

GCP Certification Series: 4.6

Monitoring and logging



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Nov 9, 2018 · 4 min read

monitoring and logging

In this blog, we will look at the monitoring features of GCP, particularly through stackdriver.

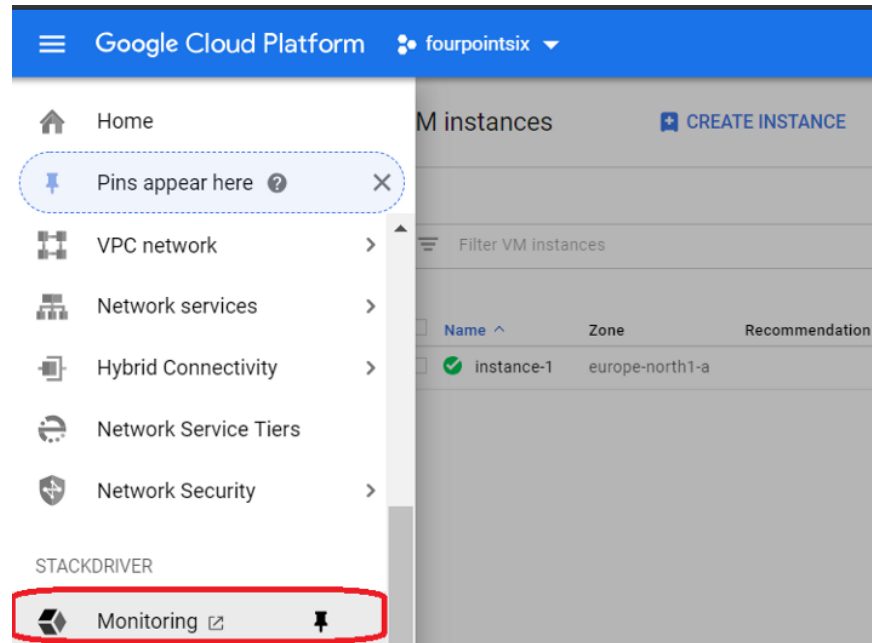
Monitoring is a very important aspect of DevOps and keeping track of what is going on with the applications, users, authentications play a very important role in keeping the system up-to-date and running.

We will go through each one of the topics

- Creating Stackdriver alerts based on resource metrics.
- Creating Stackdriver custom metrics.
- Configuring log sinks to export logs to external systems (e.g., on premises or BigQuery).
- Viewing and filtering logs in Stackdriver.
- Viewing specific log message details in Stackdriver.
- Using cloud diagnostics to research an application issue (e.g., viewing Cloud Trace data, using Cloud Debug to view an application point-in-time).
- Viewing Google Cloud Platform status.
- Working with management interfaces (e.g., Cloud Console, Cloud Shell, Cloud SDK).

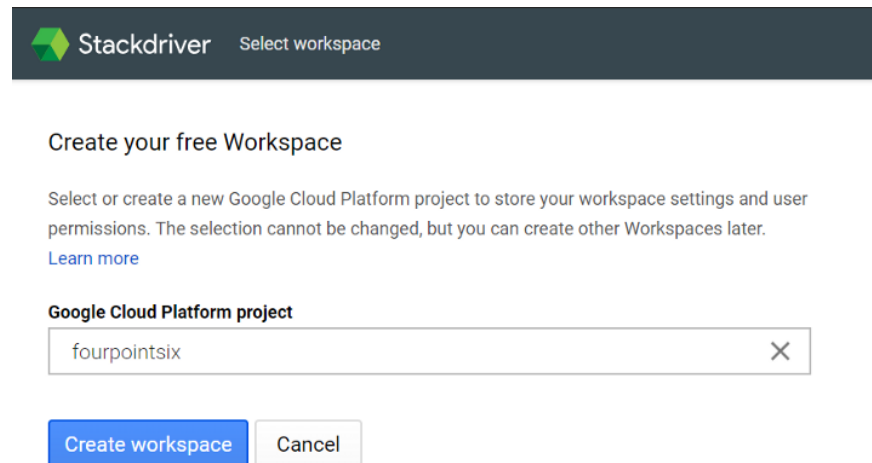
Creating Stackdriver alerts based on resource metrics

Go-to stackdriver then to monitoring



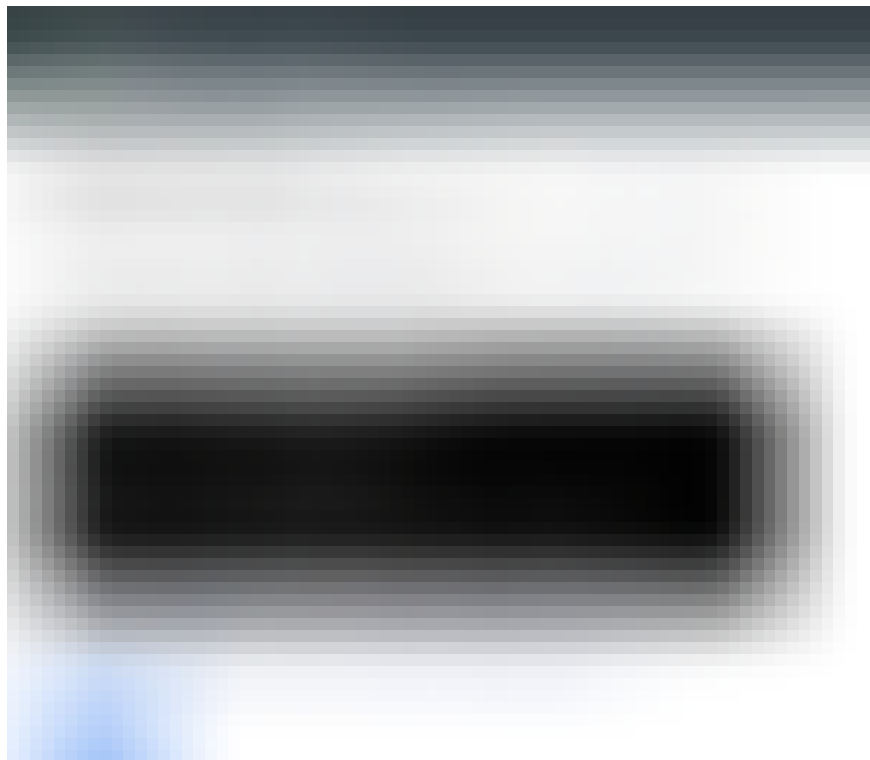
Monitoring

Then you will be redirected to Stackdriver webpage, where you need to first create a Workspace before starting any monitoring



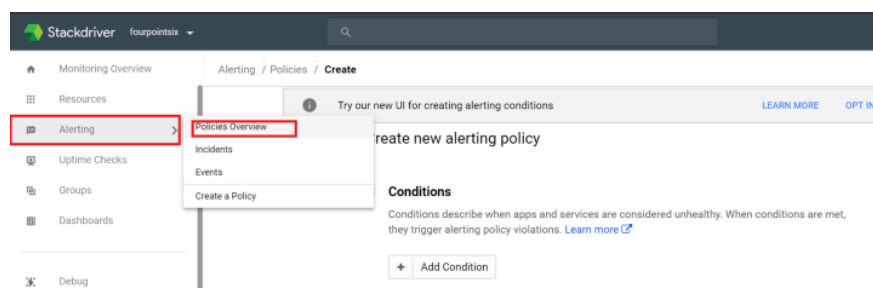
create workspace

Next, you need to install an agent into the VM if you are trying to monitor a server. **Basic monitoring can be done without installing an agent.**



install an agent in VM

Then go-to Alerting > policy Overview




policy overview

Now you can create a policy for alerting from this page.

Alert can be based on CPU usage, network traffic, read/write, idle etc.

[ALERT] Metric Rate of Change on Instance (GCE) instance-1 on fourpointsix-222012 instance-1

Stackdriver Alerts <alerts@stackdriver.com> 2:42 PM (23 minutes ago)


[VIEW DETAILS](#)

Alert firing

Metric Rate of Change on Instance (GCE) instance-1

Disk write bytes for fourpointsix-222012 instance-1 is increasing by more than 1% with a value of 1.698%.

Summary

Start time
Nov 9, 2018 at 12:38PM UTC (~4 min, 15 sec ago)

Project
fourpointsix-222012 (Cloud Console | Stackdriver)

Policy
[disk write](#)

Condition
Metric Rate of Change on Instance (GCE) instance-1

Metric
[compute.googleapis.com/instance/disk/write_bytes_count](#)

Threshold
above 1%

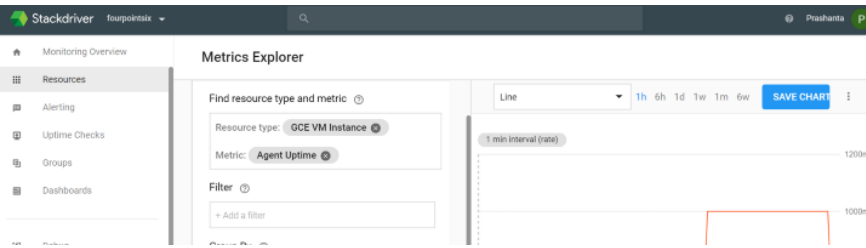
Observed
1.698%

[VIEW DETAILS](#)

aleart

Creating Stackdriver custom metrics

Go to resources and then click on Metrics. Here you will see previously created metrics and if you want to create a new one click on add and then follow the prompts.



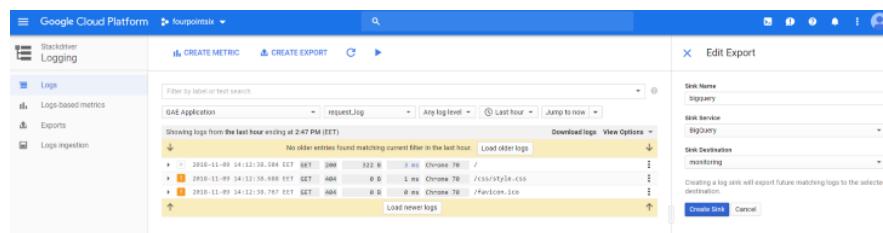
custom metrics

Configuring log sinks to export logs to external systems

Log sinks are like continuous supply to errors or alerts to the desired destination within GCP or outside.

You need to install logging agent in VM for getting the log out of VM to stackdriver Logging

You can select the destination in Logging Export prompt.



Export log/log sink

×

Edit Export

Sink Name

bigquery

Sink Service

BigQuery

Sink Destination

monitoring

Creating a log sink will export future matching logs to the selected destination.

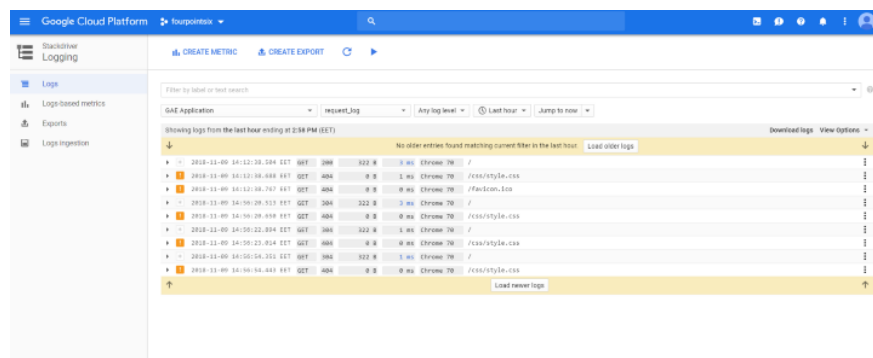
Create Sink

Cancel

log sink

Viewing and filtering logs in Stackdriver

Although there are many ways you can check the log of whole GCP, the easiest one is through stackdriver logging.

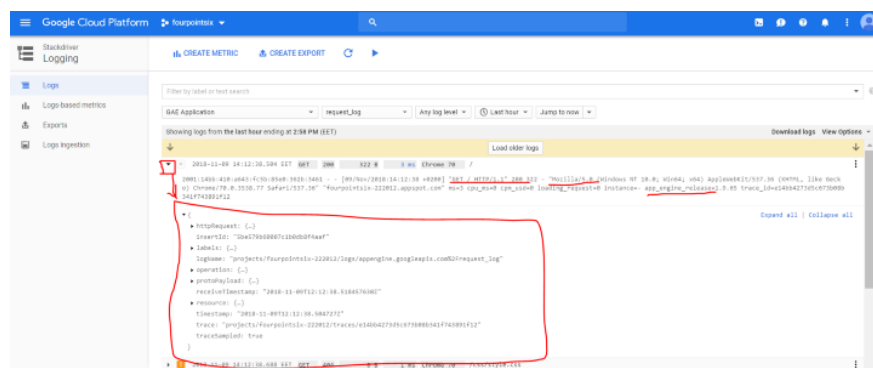


stackdriver logging

You can select various filters within it to filter out unwanted errors.

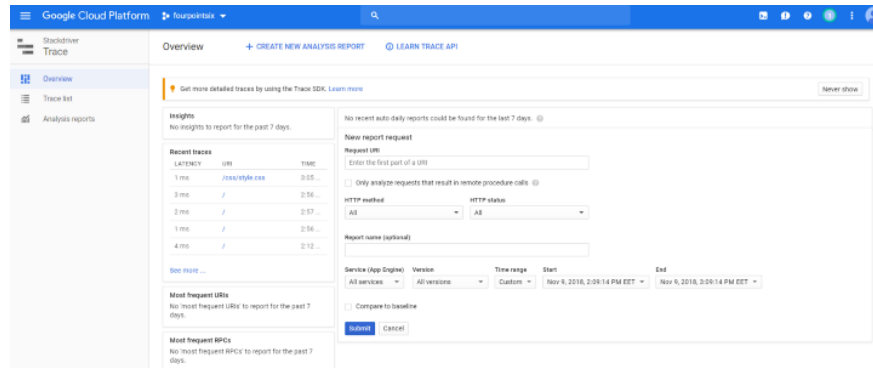
Viewing specific log message details in Stackdriver

When you click the arrow button in the log you can see detail message



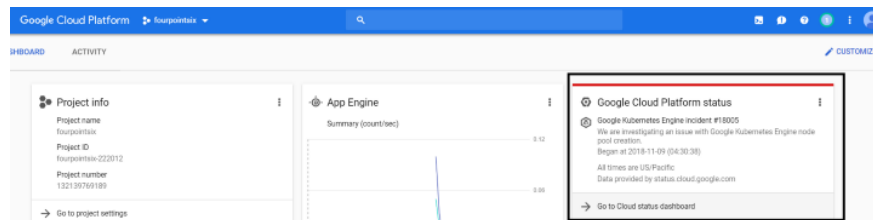
Using cloud diagnostics to research an application issue (e.g., viewing Cloud Trace data, using Cloud Debug to view an application point-in-time)

Trace can help you find the usage issues or check the




Viewing Google Cloud Platform status

When you go to GCP Dashboard you will see



Clicking in Google Cloud platform status will lead you to the page

 Google Cloud Platform									
November 09, 2018 Google Kubernetes Engine reporting issues									
Google Cloud Status Dashboard									
This page provides status information on the services that are part of Google Cloud Platform. Check back here to view the current status of the services listed below. If you are experiencing an issue not listed here, please contact Support . Learn more about what's posted on the dashboard in this FAQ . For additional information on these services, please visit cloud.google.com .									
	November 2	3	4	5	6	7	8	9	
Google App Engine									✓
Google Compute Engine					1				✓
Google Cloud Storage									✓
Google BigQuery									✓
Google Cloud Dataproc									✓
Google Cloud Datastore									✓
Cloud Developer Tools									✓
Google Cloud DNS									✓
Google Cloud Functions	1								✓
Identity & Security									✓
Google Cloud IoT									✓
Cloud Key Management Service									✓
Cloud Memorystore									✓
Cloud Machine Learning									✓

This page shows all the problematic areas overall in GCP and clicking in the icon will show the detail of the problem.

