



Qualys Gateway Service GCP VM

Deployment Guide
Version 1.1

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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 GCP Cloud.

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

The Qualys Gateway Service (QGS) is a packaged virtual appliance. QGS provides proxy services for Qualys Cloud Agent deployments that require proxy connectivity to 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 Google Cloud Platform (GCP).

Prerequisites

- You need a GCP account to set up CAMS QGS.
- You must install CLI on your machine to launch and execute commands on GCP CLI.
- You can get the CAMS/QGS GCP VHD image from [Google Marketplace](#). Make sure you comply with the publisher's minimum system requirements.

Steps to Configure the CAMS Appliance

1. [Launch QGS Instance from the GCP Marketplace](#)
2. [Create a GCP VM Instance](#)
3. [Add a Secondary Hard Disk to use Patch Mode](#)
4. [Access the QGS Text UI](#)

Launch a QGS Instance from the GCP Marketplace

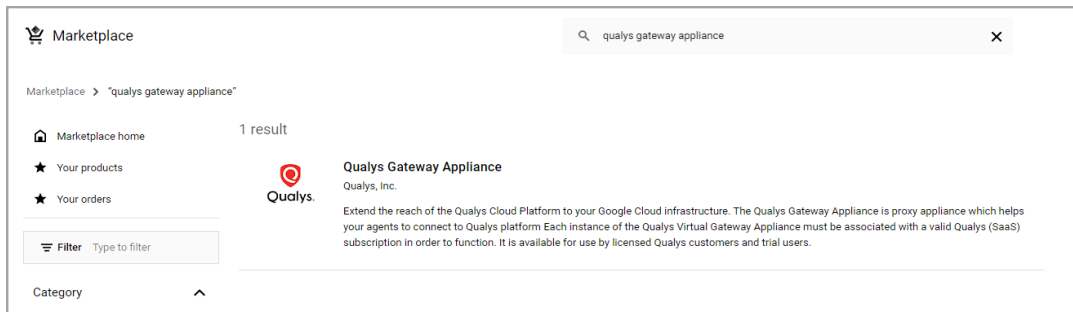
The first step in setting up a CAMS appliance on GCP is to launch a QGS instance from the GCP marketplace.

To get started, follow these steps.

1. Log in to your Google Cloud Platform account via [Google Marketplace](#).

Alternatively,


- a) Search for Qualys Gateway Appliance in the Marketplace search bar.
- b) Select Qualys Gateway Appliance from the search results.



2. Click **Launch** to start the Qualys Gateway Appliance.

The screenshot shows the 'Product details' page for the 'Qualys Gateway Appliance' by Qualys, Inc. The page has a header with a back arrow and the title 'Product details'. Below this is the Qualys logo and the product name 'Qualys Gateway Appliance' with a link to 'Qualys, Inc.'. Underneath, it says 'Qualys Proxy Appliance'. There are two buttons: a green 'LAUNCH' button and a white 'VIEW PAST DEPLOYMENTS' button. Below the buttons are two tabs: 'OVERVIEW' (selected) and 'PRICING'. The main content area is divided into two columns. The left column is titled 'Overview' and contains text about extending the reach of the Qualys Cloud Platform, a description of the appliance as a proxy, and a note that it must be associated with a valid Qualys subscription. It includes a 'Learn more' link. The right column is titled 'Additional details' and lists technical specifications: 'Runs on: Google Compute Engine', 'Type: Virtual machines, Single VM, BYOL', 'Last product update: 5/3/23', 'Category: Security, Networking, Other', 'Version: 2.0.0-17', 'Operating System: flatcar-linux 3139.23', and a link to the 'Deployment .zip file' with a download icon.

Product details

 **Qualys Gateway Appliance**
[Qualys, Inc.](#)

Qualys Proxy Appliance

LAUNCH VIEW PAST DEPLOYMENTS

OVERVIEW PRICING

Overview

Extend the reach of the Qualys Cloud Platform to your Google Cloud infrastructure.

The Qualys Gateway Appliance is proxy appliance which helps your agents to connect to Qualys platform

Each instance of the Qualys Virtual Gateway Appliance must be associated with a valid Qualys (SaaS) subscription in order to function. It is available for use by licensed Qualys customers and trial users.

[Learn more](#)

About Qualys, Inc.

The leading provider of information security and compliance solutions for cloud

About BYOL

BYOL (Bring Your Own License) solutions let you run software on Compute Engine while using licenses purchased directly from the provider. Google only charges you for the infrastructure costs, giving you the flexibility to purchase and manage your own licenses.

Additional details

Runs on: Google Compute Engine

Type: [Virtual machines](#), Single VM, BYOL

Last product update: 5/3/23

Category: [Security](#), [Networking](#), [Other](#)

Version: 2.0.0-17

Operating System: flatcar-linux 3139.23

Add to Service Catalog: [Deployment .zip file](#)

The CAMS appliance is registered on a GCP VM instance. A GCP VM deployment page appears after launching the appliance from the marketplace.

Create a GCP VM Instance

The following steps are required to create a GCP VM Instance.

1. Provide the following details on the VM deployment page.

Note: We recommend only using the values suggested in **Series**, **Machine type**, **Boot disk type**, and **Boot disk size in GB** fields for the VM Instance configuration.

- Deployment name: Provide a name for your VM Instance.
- Zone: Provide the region where the VM Instance must be created.
- Series: Provide the series as **E2**.
- Machine type: Provide machine type as **e2-standard-4 (4 vCPU, 16GB memory)**.
- Boot disk type: Provide boot disk type as **Standard Persistent Disk**.
- Boot disk size in GB: Provide disk size as **30**.

Google Cloud

qlys-dev-qgs

New Qualys Gateway Appliance deployment

Prices don't include private offer discounts

Deployment name *

testgcpappliance

Zone

us-east1-b

Machine type

General purpose

Compute optimized

Memory optimized

Machine types for common workloads, optimized for cost and flexibility

Series

E2

CPU platform selection based on availability

Machine type

e2-standard-4 (4 vCPU, 16 GB memory)

vCPU

4

Memory

16 GB

Boot Disk

Boot disk type *

Standard Persistent Disk

Boot disk size in GB *

30

Additional information

Qualys

Qualys Gateway Appliance overview

Product provided by Qualys, Inc.

Launching a BYOL product

Qualys Gateway Appliance is a BYOL (Bring Your Own License) product. Marketplace will deploy this product, but you are responsible for purchasing and managing the license directly from the provider

License for Cloud Marketplace virtual machine image solution with billing service qualys-gateway-service endpoints qualys-gcp-security.cloud.google.com default usage fee (BYOL)	Varies
Google does not collect this license fee.	
Infrastructure fee	
VM instance: 4 vCPUs + 16 GB memory (e2-standard-4)	USD 97.84/mo
Standard Persistent Disk: 30GB	USD 1.42/mo
Sustained use discount	- USD 0.00/mo
Estimated monthly total	USD 99.25/mo
	+ BYOL license fee

Price estimates based on 30-day, 24hrs per day usage of the listed resources in the selected region. The Estimated Monthly Infrastructure Fee calculation may not reflect all Google Cloud IaaS resources actually created or consumed by this product (or the fees charged for such consumption). Qualys, Inc. may be able to provide a more accurate estimate of monthly GCP IaaS consumption.

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2. On the Network Interface configurations of the VM deployment page, do the following:

- Network: Select **Default** for Network.
- Subnetwork: Select **Default** for Subnetwork.
- External IP: Select from the default **Ephemeral** for external IP or **None** for private IP. We recommend selecting private IP for additional network security.

Tip: The Text UI requires an upstream proxy to be configured for private IP. The appliance can only reach the Qualys server if it includes the URLs listed in the *Network Configuration* section of the [QGS User Guide](#).

3. Click **Deploy** after verifying the configurations. Wait for the VM Instance to deploy.

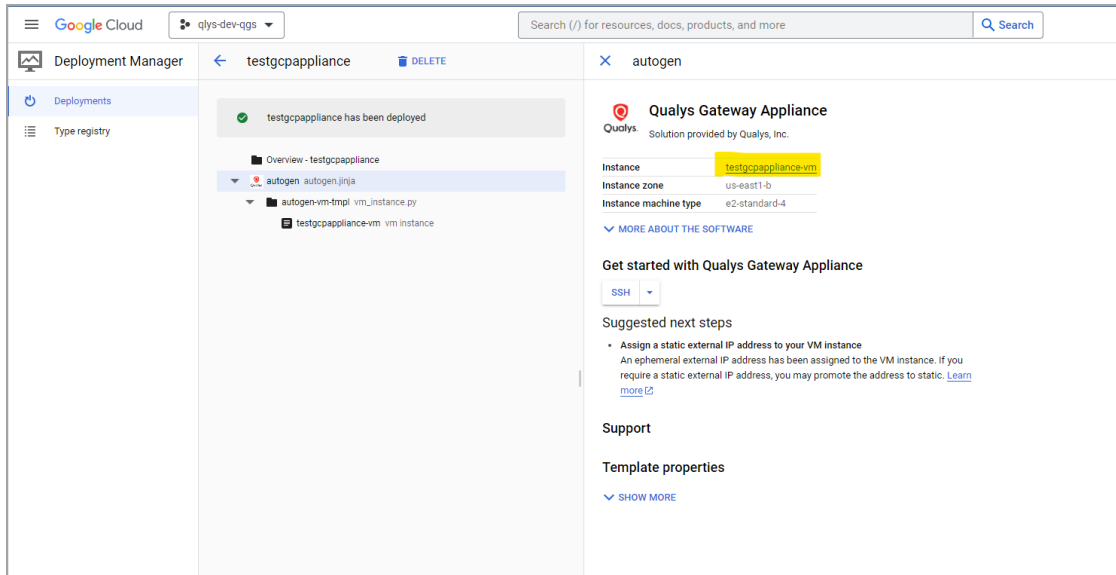
The screenshot shows the 'Networking' section of the GCP VM Instance configuration page. On the left, under 'Network interfaces', there is a form titled 'Edit network interface'. It contains three dropdown menus: 'Network' (set to 'default'), 'Subnetwork' (set to 'default'), and 'External IP' (set to 'None'). Each dropdown has a help icon. Below these is a 'DONE' button. At the bottom of the form is a button labeled 'ADD A NETWORK INTERFACE'. To the right of the form, there is a 'Software' section showing 'Operating System' as 'flatcar-linux(3139.23)'. Below that is a 'Terms of Service' section with a paragraph of text and a link to 'Qualys, Inc. terms of service'. At the bottom of the page, there is a blue 'DEPLOY' button.

After deployment, you can see the GCP VM Instance listed on the Deployment Manager.

Add a Secondary Hard Disk to use Patch Mode

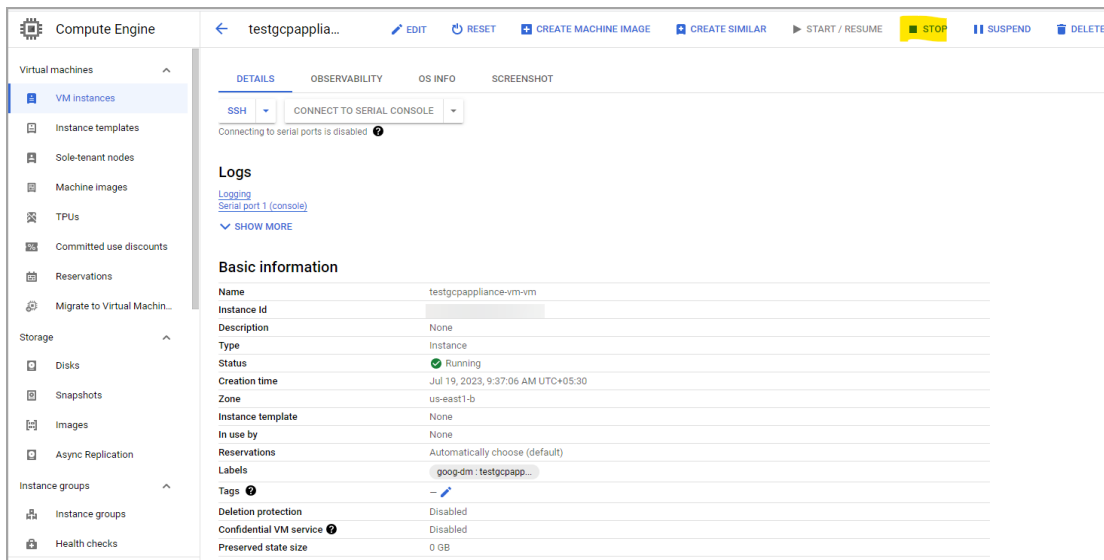
You can add a secondary disk of 250 GB to enable patch mode during or after creating the VM Instance. Ensure that the minimum VM requirement is met. For more details, see the *Virtual Machine Configuration* section of the [QGS User Guide](#).

1. Click the newly created VM Instance to add a secondary disk.



A detailed list of information on your VM Instance is displayed with edit options.

2. Click **Stop** on the VM Instance page to stop the VM instance before moving to the next steps.



3. Click **Edit** to add a secondary hard disk to the virtual machine.

[testgcpapplia...](#) EDIT RESET CREATE MACHINE IMAGE CREATE SIMILAR

DETAILS

OBSERVABILITY

OS INFO

SCREENSHOT

SSH

CONNECT TO SERIAL CONSOLE

Connecting to serial ports is disabled

Logs

[Logging](#)
[Serial port 1 \(console\)](#)

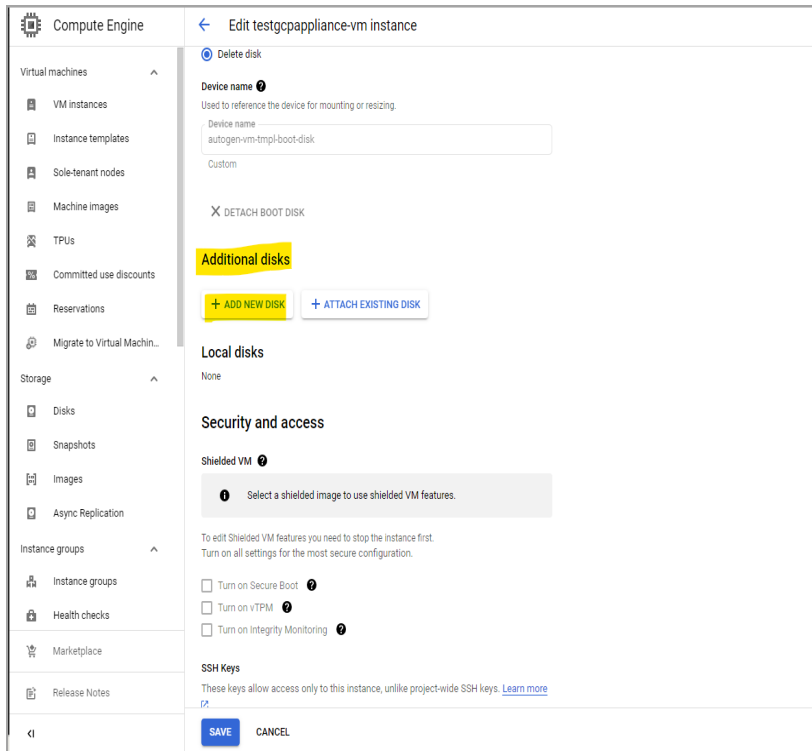
SHOW MORE

Basic information

Name	testgcpappliance-vm
Instance Id	
Description	None
Type	Instance
Status	Running
Creation time	Jul 11, 2023, 3:27:58 PM UTC+05:30
Zone	us-east1-b
Instance template	None
In use by	None
Reservations	Automatically choose (default)
Labels	goog-dm : testgcpappliance
Tags	
Deletion protection	Disabled
Confidential VM service	Disabled
Preserved state size	0 GB

You can edit your previous configurations and add disk information on this page.

4. In the **Additional disks** section, click **Add New Disk**.



The **Add new disk** page is displayed. You can configure your secondary disk here.

5. Do the following:

- Enter a name.
- Select **Disk source type** as Blank Disk.
- Select **Disk type** as Balanced Persistent Disk.

- d) Provide the disk size. The minimum size for a Patch Disk is 250 GB. The size can be increased when there is too much cache attrition.

Add new disk

Name *

diskname

?

Name is permanent

Description

Source

Create a blank disk, apply a bootable disk image, or restore a snapshot of another disk in this project.

Disk source type *

Blank disk

Disk settings

Disk type *

Balanced persistent disk

?

COMPARE DISK TYPES

Size *

250

GB

?

Provision between 10 and 65,536 GB

- e) Keep the **Encryption Type** as Google-managed encryption key.
- f) Select the **Mode** as Read/write.
- g) Select the **Deletion rule** as Delete disk. The secondary disk is deleted when the VM instance is deleted.

By default, the device name is the configured disk name. If needed, you can add a custom device name.

6. Click **Save**.

The screenshot shows a 'Add new disk' dialog box with the following sections:

- Encryption:** Data is encrypted automatically. Select an encryption key management solution.
 - ☒ Google-managed encryption key (No configuration required)
 - ☐ Customer-managed encryption key (CMEK) (Manage via [Google Cloud Key Management Service](#))
 - ☐ Customer-supplied encryption key (CSEK) (Manage outside of Google Cloud)
- Labels:** Includes a '+ ADD LABEL' button.
- Attachment settings:**
 - Mode:** Disk attachment mode.
 - ☒ Read/write
 - ☐ Read-only
 - Deletion rule:** When deleting instance.
 - ☐ Keep disk
 - ☒ Delete disk
- Device name:** Used to reference the device for mounting or resizing.
 - ☐ Use a custom device name
 - Device name: (Based on disk name (default))

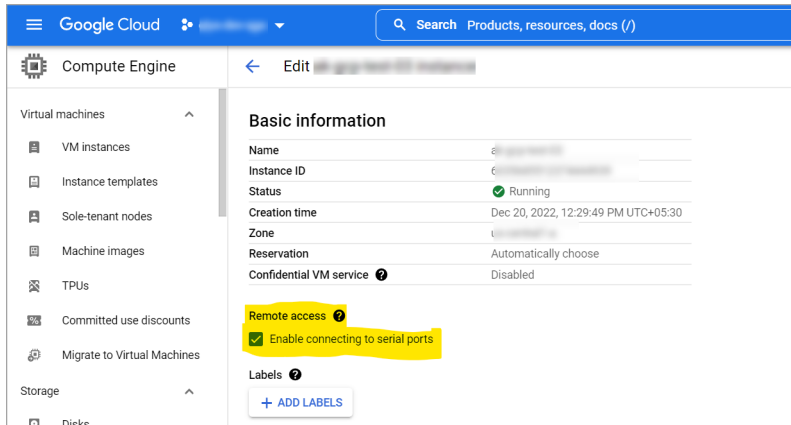
At the bottom, there is a note: 'You're creating an unformatted disk. Format the disk after you attach it to your VM instance. [Formatting and mounting a zonal persistent disk](#)' and a final statement: 'This new disk will be created and attached once you save the instance'. At the very bottom are 'SAVE' and 'CANCEL' buttons.

7. Click **Save** on the **Edit Instance** page and save the changes to the instance.

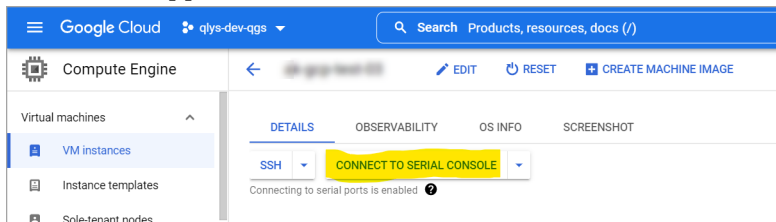
Access the QGS Text UI

The CAMS Appliance must be registered using the QGS Text UI. To launch the Text UI, follow the steps below.

1. Select the newly created GCP VM Instance, and click **Edit**.
2. Select the **Enable connecting to serial ports** checkbox and click **Save**.

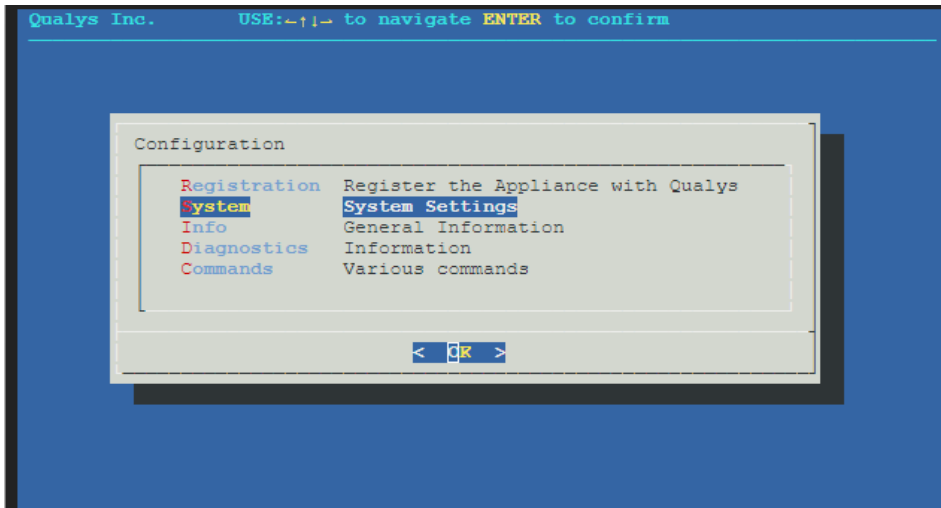


3. After saving the details, click the **Connect to Serial Console** option to access the Text UI of the QGS Appliance.

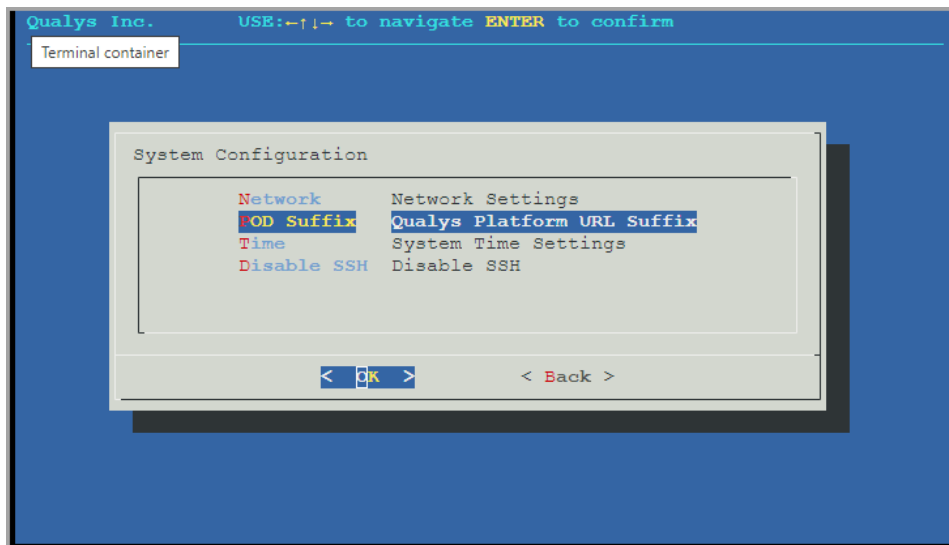


Note: Press any key if the Text UI is not displayed within 10-15 seconds. You can view the Configuration screen once the QGS Text UI is visible.

4. Click **System** to access the System Configuration.



5. On **System Configuration**, click **POD Suffix**.

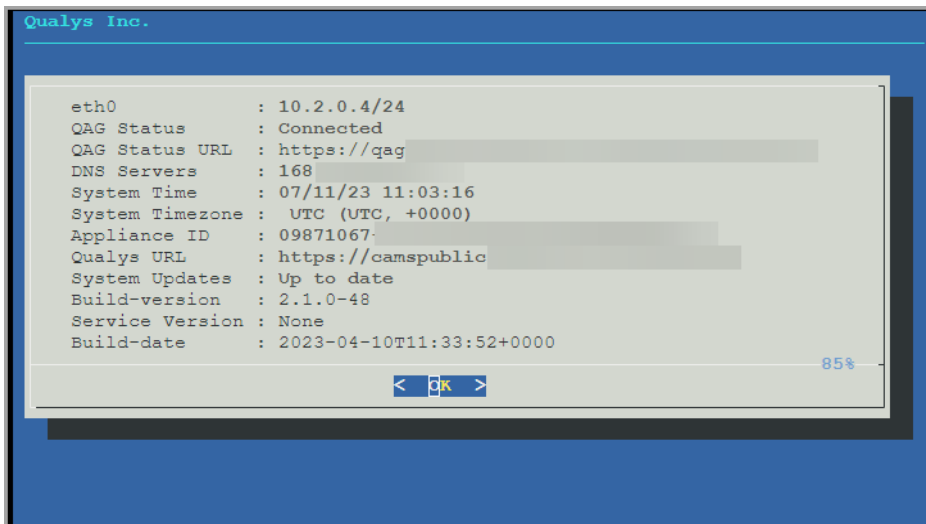


An input field is displayed to provide the Platform URL Suffix (POD Suffix).

6. Enter the Qualys Platform URL Suffix corresponding to the platform where your subscription is hosted. To identify the Platform URL Suffix for your subscription, refer to the *Platform URL Suffix* section of the [Qualys Platform Identification](#).



Once the POD Suffix is successfully updated and network settings are configured, the appliance should display as below. Verify that the QAG Status shows Connected to ensure your appliance runs successfully.

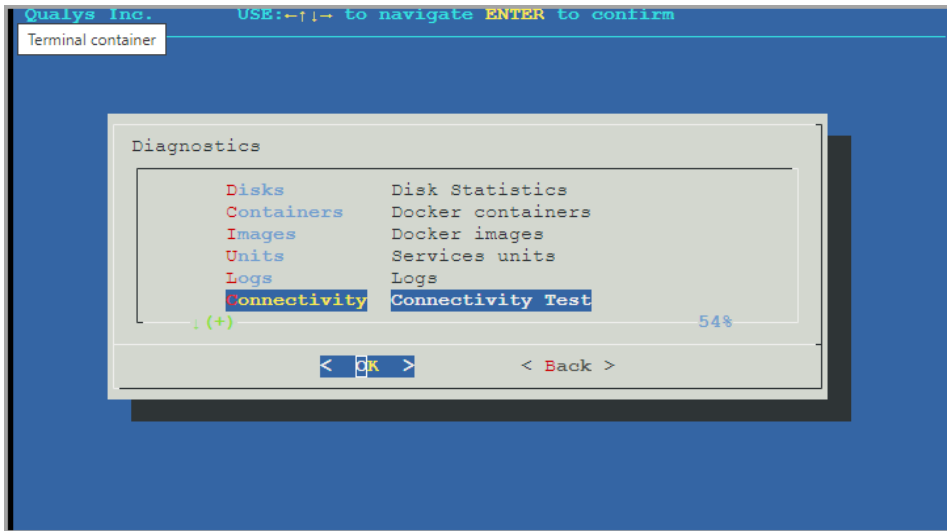


7. We recommend running a connectivity test to ensure all Qualys backend services are reachable.

To run a connectivity test, follow these steps.

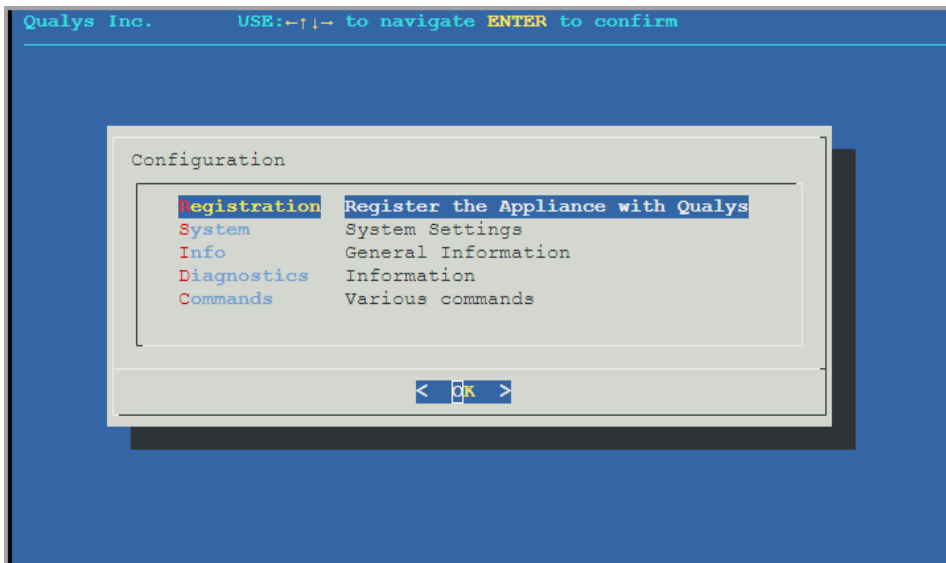
a) Navigate back to the Configuration screen.

b) Click **Diagnostics > Connectivity Test**.



Note: If the VM Instance is configured on a private IP network, configure your upstream proxy network before appliance registration. Refer to the *Proxy Servers* section of the [Qualys User Guide](#).

8. Click **Registration** to register the appliance.



Follow the steps instructed in the *Registration* section of the [QGS User Guide](#) to complete the appliance registration.

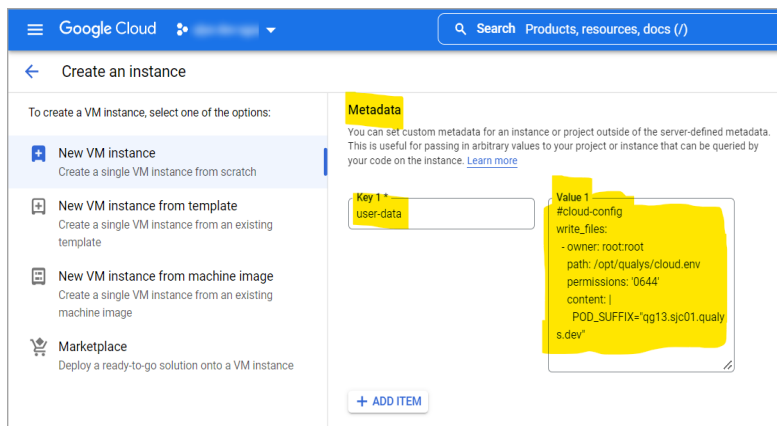
Create VM Instance Using User Data

You can also configure a GCP VM Instances using the User Data setting. We recommend using the User Data option only when the VM Instance is launched using scripts.

Follow the steps below to create a VM using User Data.

1. Navigate to the **Advanced** options on the VM deployment page during the [GCP VM Instance creation](#).
 2. Click **Management**.
 3. In Metadata, click **Add Item**.
 4. Set the Key as user-data (Setting this key is mandatory).
 5. Keep the other settings as default.
- Add the following user data in the value field.

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



The Text UI can be launched after you have created a VM using these steps. Refer to [Access the QGS Text UI](#).