) charges per instance.

When the Barracuda CloudGen WAF instance is deployed with Usage Based licensing, per instance license charges are not applicable. The pricing is based on the total throughput across all deployed Barracuda CloudGen WAF instances on a specific account (launched with Usage based billing).

Usage Based/Metered Model and Instance Types

For **Usage Based/Metered** licensing, Barracuda offers four models. The following table lists each instance type with its CPU, memory, and the number of Private IP addresses that can be associated per ENI.

If you want to increase the performance of an existing VM, configure it with a larger instance type on AWS and you will be charged accordingly by Amazon. The VM will automatically be reconfigured by Amazon with the resources and capabilities of the larger instance type.

Supported Instance Type in Amazon Web Services	Default vCPU	Default Memory	Maximum Number of Private IP Addresses per ENI
m3.large	2	7.5 GB	10
m3.xlarge	4	15 GB	15
m4.large	2	8 GB	10
m4.xlarge	4	16 GB	15

Before You Begin

Before you deploy the Barracuda CloudGen WAF on Amazon Web Services, choose the licensing option (Bring Your Own License (BYOL) or Hourly / Metered). Then set up an Amazon Virtual Private Cloud (VPC).

A Virtual Private Cloud (VPC) is an isolated virtual network on Amazon Web Services (AWS) Cloud where you can launch AWS resources, such as Amazon EC2 instances. When creating a VPC, the IP address(es) should be in the form of Classless Inter-Domain Routing (CIDR) block (for example, 10.0.0.0/16). In a VPC, you can select your own IP address range, create subnets, configure routing tables and network gateways.

The VPC cannot be larger than /16.

For more information about CIDR notation, refer to Classless Inter-Domain Routing on Wikipedia. For information about the number of VPCs that you can create, refer to Amazon VPC Limits.

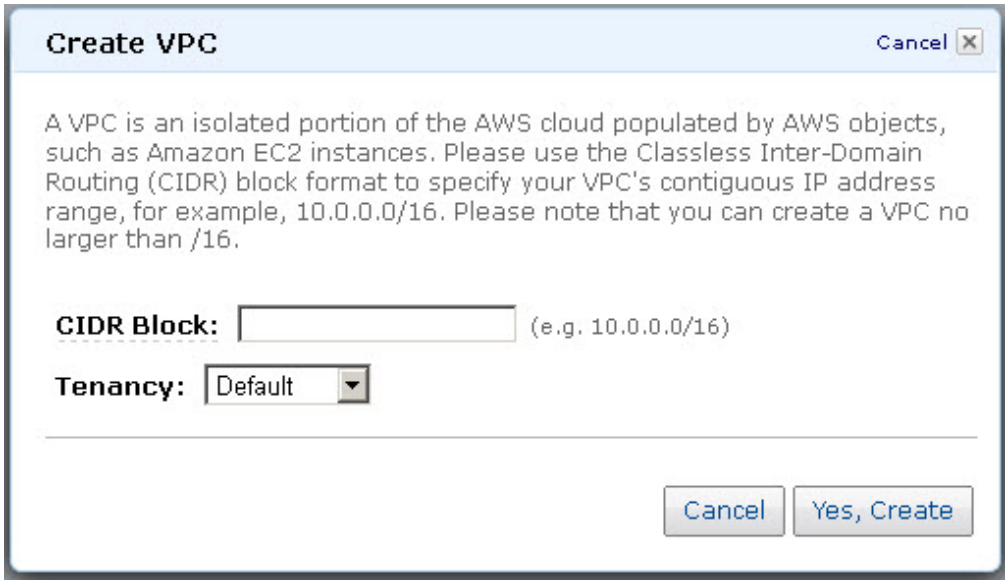
To set up a VPC, complete the following steps. If you have already configured a VPC for the Barracuda CloudGen WAF, you can skip the steps below and continue with "Deploying the Barracuda CloudGen WAF on Amazon Web Services".

Step 1 - Create the Amazon VPC Cloud

Perform the steps below to create a VPC:

1. Go to the AWS Management Console.
2. In the **Compute & Networking** section, click **VPC**:

3. From the **VPC Dashboard**, select **Your VPCs** under **VIRTUAL PRIVATE CLOUDS**.
4. Click **Create VPC**.
5. In the **Create VPC** dialog box, do the following:
    1. Enter the IP address in the **CIDR Block** field.
    2. Select *Default* from the **Tenancy** drop-down list:



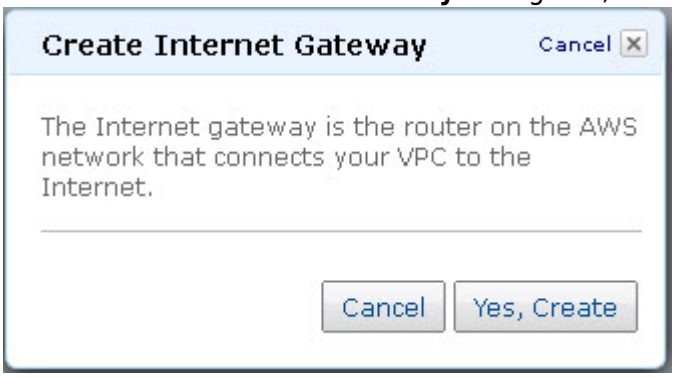
6. Click **Yes, Create**.

Step 2 - Add an Internet Gateway to the VPC

By default, the instances launched on the Virtual Private Cloud (VPC) cannot communicate with the internet until an Internet Gateway is created and attached to the VPC.

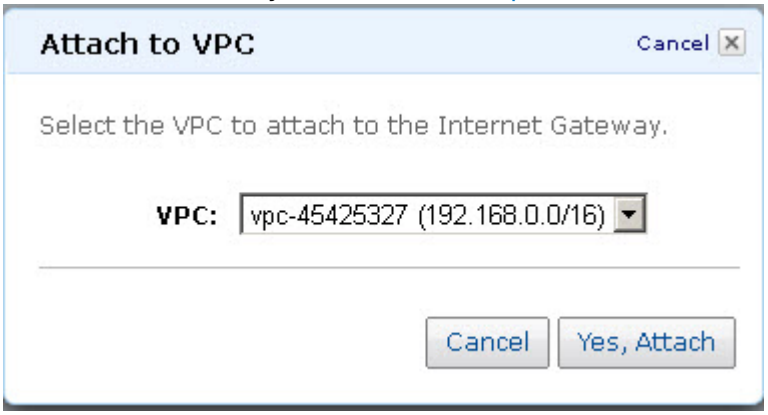
Perform the following steps to add an internet gateway to your VPC:

1. From the **VPC Dashboard**, select **Internet Gateways** under **VIRTUAL PRIVATE CLOUDS**.
2. Click **Create Internet Gateway**.
3. In the **Create Internet Gateway** dialog box, click **Yes, Create**:



4. Select the internet gateway created in the above step, and then click **Attach to VPC**:

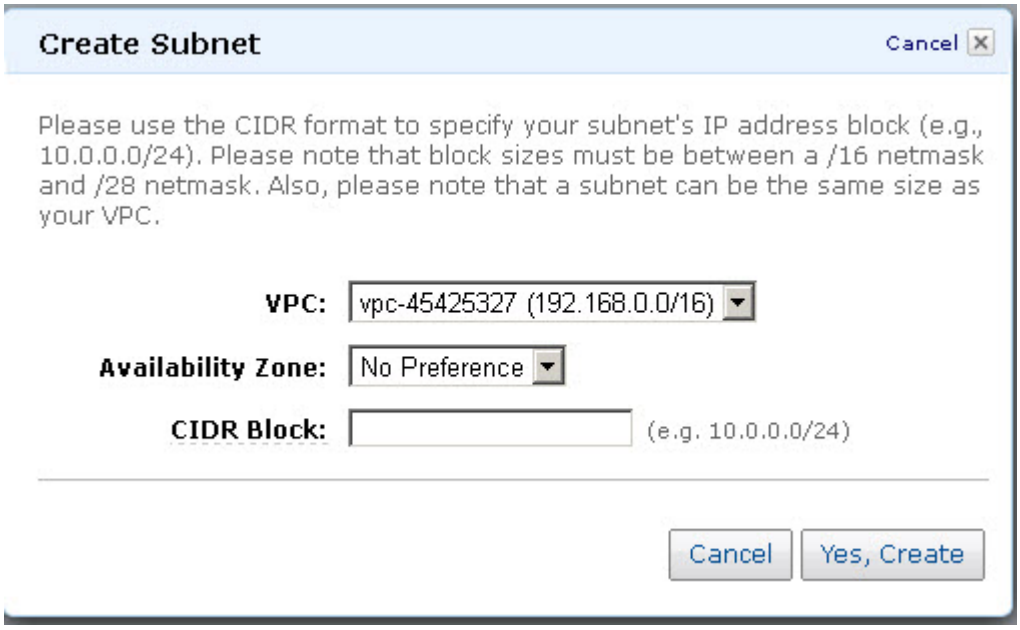
5. Select the VPC that you created in Step 1, and then click **Yes, Attach**:



Step 3 - Add a Subnet to the VPC

Perform the following steps to add a subnet to your VPC:

1. From the **VPC Dashboard**, select **Subnets** under **VIRTUAL PRIVATE CLOUDS**.
2. Click **Create Subnet**.
3. In the **Create Subnet** dialog box, do the following:
    1. Select the created VPC from the **VPC** drop-down list.
    2. Select the availability zone that your VPC resides from the **Availability Zone** drop-down list.
    3. Specify the IP address(es) in the **CIDR Block** field:

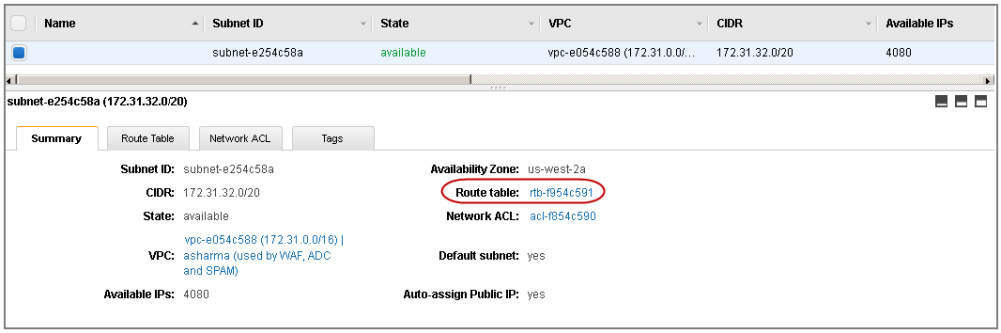


4. Click **Yes, Create**.

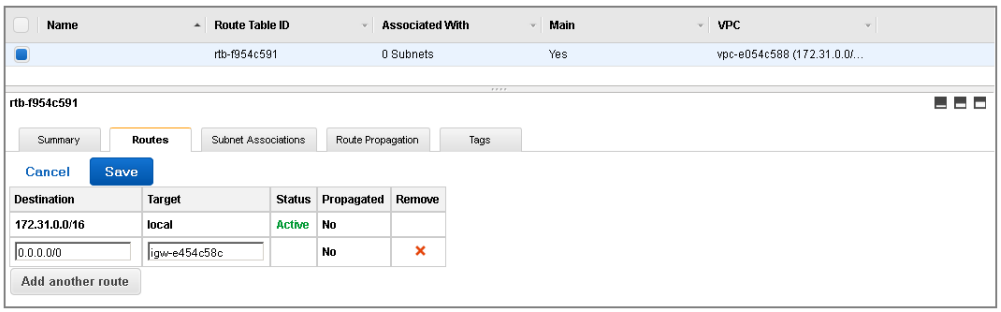
Step 4 - Attach the Internet Gateway to the Route Table

Attach the internet gateway created in **Step 2 - Add an Internet Gateway to the VPC** to the route table by following the steps below:

1. From the **VPC Dashboard**, select **Subnets** under **Virtual Private Cloud**.
2. In the **Subnets** list, select the subnet you created in **Step 3 - Add a Subnet to the VPC**, and note the **Route table** entry:



3. Now, select **Route Tables** under **Virtual Private Cloud**.
4. In the **Route Tables** list, select the route that you noted down in step **2** above.
5. In the **Routes** tab, click **Edit** and specify the following values:
    1. **Destination** – 0.0.0.0/0
    2. **Target** – Should be the internet gateway created in **Step 2 - Add an Internet Gateway to the VPC**:



6. Click **Save**.

Next Step

Now that you have set up a VPC for the Barracuda CloudGen WAF, you can continue with Barracuda CloudGen WAF Deployment and Quick Start Guide for Amazon Web Services. If you encounter network connectivity issues, see Troubleshooting the Barracuda CloudGen WAF on Amazon Web Services.

Figures