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About this Deployment Guide

This deployment guide contains the information for deploying, interacting, and configuring Centralized Appliance Management Service (CAMS) QGS Appliance on AWS Cloud. Also, it outlines the details on launching the QGS instances using AWS Command Line Interface (CLI).

About Qualys

Qualys, Inc. (NASDAQ: QLYS) is a pioneer and leading provider of cloud-based security and compliance solutions. The Qualys Cloud Platform and its integrated apps help businesses simplify security operations and lower the cost of compliance by delivering critical security intelligence on demand and automating the full spectrum of auditing, compliance and protection for IT systems and web applications.

Founded in 1999, Qualys has established strategic partnerships with leading managed service providers and consulting organizations including Accenture, BT, Cognizant Technology Solutions, Deutsche Telekom, Fujitsu, HCL, HP Enterprise, IBM, Infosys, NTT, Optiv, SecureWorks, Tata Communications, Verizon and Wipro. The company is also founding member of the Cloud Security Alliance (CSA). For more information, please visit www.qualys.com

Qualys Support

Qualys is committed to providing you with the most thorough support. Through online documentation, telephone help, and direct email support, Qualys ensures that your questions will be answered in the fastest time possible. We support you 7 days a week, 24 hours a day. Access online support information at www.qualys.com/support/.
Overview

Qualys Gateway Service (QGS) is a packaged virtual appliance developed by Qualys that provides proxy services for Qualys Cloud Agent deployments requiring proxy connectivity to connect with the Qualys Cloud Platform.

This document outlines the steps required to set up a Centralized Appliance Management Service (CAMS) Qualys Gateway Service (QGS) appliance on the AWS cloud.

Pre-requisites

- To set up the CAMS QGS appliance on AWS Cloud, you need an AWS account.
- You must have CLI installed on your machine to use AWS CLI to launch and execute the command.

How to Deploy and Configure CAMS QGS Appliance on AWS Cloud

Follow these steps to deploy and configure a CAMS QGS appliance on the AWS Cloud.

1. Log in to your AWS account.
2. Go to Launch a virtual machine with EC2.
3. On the EC2 experience page, go to **Images > AMIs** (Amazon Machine Images).

4. Select the QGS AMI and click **Launch Instances** to launch an EC2 instance.
5. Select the qualys-qgs-1.1.0-65 AMI image.  
**Note:** You need not deploy a new instance if you already have one with an old AMI image that can be auto-upgraded.

- An AMI is a template that contains the software configuration required to launch your instance. You can select an AMI provided by AWS Marketplace, Community or your available AMIs.

6. Select a t3.large size of the instance and click **Next: Configure Instance Details**.

7. If you want to assign a public IP to the QGS appliances, then configure the instance details with the appropriate network and set the Auto-assign Public IP field to **Enable**.
- If you want to assign a private IP to the QGS appliances, then do not enable the Auto-assign Public IP option.

8. On the same Instance Detail Configuration screen, scroll down to the User data section and add the following user data and click Next: Add Storage.

```yaml
#cloud-config
write_files:
  - owner: root:root
    path: /opt/qualys/cloud.env
    permissions: '0644'
    content: |
      POD_SUFFIX="Add your corresponding POD suffix here"

To know the POD suffixes for corresponding PODs, see the Cloud Agent Servers section of the Qualys Platform Identification web-page.

9. On the Add Storage page, you can attach additional EBS volumes and instance store volumes to your instance.

**Note:** If you want to use your appliance for Patch caching purposes, then you need to add another storage volume of at least 256 GB.
After adding the volumes to your instance, click **Next: Add Tags**.

10. On the Add Tags page, you can add Owner and Name tags details then click **Next: Configure Security Groups**.

11. On the Configure Security Group page, you can select an appropriate **Security Group** and click **Review and Launch**.

**Note:** A security group is a set of firewall rules that control the traffic for your instance. You can add rules to allow specific traffic to reach your instance.
12. Verify that all the settings are matching with the selected values and click **Launch**.

13. Choose to **Proceed without a key pair** from the dropdown and acknowledge the check-box and click **Launch Instances**.

The following is the sample screenshot that shows the instance launch status.
How to Interact with the Appliance

To communicate with the QGS appliance, use the AWS EC2 Connect feature. This is a secure and straightforward method of connecting to your instances. It shortens the time required to boot and obtain new instances.

1. Go to your AWS account, select the running instance and click Connect.

2. Go to EC2 Instance Connect and change the User name to core and click Connect.

Note: Use the EC2 Instance Connect option to connect your instance if you’ve enabled the Auto-assign public IP while configuring the instance details to assign the public IP to your appliances.

Note: If you want to assign a private IP to your QGS appliances then use the EC2 Serial Console option to connect your instance.
3. Once you connect your instance, you are redirected to the appliance console.

![Image of appliance console](image)

**Note:** We would recommend you to keep trying to connect, in case it takes longer time to connect to your instance.

4. Register the appliance with Qualys. For detailed steps on registration of the appliance, refer to [Qualys Gateway Service User Guide](#).

### How to Launch QGS Instances Using AWS CLI

The following script can be used to launch one or more QGS instances in the AWS cloud. You can use [AWS CLI](#) to launch the below command.

**Note:** You must have CLI installed on your machine to use AWS CLI to launch and execute the below command.

#### Command to Launch QGS Instances in the AWS Cloud

```bash
aws ec2 run-instances \
  --image-id ami-046a1af413842c91 \
  --instance-type t3.large \
  --security-group-ids sg-0********** sg-0********** \
  --subnet-id subnet-0*************** \
  --user-data file://ec2-userdata.yml \
  --associate-public-ip-address \
  --count 1 \
  --block-device-mappings
  'DeviceName=/dev/sdb,Ebs={DeleteOnTermination=True,VolumeSize=256,Encrypted=False}' \
  --tag-specifications
  'ResourceType=instance,Tags=[{Key=Name,Value="QGS Appliance"}]'
```

Content of `ec2-userdata.yml` file used in previous command.

```yaml
#cloud-config
write_files:
  - owner: root:root
    path: /opt/qualys/cloud.env
```

12
permissions: '0644'
content: |

POD_SUFFIX="Refer last page to know which POD suffix to use"

**POD Suffixes**

To know the POD suffixes for corresponding PODs, see the Cloud Agent Servers section of the Qualys Platform Identification web-page.