Cloud Monitoring: Qwik Start - LAB

GSP089

Google Cloud Self-Paced Labs

Overview

Cloud Monitoring provides visibility into the performance, uptime, and overall health of cloud-powered applications. Cloud Monitoring collects metrics, events, and metadata from Google Cloud, Amazon Web Services, hosted uptime probes, application instrumentation, and a variety of common application components including Cassandra, Nginx, Apache Web Server, Elasticsearch, and many others. Cloud Monitoring ingests that data and generates insights via dashboards, charts, and alerts. Cloud Monitoring alerting helps you collaborate by integrating with Slack, PagerDuty, HipChat, Campfire, and more.

In this lab you'll install monitoring and logging agents to collect information from your instance, which could include metrics and logs from 3rd party apps.

Objectives

In this lab, you learn how to:
•Monitor a Compute Engine virtual machine (VM) instance with Cloud Monitoring.
•Install monitoring and logging agents for your VM

`gcloud` is the command-line tool for Google Cloud. It comes pre-installed on Cloud Shell and supports tab-completion.

3. (Optional) You can list the active account name with this command:

```
gcloud auth list
```

4. Click **Authorize**.

Output:

```
ACTIVE: *
ACCOUNT: student-02-44c3c12d53fd@qwiklabs.net

To set the active account, run:
    $ gcloud config set account `ACCOUNT`
```

5. (Optional) You can list the project ID with this command:

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-02-44c3c12d53fd

Password
MEB8TZKXavPu

Project ID
qwiklabs-gcp-01-0bae0d0

```
ACCOUNT: student-02-44c3c12d53fd@qwiklabs.net

To set the active account, run:
    $ gcloud config set account `ACCOUNT`
```

5. (Optional) You can list the project ID with this command:

```
gcloud config list project
```

Output:

```
[core]
project = qwiklabs-gcp-01-0bae0d009b16
```

Note: For full documentation of `gcloud`, in Google Cloud, refer to the gcloud CLI overview guide.

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Set your region and zone

Certain Compute Engine resources live in regions and zones. A region is a specific geographical location where you can run your resources. Each region has one or more zones.

Note: Learn more about regions and zones and see a complete list in Regions & Zones documentation.

Run the following gcloud commands in Cloud Shell to set the default region and zone for your lab:

```
gcloud config set compute/zone "us-east1-c"
export ZONE=$(gcloud config get compute/zone)

gcloud config set compute/region "us-east1"
export REGION=$(gcloud config get compute/region)
```


Air: Poor
Tomorrow
Search
ENG IN
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27-11-2025

Dashboard – qwiklabs-gcp-01-0b | qwiklabs-gcp-01-0ba... – Google Clou

https://console.cloud.google.com/home/dashboard?project=qwiklabs-gcp-01-0bae0d009b16&pli=1&cloudshell=true

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Dashboard | Activity | Recommendations | Customize

CLOUD SHELL
Terminal (qwiklabs-gcp-01-0bae0d009b16) | Open Editor

Gemini CLI is available in Cloud Shell terminal! Type `gemini` to try it. Learn more | Don't show again | Dismiss

```
Welcome to Cloud Shell! Type "help" to get started, or type "gemini" to try prompting with Gemini CLI.
Your Cloud Platform project in this session is set to qwiklabs-gcp-01-0bae0d009b16.
Use `gcloud config set project [PROJECT_ID]` to change to a different project.
student_02_44c3c12d53fd@cloudshell:~ (qwiklabs-gcp-01-0bae0d009b16)$ gcloud auth list
Credentialed Accounts

ACTIVE: *
ACCOUNT: student-02-44c3c12d53fd@qwiklabs.net

To set the active account, run:
    $ gcloud config set account `ACCOUNT`

student_02_44c3c12d53fd@cloudshell:~ (qwiklabs-gcp-01-0bae0d009b16)$ gcloud config list project
INFORMATION: Project 'qwiklabs-gcp-01-0bae0d009b16' has no 'environment' tag set. Use either 'Production', 'Development', 'Test', or 'Staging'. Add an 'environment' tag using `gcloud resource
-manager tags bindings create`.
[core]
project = qwiklabs-gcp-01-0bae0d009b16

Your active configuration is: [cloudshell-20847]
student_02_44c3c12d53fd@cloudshell:~ (qwiklabs-gcp-01-0bae0d009b16)$ gcloud config set compute/zone "us-east1-c"
export ZONE=$(gcloud config get compute/zone)

gcloud config set compute/region "us-east1"
export REGION=$(gcloud config get compute/region)
Updated property [compute/zone].
Your active configuration is: [cloudshell-20847]
Updated property [compute/region].
Your active configuration is: [cloudshell-20847]
student_02_44c3c12d53fd@cloudshell:~ (qwiklabs-gcp-01-0bae0d009b16)$
```

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```
export REGION=$(gcloud config get compute/region)
```

Lab setup instructions and requirements

End Lab 00:47:09

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-02-44c3c12d53fd

Password
MEB8TZKXavPu

Project ID
qwiklabs-gcp-01-0bae0d0

Task 1. Create a Compute Engine instance

1. In the **Cloud console**, on the **Navigation menu** (☰), click **Compute Engine** > **VM Instances**, then click **Create instance**.

   Fill in the fields as follows, leaving all other fields at the default value:

2. In the **Machine configuration**

   Enter the values for the following fields:

Field	Value
Name	`lamp-1-vm`
Region	`us-east1`
Zone	`us-east1-c`

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Dashboard – qwiklabs-gcp-01-0ba... | qwiklabs-gcp-01-0ba... – Google

https://console.cloud.google.com/welcome?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud

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Products

- Billing
- IAM & Admin
- Marketplace
- APIs & Services
- Vertex AI
- Compute Engine
- Kubernetes Engine

View all products

Overview

Security risk overview

Virtual machines

- VM instances
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Committed use discounts
- Reservations
- Migrate to Virtual Machines

Storage

- Disks
- Storage Pools
- Snapshots
- Images
- Async Replication

Instance groups

bae0d009b16

t ID: qwiklabs-gcp-01-0bae0d009b16

gQuery | Deploy an application

Try Gemini Cloud Assist chat

(Tip: use Alt G to open and close the chat)

Chat now

IAM & Admin | Billing | Compute Engine

https://console.cloud.google.com/compute/instances?project=qwiklabs-gcp-01-0bae0d009b...

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Dashboard – qwiklabs-gcp-01-0ba... | Compute Engine – qwiklabs-gcp

https://console.cloud.google.com/compute/instancesAdd?project=qwiklabs-gcp-01-0bae0d009b16

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Create an instance

Create VM from... | Equivalent code

- **Machine configuration**
  e2-medium, us-east1-c
- **OS and storage**
  Debian GNU/Linux 12 (bookworm)
- **Data protection**
  Snapshot schedules
- **Networking**
  1 network interface
- **Observability**
  Install Ops Agent
- **Security**
- **Advanced**

Machine configuration

Name *
lamp-1-vm

Region *
us-east1 (South Carolina)
Region is permanent

Zone *
us-east1-c
Zone is permanent

NEW: General-purpose AMD machine series now available 1 of 2

Try the new N4D series, a high performance and cost-optimized machine series ideal — Try now

General purpose | Compute optimized | Memory optimized | Storage optimized | GPUs

Machine types for common workloads, optimized for cost and flexibility

Series	Description	vCPUs	Memory	CPU Platfor
C4	Consistently high performance	2 - 288	4 - 2,232 GB	Intel Emerald
C4A	Arm-based consistently high performance	1 - 72	2 - 576 GB	Google Axion
C4D	Consistently high performance	2 - 384	3 - 3,072 GB	AMD Turin
N4	Flexible & cost-optimized	2 - 80	4 - 640 GB	Intel Emerald

Monthly estimate

$25.46

That's about $0.03 hourly

Pay for what you use: no upfront costs and per second billing

Item	Monthly estimate
2 vCPU + 4 GB memory	$24.46
10 GB balanced persistent disk	$1.00
Logging	Cost varies
Monitoring	Cost varies
Snapshot schedule	Cost varies
Total	$25.46

Compute Engine pricing

Cloud Operations pricing

Less

Create | Cancel | Equivalent code

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Create an instance

Create VM from... | Equivalent code

- **Machine configuration**
  e2-medium, us-east1-c
- **OS and storage**
  Debian GNU/Linux 12 (bookworm)
- **Data protection**
  Snapshot schedules
- **Networking**
  1 network interface
- **Observability**
  Install Ops Agent
- **Security**
- **Advanced**

○	C3D	Consistently high performance	4 - 360	8 - 2,880 GB	AMD Genoa
◉	E2	Low cost, day-to-day computing	0.25 - 32	1 - 128 GB	Intel Broadwe
○	N2	Balanced price & performance	2 - 128	2 - 864 GB	Intel Cascade
○	N2D	Balanced price & performance	2 - 224	2 - 896 GB	AMD Milan
○	T2A	Scale-out workloads	1 - 48	4 - 192 GB	Ampere Altra
○	T2D	Scale-out workloads	1 - 60	4 - 240 GB	AMD Milan
○	N1	Balanced price & performance	0.25 - 96	0.6 - 624 GB	Intel Haswell

Machine type

Choose a machine type with preset amounts of vCPUs and memory that suit most workloads. Or, you can create a custom machine for your workload's particular needs. Learn more

Preset | Custom

e2-medium (2 vCPU, 1 core, 4 GB memory)

vCPU	Memory
1-2 vCPU (1 shared core)	4 GB

Advanced configurations

Monthly estimate

$25.46

That's about $0.03 hourly

Pay for what you use: no upfront costs and per second billing

Item	Monthly estimate
2 vCPU + 4 GB memory	$24.46
10 GB balanced persistent disk	$1.00
Logging	Cost varies
Monitoring	Cost varies
Snapshot schedule	Cost varies
Total	$25.46

Compute Engine pricing

Cloud Operations pricing

Less

Create | Cancel | Equivalent code

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3. Click **OS and storage**

   Select Boot Disk:

   - **Boot Disk**: Debian GNU/Linux 12 (bookworm)

4. Click **Networking**

   Select the values for Firewall:

   - **Firewall**: Allow HTTP traffic

5. Once all sections are configured, scroll down and click **Create** to launch your new virtual machine instance.

   Wait a couple of minutes, you'll see a green check when the instance has launched.

Click **Check my progress** below. A green check confirms you're on track.

Air: Very poor
Now
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Dashboard – qwiklabs-gcp-01-0ba... | Compute Engine – qwiklabs-gcp

https://console.cloud.google.com/compute/instancesAdd?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create an instance

Create VM from... | Equivalent code

- Machine configuration
  e2-medium, us-east1-c
- OS and storage
  Debian GNU/Linux 12 (bookworm)
- Data protection
  Snapshot schedules
- Networking
  1 firewall rule, 1 network interface
- Observability
  Install Ops Agent
- Security
- Advanced

Networking

Firewall

Select firewall rules to allow specific network traffic from the Internet. Firewall rules will only be applied when an instance is created.

- [x] Allow HTTP traffic
- [ ] Allow HTTPS traffic
- [ ] Allow Load Balancer Health Checks

Network tags

Network tags: http-server

Hostname

Hostname

Set a custom hostname for this instance or leave it default. Choice is permanent

IP forwarding

- [ ] Enable

Network performance configuration

Network bandwidth

Monthly estimate

$25.46

That's about $0.03 hourly

Pay for what you use: no upfront costs and per second billing

Item	Monthly estimate
2 vCPU + 4 GB memory	$24.46
10 GB balanced persistent disk	$1.00
Logging	Cost varies
Monitoring	Cost varies
Snapshot schedule	Cost varies
Total	$25.46

Compute Engine pricing

Cloud Operations pricing

Less

Create | Cancel | Equivalent code

Air: Very poor Now | Search | ENG IN | 07:28 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | VM instances – Compute Engine

https://console.cloud.google.com/compute/instances?onCreate=true&project=qwiklabs-gcp-01-0bae0d009b16

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Compute Engine

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Virtual machines

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Storage

- Disks

- Marketplace
- Release Notes

VM instances

Create instance | Import VM | Refresh | Learn

Instances | Observability | Instance schedules

VM instances

Filter | Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	lamp-1-vm	us-east1-c			10.142.0.2 (nic0)	104.196.99.84 (nic0)	SSH

Related actions

Show

PAK - SL Live | Search | ENG IN | 07:29 PM 27-11-2025

Lab setup instructions and requirements

End Lab 00:43:33

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-02-44c3c12d53fd

Password
MEB8TZKXavPu

Project ID
qwiklabs-gcp-01-0bae0d0

Create a Compute Engine instance

Check my progress

Assessment Completed!

Task 2. Add Apache2 HTTP Server to your instance

1. In the Console, click **SSH** in line with `lamp-1-vm` to open a terminal to your instance.
2. Run the following commands in the SSH window to set up Apache2 HTTP Server:

```
sudo apt-get update
```

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

```
Linux lamp-1-vm 6.1.0-40-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.153-1 (2025-09-20) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Creating directory '/home/student-02-44c3c12d53fd'.
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:2 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Hit:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease
Hit:3 https://deb.debian.org/debian bookworm InRelease
Hit:4 https://deb.debian.org/debian bookworm-updates InRelease
Hit:5 https://deb.debian.org/debian bookworm-backports InRelease
Hit:6 https://deb.debian.org/debian-security bookworm-security InRelease
Hit:8 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease
Hit:9 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-2 InRelease
Reading package lists... Done
student-02-44c3c12d53fd@lamp-1-vm:~$
```

PAK - SL Live

Search

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Lab setup instructions and requirements

End Lab 00:42:29

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-02-44c3c12d53fd

Password
MEB8TZKXavPu

Project ID
qwiklabs-gcp-01-0bae0d0

Task 2. Add Apache2 HTTP Server to your instance

1. In the Console, click **SSH** in line with `lamp-1-vm` to open a terminal to your instance.
2. Run the following commands in the SSH window to set up Apache2 HTTP Server:

```
sudo apt-get update
```

```
sudo apt-get install apache2 php7.0
```

3. When asked if you want to continue, enter **Y**.

Note: If you cannot install php7.0, use php5.

```
sudo service apache2 restart
```

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Lab setup instructions and requirements

End Lab 00:40:51

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-02-44c3c12d53fd

Password
MEB8TZKXavPu

Project ID
qwiklabs-gcp-01-0bae0d0

3. When asked if you want to continue, enter **Y**.

Note: If you cannot install php7.0, use php5.

```
sudo service apache2 restart
```

Click **Check my progress** below. A green check confirms you're on track.

Add Apache2 HTTP Server to your instance

Check my progress

Assessment Completed!

4. Return to the Cloud Console, on the VM instances page. Click the `External IP` for `lamp-1-vm` instance to see the Apache2 default page for this instance.

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

```
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo apt-get install apache2 php7.0
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'php7.0-thrift' for regex 'php7.0'
Note, selecting 'php7.0-common' for regex 'php7.0'
Note, selecting 'php7.0-curl' for regex 'php7.0'
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdbm-compat4 libjansson4 liblua5.3-0 libperl5.36 perl perl-modules-5.36 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdbm-compat4 libjansson4 liblua5.3-0 libperl5.36 perl perl-modules-5.36
  ssl-cert
0 upgraded, 15 newly installed, 0 to remove and 4 not upgraded.
Need to get 9698 kB of archives.
After this operation, 57.1 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:2 https://deb.debian.org/debian bookworm/main amd64 perl-modules-5.36 all 5.36.0-7+deb12u3 [2815 kB]
Get:3 https://deb.debian.org/debian bookworm/main amd64 libgdbm-compat4 amd64 1.23-3 [48.2 kB]
Get:4 https://deb.debian.org/debian bookworm/main amd64 libperl5.36 amd64 5.36.0-7+deb12u3 [4196 kB]
Get:5 https://deb.debian.org/debian bookworm/main amd64 perl amd64 5.36.0-7+deb12u3 [239 kB]
Get:6 https://deb.debian.org/debian bookworm/main amd64 libapr1 amd64 1.7.2-3+deb12u1 [102 kB]
Get:7 https://deb.debian.org/debian bookworm/main amd64 libaprutil1 amd64 1.6.3-1 [87.8 kB]
Get:8 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1 [13.6 kB]
Get:9 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-ldap amd64 1.6.3-1 [11.8 kB]
Get:10 https://deb.debian.org/debian bookworm/main amd64 libjansson4 amd64 2.14-2 [40.8 kB]
Get:11 https://deb.debian.org/debian bookworm/main amd64 liblua5.3-0 amd64 5.3.6-2 [123 kB]
Get:12 https://deb.debian.org/debian bookworm/main amd64 apache2-bin amd64 2.4.65-1~deb12u1 [1396 kB]
Get:13 https://deb.debian.org/debian bookworm/main amd64 apache2-data all 2.4.65-1~deb12u1 [160 kB]
Get:14 https://deb.debian.org/debian bookworm/main amd64 apache2-utils amd64 2.4.65-1~deb12u1 [214 kB]
Get:15 https://deb.debian.org/debian bookworm/main amd64 apache2 amd64 2.4.65-1~deb12u1 [228 kB]
Get:16 https://deb.debian.org/debian bookworm/main amd64 ssl-cert all 1.1.2 [21.1 kB]
Fetched 9698 kB in 0s (32.2 MB/s)
Preconfiguring packages ...
Selecting previously unselected package perl-modules-5.36.
(Reading database ... 73802 files and directories currently installed.)
Preparing to unpack .../00-perl-modules-5.36_5.36.0-7+deb12u3_all.deb ...
Unpacking perl-modules-5.36 (5.36.0-7+deb12u3) ...
Selecting previously unselected package libgdbm-compat4:amd64.
Preparing to unpack .../01-libgdbm-compat4_1.23-3_amd64.deb ...
Unpacking libgdbm-compat4:amd64 (1.23-3) ...
Selecting previously unselected package libperl5.36:amd64.
Preparing to unpack .../02-libperl5.36_5.36.0-7+deb12u3_amd64.deb ...
Unpacking libperl5.36:amd64 (5.36.0-7+deb12u3) ...
```

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

```
Setting up libapr1:amd64 (1.7.2-3+deb12u1) ...
Setting up libjansson4:amd64 (2.14-2) ...
Setting up perl-modules-5.36 (5.36.0-7+deb12u3) ...
Setting up ssl-cert (1.1.2) ...
Setting up libgdbm-compat4:amd64 (1.23-3) ...
Setting up liblua5.3-0:amd64 (5.3.6-2) ...
Setting up apache2-data (2.4.65-1~deb12u1) ...
Setting up libperl5.36:amd64 (5.36.0-7+deb12u3) ...
Setting up libaprutil1:amd64 (1.6.3-1) ...
Setting up libaprutil1-ldap:amd64 (1.6.3-1) ...
Setting up libaprutil1-dbd-sqlite3:amd64 (1.6.3-1) ...
Setting up perl (5.36.0-7+deb12u3) ...
Setting up apache2-utils (2.4.65-1~deb12u1) ...
Setting up apache2-bin (2.4.65-1~deb12u1) ...
Setting up apache2 (2.4.65-1~deb12u1) ...
Enabling module mpm_event.
Enabling module authz_core.
Enabling module authz_host.
Enabling module authn_core.
Enabling module auth_basic.
Enabling module access_compat.
Enabling module authn_file.
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for man-db (2.11.2-2) ...
Processing triggers for libc-bin (2.36-9+deb12u13) ...
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo service apache2 restart
student-02-44c3c12d53fd@lamp-1-vm:~$
```

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07:32 PM 27-11-2025

Assessment Completed!

4. Return to the Cloud Console, on the VM instances page. Click the `External IP` for `lamp-1-vm` instance to see the Apache2 default page for this instance.

Note: If you are unable to find `External IP` column then click on **Column Display Options** icon on the right side of the corner, select `External IP` checkbox and click **OK**.

Click **Check my progress** below. A green check confirms you're on track.

Get a success response over External IP of VM instance

Check my progress

Assessment Completed!

Create a Monitoring Metrics Scope

GSP089
Overview
Objectives
Setup and requirements
Task 1. Create a Compute Engine instance
Task 2. Add Apache2 HTTP Server to your instance
Task 3. Create an uptime check
Task 4. Create an alerting policy
Task 5. Create a

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Dashboard – qwiklabs-gcp-01-0ba... | VM instances – Compute Engine | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/compute/instances?onCreate=true&project=qwiklabs-gcp-01-0bae0d009b16

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Compute Engine

- Overview
- Security risk overview

Virtual machines

- VM instances
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Committed use discou...
- Reservations
- Migrate to Virtual Mach...

Storage

- Disks

- Marketplace
- Release Notes

VM instances

Create instance | Import VM | Refresh | Learn

Instances | Observability | Instance schedules

VM instances

Filter | Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	lamp-1-vm	us-east1-c			10.142.0.2 (nic0)	104.196.99.84 (nic0)	SSH

Copied

Related actions

Show

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Dashboard – qwiklabs-gcp-01-0ba... | VM instances – Compute Engine – qw | Apache2 Debian Default Page: It
Not secure http://104.196.99.84
Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Apache2 Debian Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Debian systems. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Debian's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Debian tools. The configuration system is **fully documented in /usr/share/doc/apache2/README.Debian.gz**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Debian systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|       `--  ports.conf
|-- mods-enabled
|       |-- *.load
|       `-- *.conf
|-- conf-enabled
|       `-- *.conf
|-- sites-enabled
|       `-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.

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GSP089
Overview
Objectives
Setup and requirements
Task 1. Create a Compute Engine instance
Task 2. Add Apache2 HTTP Server to your instance
Task 3. Create an uptime check
Task 4. Create an alerting policy
Task 5. Create a

Create a Monitoring Metrics Scope

Set up a Monitoring Metrics Scope that's tied to your Google Cloud Project. The following steps create a new account that has a free trial of Monitoring.

- In the Cloud Console, click **Navigation menu** (≡) > View All Products > Observability > **Monitoring**.

When the Monitoring **Overview** page opens, your metrics scope project is ready.

Install the Monitoring and Logging agents

Agents collect data and then send or stream info to Cloud Monitoring in the Cloud Console.

The *Cloud Monitoring agent* is a collected-based daemon that gathers system and application metrics from virtual machine instances and sends them to Monitoring. By default, the Monitoring agent collects disk, CPU, network, and process metrics.

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Dashboard – qwiklabs-gcp-01-0ba... | Overview – Monitoring – qwiklab | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring?referrer=search&project=qwiklabs-gcp-01-0bae0d009b16

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Observability
Monitoring

- Overview
- Dashboards
- Application monitoring

Explore

- Metrics explorer
- Logs explorer
- Log analytics
- Trace explorer
- Cost explorer

Detect

- Alerting
- Error reporting
- Uptime checks

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Overview

Learn

Set up your project's observability 0% complete

Alerts	Services with SLO out of budget	Failed uptime checks	VMs with Ops Agent
0	0	0	1 of 1
View alerts	View services	View checks	No legacy agents. View VMs

Predefined

Last 1 hour IST | Customize

Get Started with Cloud Observability

Google Cloud Observability offers a full suite of features for monitoring and troubleshooting your workloads, from logs, dashboards, alerts, and traces to SLO and uptime checks. You can customize this page to quickly access the views that matter most to you.

Logs

An at-a-glance view of the health of your applications. View all logs here.

Widget
Compute Engine Logs by Severity

Dashboards and Integrations

Google Cloud Observability provides out-of-the-box dashboards for a wide range of service types, including Google Cloud products like Compute Engine, Kubernetes Engine, Cloud Run, Cloud SQL, BigQuery, and Anthos along with third party integrations like PostgreSQL and ElasticSearch.

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Note: It is best practice to run the Cloud Logging agent on all your VM instances.

1. Run the Monitoring agent install script command in the SSH terminal of your VM instance to install the Cloud Monitoring agent:

```
curl -sSO https://dl.google.com/cloudagents/add-google-cloud-ops-agent-repo.sh
```

```
sudo bash add-google-cloud-ops-agent-repo.sh --also-install
```

2. If asked if you want to continue, press **Y**.

3. Run the Logging agent install script command in the SSH terminal of your VM instance to install the Cloud Logging agent:

```
sudo systemctl status google-cloud-ops-agent"*"
```

Press **q** to exit the status.

GSP089
Overview
Objectives
Setup and requirements
Task 1. Create a Compute Engine instance
Task 2. Add Apache2 HTTP Server to your instance
Task 3. Create an uptime check
Task 4. Create an alerting policy
Task 5. Create a dashboard and chart
Task 6. View your logs

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```
sudo bash add-google-cloud-ops-agent-repo.sh --also-install
```

2. If asked if you want to continue, press **Y**.

3. Run the Logging agent install script command in the SSH terminal of your VM instance to install the Cloud Logging agent:

```
sudo systemctl status google-cloud-ops-agent"*"
```

Press **q** to exit the status.

```
sudo apt-get update
```

Task 3. Create an uptime check

Uptime checks verify that a resource is always accessible. For practice, create an uptime check to verify your VM is up.

ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

```
student-02-44c3c12d53fd@lamp-1-vm:~$ curl -sSO https://dl.google.com/cloudagents/add-google-cloud-ops-agent-repo.sh
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo bash add-google-cloud-ops-agent-repo.sh --also-install
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:5 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Hit:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease
Hit:2 https://deb.debian.org/debian bookworm InRelease
Hit:3 https://deb.debian.org/debian bookworm-updates InRelease
Hit:4 https://deb.debian.org/debian bookworm-backports InRelease
Hit:6 https://deb.debian.org/debian-security bookworm-security InRelease
Hit:8 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease
Hit:9 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-2 InRelease
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 4 not upgraded.
Need to get 25.2 kB of archives.
After this operation, 35.8 kB of additional disk space will be used.
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:2 https://deb.debian.org/debian bookworm/main amd64 apt-transport-https all 2.6.1 [25.2 kB]
Fetched 25.2 kB in 0s (227 kB/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 76535 files and directories currently installed.)
Preparing to unpack .../apt-transport-https_2.6.1_all.deb ...
Unpacking apt-transport-https (2.6.1) ...
Setting up apt-transport-https (2.6.1) ...
Adding agent repository for debian.
deb https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-all main
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
Get:1 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-all InRelease [1303 B]
Get:2 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-all/main amd64 Packages [45.4 kB]
Fetched 46.7 kB in 0s (127 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
```

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser UPLOAD FILE DOWNLOAD FILE

```
Get:26 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main amd64 Packages [4387 kB]
Get:27 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-2/main amd64 Packages [45.3 kB]
Fetched 32.6 MB in 4s (7766 kB/s)
Reading package lists... Done
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo systemctl status google-cloud-ops-agent"*"
● google-cloud-ops-agent.service - Google Cloud Ops Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent.service; enabled; preset: enabled)
     Active: active (exited) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1428 (code=exited, status=0/SUCCESS)
        CPU: 195ms

Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:   service:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:     pipelines:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:       default_pipeline:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:         receivers: [hostmetrics]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:         processors: [metrics_filter]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [Ports Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [Network Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [API Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 Startup checks finished
Nov 27 13:59:31 lamp-1-vm systemd[1]: Finished google-cloud-ops-agent.service - Google Cloud Ops Agent.

● google-cloud-ops-agent-fluent-bit.service - Google Cloud Ops Agent - Logging Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent-fluent-bit.service; static)
     Active: active (running) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1478 (google_cloud_op)
      Tasks: 31 (limit: 4682)
     Memory: 33.4M
        CPU: 1.790s
     CGroup: /system.slice/google-cloud-ops-agent-fluent-bit.service
             ├─1478 /opt/google-cloud-ops-agent/libexec/google_cloud_ops_agent_wrapper -config_path /etc/google-cloud-ops-agent/config.yaml -log_path /var/log/google-cloud-op>
             └─1509 /opt/google-cloud-ops-agent/subagents/fluent-bit/bin/fluent-bit --config /run/google-cloud-ops-agent-fluent-bit/fluent_bit_main.conf --parser /run/google->

Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   processors:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     metrics_filter:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       type: exclude_metrics
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       metrics_pattern: []
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   service:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     pipelines:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       default_pipeline:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         receivers: [hostmetrics]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         processors: [metrics_filter]
Nov 27 13:59:31 lamp-1-vm systemd[1]: Started google-cloud-ops-agent-fluent-bit.service - Google Cloud Ops Agent - Logging Agent.

● google-cloud-ops-agent-opentelemetry-collector.service - Google Cloud Ops Agent - Metrics Agent
lines 1-40...skipping...
● google-cloud-ops-agent.service - Google Cloud Ops Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent.service; enabled; preset: enabled)
     Active: active (exited) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1428 (code=exited, status=0/SUCCESS)
        CPU: 195ms
```

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser

UPLOAD FILE DOWNLOAD FILE

```
● google-cloud-ops-agent.service - Google Cloud Ops Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent.service; enabled; preset: enabled)
     Active: active (exited) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1428 (code=exited, status=0/SUCCESS)
        CPU: 195ms

Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:   service:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:     pipelines:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:       default_pipeline:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:         receivers: [hostmetrics]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]:         processors: [metrics_filter]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [Ports Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [Network Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 [API Check] Result: PASS
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1404]: 2025/11/27 13:59:31 Startup checks finished
Nov 27 13:59:31 lamp-1-vm systemd[1]: Finished google-cloud-ops-agent.service - Google Cloud Ops Agent.

● google-cloud-ops-agent-fluent-bit.service - Google Cloud Ops Agent - Logging Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent-fluent-bit.service; static)
     Active: active (running) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1478 (google_cloud_op)
      Tasks: 31 (limit: 4682)
     Memory: 33.4M
        CPU: 1.790s
     CGroup: /system.slice/google-cloud-ops-agent-fluent-bit.service
             ├─1478 /opt/google-cloud-ops-agent/libexec/google_cloud_ops_agent_wrapper -config_path /etc/google-cloud-ops-agent/config.yaml -log_path /var/log/google-cloud-ops-agent/subagents/logging-module.log /o>
             └─1509 /opt/google-cloud-ops-agent/subagents/fluent-bit/bin/fluent-bit --config /run/google-cloud-ops-agent-fluent-bit/fluent_bit_main.conf --parser /run/google-cloud-ops-agent-fluent-bit/fluent_bit_p>

Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   processors:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     metrics_filter:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       type: exclude_metrics
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       metrics_pattern: []
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   service:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     pipelines:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       default_pipeline:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         receivers: [hostmetrics]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         processors: [metrics_filter]
Nov 27 13:59:31 lamp-1-vm systemd[1]: Started google-cloud-ops-agent-fluent-bit.service - Google Cloud Ops Agent - Logging Agent.

● google-cloud-ops-agent-opentelemetry-collector.service - Google Cloud Ops Agent - Metrics Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent-opentelemetry-collector.service; static)
     Active: active (running) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1476 (otelopscol)
      Tasks: 8 (limit: 4682)
     Memory: 45.2M
        CPU: 1.414s
     CGroup: /system.slice/google-cloud-ops-agent-opentelemetry-collector.service
             └─1476 /opt/google-cloud-ops-agent/subagents/opentelemetry-collector/otelopscol --config=/run/google-cloud-ops-agent-opentelemetry-collector/otel.yaml --feature-gates=receiver.prometheusreceiver.Remov>

Nov 27 13:59:32 lamp-1-vm otelopscol[1476]: 2025-11-27T13:59:32.291Z	info	ottl@v0.136.0/parser_collection.go:646	one or more paths were modified to include their context prefix, please rewrite>
Nov 27 13:59:32 lamp-1-vm otelopscol[1476]: 2025-11-27T13:59:32.295Z	info	service@v0.136.0/service.go:239	Starting otelopscol...	{"resource": {"service.instance.id": "1a405311-7923-47d6>
student-02-44c3c12d53fd@lamp-1-vm:~$
```

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ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true - Brave

https://ssh.cloud.google.com/v2/ssh/projects/qwiklabs-gcp-01-0bae0d009b16/zones/us-east1-c/instances/lamp-1-vm?authuser=0&hl=en_US&projectNumber=655743958698&useAdminProxy=true

SSH-in-browser UPLOAD FILE DOWNLOAD FILE

```
       CPU: 1.790s
    CGroup: /system.slice/google-cloud-ops-agent-fluent-bit.service
            ├─1478 /opt/google-cloud-ops-agent/libexec/google_cloud_ops_agent_wrapper -config_path /etc/google-cloud-ops-agent/config.yaml -log_path /var/log/google-cloud-ops-agent/subagents/l
ogging-module.log /d>
            └─1509 /opt/google-cloud-ops-agent/subagents/fluent-bit/bin/fluent-bit --config /run/google-cloud-ops-agent-fluent-bit/fluent_bit_main.conf --parser /run/google-cloud-ops-agent-flu
ent-bit/fluent_bit_p>

Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   processors:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     metrics_filter:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       type: exclude_metrics
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       metrics_pattern: []
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:   service:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:     pipelines:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:       default_pipeline:
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         receivers: [hostmetrics]
Nov 27 13:59:31 lamp-1-vm google_cloud_ops_agent_engine[1430]:         processors: [metrics_filter]
Nov 27 13:59:31 lamp-1-vm systemd[1]: Started google-cloud-ops-agent-fluent-bit.service - Google Cloud Ops Agent - Logging Agent.

● google-cloud-ops-agent-opentelemetry-collector.service - Google Cloud Ops Agent - Metrics Agent
     Loaded: loaded (/lib/systemd/system/google-cloud-ops-agent-opentelemetry-collector.service; static)
     Active: active (running) since Thu 2025-11-27 13:59:31 UTC; 8min ago
   Main PID: 1476 (otelopscol)
      Tasks: 8 (limit: 4682)
     Memory: 45.2M
        CPU: 1.414s
     CGroup: /system.slice/google-cloud-ops-agent-opentelemetry-collector.service
             └─1476 /opt/google-cloud-ops-agent/subagents/opentelemetry-collector/otelopscol --config=/run/google-cloud-ops-agent-opentelemetry-collector/otel.yaml --feature-gates=receiver.prom
etheusreceiver.Remov>

Nov 27 13:59:32 lamp-1-vm otelopscol[1476]: 2025-11-27T13:59:32.291Z        info        ottl@v0.136.0/parser_collection.go:646        one or more paths were modified to include their context pr
efix, please rewrite>
Nov 27 13:59:32 lamp-1-vm otelopscol[1476]: 2025-11-27T13:59:32.295Z        info        service@v0.136.0/service.go:239        Starting otelopscol...        {"resource": {"service.instance.id":
 "1a405311-7923-47d6>
student-02-44c3c12d53fd@lamp-1-vm:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:5 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Hit:2 https://deb.debian.org/debian bookworm InRelease
Hit:3 https://deb.debian.org/debian bookworm-updates InRelease
Hit:7 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-all InRelease
Hit:4 https://deb.debian.org/debian bookworm-backports InRelease
Hit:6 https://deb.debian.org/debian-security bookworm-security InRelease
Hit:8 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease
Hit:9 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease
Hit:10 https://packages.cloud.google.com/apt google-cloud-ops-agent-bookworm-2 InRelease
Reading package lists... Done
student-02-44c3c12d53fd@lamp-1-vm:~$
```

16°C Clear Search ENG IN 07:39 PM 27-11-2025

Task 3. Create an uptime check

Uptime checks verify that a resource is always accessible. For practice, create an uptime check to verify your VM is up.

1. In the Cloud Console, in the left menu, click **Uptime checks**, and then click **Create Uptime Check**.
2. For **Protocol**, select **HTTP**.
3. For **Resource Type**, select **Instance**.
4. For **Instance**, select **lamp-1-vm**.
5. For **Check Frequency**, select **1 minute**.
6. Click **Continue**.
7. In Response Validation, accept the defaults and then click **Continue**.
8. In Alert & Notification, accept the defaults, and then click **Continue**.

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Dashboard – qwiklabs-gcp-01-0ba... | Overview – Monitoring – qwiklab | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring?referrer=search&project=qwiklabs-gcp-01-0bae0d009b16

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Observability
Monitoring

- Cost explorer

Detect

- Alerting
- Error reporting
- Uptime checks
- Synthetic monitoring
- SLOs

Configure

- Integrations
- Log-based metrics
- Log router
- Logs storage
- Metrics management

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

- Release Notes

Overview

Learn

Set up your project's observability 0% complete

Alerts	Services with SLO out of budget	Failed uptime checks	VMs with Ops Agent
0	0	0	1 of 1
View alerts	View services	View checks	No legacy agents. View VMs

Predefined

Last 1 hour IST | Customize

Get Started with Cloud Observability

Google Cloud Observability offers a full suite of features for monitoring and troubleshooting your workloads, from logs, dashboards, alerts, and traces to SLO and uptime checks. You can customize this page to quickly access the views that matter most to you.

Logs

An at-a-glance view of the health of your applications. View all logs here.

Widget

Dashboards and Integrations

Google Cloud Observability provides out-of-the-box dashboards for a wide range of service types, including Google Cloud products like Compute Engine, Kubernetes Engine, Cloud Run, Cloud SQL, BigQuery, and Anthos along with third party integrations like PostgreSQL and ElasticSearch.

https://console.cloud.google.com/monitoring/uptime?project=qwiklabs-gcp-01-0bae0d009...

16°C Clear | Search | ENG IN | 07:40 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/uptime/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- Metrics management

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

- Release Notes

Create Uptime Check

- Target
- Response Validation (optional)
- Alert & Notification (optional)
- Review

Create | Cancel

Select the resource to be monitored.

Protocol
HTTP

Resource Type
Instance

Applies to

- (●) Single
  Apply to one resource.
- ( ) Group
  Apply to a collection of resources that is defined as a Monitoring Group.

Instance*
lamp-1-vm

Path

Check Frequency
1 minute

More target options

Continue

16°C Clear | Search | ENG IN | 07:42 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/uptime/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- Integrations
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Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

- Release Notes

Create Uptime Check

- Target
- Response Validation (optional)
- Alert & Notification (optional)
- Review

Create | Cancel

Enter a name for the uptime check.

Title *
Lamp Uptime Check

User Labels

Key | Value (optional)

+ Add user label

Hide user labels

Test uptime check (optional)

We recommend that you test your uptime check before creating.

Responded with "200 (OK)" in 240 ms.

Test | View Details

16°C Clear | Search | ENG IN | 07:42 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Uptime checks – Monitoring – qw | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/uptime?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Observability
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- Log router
- Logs storage
- Metrics management

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Uptime checks

+ Create uptime check | + 1 recommended alert | Learn

Try the new Synthetic monitoring capability! New

Proactively monitor your application's critical user journeys by simulating user behavior. Detect and alert on failures, and receive detailed reports for debugging. Learn more.

Create Synthetic Monitor | View Documentation

Filter Enter property name or value

Display Name	Asia Pacific	Europe	North America	South America	Policies
Lamp Uptime Check	●	●	●	●	1

16°C Clear | Search | ENG IN | 07:43 PM 27-11-2025

Task 4. Create an alerting policy

Use Cloud Monitoring to create one or more alerting policies.

1. In the left menu, click **Alerting**, and then click **+Create Policy**.
2. Click on **Select a metric** dropdown. Uncheck the **Active**.
3. Type **Network traffic** in filter by resource and metric name and click on **VM instance > Interface**. Select `Network traffic` (agent.googleapis.com/interface/traffic) and click **Apply**. Leave all other fields at the default value.
4. Click **Next**.
5. Set the **Threshold position** to `Above threshold`, **Threshold value** to `500` and **Advanced Options > Retest window** to `1 min`. Click **Next**.
6. Click on the drop down arrow next to **Notification Channels**, then click on **Manage Notification Channels**.

A **Notification channels** page will open in a new tab.

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Task 6. View your logs

16°C Clear | Search | ENG IN | 07:43 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Uptime checks – Monitoring – qw | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/uptime?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Observability
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Cost explorer

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- SLOs

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Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Uptime checks

+ Create uptime check | + 1 recommended alert | Learn

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Create Synthetic Monitor | View Documentation

Filter Enter property name or value

Display Name	Asia Pacific	Europe	North America	South America	Policies
Lamp Uptime Check	●	●	●	●	1

https://console.cloud.google.com/monitoring/alerting?project=qwiklabs-gcp-01-0bae0d009...

16°C Clear | Search | ENG IN | 07:43 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create alerting policy

+ Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

- New condition
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

Policy configuration mode

(•) Builder ( ) Code editor (MQL or PromQL)

Looking to alert on other types of data?

Create a log-based alert policy

Create a SQL alert policy

by querying and aggregating log data
Observability Analytics.

SQL alert | Learn more

Select a metric

Reset

Network traffic

Active

POPULAR RESOURCES

- Amazon EC2 Instance — 3 metrics
- VM Instance — 6 metrics

ACTIVE RESOURCES

- GCP Location — 1 metric
- VM Instance — 6 metrics

INACTIVE RESOURCES

- Amazon EC2 Instance — 3 metrics

ACTIVE METRIC CATEGORIES

- Interface — 1 metric

INACTIVE METRIC CATEGORIES

- Popular metrics
- Elasticsearch — 1 metric
- Instance — 3 metrics
- Memcached — 1 metric

ACTIVE METRICS

- Network traffic
  agent.googleapis.com/interface/traffic

INACTIVE METRICS

Selection preview
VM Instance > interface

Cancel | Apply

16°C Clear | Search | ENG IN | 07:44 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create alerting policy

+ Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

- VM Instance - Network traffic
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

Policy configuration mode

(•) Builder ( ) Code editor (MQL or PromQL)

Select a metric

VM Instance - Network traffic

Add filters Optional

Selections made on the chart do not affect the alert policy Learn more

Add a filter

Transform data

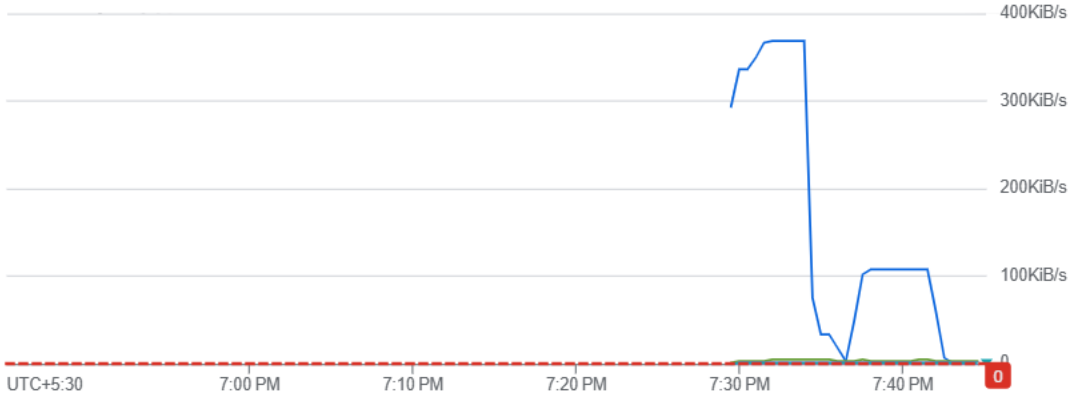
Within each time series

Rolling window *
5 min

Adjust the length of time a signal is calculated for. Example: Mean of CPU utilization for 5 minutes is above 80%

✓ 1 hour | 6 hours | 1 day | 7 days | 30 days | Custom

VM Instance - Network traffic



Filter Enter property name or value

device	direction	Value
ens4	rx	329.371 B/s
ens4	tx	2.599 KiB/s
lo	rx	405.144 B/s

Create Policy | Provide feedback | Cancel

16°C Clear | Search | ENG IN | 07:45 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create alerting policy

+ Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

- VM Instance - Network traffic
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

Alert trigger: Any time series violates

Threshold position: Above threshold

Threshold value: 500 B/s

Advanced Options

Retest window *: 1 min

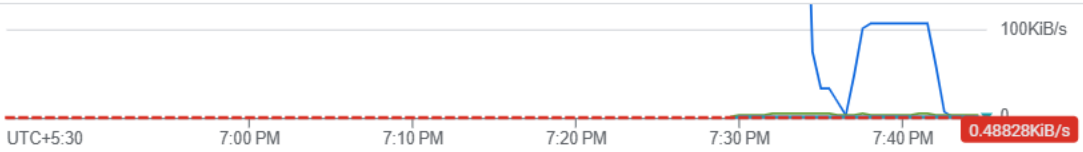
Used to retest alerts. Expand timeframe if alerts have a tendency to be false positive.

Evaluation of missing data

Choose how conditions are evaluated when data is missing.

Condition name *: VM Instance - Network traffic

Next



Filter: Enter property name or value

device	direction	Value
ens4	rx	398.101 B/s
ens4	tx	3.217 KiB/s
lo	rx	499.568 B/s

Rows per page: 3 | 1 – 3 of 4

Estimated monthly cost Coming 2026

~~$0.22~~ $0.00

Pricing will be introduced in 2026. Estimates do not account for discounts, credits, and the free tier. Learn more

Show cost breakdown

Create Policy | Provide feedback | Cancel

16°C Clear | Search | ENG IN | 07:45 PM 27-11-2025

Manage Notification Channels.

A **Notification channels** page will open in a new tab.

7. Scroll down the page and click on **ADD NEW** for **Email**.
8. In the **Create Email Channel** dialog box, enter your personal email address in the **Email Address** field and a **Display name**.
9. Click on **Save**.
10. Go back to the previous **Create alerting policy** tab.
11. Click on **Notification Channels** again, then click on the **Refresh icon** to get the display name you mentioned in the previous step.
12. Click on **Notification Channels** again if necessary, select your **Display name** and click **OK**.
13. Add a message in documentation, which will be included in the emailed alert.
14. Mention the **Alert name** as `Inbound Traffic Alert`.
15. Click **Next**.

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Dashboard – qwiklabs-gcp-01-0ba... | Notification channels – Monitori | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qw

Create alerting policy

ALERT CONDITIONS

VM Instance - Network traffic

Configure trigger

ALERT DETAILS

Notifications and name

Review alert

Notification channels

Google Chat Preview — Add New

No Google Chat channels configured

PagerDuty Services — Add New

No PagerDuty services configured

PagerDuty Sync Beta — Add New

No PagerDuty Sync channels conf

Slack — Add New

No Slack channels configured

Webhooks — Add New

No webhook channels configured

Email — Add New

No emails configured

SMS — Add New

No SMS channels configured

Pub/Sub — Add New

No Pub/Sub channels configured

Create Email Channel

Email addresses can be set to receive notifications from your alerting when a new incident is created.

Email Address *
devt40363@gmail.com

Display Name *
Lamp Notification

Cancel | Save

16°C Clear | Search | ENG IN | 07:47 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create alerting policy | + Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

- VM Instance - Network traffic
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

Configure notifications and finalize alert

Configure notifications Recommended

Use notification channel

Notification Channels

Filter Type to filter

Email

Lamp Notification

Manage Notification Channels

Cancel | OK

Learn more

Notify on incident closure

Incident autoclose duration

Create Policy | Provide feedback | Cancel

16°C Clear | Search | ENG IN | 07:47 PM 27-11-2025

Create alerting policy | + Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

- VM Instance - Network traffic
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

Documentation Optional

Enter any documentation you would like included with the notification. You can use markdown, variables, and channel-specific controls. Markdown formatting may not apply to all notification channels.

Text Field

Lamp Notification: Above Threshold

Name the alert policy

Alert policy name *

Inbound Traffic Alert

Next

Create Policy | Provide feedback | Cancel

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/create?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Create alerting policy

+ Add alert condition | Delete alert condition | View Code

ALERT CONDITIONS

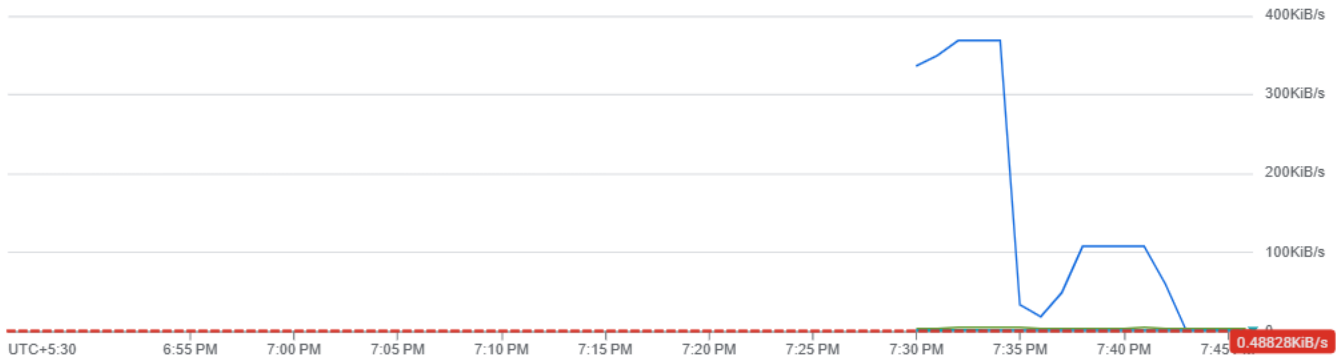
- VM Instance - Network traffic
  - Configure trigger

ALERT DETAILS

- Notifications and name
- Review alert

VM Instance - Network traffic

Condition type	Triggers when	Threshold position	Threshold value	Retest window
Threshold	Any time series cross threshold	Above threshold	500	1 min



Filter Enter property name or value

device	direction	Value
ens4	rx	298.65 B/s
ens4	tx	2.315 KiB/s
lo	rx	355.309 B/s

Rows per page: 3 | 1 – 3 of 4

Policy Details

Alert Policy Name
Inbound Traffic Alert

Severity
No severity

Notification channels

Notify on incident open only.

Incidents with absent data will auto close after 1 minute.

Display name	Type
Lamp Notification	Email

Documentation

Lamp Notification: Above Threshold

Create Policy | Provide feedback | Cancel

16°C Clear | Search | ENG IN | 07:49 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Policy details – Monitoring – qwi | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/alerting/policies/16494762412099309108?project=qwiklabs-gcp-01-0bae0d009b16

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- Trace explorer
- Cost explorer

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- Error reporting
- Uptime checks
- Synthetic monitoring
- SLOs

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Policy details | Enabled | Edit | Copy | Delete | JSON | 1 hour | 6 hours | 1 day | 1 week | 1 month | 6 weeks

Inbound Traffic Alert

Conditions

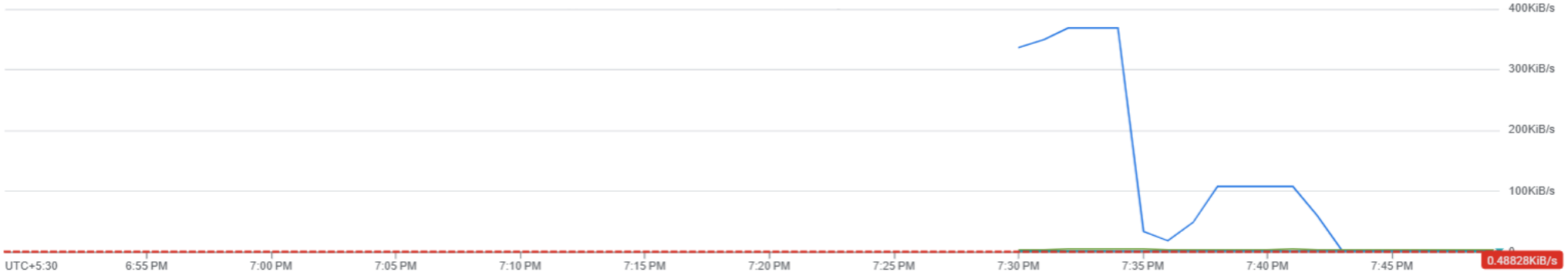
Policy violates when ANY condition is met

Severity

No severity

VM Instance - Network traffic

Condition type	Triggers when	Threshold position	Threshold value	Retest window
Threshold	Any time series cross threshold	Above threshold	500 B/s	1 min



Filter Enter property name or value

device	direction	Value
ens4	rx	327.426 B/s
ens4	tx	2.521 KiB/s

16°C Clear | Search | ENG IN | 07:49 PM 27-11-2025

Task 5. Create a dashboard and chart

You can display the metrics collected by Cloud Monitoring in your own charts and dashboards. In this section you create the charts for the lab metrics and a custom dashboard.

1. In the left menu select **Dashboards**, and then **+Create Custom Dashboard**.
2. Name the dashboard `Cloud Monitoring LAMP Qwik Start Dashboard`.

Add the first chart

1. Click on **+ ADD WIDGET**

75/100
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Task 5. Create a dashboard and chart

You can display the metrics collected by Cloud Monitoring in your own charts and dashboards. In this section you create the charts for the lab metrics and a custom dashboard.

1. In the left menu select **Dashboards**, and then **+Create Custom Dashboard**.
2. Name the dashboard `Cloud Monitoring LAMP Qwik Start Dashboard`.

Add the first chart

1. Click on **+ ADD WIDGET**
2. Select the **Line** option under **Visualization** in the **Add widget**.
3. Name the Widget title **CPU Load**.
4. Click on **Select a metric** dropdown. Uncheck the **Active**.

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- Application monitoring

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- Metrics explorer
- Logs explorer
- Log analytics
- Trace explorer
- Cost explorer

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- Synthetic monitoring
- SLOs

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

- Release Notes

Policy details | Enabled | Edit | Copy | Delete | JSON | 1 hour | 6 hours | 1 day | 1 week | 1 month | 6 weeks

Inbound Traffic Alert

Conditions

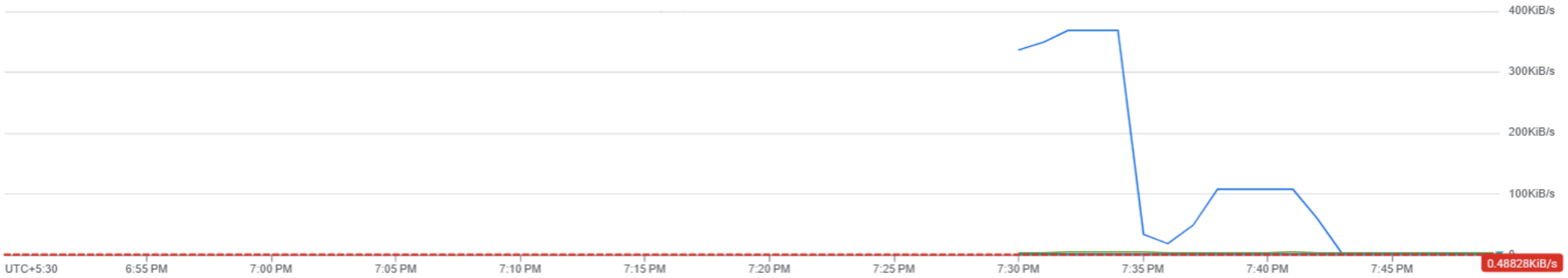
Policy violates when ANY condition is met

Severity

No severity

VM Instance - Network traffic

Condition type	Triggers when	Threshold position	Threshold value	Retest window
Threshold	Any time series cross threshold	Above threshold	500 B/s	1 min



Filter Enter property name or value

device	direction	Value
ens4	rx	327.426 B/s
	tx	2.521 KiB/s

Dashboard – qwiklabs-gcp-01-0ba... | Monitoring – qwiklabs-gcp-01-0 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards?project=qwiklabs-gcp-01-0bae0d009b16

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Observability
Monitoring

- Overview
- Dashboards
- Application monitoring

Explore

- Metrics explorer
- Logs explorer
- Log analytics
- Trace explorer
- Cost explorer

Detect

- Alerting
- Error reporting
- Uptime checks
- Synthetic monitoring
- SLOs

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Dashboards

Add or create more dashboards

Create Custom Dashboard

Create a custom dashboard to fit your needs.

Create Custom Dashboard

Dashboard Templates

Add a pre-made dashboard from the template catalog.

View Dashboard Templates

Import Dashboards

Upload your Grafana dashboards into Google Cloud.

Import Grafana Dashboards

My Dashboards

+ Labels | Delete | Tags | Manage Labels

Filter | Search your dashboards

All	22
Recently Viewed	0
Favorites	0
Recommended	22
Integrations	
Ops Agent	0
GMP	0
Type	
Custom	0
Playbook	7
Google Services	15

Name	Type	Description	Actions
Autoscaler Monitoring	Google Services	This dashboard has 2 charts for the related autoscaler metrics: Current...	
Cluster Director Block Network	Google Services	This dashboard features 14 charts providing an in-depth view of Cluster...	
Cluster Director Health Monitoring	Google Services	This dashboard features 18 charts presenting detailed insights into...	
Cluster Director Transmission Efficiency	Google Services	This dashboard features 24 charts providing insights into Cluster Director...	
Cluster Health Scanner	Google Services	This dashboard features charts for monitoring the results of the Cluster...	
Compute Engine - Instances	In-Context	This dashboard shows charts displaying metrics of VMs instances in a...	
Disks	Google Services	This dashboard has charts displaying an inventory of GCE Disks, Volume...	
Firewalls	Google Services	This dashboard shows the list of firewalls in a project.	
GCE Interactive Playbook - Cluster Director Block Netwo...	Playbook	The playbook helps you monitor and troubleshoot network locality issues i...	
GCE Interactive Playbook - Cluster Director Health Moni...	Playbook	This playbook helps you monitor, identify, and troubleshoot infrastructure...	
GCE Interactive Playbook - Host Events	Playbook	This playbook will assist you with troubleshooting VM host events such as...	
GCE Interactive Playbook - MIG Autoscaling Failures	Playbook	This playbook will assist you with troubleshooting autoscaling issues in...	

Rows per page: 50 | 1 – 22 of 22

16°C Clear | Search | ENG IN | 07:52 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | New Dashboard - Nov 27, 2025 | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Dashboard name
Cloud Monitoring LAMP Qwik Start Dashboard

Dashboard description

Type: Custom | Labels: None

Dashboards | + Create Dashboard

Recent | Favorites | All

Filter | Filter Dashboards

Name	Type
New Dashboard - Nov 27, 2025 7:5...	Custom

See All Dashboards

ted building
et to start building your

Last 1 hour | IST | Share

Autosave

No widgets configured

Display any metric type collected by your project, including custom metrics, so you can spot trends or issues before they happen. Learn more

Add widget

Get started building
Add a widget to start building your dashboard.

16°C Clear | Search | ENG IN | 07:52 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- SLOs

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Cloud Monitoring LAMP Qwik Start Dashboard | Add widget | Last 1 hour IST | Share

Annotations (1) | Group by | Filter | Saved 11/27/25, 7:53 PM | Autosave

No widgets configured

Display any metric type collected by your project, including custom metrics, so you can spot trends or issues before they happen. Learn more

Add widget

Get started building

Add a widget to start building your dashboard.

16°C Clear | Search | ENG IN | 07:53 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Configure widget

Last 1 hour IST | Apply | Cancel

Queries | Add query | Create ratio | Auto-Run

A | Metric | Select a metric | Filter | Add filter | Aggregation | Unaggregated | by | None | PromQL

Results

Explore

Detect

Select a metric

Reset

CPU load (1m)

Active

POPULAR RESOURCES

VM Instance — 2 metrics

ACTIVE RESOURCES

VM Instance — 2 metrics

INACTIVE RESOURCES

Amazon EC2 Instance — 1 metric

Bare Metal Solution Instance — 1 metric

ACTIVE METRIC CATEGORIES

Cpu — 1 metric

INACTIVE METRIC CATEGORIES

Popular metrics — 5 metrics

Guest — 1 metric

ACTIVE METRICS

CPU load (1m)
agent.googleapis.com/cpu/load_1m

INACTIVE METRICS

Selection preview
VM Instance > cpu

Cancel | Apply

Display

Widget type: Line chart

Widget title

Analysis Mode

Compare to past

Threshold Line

Y-axis scale

Widget Visibility

16°C Clear | Search | ENG IN | 07:53 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- SLOs

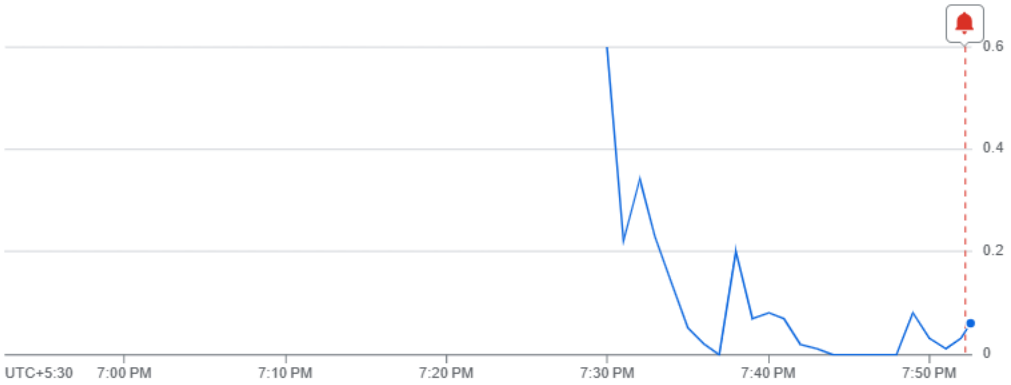
Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

Cloud Monitoring LAMP Qwik Start Dashboard | Add widget | Last 1 hour IST | Share

Annotations (2) | Group by | + Filter | Saved 11/27/25, 7:54 PM | Autosave

CPU load (1m) [SUM]



16°C Clear | Search | ENG IN | 07:54 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

Free AI Paraphrasin... | Transcript of Case St... | GCP-LAB | Hydra | datawarehouse

Configure widget

Last 1 hour IST | Apply | Cancel

Queries | Add query | Create ratio | Auto-Run

A | Metric | Select a metric | Filter | Add filter | Aggregation | Unaggregated | by | None | PromQL

Results | Chart | Table | Both

Select a metric to start

Display

Widget type: Line chart

Widget title: Received Packets

Analysis Mode

Compare to past

Threshold Line

Y-axis scale

Widget Visibility

15°C Clear | Search | ENG IN | 07:55 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Configure widget

Last 1 hour IST | Apply | Cancel

Queries | Add query | Create ratio | Auto-Run

A | Metric | Select a metric | Filter | Add filter | Aggregation | Unaggregated | by | None | PromQL

Results

Explore

Detect

Select a metric

Reset

Received Packets

Active

POPULAR RESOURCES

- VM Instance — 4 metrics

ACTIVE RESOURCES

- VM Instance — 4 metrics

INACTIVE RESOURCES

- Amazon EC2 Instance — 1 metric
- Cloud NAT Gateway — 2 metrics
- Cloud Router — 1 metric

ACTIVE METRIC CATEGORIES

- Instance — 1 metric

INACTIVE METRIC CATEGORIES

- Popular metrics — 5 metrics
- Nat — 2 metrics
- Zookeeper — 1 metric

ACTIVE METRICS

- Received packets
  compute.googleapis.com/instance/network/rece...

INACTIVE METRICS

Selection preview
VM Instance > instance > Received packets

Cancel | Apply

Display

Widget type: Line chart

Widget title: Received Packets

Analysis Mode

Compare to past

Threshold Line

Y-axis scale

Widget Visibility

Air: Poor
Tomorrow

Search

ENG IN

07:56 PM
27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- Synthetic monitoring
- SLOs

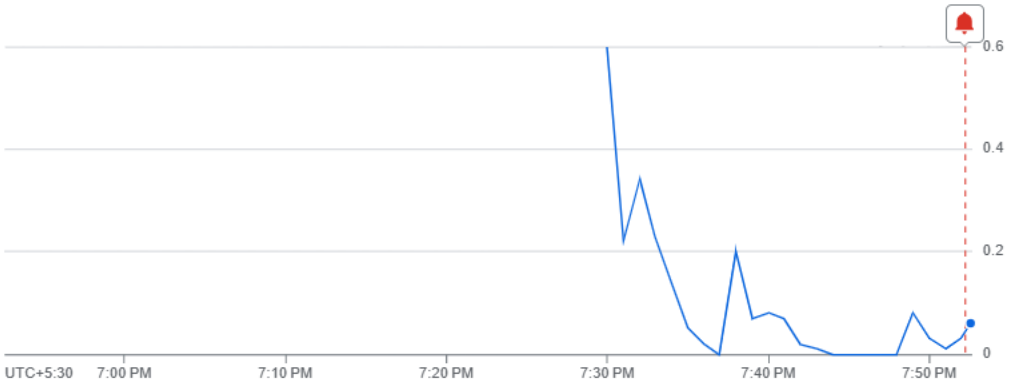
Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

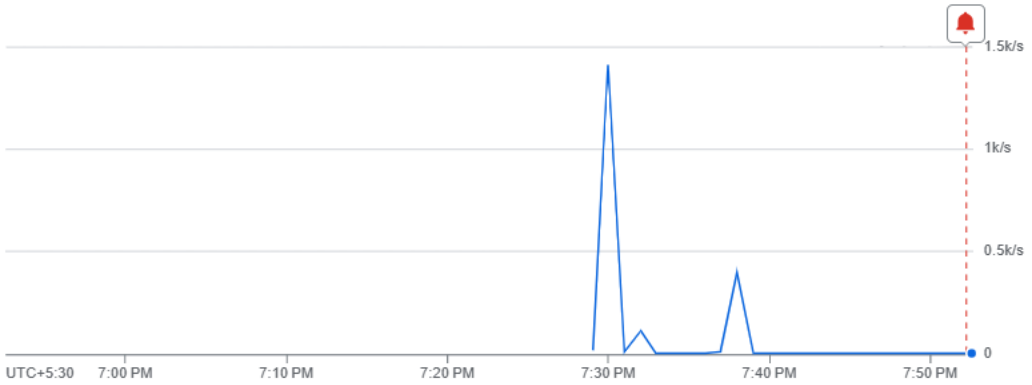
Cloud Monitoring LAMP Qwik Start Dashboard | Add widget | Last 1 hour IST | Share

Annotations (2) | Group by | + Filter | Saved 11/27/25, 7:56 PM | Autosave

CPU load (1m) [SUM]



Received Packets



Air: Poor
Tomorrow

Search

ENG
IN

07:56 PM
27-11-2025

Task 6. View your logs

Cloud Monitoring and Cloud Logging are closely integrated. Check out the logs for your lab.

1. Select **Navigation menu** > **Logging** > **Logs Explorer**.
2. Select the logs you want to see, in this case, you select the logs for the lamp-1-vm instance you created at the start of this lab:
   - Click on **All Resource**.
   - Select **VM Instance** > **lamp-1-vm** in the Resource drop-down menu.
   - Click **Apply**.

In the results section you can see the logs for your VM instance.

Check out what happens when you start and stop the VM instance.

To best see how Cloud Monitoring and Cloud Logging reflect VM instance changes,

Task 1. Create a Co Engine instance
Task 2. Add Apache2 HTTP Server to your instance
Task 3. Create an uptime check
Task 4. Create an alerting policy
Task 5. Create a dashboard and chart
Task 6. View your logs
Task 7. Check the uptime check results and triggered alerts
Congratulations!

Air: Poor Tomorrow | Search | ENG IN | 07:56 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Cloud Monitoring LAMP Qwik St | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/monitoring/dashboards/builder/db43c974-9866-4e90-b9da-e974974c1b9b;duration=PT1H?project=qw...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

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- Uptime checks
- Synthetic monitoring
- SLOs

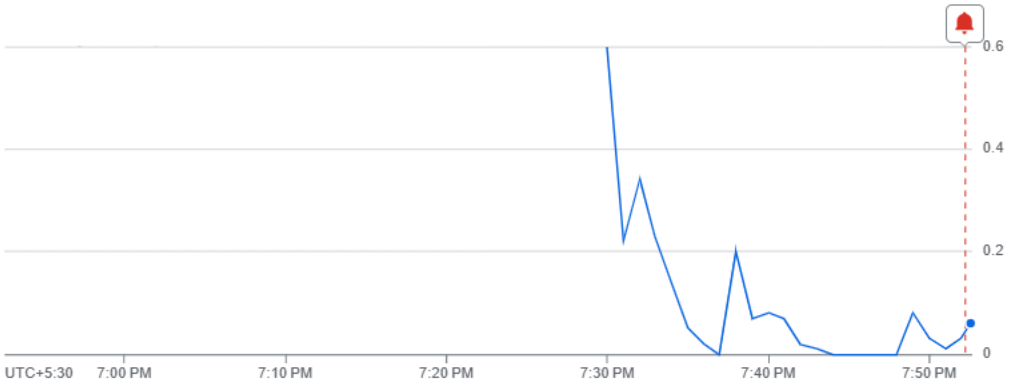
Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

Release Notes

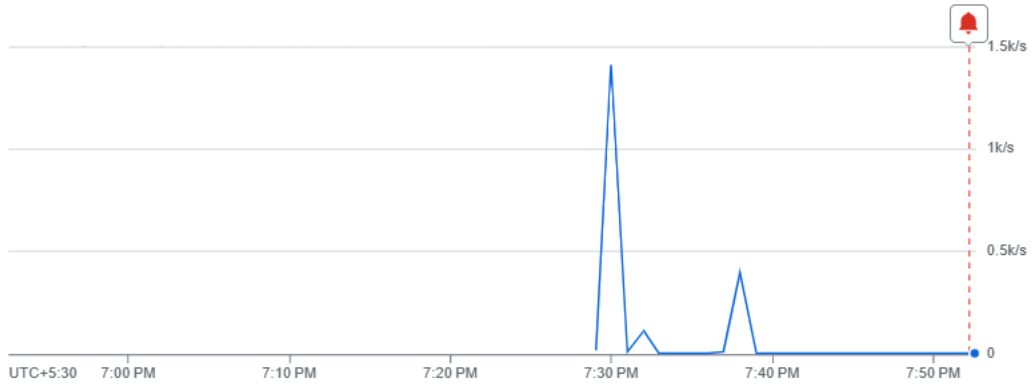
Cloud Monitoring LAMP Qwik Start Dashboard | Add widget | Last 1 hour IST | Share

Annotations (2) | Group by | + Filter | Saved 11/27/25, 7:56 PM | Autosave

CPU load (1m) [SUM]



Received Packets



https://console.cloud.google.com/logs/query?project=qwiklabs-gcp-01-0bae0d009b16

Air: Poor
Tomorrow

Search

ENG
IN

07:57 PM
27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Logs Explorer – Logging – qwikla | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/logs/query;cursorTimestamp=2025-11-27T14:27:01.109368Z;duration=PT1H?project=qwiklabs-gcp-01-...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Logs Explorer

Query library | Share link | Preferences | Last 1 hour IST | Learn

Project logs | Search all fields | Run query

All resources | All log names | All severities | Correlate by | Show query

Select resource

Clear

VM

RECENT

ALL RESOURCE TYPES

VM Instance

Search by prefix...

All instance_id

INSTANCE_ID

lamp-1-vm
2139389355712964604

Cancel | Apply

Language: LQL

19:20 19:25 19:30 19:35 19:40 19:45 19:50 19:58:00

Showing top 5 of 5 values

Default	965
Info	232
Notice	40
Warning	4
Debug	2
Resource type	1,243

JSON payload (most frequent) Preview

message	2,041
progName	54
progVersion	54

1,243 results | Actions

SEVERITY	TIME	SUMMARY
	2025-11-27 19:54:16.174	Cloud Monitoring API UpdateDashboard db43c974-9866-4e90-b9da-e974974c1b9b student-02-44c3c12d53fd@q… audi…
	2025-11-27 19:54:32.580	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:54:33.360	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:55:03.080	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:55:33.371	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:55:33.869	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:56:03.242	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:56:31.837	Cloud Monitoring API UpdateDashboard db43c974-9866-4e90-b9da-e974974c1b9b student-02-44c3c12d53fd@q… audi…
	2025-11-27 19:56:32.505	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:56:33.364	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…
	2025-11-27 19:56:49.000	lamp-1-vm
	2025-11-27 19:57:01.109	OS Login ListLoginProfiles us-east1-c:lamp-1-vm audit_log, method: "google.cloud.oslogin.dataplane.OsLoginD…

LEARN Tutorial

Recommended for you

Using the Logs Explorer
Help document
The Cloud Logging lets you efficiently retrieve, view, and analyze logs from your queries.

Quickstart: Cloud Logging tour and introduction
Tutorial | 20 min
Get started with Cloud Logging and track down issues in your application.

Quickstart: Collect logs from an Apache web server with the Ops Agent
Tutorial
Use the Ops Agent to collect logs from an Apache web server, and then view those logs with the Logs Explorer.

Use cases for Logging
Help document
Explore use cases, best practices, and industry solutions.

Architecture guides for monitoring and logging
Help document
Discover best practices and reference architectures for monitoring and

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Tomorrow

Search

ENG IN | 07:58 PM 27-11-2025

Dashboard – qwiklabs-gcp-01-0ba... | Logs Explorer – Logging – qwikla | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/logs/query;query=resource.type%3D"gce_instance";cursorTimestamp=2025-11-27T14:26:49Z;duration=...

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Google Cloud | qwiklabs-gcp-01-0bae0d009b16 | Search (/) for resources, docs, products, and more | Search

Logs Explorer

Query library | Share link | Preferences | Last 1 hour IST | Learn

Project logs | Search all fields | Run query

VM Instance | All log names | All severities | Correlate by | Show query

```
resource.type="gce_instance"
```

Example queries | Query language guide | Language: LQL

Fields

Search fields and values

System Metadata

- Severity 1,114
  - Showing top 5 of 5 values
  - Default 964
  - Info 139
  - Notice 5
  - Warning 4
  - Debug 2
- Resource type
  - Showing top 1 of 1 value
  - VM Instance
- INSTANCE ID 1,114
- Log name 1,114

Timeline

1,114 results | Actions

SEVERITY	TIME	SUMMARY
	2025-11-27 19:32:00.576	lamp-1-vm 2025-11-27T14:02:00.575505+00:00 lamp-1-vm systemd[1]: Started apache2.service - The Apache HTTP Server.
	2025-11-27 19:39:32.100	lamp-1-vm {"code":"LogPingOpsAgent"}
	2025-11-27 19:44:11.098	lamp-1-vm 2025-11-27T14:14:11.097925+00:00 lamp-1-vm systemd[1]: Starting systemd-tmpfiles-clean.service - Cleanup of Temporary Directories...
	2025-11-27 19:44:11.121	lamp-1-vm 2025-11-27T14:14:11.120882+00:00 lamp-1-vm systemd[1]: systemd-tmpfiles-clean.service: Deactivated successfully.
	2025-11-27 19:44:11.122	lamp-1-vm 2025-11-27T14:14:11.121109+00:00 lamp-1-vm systemd[1]: Finished systemd-tmpfiles-clean.service - Cleanup of Temporary Directories.
	2025-11-27 19:44:11.123	lamp-1-vm 2025-11-27T14:14:11.123672+00:00 lamp-1-vm systemd[1]: run-credentials-systemd\x2dtmpfiles\x2dclean.service.mount: Deactivated successfully.
	2025-11-27 19:47:02.022	lamp-1-vm 2025-11-27T14:17:02.021831+00:00 lamp-1-vm CRON[5762]: (root) CMD (cd / && run-parts --report /etc/cron.hourly)
	2025-11-27 19:49:32.100	lamp-1-vm {"code":"LogPingOpsAgent"}
	2025-11-27 19:52:14.000	lamp-1-vm
	2025-11-27 19:52:52.000	lamp-1-vm
	2025-11-27 19:56:49.000	lamp-1-vm

Air: Poor Tomorrow | Search | ENG IN | 07:58 PM 27-11-2025

makes it easier to view how changes to the VM are reflected in the logs

3. In the Compute Engine window, select the `lamp-1-vm` instance, click the three vertical dots at the right of the screen and then click **Stop**, and then confirm to stop the instance.

   It takes a few minutes for the instance to stop.

4. Watch in the Logs View tab for when the VM is stopped.

5. In the VM instance details window, click the three vertical dots at the right of the screen and then click **Start/resume**, and then confirm. It will take a few minutes for the instance to re-start. Watch the log messages to monitor the start up.

Task 7. Check the uptime check results and triggered alerts

1. In the Cloud Logging window, select **Navigation menu** > **Monitoring** > **Uptime checks**. This view provides a list of all active uptime checks, and the status of each in different locations.

   You will see Lamp Uptime Check listed. Since you have just restarted your

Task 1. Create a Co Engine instance
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Task 5. Create a dashboard and chart
Task 6. View your logs
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Congratulations!

Dashboard – qwiklabs-gcp-01-0ba... | Logs Explorer – Logging – qwiklabs-g | VM instances – Compute Engine | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/compute/instances?project=qwiklabs-gcp-01-0bae0d009b16

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Compute Engine

- Overview
- Security risk overview

Virtual machines

- VM instances
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Committed use discou...
- Reservations
- Migrate to Virtual Mach...

Storage

- Disks
- Storage Pools
- Snapshots

- Marketplace
- Release Notes

VM instances | Create instance | Import VM | Refresh | Learn

Instances | Observability | Instance schedules

VM instances

Filter | Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	lamp-1-vm	us-east1-c			10.142.0.2 (nic0)	104.196.99.84 (nic0)	SSH

Start / Resume
Stop
Suspend
Reset
Run maintenance
Configure data protection
Delete
Create a group based on this VM Preview
View network details
Create new machine image
View logs
View monitoring

Related actions

Hide

Fix data protection gaps New
Assess data protection gaps at no cost. You can use the Backup and DR Service to configure VM backups with backup vault storage.

Monitor VMs
View outlier VMs across metrics like CPU and network

Explore VM logs
View, search, analyze, and download VM instance logs

Patch management
Schedule patch updates and view patch compliance on VM instances

Load balance between VMs
Set up Load Balancing for your applications as your traffic and users grow

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Dashboard – qwiklabs-gcp-01-0ba... | Logs Explorer – Logging – qwiklabs-g | VM instances – Compute Engine | Apache2 Debian Default Page: It wor

https://console.cloud.google.com/compute/instances?project=qwiklabs-gcp-01-0bae0d009b16

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Compute Engine

- Overview
- Security risk overview

Virtual machines

- VM instances
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Committed use discou...
- Reservations
- Migrate to Virtual Mach...

Storage

- Disks
- Storage Pools
- Snapshots

- Marketplace
- Release Notes

VM instances | Create instance | Import VM | Refresh | Learn

Instances | Observability | Instance schedules

VM instances

Filter | Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
	lamp-1-vm	us-east1-c			10.142.0.2 (nic0)		SSH

Related actions

Fix data protection gaps New
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Monitor VMs
View outlier VMs across metrics like CPU and network

Explore VM logs
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Set up firewall rules
Control traffic to and from a VM instance

Patch management
Schedule patch updates and view patch compliance on VM instances

Load balance between VMs
Set up Load Balancing for your applications as your traffic and users grow

- Start / Resume
- Stop
- Suspend
- Reset
- Run maintenance
- Configure data protection
- Delete
- Create a group based on this VM Preview
- View network details
- Create new machine image
- View logs
- View monitoring

VM instance stopped

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screen and then click **Start/resume**, and then confirm. It will take a few minutes for the instance to re-start. Watch the log messages to monitor the start up.

Task 7. Check the uptime check results and triggered alerts

1. In the Cloud Logging window, select **Navigation menu** > **Monitoring** > **Uptime checks**. This view provides a list of all active uptime checks, and the status of each in different locations.

   You will see Lamp Uptime Check listed. Since you have just restarted your instance, the regions are in a failed status. It may take up to 5 minutes for the regions to become active. Reload your browser window as necessary until the regions are active.

2. Click the name of the uptime check, `Lamp Uptime Check`.

   Since you have just restarted your instance, it may take some minutes for the regions to become active. Reload your browser window as necessary.

Task 1. Create a Co Engine instance
Task 2. Add Apache2 HTTP Server to your instance
Task 3. Create an uptime check
Task 4. Create an alerting policy
Task 5. Create a dashboard and chart
Task 6. View your logs
Task 7. Check the uptime check results and triggered alerts
Congratulations!

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Observability
Monitoring

- Overview
- Dashboards
- Application monitoring

Explore

- Metrics explorer
- Logs explorer
- Log analytics
- Trace explorer
- Cost explorer

Detect

- Alerting
- Error reporting
- Uptime checks
- Synthetic monitoring
- SLOs

Observability Scopes
qwiklabs-gcp-01-0bae0d009b16

- Release Notes

Uptime checks

+ Create uptime check | + 1 recommended alert | Learn

Try the new Synthetic monitoring capability! New

Proactively monitor your application's critical user journeys by simulating user behavior. Detect and alert on failures, and receive detailed reports for debugging. Learn more.

Create Synthetic Monitor | View Documentation

Filter Enter property name or value

Display Name	Asia Pacific	Europe	North America	South America	Policies
Lamp Uptime Check	✓	✓	⚠	!	1

https://console.cloud.google.com/monitoring/alerting?project=qwiklabs-gcp-01-0bae0d009...

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Observability Scopes
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Alerting

+ Create policy | Edit notification channels | Learn

Monitoring now supports both user-scoped and device-scoped Cloud Console Mobile notification channels | Manage channels | Learn more | Dismiss

Summary

Incidents firing	Incidents acknowledged	Alert policies
3	0	2
		View all

Incidents

Show closed incidents

State	Severity	Policy name	Incident summary	Opened
	No severity	Lamp Uptime Check upti...	An uptime check on qwiklabs-gcp-01-0bae0d009b16 lamp-1-vm is failing.	Nov 27, 2025, 8:04:00 PM
	No severity	Inbound Traffic Alert	Network traffic for qwiklabs-gcp-01-0bae0d009b16 lamp-1-vm with metric labels {device=ens4, direction=rx} is a...	Nov 27, 2025, 8:02:48 PM
	No severity	Inbound Traffic Alert	Network traffic for qwiklabs-gcp-01-0bae0d009b16 lamp-1-vm with metric labels {device=ens4, direction=tx} is a...	Nov 27, 2025, 7:52:14 PM

See all incidents

Snoozes

Create snooze | Show past snoozes

State	Name	Start time	End time
No rows to display			

See all snoozes

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