



Qualys Gateway Service

OpenStack Deployment Guide

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About This Guide

This deployment guide contains information on deploying, interacting, and configuring the Qualys Gateway Service (QGS) in the OpenStack environment.

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 a founding member of the Cloud Security Alliance (CSA). For more information, please visit www.qualys.com.

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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 for OpenStack. This process includes the installation of the VHD file in the OpenStack environment.

To learn more about the QGS application and its features, refer to the [Qualys Gateway Service User Guide](#).

Pre-requisites

- To get the latest version of QGS image, you need access to Qualys Cloud Platform.
- Ensure to cover the minimum system requirements recommended in the [Qualys Gateway Service User Guide](#).

Deploy the QGS Appliance in OpenStack Environment

Before initiating the QGS deployment, refer to the **QGS User Guide** to review the system requirements and other necessary configurations for customer environments. These requirements are essential to proceed with the deployment.

OpenStack Configuration

Follow the steps below to deploy the QGS Appliance Text User Interface from your OpenStack Console.

1. Login to your OpenStack console.
2. Navigate to **Admin > Compute > Flavor** and create the flavor by providing the values in the following image. Next, click **Create Flavor**

Create Flavor

Flavor Information * Flavor Access

Name *
m1-qgs-flavor

ID ?
auto

VCPUs *
4

RAM (MB) *
16048

Root Disk (GB) *
41

Ephemeral Disk (GB)
251

Swap Disk (MB)
0

RX/TX Factor
1

Flavors define the sizes for RAM, disk, number of cores, and other resources and can be selected when users deploy instances.

Cancel Create Flavor

3. The new flavor for the QGS Appliance is displayed.

Flavor Name	VCPUs	RAM	Root Disk	Ephemeral Disk	Swap Disk	RX/TX factor	ID	Public	Metadata	Actions
m1.large	8	8GB	70GB	100GB	0MB	1.0	2	Yes	No	Update Metadata
m1.qgs	4	16GB	50GB	0GB	0MB	1.0	33e13993-fc0a-4110-93f6-08c3792dd516	Yes	No	Update Metadata
m1.qgsCustom	8	16GB	40GB	0GB	0MB	1.0	ca88c718-47c3-40b4-a81d-92f640e3e3c8	Yes	No	Update Metadata
m1.qgsCustom45gb	4	16GB	45GB	0GB	0MB	1.0	229f57c1-7967-44b7-8d66-5fe192b43965	Yes	No	Update Metadata
m1.qgslarge	8	20GB	70GB	0GB	0MB	1.0	ab9561ee-936b-4c88-b645-99018621b11b	Yes	No	Update Metadata
m1.qgstest-large	4	19.6GB	100GB	300GB	0MB	1.0	dc188857-2615-47e4-a3a0-fa43880c2886	Yes	No	Update Metadata

4. Navigate to **Admin > Compute > Image** and create the new image by uploading the latest QGS VHD image.
 - i. Provide the Image Name
 - ii. Choose the QGS VHD Image file from location
 - iii. Select the file format as VHD
 - iv. Click **Create Image**.

Image Details

Metadata

Image Details

Specify an image to upload to the Image Service.

Image Name

qgs-2.3.0-6

Image Description

CAMS/QGS

Image Source

File *

Choose File

qualys-qgs-appliance-2.3.0-6.vhd

Format *

VHD - Virtual Hard Disk

Image Requirements

Kernel

Choose an image

Ramdisk

Choose an image

Architecture

Minimum Disk (GB)

0

Minimum RAM (MB)

0

Image Sharing

Visibility

Private

Shared

Public

Community

Protected

Yes

No

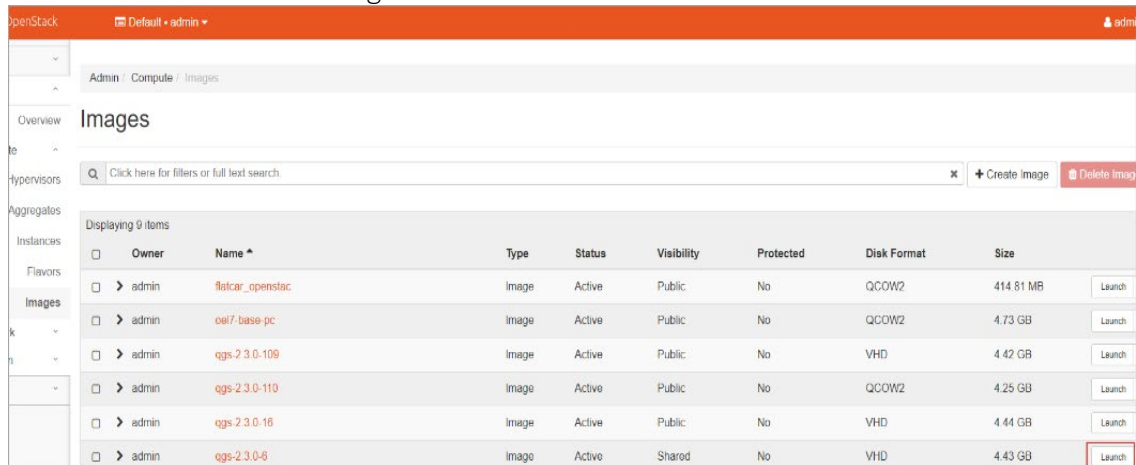
Cancel

Back

Next

Create Image

- Then select the created Image and launch the instance.



You must configure the following sections from the Launch Instance window. Start with providing values in the **Details** page.

- In the **Details** page, provide the instance name and description (optional). Click **Next**.

Details

Source

Flavor *

Networks *

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Please provide the initial hostname for the instance, the availability zone where it will be deployed, and the instance count. Increase the Count to create multiple instances with the same settings.

Project Name

Instance Name *

Description

Availability Zone

nova

Count *

Total Instances (10 Max)

80%

7 Current Usage

1 Added

2 Remaining

Cancel

Back

Next

Launch Instance

- b. In the **Source** page, select the boot source as **Image** and the **QGS Image** should be listed under the **Allocated** section. Click **Next**.

Launch Instance

Details

Source

Flavor *

Networks *

Network Ports

Security Groups

Key Pair

Configuration

Server Groups

Scheduler Hints

Metadata

Instance source is the template used to create an instance. You can use an image, a snapshot of an instance (image snapshot), a volume or a volume snapshot (if enabled). You can also choose to use persistent storage by creating a new volume.

Select Boot Source

Image

Allocated

Displaying 1 item

Name	Updated	Size	Format	Visibility
> qgs-2.3.0-6	1/10/25 5:52 AM	4.43 GB	VHD	Shared

Displaying 1 item

▼ Available 3 Select one

Q

Click here for filters or full text search.

✕

If you are unable to find your image listed under the **Allocated** section, then scroll down to the **Available** section and select or search the list.

▼ Available 3 Select one

Q

Click here for filters or full text search.

✕

Name	Updated	Size	Format	Visibility
> flatcar_openstac	1/9/25 5:17 AM	414.81 MB	QCOW2	Public
> oel7-base-pc	6/27/24 3:15 AM	4.73 GB	QCOW2	Public
> qgs-2.3.0-109	1/9/25 9:23 AM	4.42 GB	VHD	Public
> qgs-2.3.0-110	1/10/25 7:26 AM	4.25 GB	QCOW2	Public

- c. In the **Flavor** page, the Flavor created according to the system requirements of the QGS should be listed under the **Allocated** section. If not, select or search for the Flavor from the **Available** section. Click **Next**.

Launch Instance

Details
Source
Flavor
Networks *
Network Ports
Security Groups
Key Pair
Configuration
Server Groups
Scheduler Hints
Metadata

Flavors manage the sizing for the compute, memory and storage capacity of the instance.

Allocated

Displaying 1 item

Name	VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
m1.qgsCustom45gb	4	16 GB	45 GB	45 GB	0 GB	Yes

Displaying 1 item

Available 6

Select one

Click here for filters or full text search.

Displaying 6 items

Name	VCPUS	RAM	Total Disk	Root Disk	Ephemeral Disk	Public
m1.small	4	4 GB	70 GB	70 GB	0 GB	Yes
m1.large	8	8 GB	170 GB	70 GB	100 GB	Yes

- d. In the **Networks** section, select the network and click **Next**. You can proceed to the **Security Groups** section.

Launch Instance

Details
Source
Flavor
Networks
Network Ports
Security Groups
Key Pair
Configuration
Server Groups
Scheduler Hints
Metadata

Networks provide the communication channels for instances in the cloud. You can select ports instead of networks or a mix of both.

Allocated 1

Displaying 1 item

Network	Subnets Associated	Shared	Admin State	Status
network_3252	subnet_3252	No	Up	Active

Displaying 1 item

Available 2

Select one or more

Click here for filters or full text search.

Displaying 2 items

Network	Subnets Associated	Shared	Admin State	Status
network_1648	subnet_1648	No	Up	Active
network_3004	subnet_3004	No	Up	Active

Displaying 2 items

- e. In the **Security Groups** section, select the security group and ensure it allows the following ports:
 - 1080 (default QGS Tunnel port)
 - 8080 (default QGS Cache port)
 - 22 (for SSH access)

(refer the “**QGS Appliance Cache and Patch Mode Configuration**” section of the [QGS User Guide](#) for more information on the required ports)

Once verified, click **Next**.

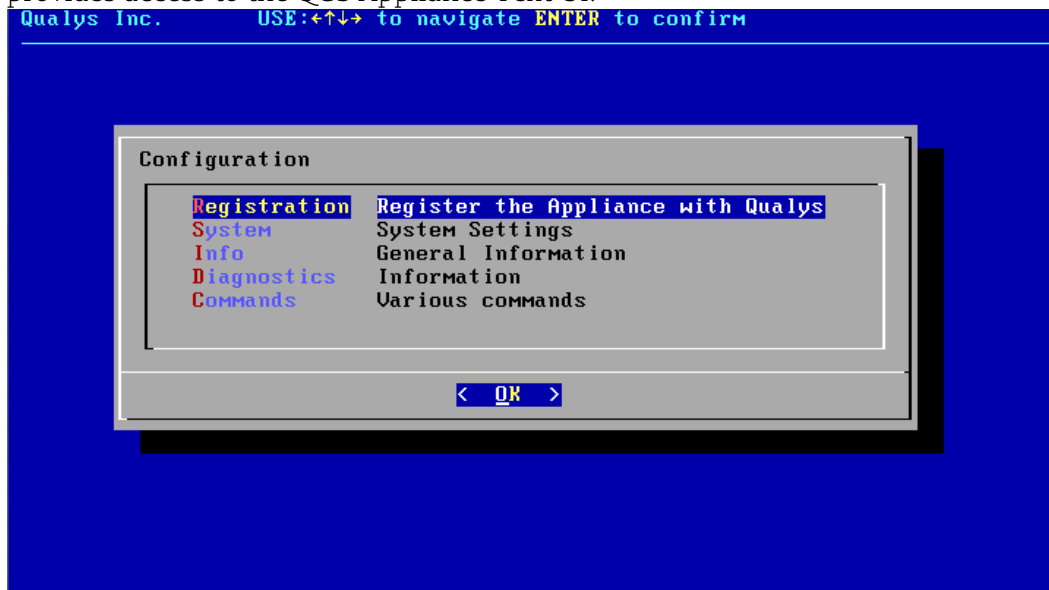
- f. Skip the **Key Pair** page. It is not required for the deployment process.
 - g. Click **Launch Instance**. The instance is created in some time.
6. Now, navigate to **Project > Compute > Instances**.
 7. Select the instance and access the console.

Instance Name	Image Name	IP Address	Flavor	Key Pair	Status	Availability Zone	Task	Power State	Age	Actions
qgs-2.3.0-110	qgs-2.3.0-110	10.15.252.215	m1.qgsCustom45gb	-	Active	nova	None	Running	2 hours, 6 minutes	Create Snapshot
qgs-2.3.0-6-Insta-nce-01	qgs-2.3.0-6	10.15.252.214	m1.qgctest-large	-	Active	nova	None	Running	3 hours	Create Snapshot
qgs-2.3.0-16-45g-bdisk	qgs-2.3.0-16	10.15.252.216	m1.qgsCustom45gb	-	Active	nova	None	Running	14 hours, 57 minutes	Associate Floating IP, Attach interface, Detach interface, Edit Instance, Update Metadata, Edit Security Groups, Edit Port Security Groups, Console, View Log, Rescue Instance, Pause Instance, Suspend Instance, Shelf Instance, Resize Instance
qgs-2.3.0-16-vhd-bootcheck	qgs-2.3.0-16	10.15.252.217	m1.qgs	-	Active	nova	None	Running	15 hours, 21 minutes	
lc-opst-bob-3.10.89-p1	qVSA.open.x86_64-3.10.89-1.qcow2	10.15.252.218	m1.small	vScanner	Active	nova	None	Running	1 month, 3 weeks	
lc-bob-3.10.89-split	qVSA.open.x86_64-3.10.89-1.qcow2	172.16.0.177 network_3252 10.15.252.219	m1.small	vScanner	Active	nova	None	Running	1 month, 3 weeks	

- Another method to access the QGS Appliance Console is via the command line. Run the following commands.

```
.root@saqa-openstack01 ~(keystone)#
root@saqa-openstack01 ~(keystone)# openstack console url show qgs-2.3.0-6-instance-01
--insecure
+-----+-----+-----+
+-----+
| Field | Value |
+-----+-----+-----+
+-----+
| protocol | vnc |
| type | novnc |
| url | https://saqa-
openstack01.eng.qualys.com:6080/vnc_auto.html?path=%3Ftoken%3D66494fc6-31ae-
46a0-9dc5-be1a5efbfe95 |
+-----+-----+-----+
+-----+
root@saqa-openstack01 ~(keystone)#
```

- Copy the highlighted URL from the above output and open it in a web browser. This provides access to the QGS Appliance Text UI.



Once the QGS Text UI is successfully loaded, you can then configure the network and pod details by following the steps in the “**Virtual Appliance Local Configuration**” section of the [Qualys Gateway Appliance User Guide](#). The images and steps mentioned in the user guide are applicable to the OpenStack configuration. You can follow them exactly as mentioned to successfully configure the appliance.