

Importing the Barracuda CloudGen WAF for AWS BYOL CFT and Deploying the Instance

<https://campus.barracuda.com/doc/73696986/>

The article walks you through how to import the Barracuda CloudGen WAF BYOL CFT and deploy the instance.

Pre-requisites

- Create all necessary S3 buckets (License S3 bucket, Cluster S3 bucket and Backup S3 bucket)
- Upload the BYOL licenses to the License S3 bucket. (Licenses can be activated [here](#).)
- Create an IAM Role to access the S3 buckets
- BYOL CloudFormation Template. See Barracuda CloudFormation Template (CFT) for BYOL Instance.

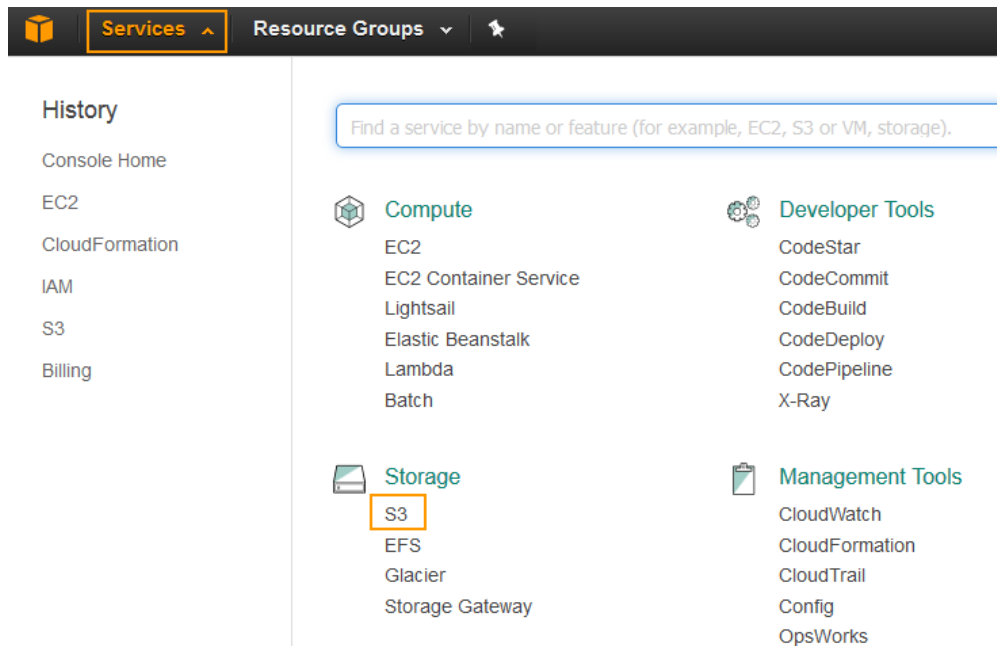
Upload the BYOL Licenses to the S3 Bucket

Before deploying the Barracuda CloudGen WAF instance(s) using the CloudFormation Template, upload the BYOL licenses to the predefined “Licenses” S3 bucket. The licenses should be activated manually by the administrator before being uploaded to the Licenses S3 bucket. If the licenses are not activated, the Barracuda CloudGen WAF will not boot up and will stop at the “Licensing” page.

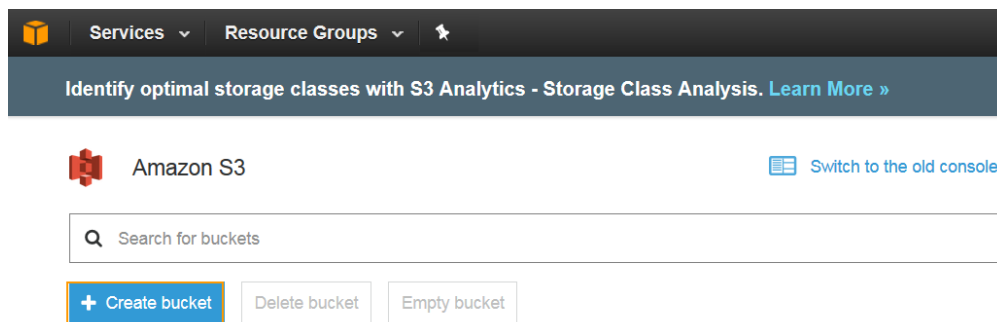
Ensure that you do not modify the license.json file when the autoscaling stack is up and running.

Uploading the BYOL Licenses

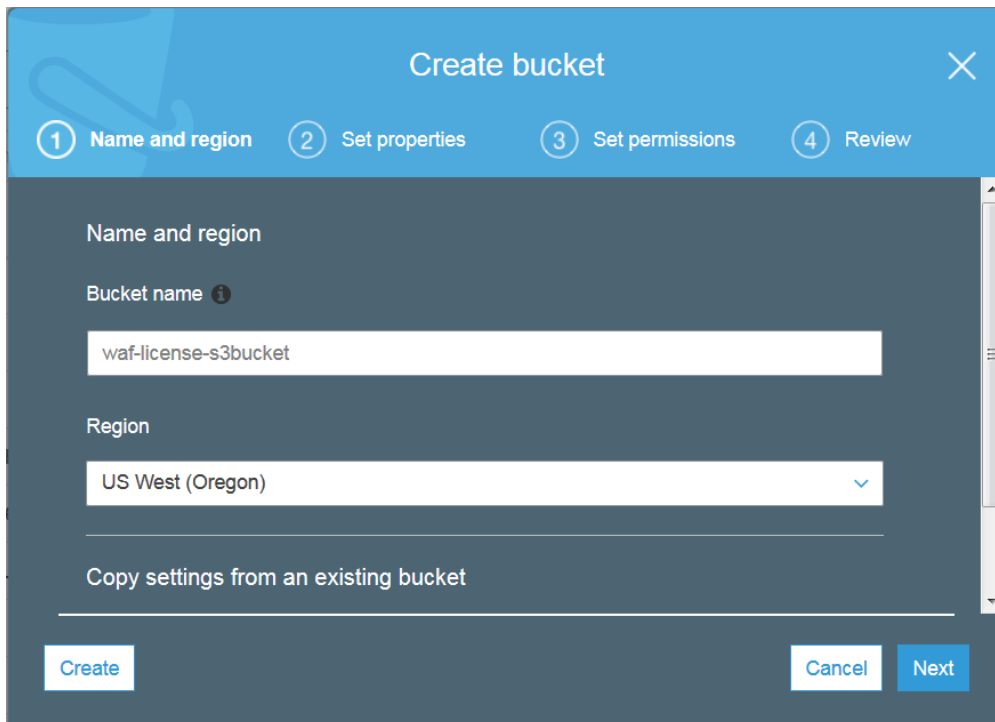
1. Log into the AWS Management Console.
2. Click **Services** and select **S3** under **Storage**.



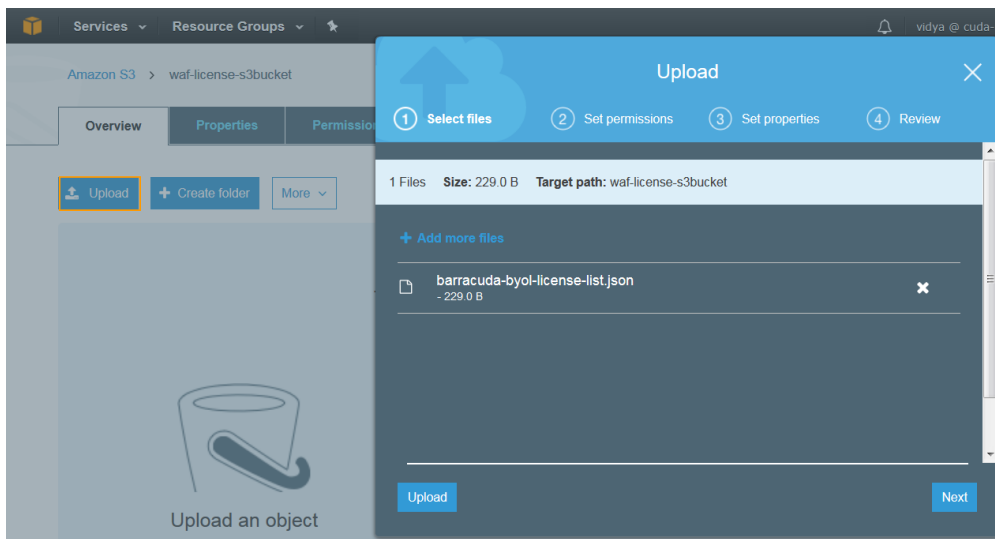
3. On the S3 Management Console, click **Create bucket** to add a S3 bucket to store the licenses.



4. In the **Create bucket** window, enter a unique bucket name, select the region where the instances will be deployed and click **Create**.



5. Select the created S3 bucket and click **Upload**.
6. In the **Upload** window, locate the licenses file by clicking **Add files** and click **Upload**. **Note:** The licenses file should be created in the valid JSON format, and the file should be named as barracuda-byol-license-list". **Example:** *barracuda-byol-license-list.json*

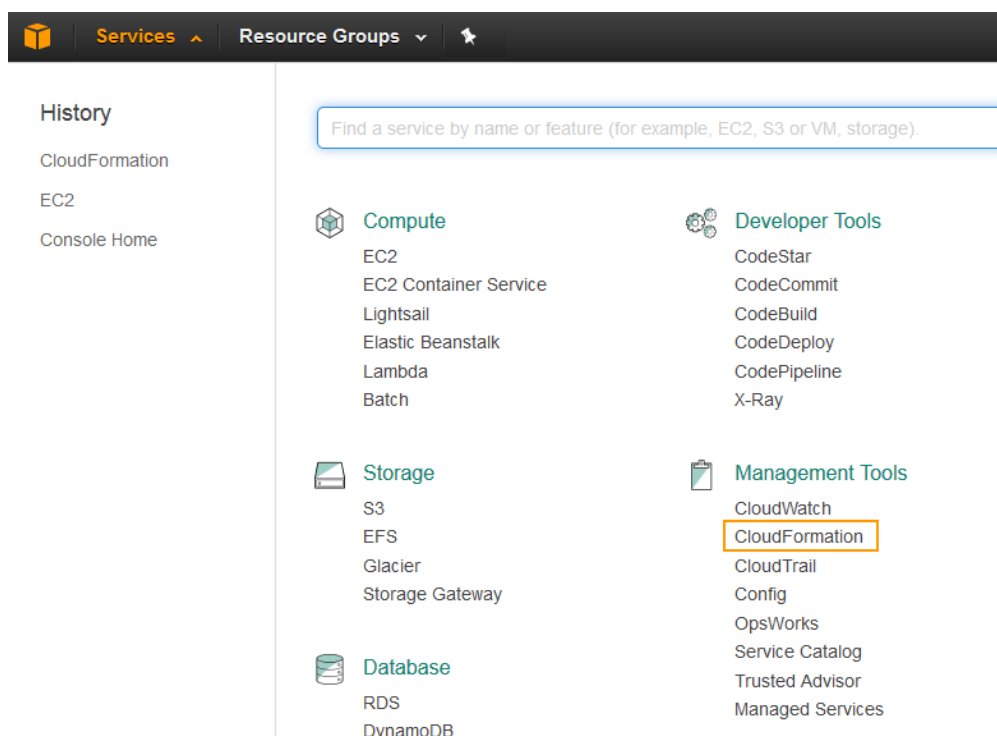


7. To create the Cluster S3 bucket, repeat step **3** and **4**.
8. To create the Backup S3 bucket, repeat step **3** to **5** and upload the backed up file(s) (if the backup was taken manually). If not, repeat step **3** and **4**. See "Backing Up the Barracuda CloudGen WAF Instance(s) System Configuration in AWS" section in the **Backing Up and Restoring Your System Configuration** article.

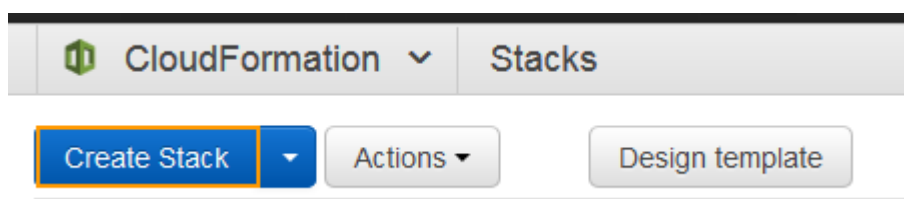
Importing the Barracuda CloudGen WAF for AWS BYOL CFT and Deploying the Instance

Perform the steps below to import the Barracuda CloudGen WAF CloudFormation Template and deploy the instance:

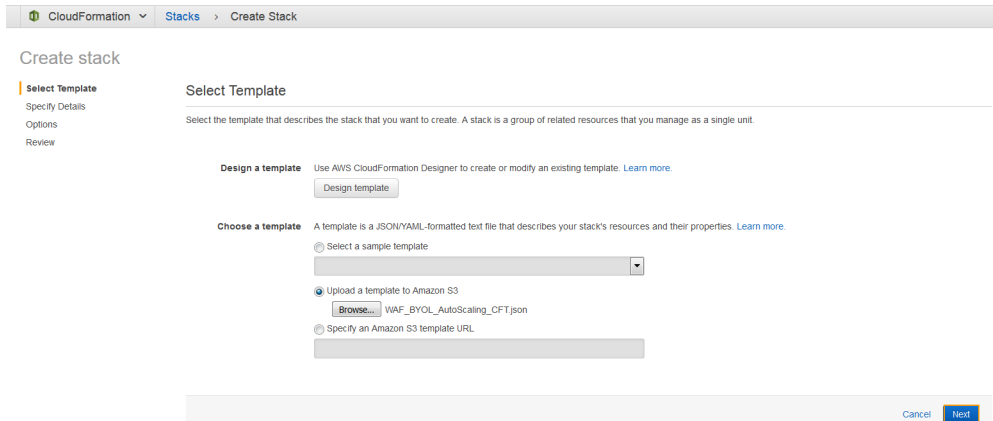
1. Log into the AWS Management Console.
2. Select **CloudFormation** under **Management Tools**.



3. On the **CloudFormation Management** page, click **Create Stack**.



4. On the **Create stack > Select Template** page:
5. Select the **Upload a template to Amazon S3** option, click **Browse** and locate the BYOL CFT file saved on your system. **Example:** `WAF_BYOL_AutoScaling_CFT.json`.
6. Click **Next**.



7. On the **Create stack > Specify Details** page, do the following configuration:
1. In the **Specify Details** section:
 2. Enter a name for the CloudFormation stack in the **Stack name** field.
 3. In the **Parameters** section, specify values for the following:

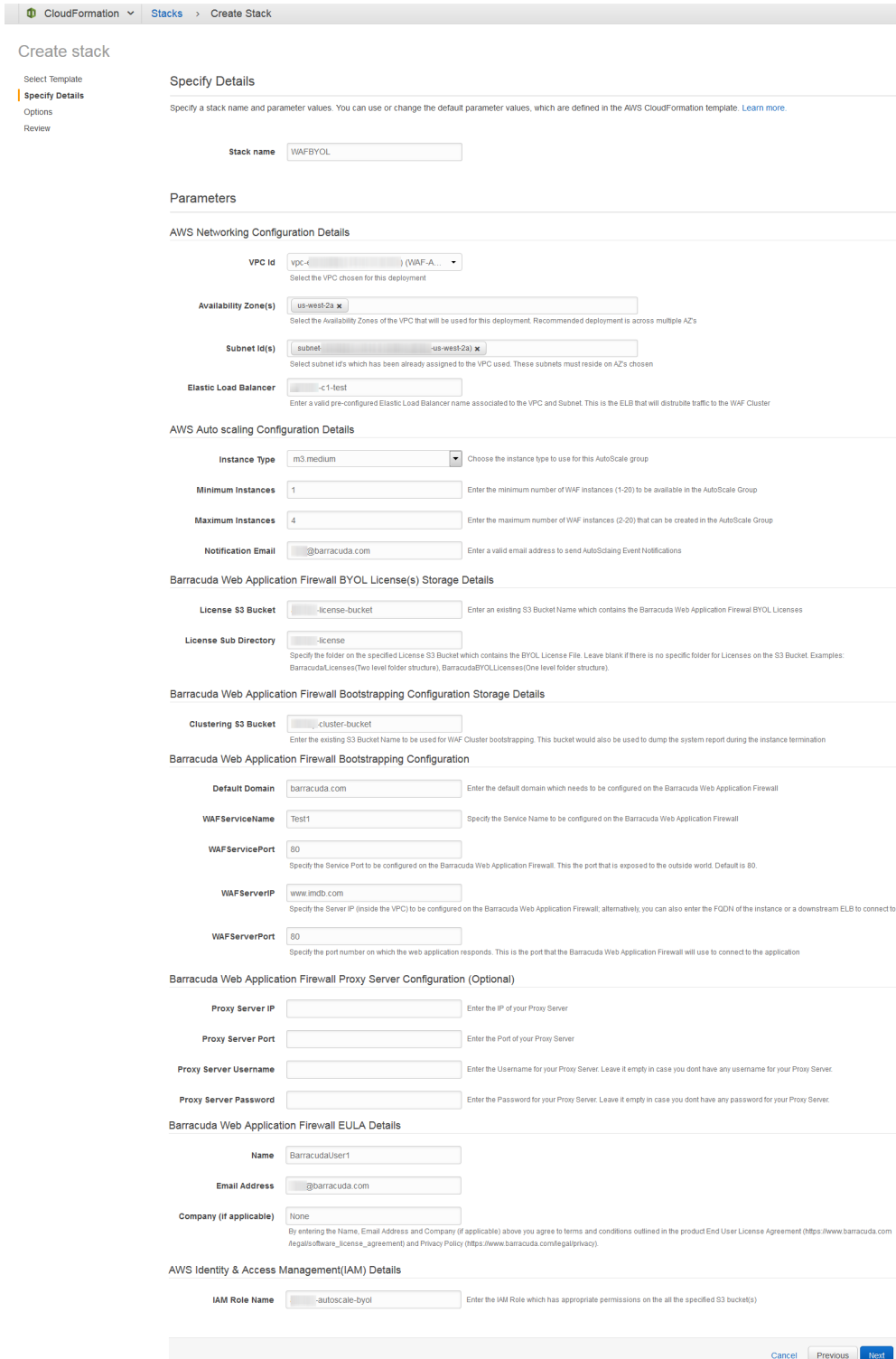
AWS Networking Configuration Details	
Parameter Name	Description
VPC ID	Select the VPC that you wish to deploy the Barracuda CloudGen WAF instance(s) from the drop-down list.
Availability Zone(s)	Select the availability zones from the multi-select drop-down list. The VPC you choose to deploy in must be available across these availability zones. Note: It is recommended to deploy the instances in multiple availability zones.
Subnet ID(s)	Select the subnet ID(s) associated with the availability zone(s) where the Barracuda CloudGen WAF instance(s) needs to be deployed. Note that these subnets must be part of the VPC that you choose.
Elastic Load Balancer	Enter the name of the elastic load balancer(s) (ELB) that needs to be used to load balance/distribute the traffic between the Barracuda Web Application Firewall(s). The ELB(s) should be connected to all the subnets that are used for this deployment and be part of the VPC that is chosen for this deployment.
AWS Auto Scaling Configuration Details	
Parameter Name	Description
Instance Type	Select an instance type depending on your requirement.
Minimum Instances	Enter the minimum number of Barracuda CloudGen WAF instance(s) that needs to be up and running continuously in the Auto Scaling group. Default: 1
Maximum Instances	Enter the maximum number of Barracuda CloudGen WAF instance(s) to be deployed in the Auto Scaling group. Default: 4
Notification Email	Enter the email address(es) to which you want Amazon SNS to send email notifications.

Barracuda Web Application Firewall BYOL License(s) Storage Details	
Parameter Name	Description
License S3 Bucket	Specify the name of the S3 bucket where the licenses are uploaded.
License Sub Directory	Specify the name of the sub directory that contains the licenses. Leave it blank if there is no sub directory.
Barracuda Web Application Firewall Bootstrapping Configuration Storage Details	
Parameter Name	Description
Clustering S3 Bucket	Specify the name of the S3 bucket that contains the details of instances that are in cluster.
Barracuda Web Application Firewall Bootstrapping Configuration	
Parameter Name	Description
Default Domain	Specify the default domain name that needs to be configured on the Barracuda CloudGen WAF for AWS.
WAF Service Name	Specify the service name that needs to be configured on the Barracuda CloudGen WAF for AWS.
WAF Service Port	Specify the port number on which your web server responds.
WAF Server IP	Specify the IP address or Fully Qualified Domain Name (FQDN) of the server that hosts the service.
WAF Server Port	Specify the port number of the server.
Barracuda Web Application Firewall Proxy Server Configuration (Optional)	
Parameter Name	Description
Proxy Server IP	Specify the IP address of the proxy server.
Proxy Server Port	Specify the port number associated with the proxy server.
Proxy Server Username	Specify the username to authenticate to the proxy server. This field can be left empty if you do not have any username to authenticate to the proxy server.
Proxy Server Password	Specify the password associated with the username. This field can be left empty if you have not specified the Proxy Server Username.
Barracuda Web Application Firewall EULA Details	
Parameter Name	Description
Name	Specify your name.
Email Address	Specify your email address.
Company (if applicable)	Specify your company name.
AWS Identity & Access Management(IAM) Details	
Parameter Name	Description

IAM Role Name

Specify the IAM role name that has appropriate permissions to the specified S3 buckets. See [IAM Policy](#).

8. Click **Next**.



The screenshot shows the 'Specify Details' step of the AWS CloudFormation console. The stack name is 'WAFBYOL'. The 'Parameters' section includes:

- AWS Networking Configuration Details:** VPC id (vpc-...), Availability Zone(s) (us-west-2a), Subnet id(s) (subnet-...), and Elastic Load Balancer (-1-test).
- AWS Auto scaling Configuration Details:** Instance Type (m3.medium), Minimum Instances (1), Maximum Instances (4), and Notification Email (@barracuda.com).
- Barracuda Web Application Firewall BYOL License(s) Storage Details:** License S3 Bucket (license-bucket) and License Sub Directory (license).
- Barracuda Web Application Firewall Bootstrapping Configuration Storage Details:** Clustering S3 Bucket (cluster-bucket).
- Barracuda Web Application Firewall Bootstrapping Configuration:** Default Domain (barracuda.com), WAFServiceName (Test1), WAFServicePort (80), WAFServerIP (www.imdb.com), and WAFServerPort (80).
- Barracuda Web Application Firewall Proxy Server Configuration (Optional):** Proxy Server IP, Proxy Server Port, Proxy Server Username, and Proxy Server Password.
- Barracuda Web Application Firewall EULA Details:** Name (BarracudaUser1), Email Address (@barracuda.com), and Company (None).
- AWS Identity & Access Management(IAM) Details:** IAM Role Name (-autoscale-byol).

At the bottom right, there are 'Cancel', 'Previous', and 'Next' buttons.

9. On the **Create stack > Options** page, add tags for resources in your stack (if required) and click **Next**.

Create stack

- Select Template
- Specify Details
- Options**
- Review

Options

Tags

You can specify tags (key-value pairs) for resources in your stack. You can add up to 50 unique key-value pairs for each stack. [Learn more](#).

Key (127 characters maximum)	Value (255 characters maximum)
1	

Permissions

You can choose an IAM role that CloudFormation uses to create, modify, or delete resources in the stack. If you don't choose a role, CloudFormation uses the permissions defined in your account. [Learn more](#).

IAM Role:

Enter role arn:

Advanced

You can set additional options for your stack, like notification options and a stack policy. [Learn more](#).

[Cancel](#) [Previous](#) [Next](#)

10. On the **Create stack > Review** page, verify the details and click **Create**.

Create stack

- Select Template
- Specify Details
- Options
- Review**

Review

Template

Template URL: https://s3-us-west-2.amazonaws.com/ct-templates-1ffa5fypunam-us-west-2/2017229VCS-WAF_BYOL_AutoScaling_CFT.json
 Description: Barracuda Web Application Firewall Auto Scaling with Basic Bootstrapping for BYOL Instances
 Estimate cost: Cost

Details

Stack name: WAFBYOL

AWS Networking Configuration Details

VPCid: vpc-
 AvailabilityZones: us-west-2a
 SubnetID: subnet-
 ELBNames: c1-test

AWS Auto scaling Configuration Details

InstanceType: m3.medium
 ScalingMinSize: 1
 ScalingMaxSize: 4
 NotificationEmail: @barracuda.com

Barracuda Web Application Firewall BYOL License(s) Storage Details

LicenseS3Bucket: -license-bucket
 CudaLicenseSubDir: -license

Barracuda Web Application Firewall Bootstrapping Configuration Storage Details

ClusterS3Bucket: -cluster-bucket

Barracuda Web Application Firewall Bootstrapping Configuration

DefaultDomain: barracuda.com
 WAFServiceName: Test1
 WAFServicePort: 80
 WAFServerIP: www.imdb.com
 WAFServerPort: 80

Barracuda Web Application Firewall Proxy Server Configuration (Optional)

ProxyServerIP:
 ProxyServerPort:
 ProxyServerUsername:
 ProxyServerPassword:

Barracuda Web Application Firewall EULA Details

AdministratorName: BarracudaUser1
 AdministratorEmailID: @barracuda.com
 AdministratorCompany: None

AWS Identity & Access Management(IAM) Details

S3AccessIAMRole: -autoscale-byol

Options

Tags

No tags provided

Advanced

Notification: none
 Timeout: none
 Rollback on failure: Yes

[Cancel](#) [Previous](#) [Create](#)

As per the configuration in the CFT above:

1. A stack with the name "WAFBYOL" will be created.
2. Deploys one (1) Barracuda CloudGen WAF VM in the specified availability zone (us-west-2a), and subnets (subnet-xxxxxxx) with instance type as m3.medium, and gets added to the "xx.c1-test" Elastic Load Balancer.

3. Sends notification to xxxxx@barracuda.com.
 4. Scales up the instance (up to total of 4) whenever the alarm triggers
 5. Creates a service on the Barracuda CloudGen WAF with port 80 that protects the server(s) (**FQDN**: www.imdb.com on port 80). The created service can be accessed over the ELB, i.e., **xxx-c1-test**, using port 80.
 6. The IAM role (xxx.autoscale-byol) gains access to the specified S3 buckets.
 7. If AWS is unable to create the stack based on the inputs you provided, the stack will roll back.
11. The CFT now starts its operation. You can see the **CREATE_IN_PROGRESS** status displayed on the **CloudFormation Management Console** for the stack. Select the tabs and see the status of events and resources that are being created. An example of the successfully created resources is available in the screenshot below:

Next Step

Continue with [Verify the Instance in the Auto Scaling Group](#).

Figures

1. S3.png
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3. License_S3_Bucket.png
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10. Review.png

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