

Module 7 ----- Assignment

Create an instance and install apache2 in it.

VM instances

CREATE INSTANCE

OPERATIONS

HELP ASSISTANT

SHOW INFO PANEL

LEARN

INSTANCES

INSTANCE SCHEDULES

VM instances are highly configurable virtual machines for running workloads on Google infrastructure. [Learn more](#)

Filter Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	instance-1	asia-south1-c			10.160.0.11 (nic0)	35.244.37.90 (nic0)	SSH
✓	instance-stackdriver	asia-south1-c			10.160.0.10 (nic0)	34.100.194.195 (nic0)	SSH

Related actions

Explore Actifio GO NEW

View billing report

Monitor VMs

Update the system and install apache2.

```
arpitacs0024@instance-stackdriver:~$ sudo apt-get update
Get:1 http://security.debian.org/debian-security bullseye-security InRelease [44.1 kB]
Hit:2 http://deb.debian.org/debian bullseye InRelease
Get:3 http://packages.cloud.google.com/apt cloud-sdk-bullseye InRelease [6778 B]
Get:4 http://deb.debian.org/debian bullseye-updates InRelease [39.4 kB]
Get:5 http://packages.cloud.google.com/apt google-cloud-packages-archive-keyring-bullseye InRelease
Get:6 http://deb.debian.org/debian bullseye-backports InRelease [44.2 kB]
Ign:7 http://packages.cloud.google.com/apt google-cloud-monitoring-bullseye InRelease
Get:8 http://packages.cloud.google.com/apt google-compute-engine-bullseye-stable InRelease [5533 B]
Err:9 http://packages.cloud.google.com/apt google-cloud-monitoring-bullseye Release
  404 Not Found [IP: 142.251.42.46 80]
Get:10 http://packages.cloud.google.com/apt cloud-sdk-bullseye/main amd64 Packages [129 kB]
Get:11 http://packages.cloud.google.com/apt google-cloud-packages-archive-keyring-bullseye/main amd64
[389 B]
Get:12 http://deb.debian.org/debian bullseye-backports/main Sources.diff/Index [63.3 kB]
Get:13 http://packages.cloud.google.com/apt google-compute-engine-bullseye-stable/main amd64 Packag
Get:14 http://deb.debian.org/debian bullseye-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:15 http://deb.debian.org/debian bullseye-backports/main Translation-en.diff/Index [63.3 kB]
Get:16 http://deb.debian.org/debian bullseye-backports/main Sources T-2022-06-08-0803.17-F-2022-06-
diff [17.4 kB]
Get:16 http://deb.debian.org/debian bullseye-backports/main Sources T-2022-06-08-0803.17-F-2022-06-
```

```

arpitacs0024@instance-stackdriver:~$ sudo apt-get install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.53-1~deb11u1).
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
arpitacs0024@instance-stackdriver:~$

```

Create an app service on any technology.

Deploy a nodejs application on App Engine standard using gcloud.

Clone this repository.

```

arpitacs0024@cloudshell:~$ cloudshell open --repo url "https://github.com/GoogleCloudPlatform/nodejs-docs-samples" --page "editor" --force_new clone
2022/06/07 14:37:37 Cloning https://github.com/GoogleCloudPlatform/nodejs-docs-samples into /home/arpitacs0024/cloudshell_open/nodejs-docs-samples-5
Cloning into '/home/arpitacs0024/cloudshell_open/nodejs-docs-samples-5'...
remote: Enumerating objects: 27689, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 27689 (delta 0), reused 3 (delta 0), pack-reused 27685
Receiving objects: 100% (27689/27689), 21.01 MiB | 9.12 MiB/s, done.
Resolving deltas: 100% (18604/18604), done.
arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5$ cd appengine/hello-world/standard

```

Run the below command.

```

arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard$ npm install
added 158 packages, and audited 159 packages in 7s

28 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard$ npm start

> appengine-hello-world@0.0.2 start
> node app.js

App listening on port 8080
Press Ctrl+C to quit.
^C

```

Now, Deploy the app using below command.

```

arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard$ gcloud config set project prac-project-351313
Updated property [core/project].
arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard (prac-project-351313)$ gcloud app deploy
Initializing App Engine resources...Done.
Services to deploy:

descriptor:          [/home/arpitacs0024/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard/app.yaml]
source:              [/home/arpitacs0024/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard]
target project:      [prac-project-351313]
target service:      [default]
target version:      [20220607t144507]
target url:          [https://prac-project-351313.uc.r.appspot.com]
target service account: [App Engine default service account]

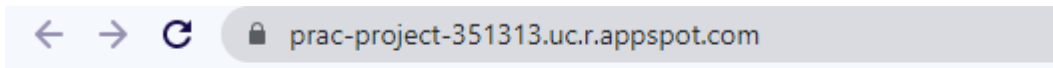
```

To view your application in the web browser.

```

arpitacs0024@cloudshell:~/cloudshell_open/nodejs-docs-samples-5/appengine/hello-world/standard (prac-project-351313)$ gcloud app browse
Did not detect your browser. Go to this link to view your app:
https://prac-project-351313.uc.r.appspot.com

```



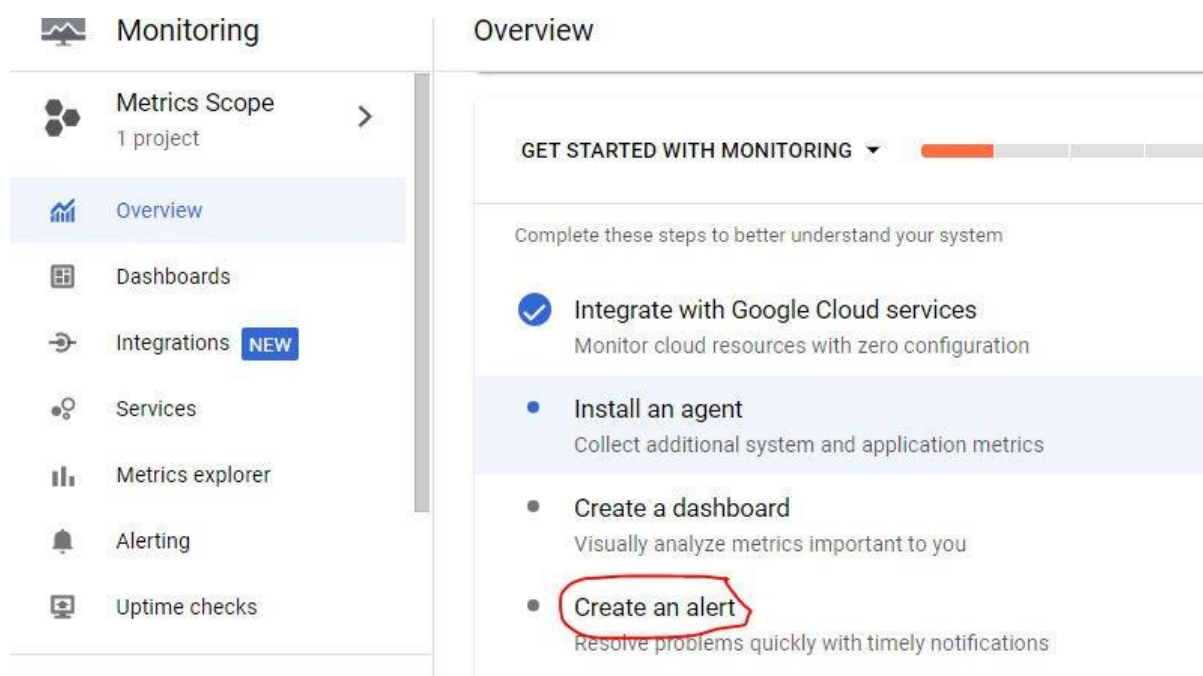
Hello, world!

Using stack driver configure the following things:

Trigger an email, if the apache service goes down (should not wait for instance to stop responding, should respond when apache service goes down).

Go to stack driver > Monitoring

Create an alert.



Now, Create an alert policy.

Alerting

Respond to performance problems before they affect your customers by configuring alerting policies to notify you when events occur or particular system or custom metrics violate rules that you define. Use multiple conditions to define complex alerting rules.



Leverage built-in integrations to receive notifications via email, SMS, Slack, PagerDuty, and more.

[CREATE ALERT POLICY](#)

[Explore sample policies](#) 

[Manage using API](#) 

Select metric VM instance.

VM Instance - Traffic for apache [RATE]

METRIC

UPTIME CHECK

PROCESS HEALTH

Target ?

<> Query Editor

Find resource type and metric ?

Resource type: VM Instance x

Metric: Traffic x

Filter ?

server_name = "apache" x + Add a filter

Group By ?

+ Add a label

Aggregator ?

none


ADD

CANCEL

1 What do you want to track?

Conditions

Conditions describe when apps and services are considered unhealthy. When conditions are met, they trigger alerting policy violations.

Condition	Actions
VM Instance - Traffic for apache [RATE] Violates when: Any agent.googleapis.com/apache/traffic stream is above a threshold of 9	 

[ADD CONDITION](#)

[NEXT](#)

2 Who should be notified? (optional)

Add notification channel and add email.

orm

Prac-Project

Search Products, resources, docs (/)

20

?

:

← Notification channels

Slack ?

ADD NEW

No Slack channels configured

Webhooks



ADD NEW

No webhook channels configured

Email

ADD NEW

Filter Filter email addresses ?

Email	Display Name	
arpitacs0024@gmail.com	arpita	 

SMS

ADD NEW

No SMS channels configured

Cloud Pub/Sub

ADD NEW

✓ **What do you want to track?**

VM Instance - Traffic for apache [RATE]

2 **Who should be notified? (optional)**

When alerting policy violations occur, you will be notified via these channels.

Notification Channels

arpita



We recommend at least 2 notification channels of different channel types for resilience to failures for a single channel type.

You will always receive a notification when incidents are open. Select when you would like to receive additional notifications.

☐ Notify on incident closure

Name the alert.

Prac-Project

Search Products, resources, docs (/)

←

Create alerting policy

3

What are the steps to fix the issue?

Alert policy name *

Alert5

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.

Your alert policies may trigger messages that include personal data. Please use appropriate communication channels for these alerts and confirm that the alert recipients are authorized to receive such data.

Documentation

?

SAVE

CANCEL

Policy created for apache service.

←	Policy details	✓ ENABLED	✎ EDIT	📄 COPY	⋮	✓ 1 hour	6 hours	1 day	1 week	1 month	6 m
Alert5											
Conditions											
Policy violates when ANY condition is met											
VM Instance - Traffic for apache [RATE]											
Condition type	Triggers when	Threshold position	Threshold value	Retest window							
Threshold	Any time series cross threshold	Above threshold	9	No retest							
<div>🔍 ≡ 🗨 ⋮</div>											

Trigger an email when app service goes down.

Monitoring/Logging Agent Uptime [RATE]

METRIC

UPTIME CHECK

PROCESS HEALTH

Target ?

[<> Query Editor](#)

Find resource type and metric ?

Resource type: GAE Application ×

Metric: Monitoring/Logging A... ×

Filter ?

+ Add a filter

Group By ?

+ Add a label

Aggregator ?

none ▼

ADD

CANCEL