GCP CICD PIPELINE:

TOOLS USED TO BUILD THIS PIPELINE:

- GOOGLE CLOUD BUILD
- GOOGLE KUBERNETES ENGINE
- GITHUB
- MAVEN
- DOCKER
- GOOGLE CONTAINERS REPOSITORY
- GOOGLE CLOUD PERMISSION MANAGER (IAM & ADMIN)
- SONAR CLOUD

GOOGLE CLOUD BUILD

It is used to link the source code repository from GitHub/bitbucket/google cloud source repositories and helps to add triggers(webhooks). So, when a code is pushed into source code repository by a developer it automatically starts a build and uses cloud config file in the source code repository.

https://cloud.google.com/cloud-build

GOOGLE KUBERNETEES ENGINE

It is used to deploy the containers after the application is built using maven and docker. The built application is uploaded to the google cloud container repository from there the google cloud build deploys to the Kubernetes cluster.

https://cloud.google.com/kubernetes-engine

GITHUB

This is the tool used to hold the source code repository and helps to trigger the builds when a code is pushed to the repository by a developer.

https://github.com

MAVEN

This is the tool used in the pipeline to build the project using maven life cycle components like compile, test, install, package.

https://github.com/GoogleCloudPlatform/cloud-builders/tree/master/mvn**`gcr.io/cloud-builders/mvn`** `is the tool representation in gcp`

DOCKER

The docker in gcp helps us to build an image of the application and helps us to push it to the container repository in gcp.

https://github.com/GoogleCloudPlatform/cloud-builders/tree/master/docker

```
gcr.io/cloud-builders/docker is the tool representation in gcp.
```

GOOGLE CONAINERS REPOSITORY

This helps to store the container images of the project that were built by docker and uploaded to this repository.

https://cloud.google.com/container-registry

SONAR CLOUD

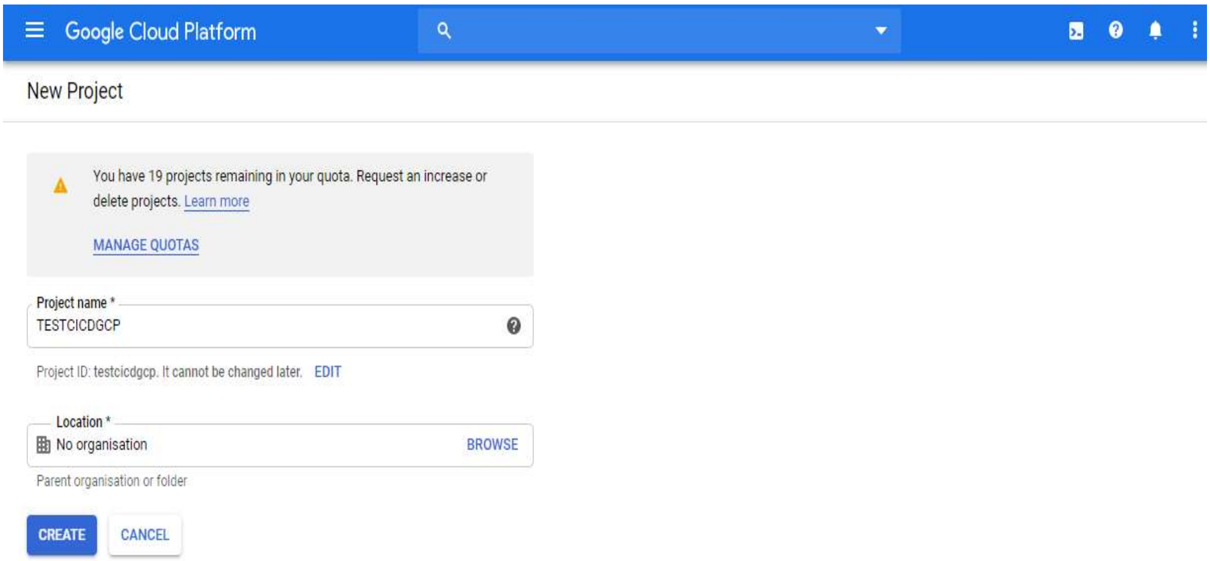
This online cloud SonarQube server helps to upload the processed data of source code repository

https://sonarcloud.io/projects

SETTING PIPELINE IN GCP:

STEP1:

CREATE A NEW PROJECT IN THE GOOGLE CONSOLE (https://console.cloud.google.com).



You have 19 projects remaining in your quota. Request an increase or delete projects. Learn more

Project name *: TESTCICDGCP

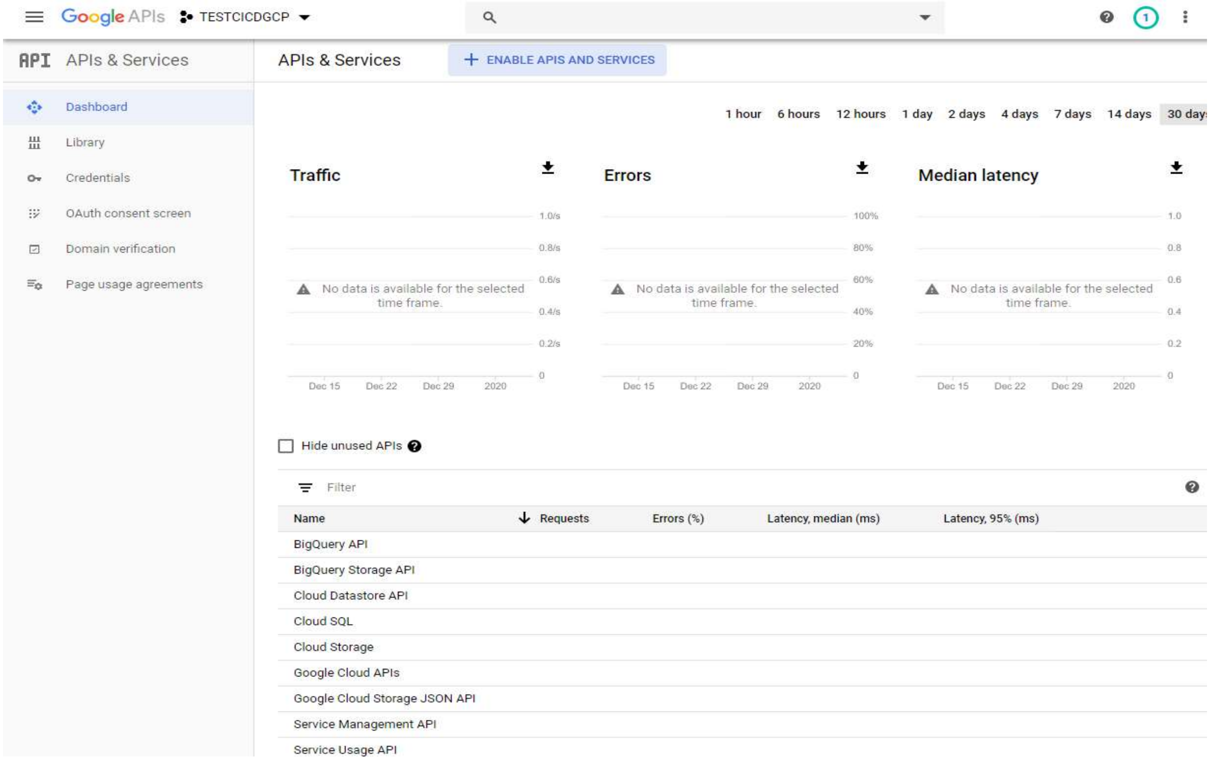
Project ID: testcicdgcp. It cannot be changed later. EDIT

Location *: No organisation

Parent organisation or folder

STEP2:

NOW GO TO THE APIS & SERVICES DASHBOARD IN THE SAME PROJECT AND CLICK ON ENABLE APIS AND SERVICES



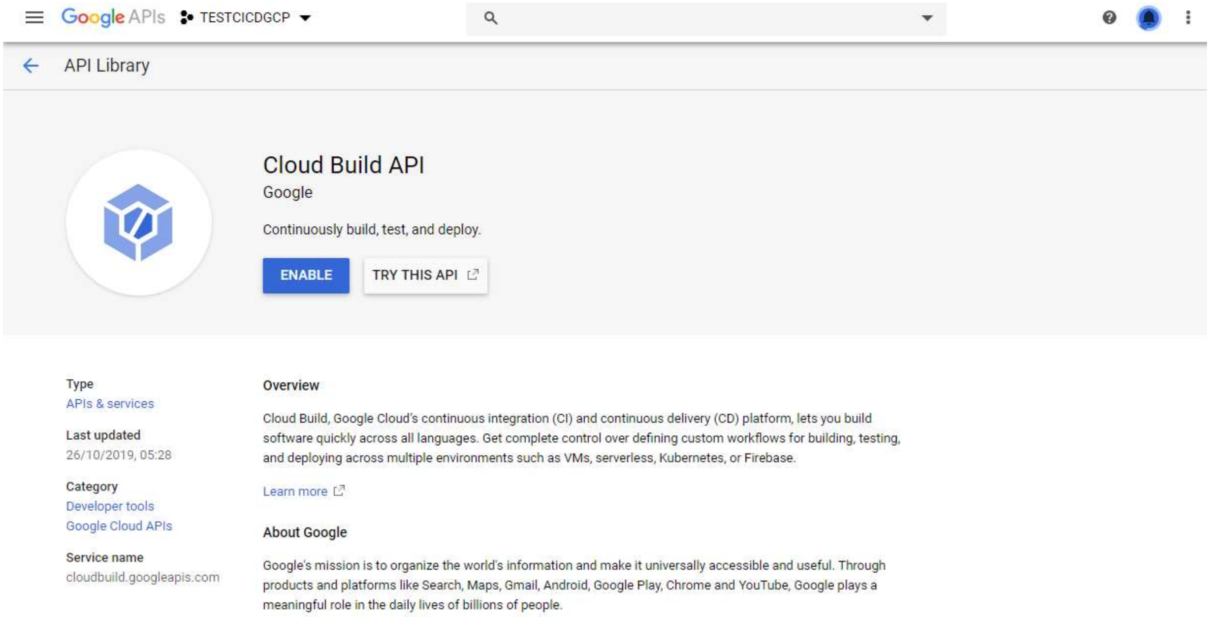
No data is available for the selected time frame.

□ Hide unused APIs

Name ↓	Requests	Errors (%)	Latency, median (ms)	Latency, 95% (ms)
BigQuery API				
BigQuery Storage API				
Cloud Datastore API				
Cloud SQL				
Cloud Storage				
Google Cloud APIs				
Google Cloud Storage JSON API				
Service Management API				
Service Usage API				

STEP3:

SEARCH FOR CLOUD BUILD API AND CLICK ON ENABLE



Cloud Build API

Google

Continuously build, test, and deploy.

Type
APIs & services

Last updated
26/10/2019, 05:28

Category
Developer tools
Google Cloud APIs

Service name
cloudbuild.googleapis.com

Overview

Cloud Build, Google Cloud's continuous integration (CI) and continuous delivery (CD) platform, lets you build software quickly across all languages. Get complete control over defining custom workflows for building, testing, and deploying across multiple environments such as VMs, serverless, Kubernetes, or Firebase.

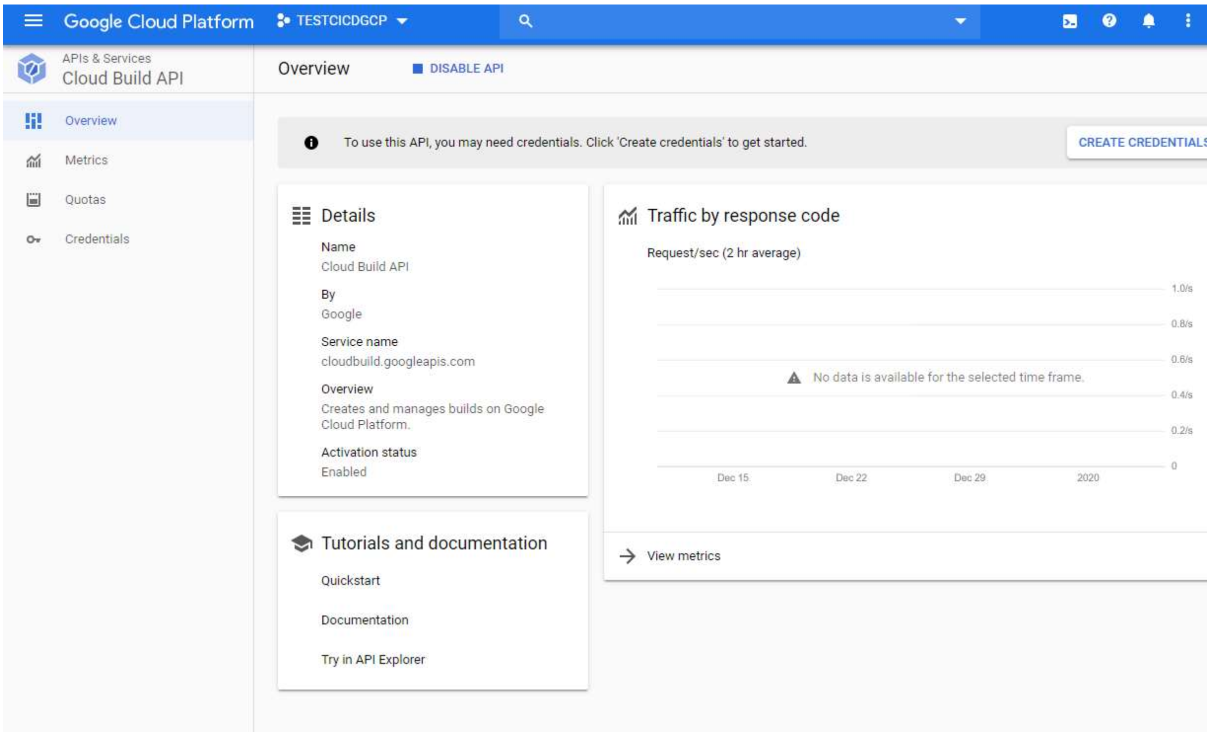
Learn more

About Google

Google's mission is to organize the world's information and make it universally accessible and useful. Through products and platforms like Search, Maps, Gmail, Android, Google Play, Chrome and YouTube, Google plays a meaningful role in the daily lives of billions of people.

STEP4:

YOU CAN SEE THAT THE API IS ENABLED AND BILLING STARTED FOR THE USAGE.



To use this API, you may need credentials. Click 'Create credentials' to get started.

Details

Name
Cloud Build API

By
Google

Service name
cloudbuild.googleapis.com

Overview
Creates and manages builds on Google Cloud Platform.

Activation status
Enabled

Tutorials and documentation

Quickstart

Documentation

Try in API Explorer

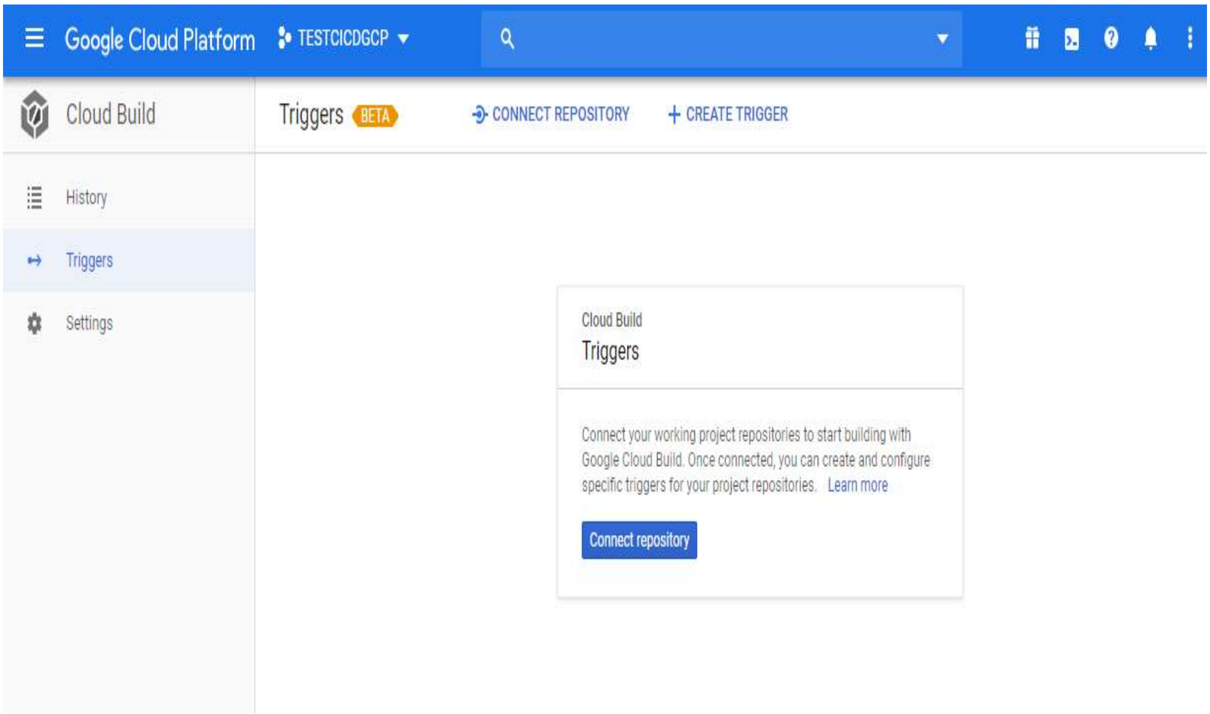
Traffic by response code

Request/sec (2 hr average)

No data is available for the selected time frame.

STEP5:

GO TO TRIGGERS IN CLOUD BUILD AND SELECT CONNECT REPOSITORY



Cloud Build

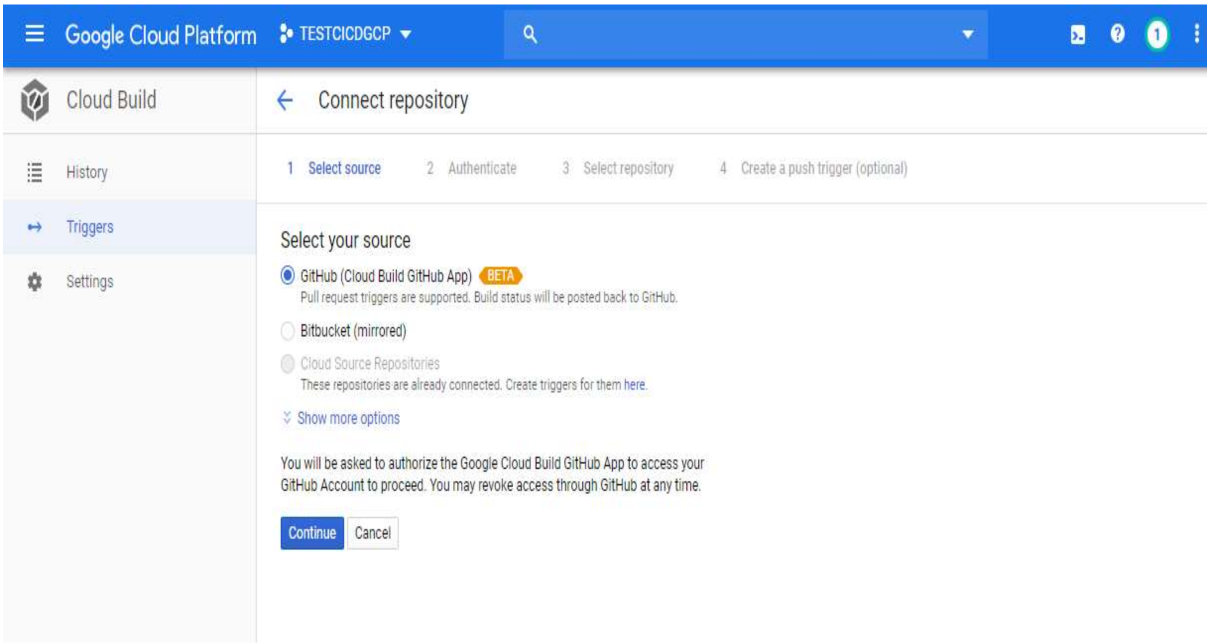
Triggers

Connect your working project repositories to start building with Google Cloud Build. Once connected, you can create and configure specific triggers for your project repositories. Learn more

Connect repository

STEP6:

AND IN HERE SELECT AS A SOURCE AS GITHUB



Select your source

● GitHub (Cloud Build GitHub App) BETA
Pull request triggers are supported. Build status will be posted back to GitHub.

○ Bitbucket (mirrored)

○ Cloud Source Repositories
These repositories are already connected. Create triggers for them here.

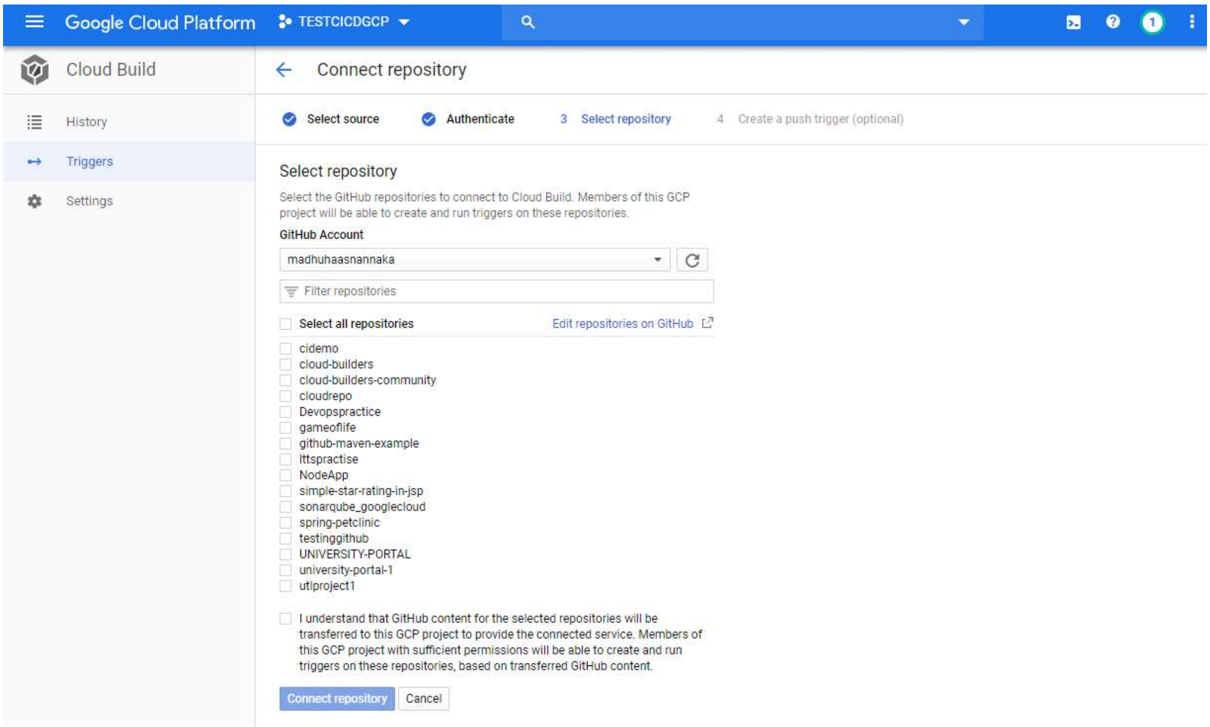
Show more options

You will be asked to authorize the Google Cloud Build GitHub App to access your GitHub Account to proceed. You may revoke access through GitHub at any time.

Continue Cancel

STEP7:

AS MY GITHUB IS ALREADY ATHUNTICATED IT DIRECTLY SHOWS THE REPOSITORIES IN MY ACCOUNT NOW WE HAVE TO SELECT THE REPOSITORY FOR SOURCE CODE



Select repository

Select the GitHub repositories to connect to Cloud Build. Members of this GCP project will be able to create and run triggers on these repositories.

GitHub Account: madhuhaasnannaka

Filter repositories

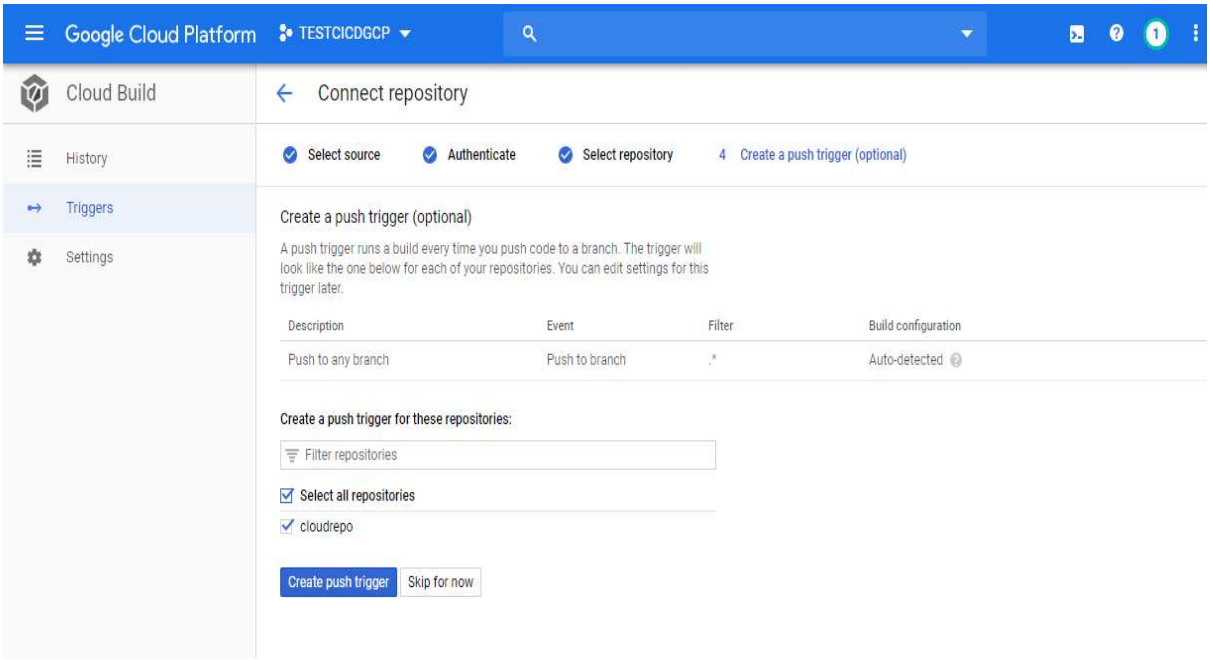
□ Select all repositories — Edit repositories on GitHub

□ cidemo
□ cloud-builders
□ cloud-builders-community
□ cloudrepo
□ Devopspractice
□ gameoflife
□ github-maven-example
□ lttspractise
□ NodeApp
□ simple-star-rating-in-jsp
□ sonarqube_googlecloud
□ spring-petclinic
□ testinggithub
□ UNIVERSITY-PORTAL
□ university-portal-1
□ utlproject1

□ I understand that GitHub content for the selected repositories will be transferred to this GCP project to provide the connected service. Members of this GCP project with sufficient permissions will be able to create and run triggers on these repositories, based on transferred GitHub content.

STEP8:

NOW CREATE A PUSH TRIGGER SO THAT WHENEVER A COMMIT OCCURRED IN SOURCE CODE THE BUILD STARTS AUTOMATICALLY



Create a push trigger (optional)

A push trigger runs a build every time you push code to a branch. The trigger will look like the one below for each of your repositories. You can edit settings for this trigger later.

Description	Event	Filter	Build configuration
Push to any branch	Push to branch	.*	Auto-detected

Create a push trigger for these repositories:

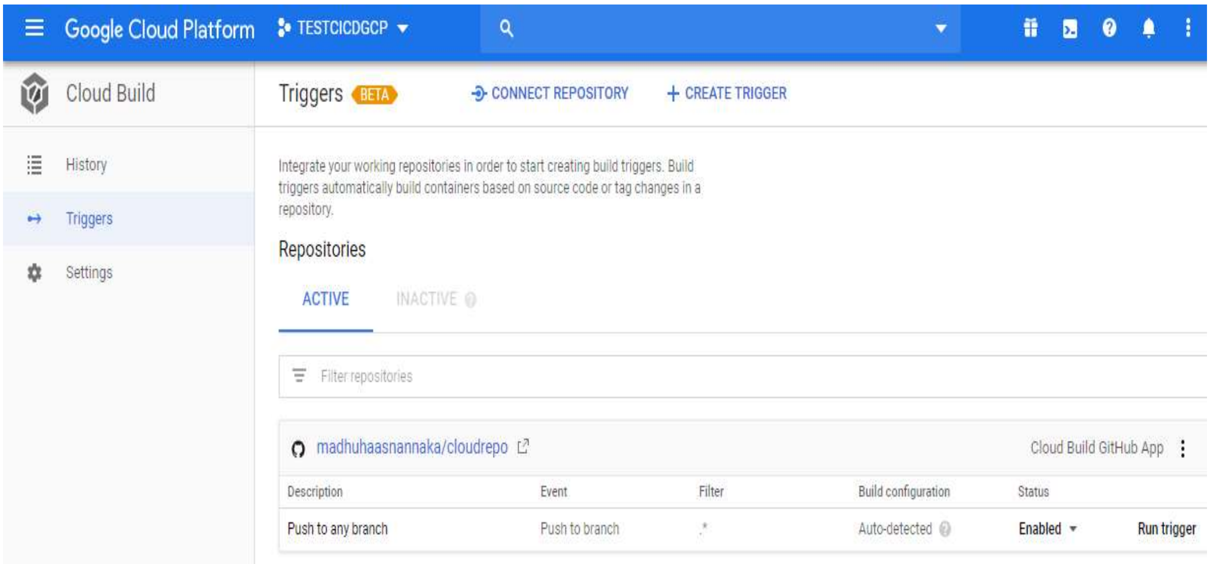
Filter repositories

☑ Select all repositories

☑ cloudrepo

STEP9:

WE CAN SEE THAT THE TRIGGER IS ALSO ASSIGNED TO THE



Integrate your working repositories in order to start creating build triggers. Build triggers automatically build containers based on source code or tag changes in a repository.

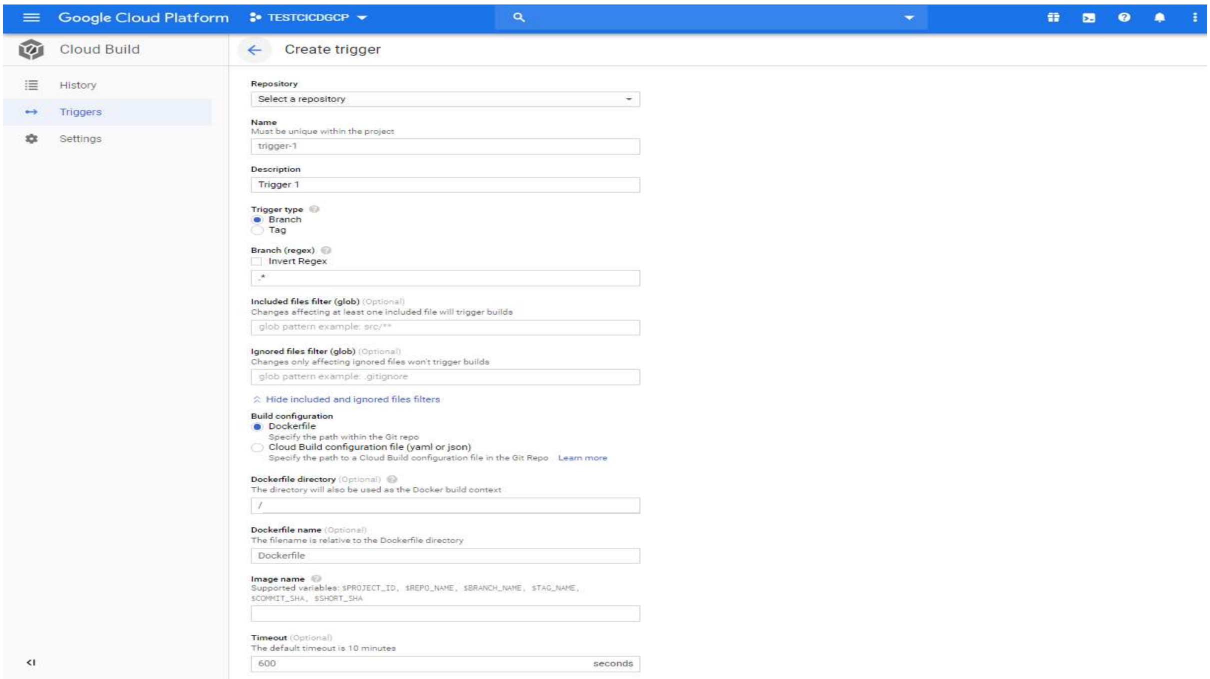
Repositories

madhuhaasnannaka/cloudrepo

Description	Event	Filter	Build configuration	Status
Push to any branch	Push to branch	.*	Auto-detected	Enabled

STEP10:

BUT IF YOU HAVE NOT SELECTD THE ENABLE TRIGGER IN THE CONNECT REPOSITORY FLOW, TO ENABLE THE TRIGGER CLICK ON CREATE TRIGGER



Repository
Select a repository

Name
Must be unique within the project
trigger-1

Description
Trigger 1

Trigger type
● Branch
○ Tag

Branch (regex)
□ Invert Regex
.*

Included files filter (glob) (Optional)
Changes affecting at least one included file will trigger builds
glob pattern example: src/**

Ignored files filter (glob) (Optional)
Changes only affecting ignored files won't trigger builds
glob pattern example: .gitignore

Build configuration
● Dockerfile
Specify the path within the Git repo
○ Cloud Build configuration file (yaml or json)
Specify the path to a Cloud Build configuration file in the Git Repo

Dockerfile directory (Optional)
The directory will also be used as the Docker build context
/

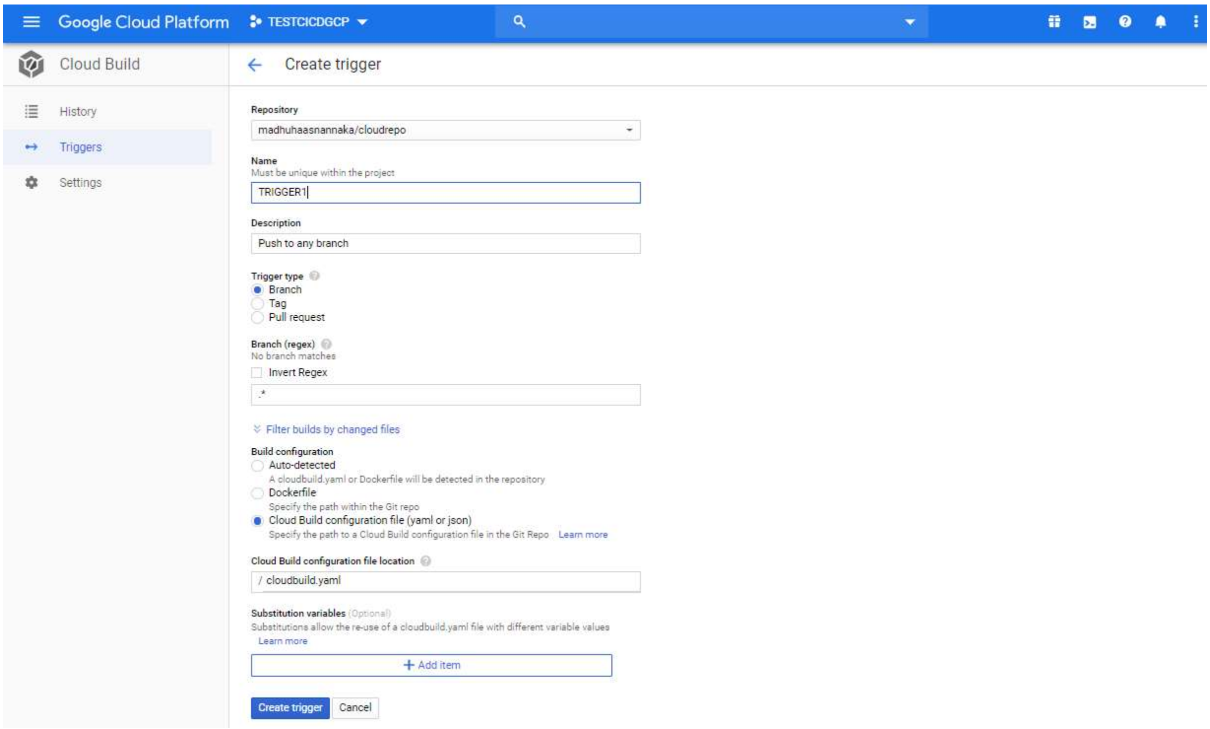
Dockerfile name (Optional)
The filename is relative to the Dockerfile directory
Dockerfile

Image name
Supported variables: $PROJECT_ID, $REPO_NAME, $BRANCH_NAME, $TAG_NAME, $COMMIT_SHA, $SHORT_SHA

Timeout (Optional)
The default timeout is 10 minutes
600 seconds

STEP11:

AND HERE SELECT THE REPOSITORY AND IN BUILD CONFIGURATION FILE SELECT THE BUILD CONFIGURATION FILE WHICH IS (.YAML) FILE AND CLICK ON CREATE TRIGGER



Create trigger

Repository
madhuhaasnannaka/cloudrepo

Name
Must be unique within the project
TRIGGER1

Description
Push to any branch

Trigger type
● Branch
○ Tag
○ Pull request

Branch (regex)
No branch matches
□ Invert Regex
.*

Filter builds by changed files

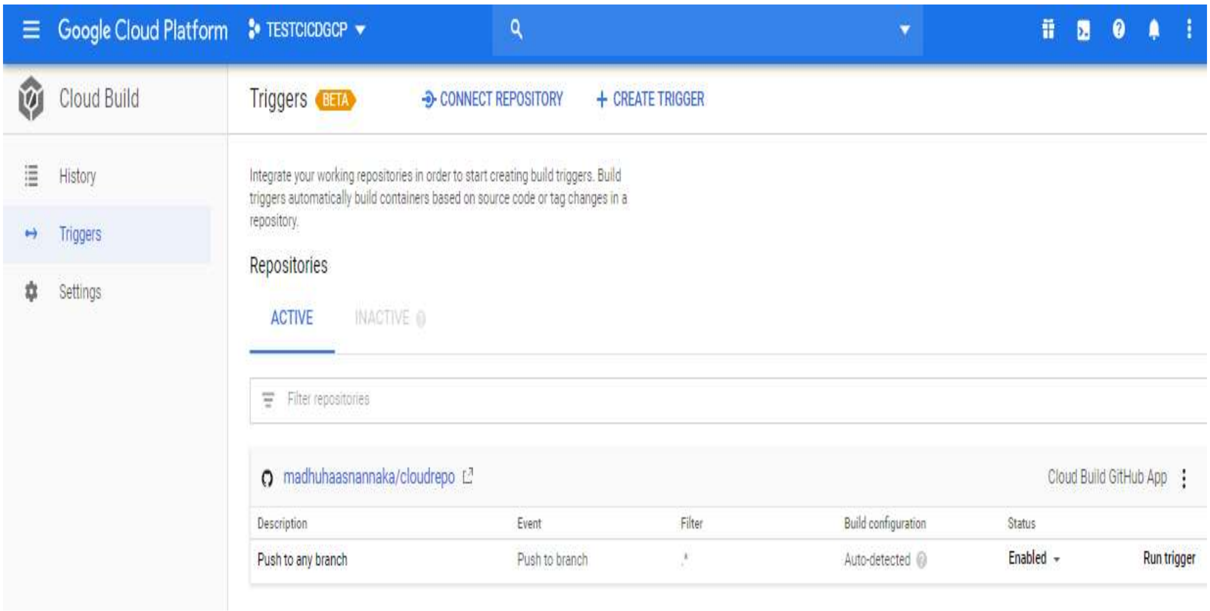
Build configuration
○ Auto-detected
A cloudbuild.yaml or Dockerfile will be detected in the repository
○ Dockerfile
Specify the path within the Git repo
● Cloud Build configuration file (yaml or json)
Specify the path to a Cloud Build configuration file in the Git Repo Learn more

Cloud Build configuration file location
/ cloudbuild.yaml

Substitution variables (Optional)
Substitutions allow the re-use of a cloudbuild.yaml file with different variable values
Learn more

STEP12:

WE CAN SEE THE SAME AS BEFORE BUT TRIGGER IS GENERATED



Integrate your working repositories in order to start creating build triggers. Build triggers automatically build containers based on source code or tag changes in a repository.

Repositories

madhuhaasnannaka/cloudrepo   Cloud Build GitHub App

Description	Event	Filter	Build configuration	Status	
Push to any branch	Push to branch	.*	Auto-detected	Enabled	Run trigger

STEP13:

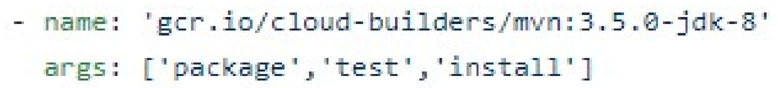
WRITE A BUILD CONFIGURATION FILE (cloudbuild. yaml) AND KEEP IT IN THE SOURCE CODE REPOSITORY

LET’S HAVE A LOOK AT THE FILE

https://github.com/madhuhaasnannaka/cloudrepo/blob/master/cloudbuild.yaml

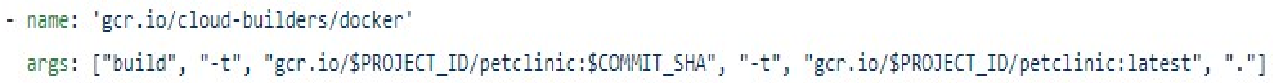
STEPS IN THE FILE INCLUDE:

I)USING MAVEN TO PACKAGE TEST AND INSTALL



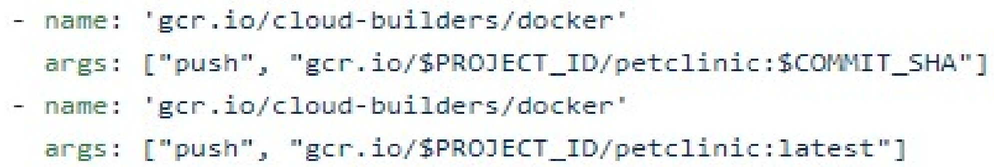
```
- name: 'gcr.io/cloud-builders/mvn:3.5.0-jdk-8'
  args: ['package','test','install']
```

II)USING DOCKER TO BUILD AN IMAGE



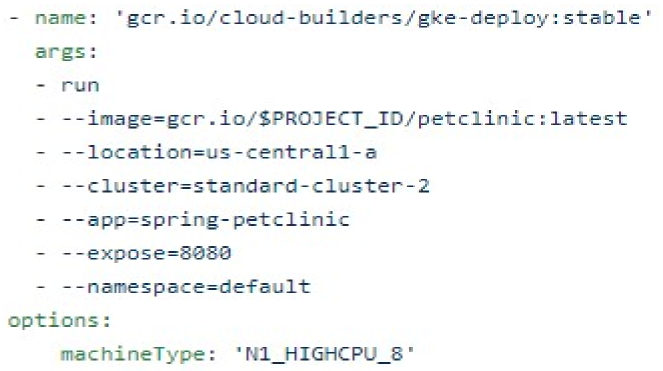
```
- name: 'gcr.io/cloud-builders/docker'
  args: ["build", "-t", "gcr.io/$PROJECT_ID/petclinic:$COMMIT_SHA", "-t", "gcr.io/$PROJECT_ID/petclinic:latest", "."]
```

III)NOW PUSHING BUILT IMAGE TO THE CLOUD IMAGE CONTAINER REPOSITORY



```
- name: 'gcr.io/cloud-builders/docker'
  args: ["push", "gcr.io/$PROJECT_ID/petclinic:$COMMIT_SHA"]
- name: 'gcr.io/cloud-builders/docker'
  args: ["push", "gcr.io/$PROJECT_ID/petclinic:latest"]
```

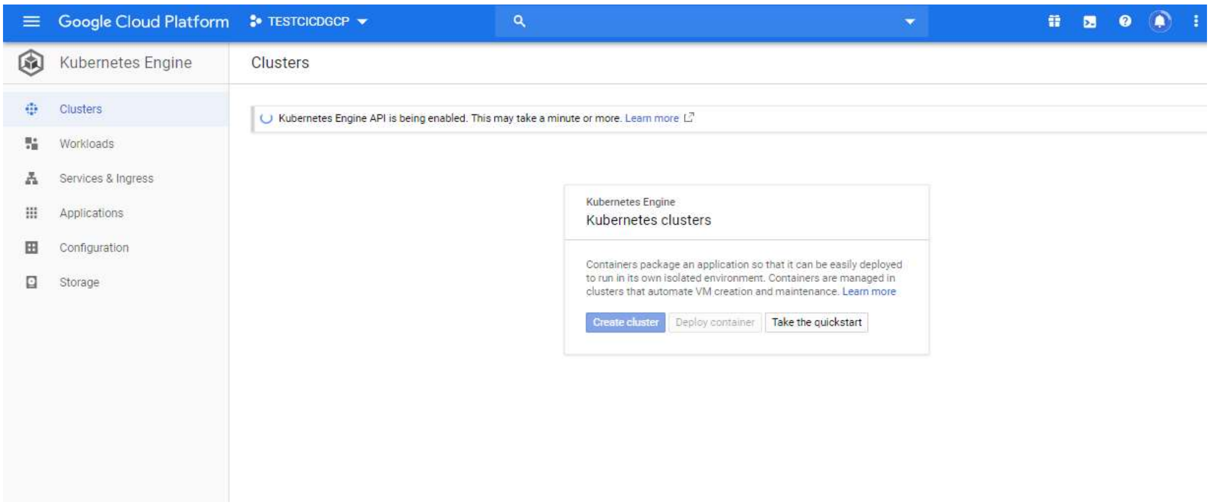
IV)DEPLOYING IMAGE TO THE KUBERNETES



```
- name: 'gcr.io/cloud-builders/gke-deploy:stable'
  args:
  - run
  - --image=gcr.io/$PROJECT_ID/petclinic:latest
  - --location=us-central1-a
  - --cluster=standard-cluster-2
  - --app=spring-petclinic
  - --expose=8080
  - --namespace=default
options:
    machineType: 'N1_HIGHCPU_8'
```

STEP14:

NOW OPEN GOOGLE CLOUD KUBERNETES ENGINE AND AS SOON AS IT IS OPENED THE API STARTS ENABLING



Kubernetes Engine API is being enabled. This may take a minute or more. Learn more

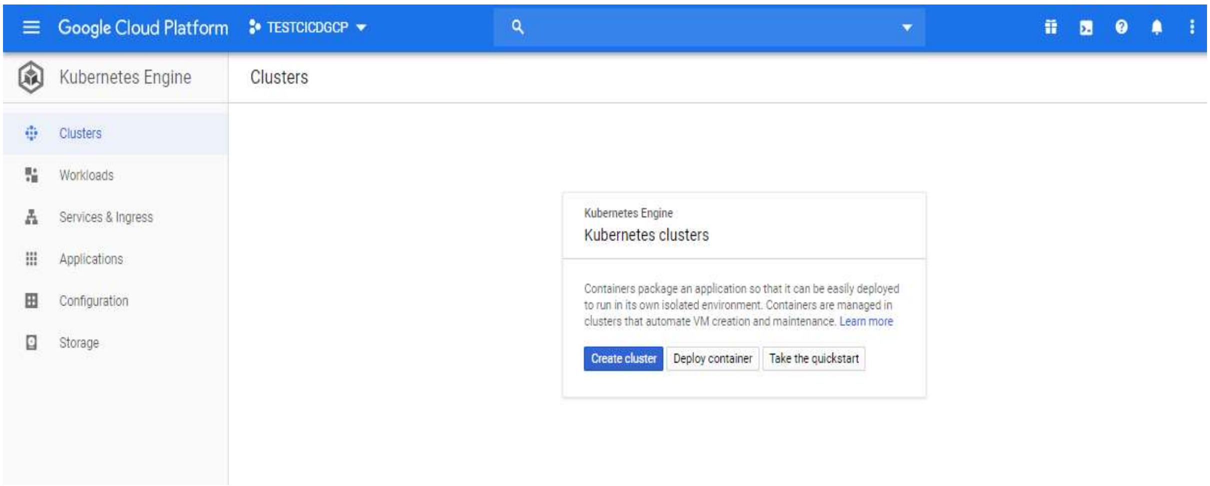
Kubernetes Engine

Kubernetes clusters

Containers package an application so that it can be easily deployed to run in its own isolated environment. Containers are managed in clusters that automate VM creation and maintenance. Learn more

STEP15:

HERE CLICK ON THE CREATE CLUSTER



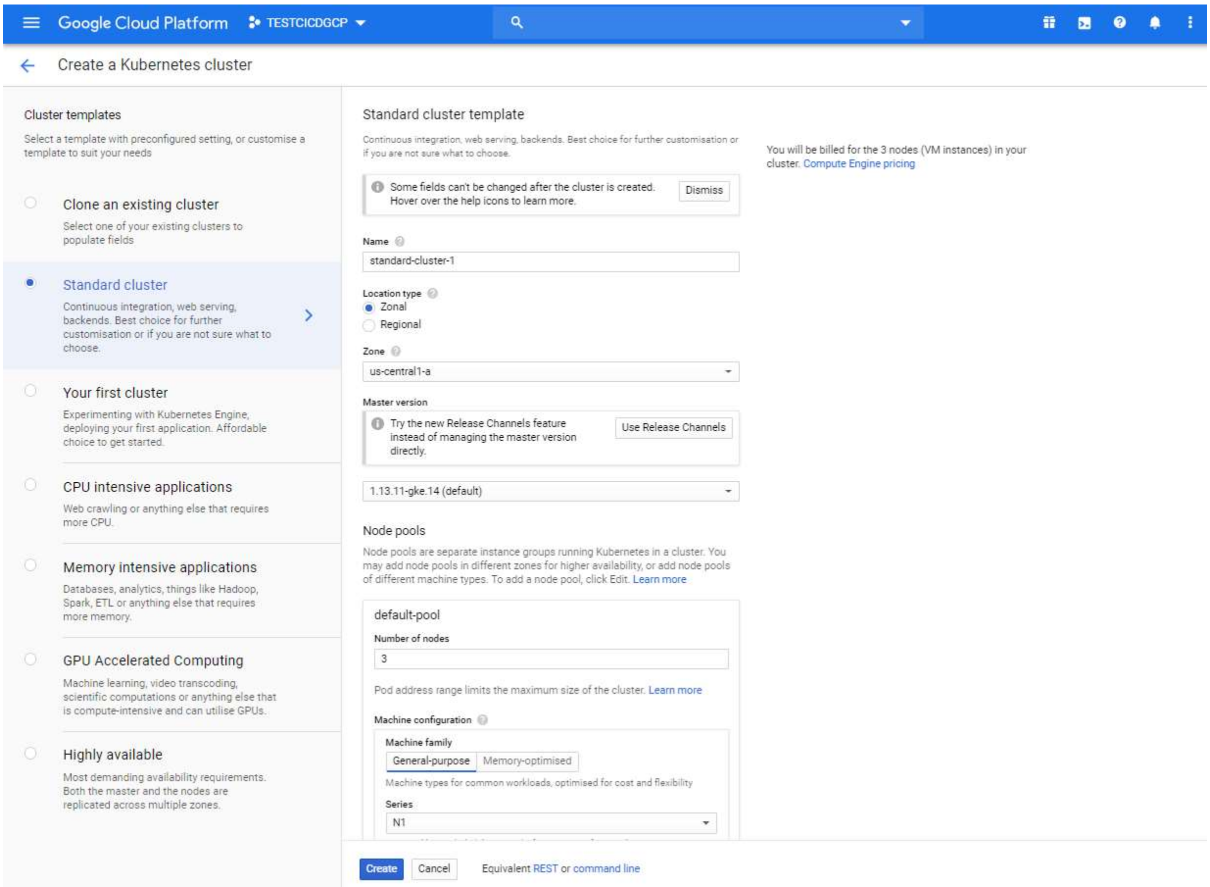
Kubernetes Engine

Kubernetes clusters

Containers package an application so that it can be easily deployed to run in its own isolated environment. Containers are managed in clusters that automate VM creation and maintenance. Learn more

STEP16:

THEN CHECK FOR THE NAMES OF THE CLUSTERS AND LOCATION MATHCES AS IN THE CLOUD BUILD CONFIGURATION FILE AND THEN CLICK ON CREATE



Create a Kubernetes cluster

Cluster templates

Select a template with preconfigured setting, or customise a template to suit your needs

○ Clone an existing cluster
Select one of your existing clusters to populate fields

● Standard cluster
Continuous integration, web serving, backends. Best choice for further customisation or if you are not sure what to choose.

○ Your first cluster
Experimenting with Kubernetes Engine, deploying your first application. Affordable choice to get started.

○ CPU intensive applications
Web crawling or anything else that requires more CPU.

○ Memory intensive applications
Databases, analytics, things like Hadoop, Spark, ETL or anything else that requires more memory.

○ GPU Accelerated Computing
Machine learning, video transcoding, scientific computations or anything else that is compute-intensive and can utilise GPUs.

○ Highly available
Most demanding availability requirements. Both the master and the nodes are replicated across multiple zones.

Standard cluster template

Continuous integration, web serving, backends. Best choice for further customisation or if you are not sure what to choose.

Some fields can't be changed after the cluster is created. Hover over the help icons to learn more. Dismiss

Name: standard-cluster-1

Location type
● Zonal
○ Regional

Zone: us-central1-a

Master version

Try the new Release Channels feature instead of managing the master version directly. Use Release Channels

1.13.11-gke.14 (default)

Node pools

Node pools are separate instance groups running Kubernetes in a cluster. You may add node pools in different zones for higher availability, or add node pools of different machine types. To add a node pool, click Edit. Learn more

default-pool

Number of nodes: 3

Pod address range limits the maximum size of the cluster. Learn more

Machine configuration

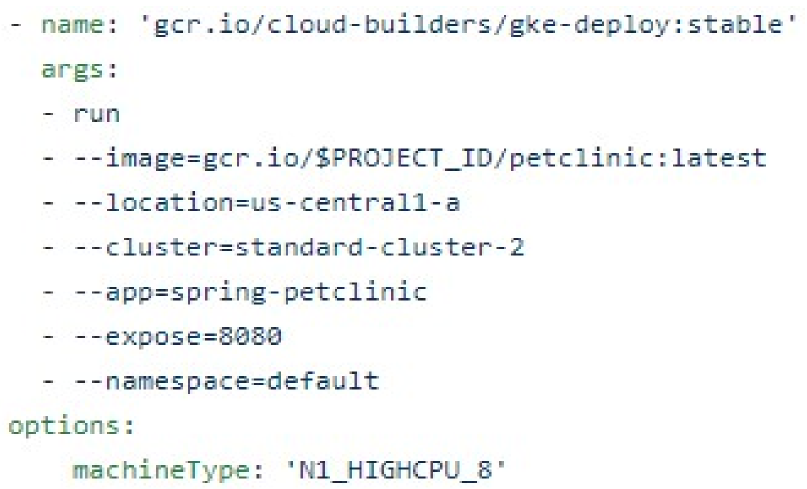
Machine family: General-purpose | Memory-optimised

Machine types for common workloads, optimised for cost and flexibility

Series: N1

You will be billed for the 3 nodes (VM instances) in your cluster. Compute Engine pricing

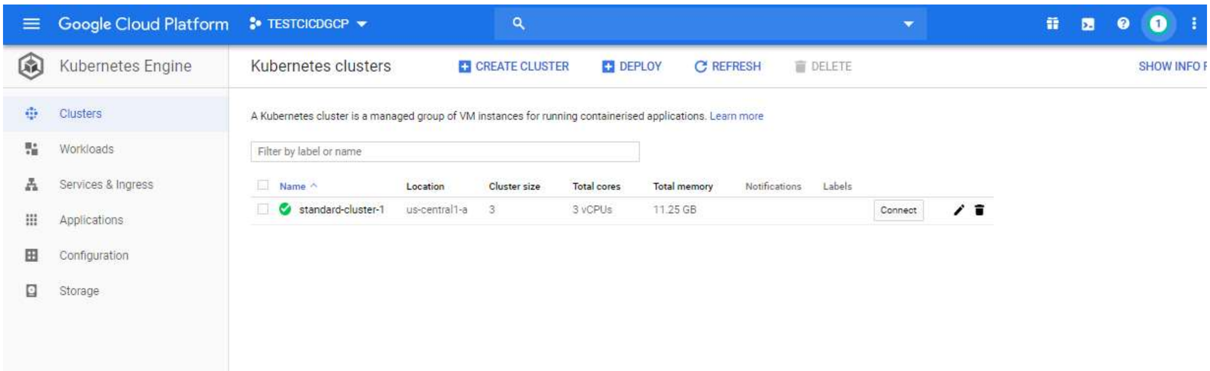
Create Cancel Equivalent REST or command line



```
- name: 'gcr.io/cloud-builders/gke-deploy:stable'
  args:
  - run
  - --image=gcr.io/$PROJECT_ID/petclinic:latest
  - --location=us-central1-a
  - --cluster=standard-cluster-2
  - --app=spring-petclinic
  - --expose=8080
  - --namespace=default
options:
    machineType: 'N1_HIGHCPU_8'
```

STEP17:

THE KUBERNETES CLUSTER IS CREATED

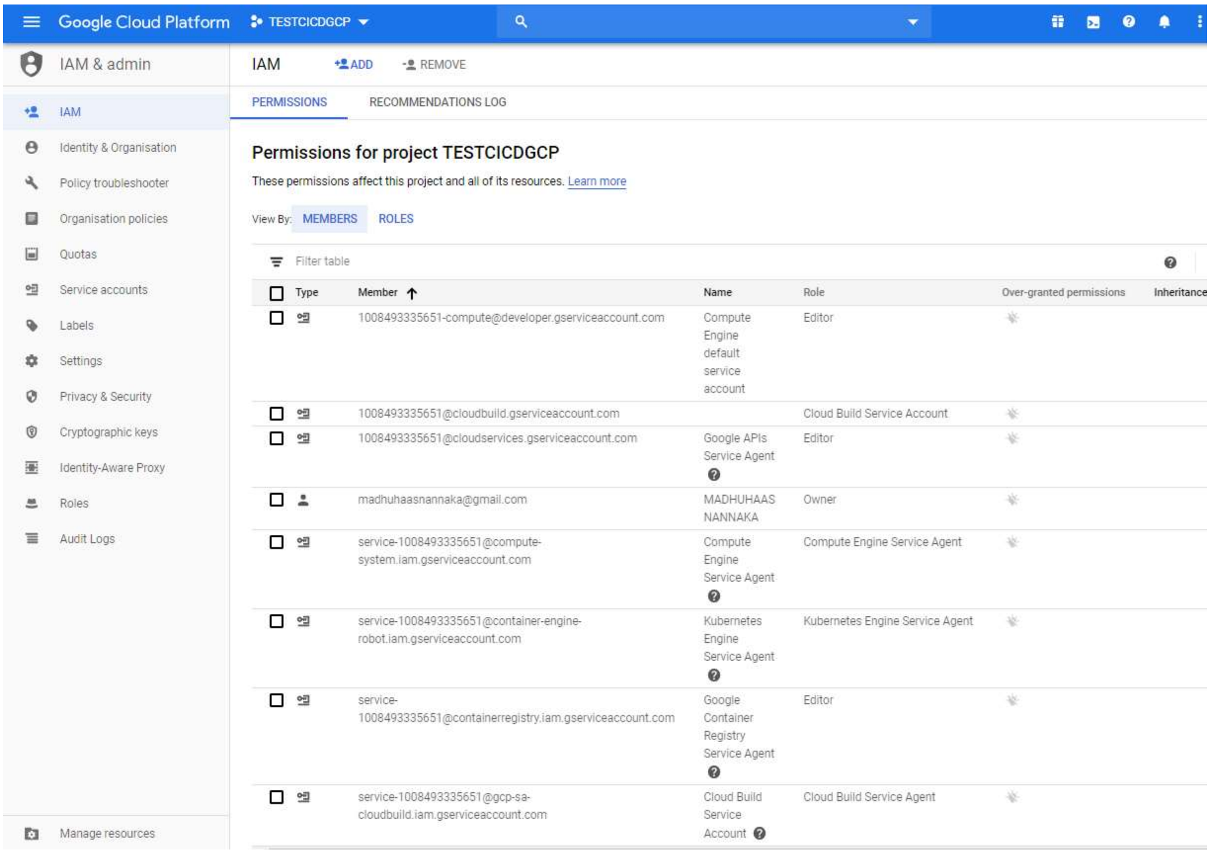


A Kubernetes cluster is a managed group of VM instances for running containerised applications. Learn more

Name	Location	Cluster size	Total cores	Total memory	Notifications	Labels
standard-cluster-1	us-central1-a	3	3 vCPUs	11.25 GB		

STEP18:

NOW GO TO IAM & ADMIN



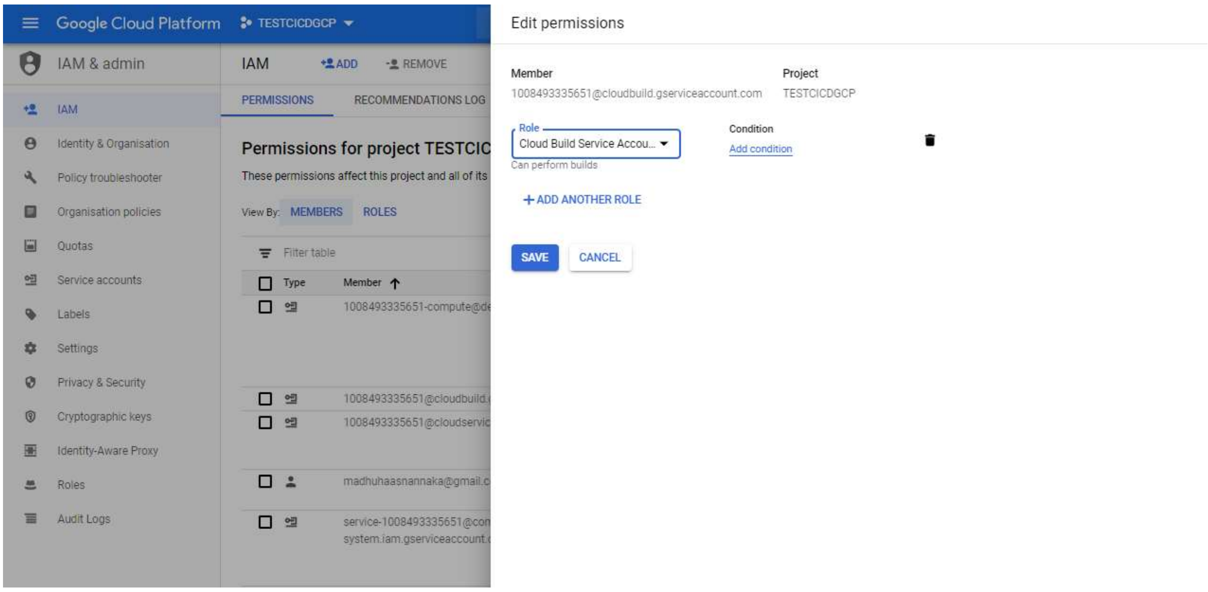
Permissions for project TESTCICDGCP

These permissions affect this project and all of its resources. Learn more

Type	Member ↑	Name	Role	Over-granted permissions	Inheritance
	1008493335651-compute@developer.gserviceaccount.com	Compute Engine default service account	Editor		
	1008493335651@cloudbuild.gserviceaccount.com		Cloud Build Service Account		
	1008493335651@cloudservices.gserviceaccount.com	Google APIs Service Agent	Editor		
	madhuhaasnannaka@gmail.com	MADHUHAAS NANNAKA	Owner		
	service-1008493335651@compute-system.iam.gserviceaccount.com	Compute Engine Service Agent	Compute Engine Service Agent		
	service-1008493335651@container-engine-robot.iam.gserviceaccount.com	Kubernetes Engine Service Agent	Kubernetes Engine Service Agent		
	service-1008493335651@containerregistry.iam.gserviceaccount.com	Google Container Registry Service Agent	Editor		
	service-1008493335651@gcp-sa-cloudbuild.iam.gserviceaccount.com	Cloud Build Service Account	Cloud Build Service Agent		

STEP19:

CHECK FOR THE cloudbuild.gserviceaccount.com AND CLICK ON EDIT OPTION AND SELECT ADD ANOTHER ROLE



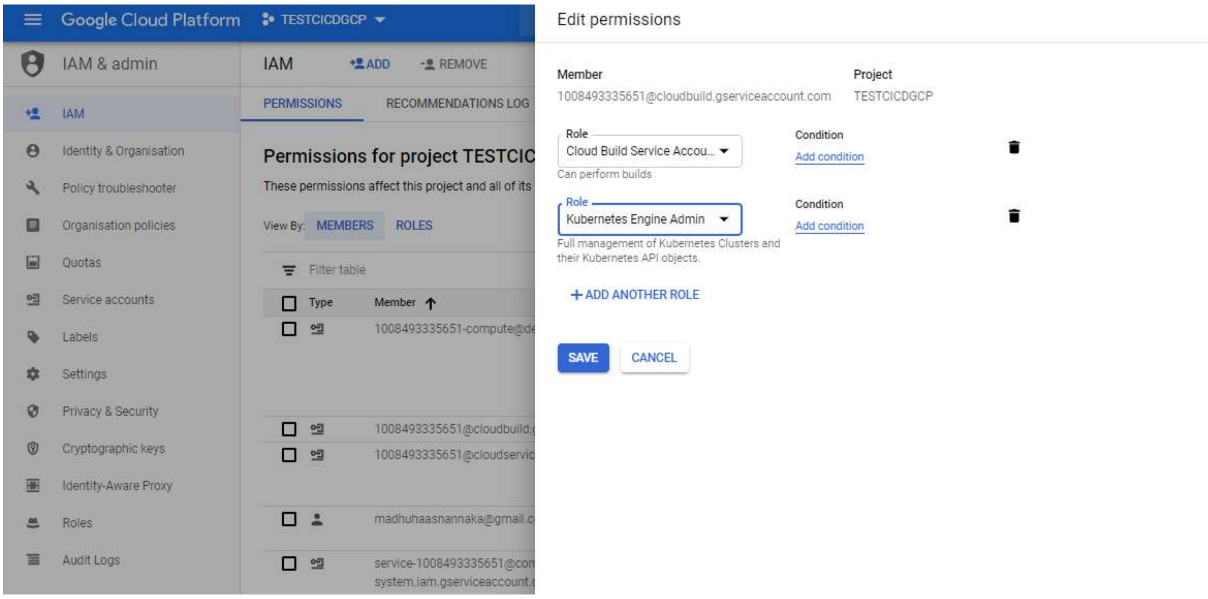
Edit permissions

Member: 1008493335651@cloudbuild.gserviceaccount.com
Project: TESTCICDGCP

Role: Cloud Build Service Accou...
Can perform builds
Condition: Add condition

STEP20:

SEARCH FOR KUBERNETES ENGINE ADMIN AND CLICK ON SAVE



Edit permissions

Member: 1008493335651@cloudbuild.gserviceaccount.com
Project: TESTCICDGCP

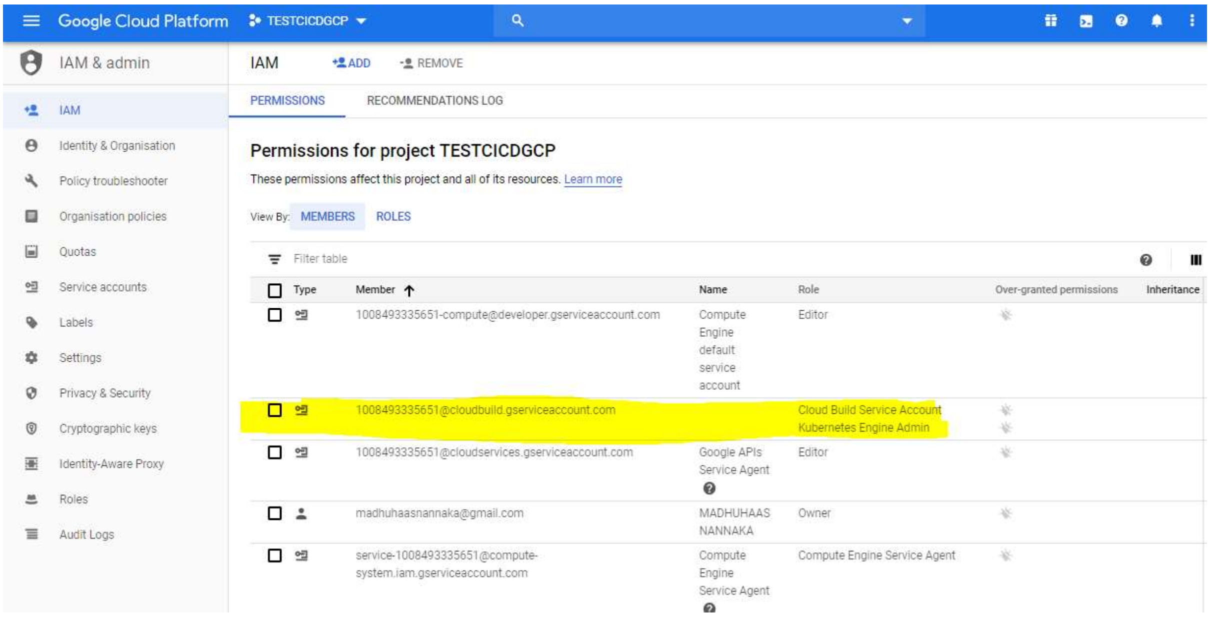
Role: Cloud Build Service Accou...
Can perform builds
Condition: Add condition

Role: Kubernetes Engine Admin
Full management of Kubernetes Clusters and their Kubernetes API objects.
Condition: Add condition

STEP21:

NOW THE KUBERNETES ENGINE PERMISSION IS ASSIGNED TO THE CLOUD BUILD SO THAT IT CAN DEPLOY THE APPLICATION IN THE CLUSTER

CHECK THE HIGHLIGHTED PART IN IMAGE



Permissions for project TESTCICDGCP

These permissions affect this project and all of its resources. Learn more

View By: MEMBERS ROLES

Filter table

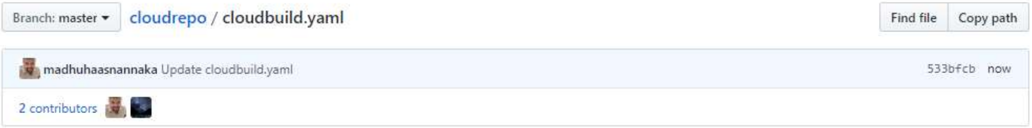
	Type	Member ↑	Name	Role	Over-granted permissions	Inheritance
□		1008493335651-compute@developer.gserviceaccount.com	Compute Engine default service account	Editor		
□		1008493335651@cloudbuild.gserviceaccount.com		Cloud Build Service Account Kubernetes Engine Admin		
□		1008493335651@cloudservices.gserviceaccount.com	Google APIs Service Agent	Editor		
□		madhuhaasnannaka@gmail.com	MADHUHAAS NANNAKA	Owner		
□		service-1008493335651@compute-system.iam.gserviceaccount.com	Compute Engine Service Agent	Compute Engine Service Agent		

STEP22:

NOW CLICK ON RUN TRIGGER OPTION OR PUSH ANY CHANGES TO THE GITHUB SOURCE CODE REPOSITORY TO START THE BUILD

TO START THE BUILD, I PUSHED SOME CODE AND WE CAN SEE THE BUILD STARTED

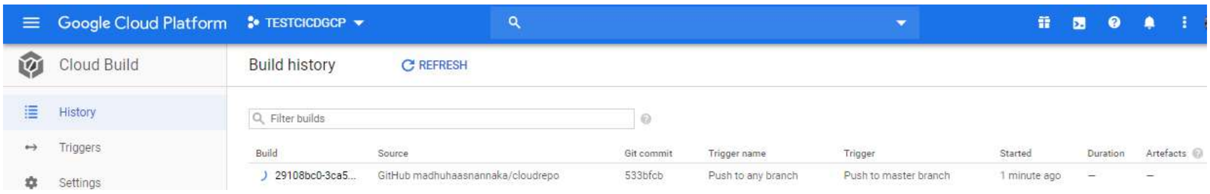
WE CAN SEE THAT IN GITHUB THE COMMIT ID 533BFCD MATCHES WITH CLOUD BUILD GIT COMMIT ID IN HISTORY



cloudrepo / cloudbuild.yaml

madhuhaasnannaka Update cloudbuild.yaml 533bfcb now

2 contributors



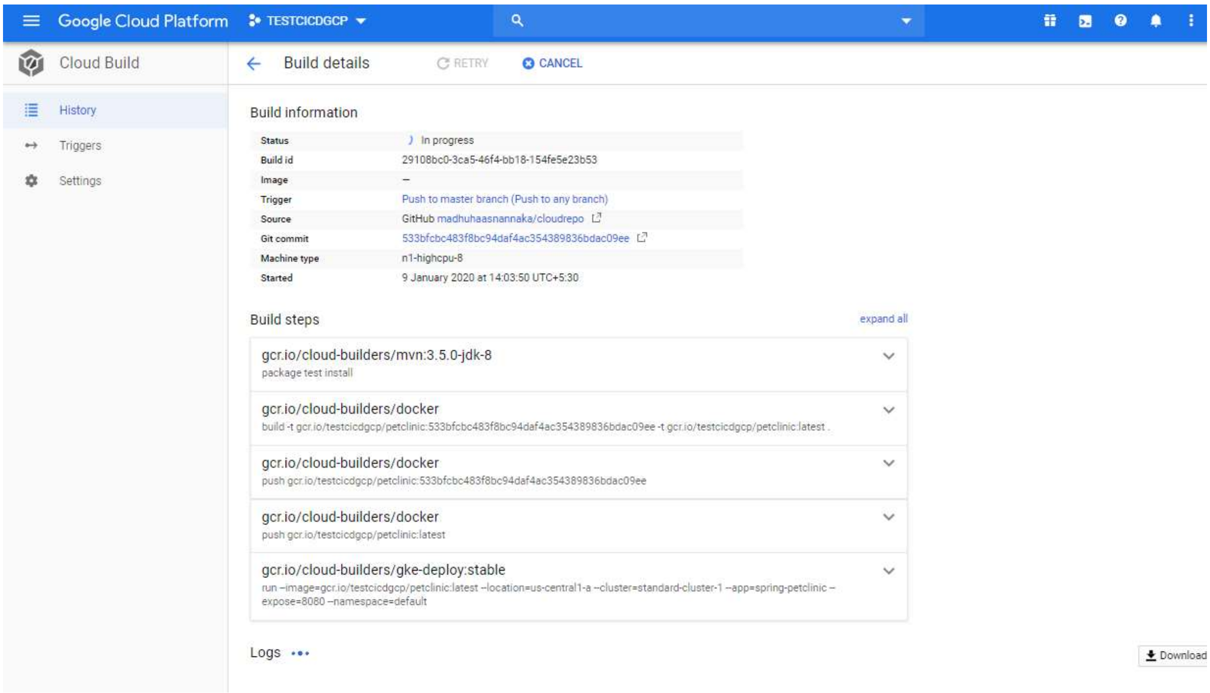
Build history

Filter builds

Build	Source	Git commit	Trigger name	Trigger	Started	Duration	Artefacts
29108bc0-3ca5...	GitHub madhuhaasnannaka/cloudrepo	533bfcb	Push to any branch	Push to master branch	1 minute ago	–	–

STEP23:

WE CAN SEE THE BUILD IN PROGRESS AFTER CLICKING ON IT



Build information

Status	In progress
Build id	29108bc0-3ca5-46f4-bb18-154fe5e23b53
Image	–
Trigger	Push to master branch (Push to any branch)
Source	GitHub madhuhaasnannaka/cloudrepo
Git commit	533bfcbc483f8bc94daf4ac354389836bdac09ee
Machine type	n1-highcpu-8
Started	9 January 2020 at 14:03:50 UTC+5:30

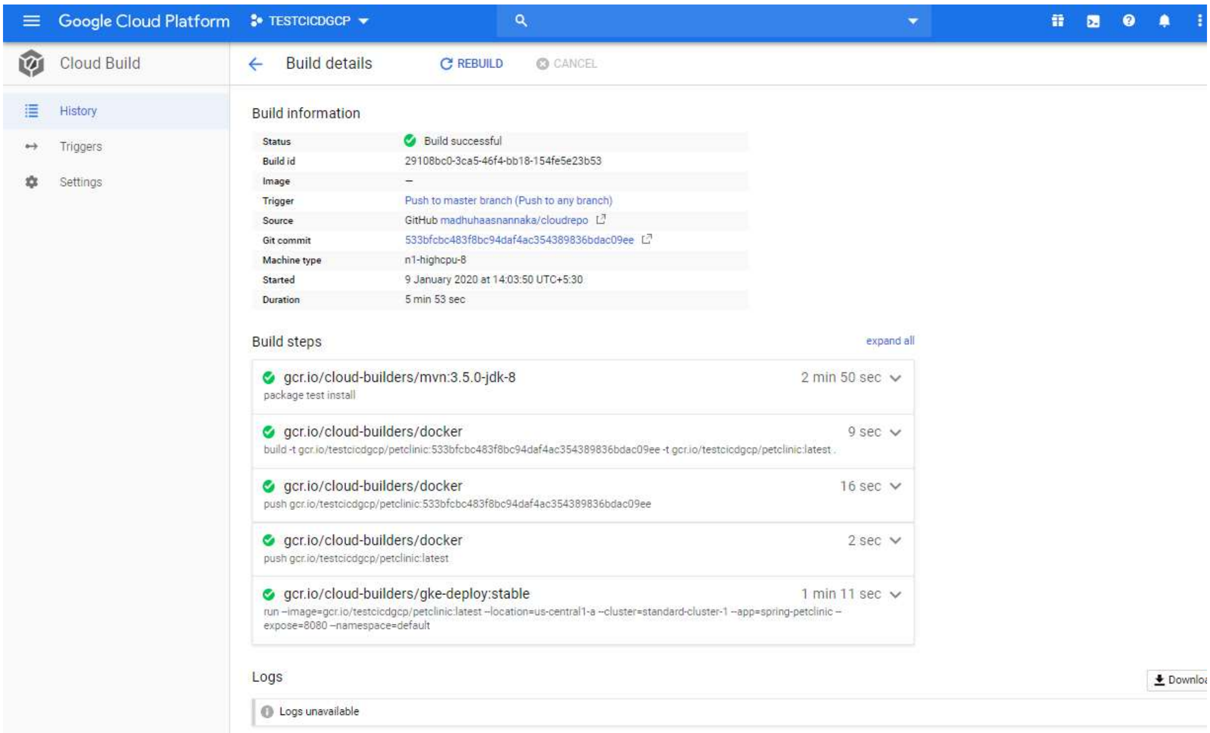
Build steps

```
gcr.io/cloud-builders/mvn:3.5.0-jdk-8
package test install

gcr.io/cloud-builders/docker
build -t gcr.io/testcicdgcp/petclinic:533bfcbc483f8bc94daf4ac354389836bdac09ee -t gcr.io/testcicdgcp/petclinic:latest .

gcr.io/cloud-builders/docker
push gcr.io/testcicdgcp/petclinic:533bfcbc483f8bc94daf4ac354389836bdac09ee

gcr.io/cloud-builders/docker
push gcr.io/testcicdgcp/petclinic:latest

gcr.io/cloud-builders/gke-deploy:stable
run –image=gcr.io/testcicdgcp/petclinic:latest –location=us-central1-a –cluster=standard-cluster-1 –app=spring-petclinic –
expose=8080 –namespace=default
```

Logs

STEP24:

WE CAN NOW SEE THAT THE BUILD IS SUCCESSFUL



Build information

Status	Build successful
Build id	29108bc0-3ca5-46f4-bb18-154fe5e23b53
Image	–
Trigger	Push to master branch (Push to any branch)
Source	GitHub madhuhaasnannaka/cloudrepo
Git commit	533bfcbc483f8bc94daf4ac354389836bdac09ee
Machine type	n1-highcpu-8
Started	9 January 2020 at 14:03:50 UTC+5:30
Duration	5 min 53 sec

Build steps

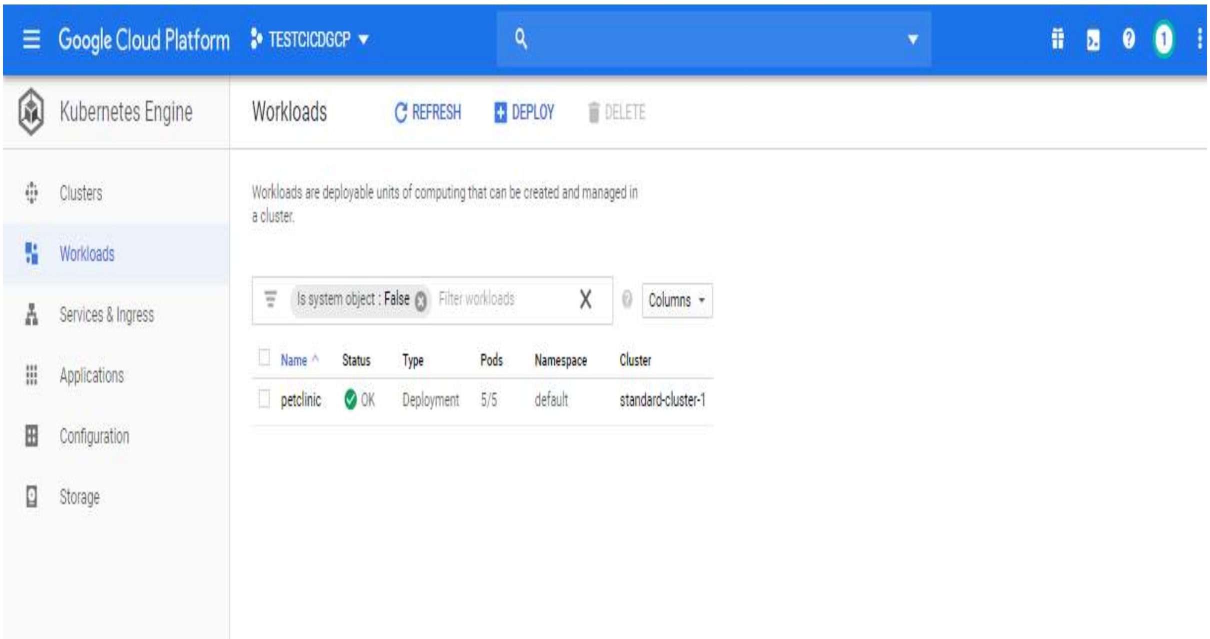
```
gcr.io/cloud-builders/mvn:3.5.0-jdk-8                                   2 min 50 sec
package test install

gcr.io/cloud-builders/docker                                                   9 sec
build -t gcr.io/testcicdgcp/petclinic:533bfcbc483f8bc94daf4ac354389836bdac09ee -t gcr.io/testcicdgcp/petclinic:latest .

gcr.io/cloud-builders/docker                                                  16 sec
push gcr.io/testcicdgcp/petclinic:533bfcbc483f8bc94daf4ac354389836bdac09ee

gcr.io/cloud-builders/docker                                                   2 sec
push gcr.io/testcicdgcp/petclinic:latest

gcr.io/cloud-builders/gke-deploy:stable                                 1 min 11 sec
run –image=gcr.io/testcicdgcp/petclinic:latest –location=us-central1-a –cluster=standard-cluster-1 –app=spring-petclinic –
expose=8080 –namespace=default
```

Logs

Logs unavailable

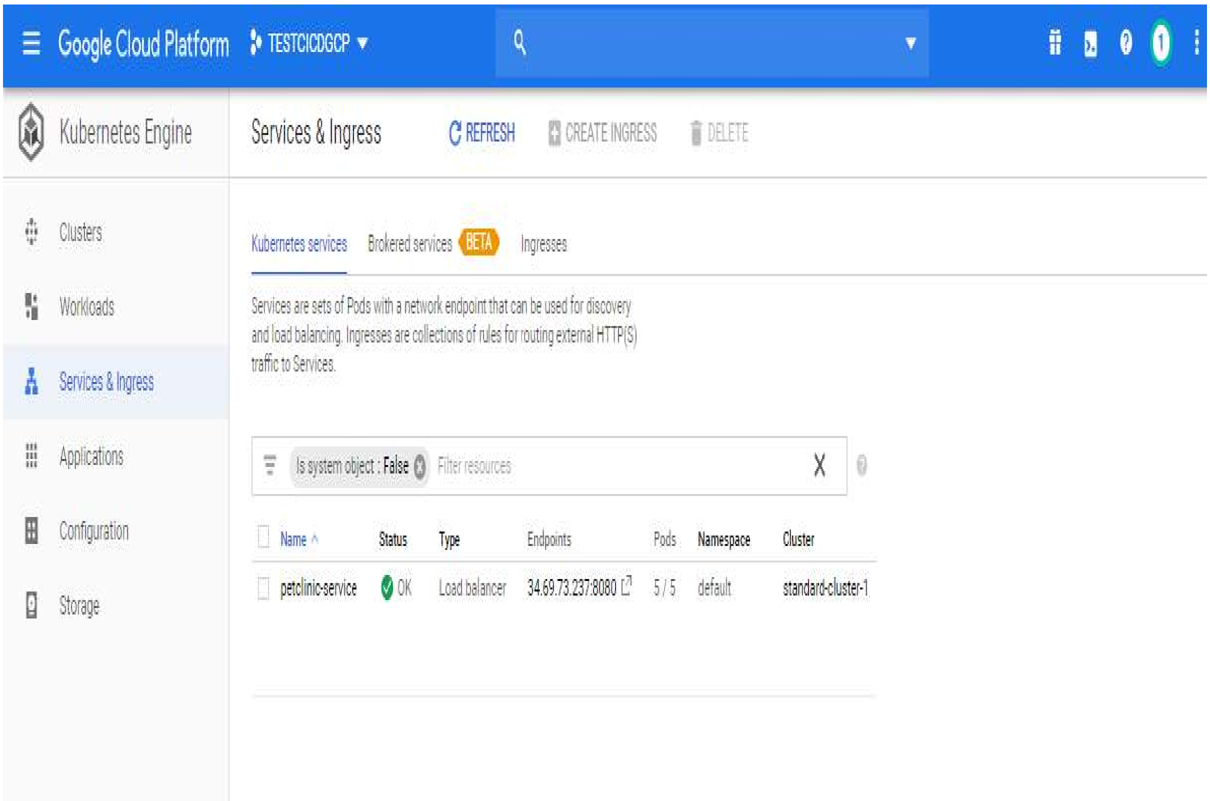
STEP25:

GO TO THE KUBERNETES ENGINE AND CLICK ON WORKLOADS NOW WE CAN SEE THAT THE APPLICATION IS DEPLOYED AND ALSO CHECK FOR THE SERVICE FOR THIS APPLICATION IN SERVICES & INGRESS



Workloads are deployable units of computing that can be created and managed in a cluster.

Name	Status	Type	Pods	Namespace	Cluster
petclinic	OK	Deployment	5/5	default	standard-cluster-1



Services are sets of Pods with a network endpoint that can be used for discovery and load balancing. Ingresses are collections of rules for routing external HTTP(S) traffic to Services.

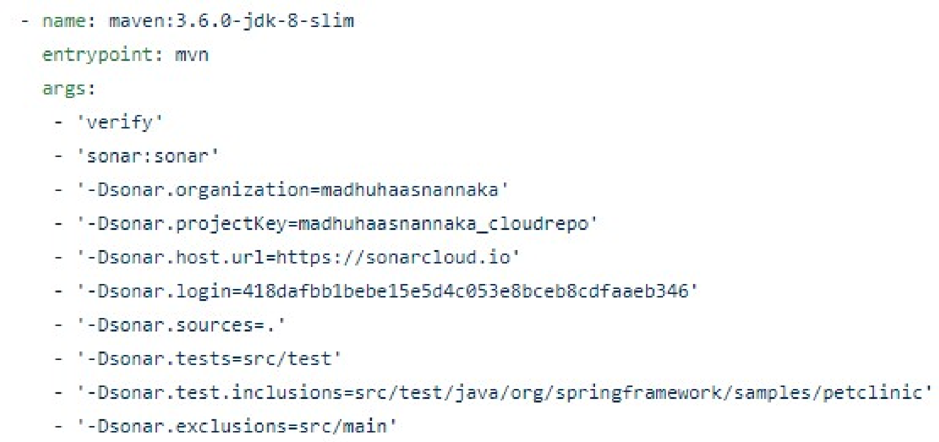
Name	Status	Type	Endpoints	Pods	Namespace	Cluster
petclinic-service	OK	Load balancer	34.69.73.237:8080	5 / 5	default	standard-cluster-1

STEP26:

SONARCLOUD INTEGRATION WITH CLOUD BUILD AND INCLUDING IT IN THE CI/CD PIPELINE

THE FOLLOWING CODE MUST BE ADDED IN THE CLOUD BUILD CONFIGURATION FILE TO ANALYZE THE SOURCE CODE IN SONAR CLOUD https://sonarcloud.io/projects

https://github.com/madhuhaasnannaka/cloudrepo/blob/master/cloudbuild.yaml

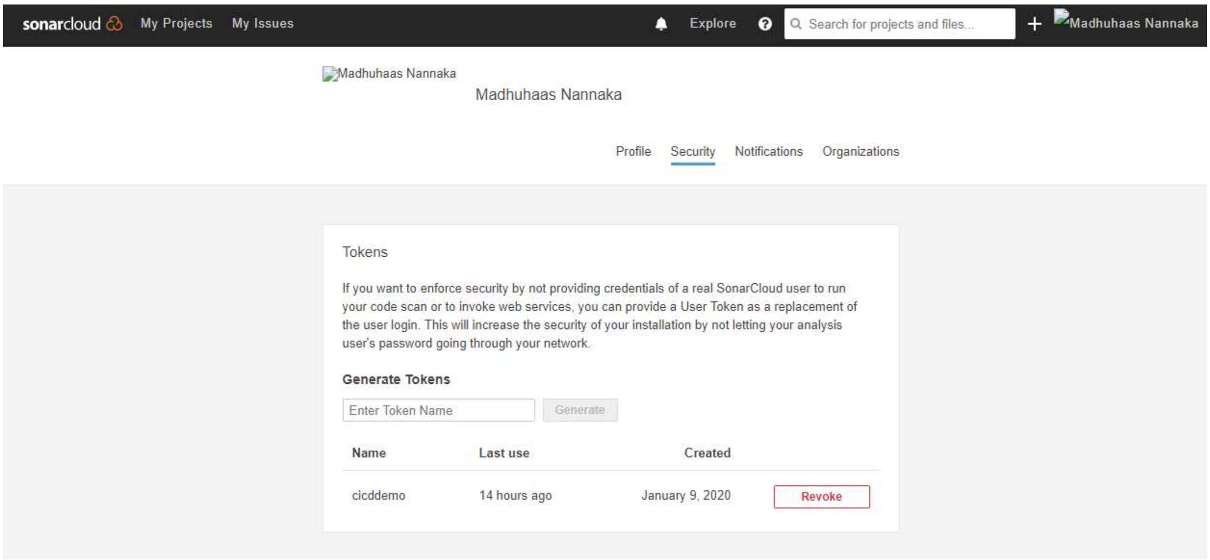


```
- name: maven:3.6.0-jdk-8-slim
  entrypoint: mvn
  args:
   - 'verify'
   - 'sonar:sonar'
   - '-Dsonar.organization=madhuhaasnannaka'
   - '-Dsonar.projectKey=madhuhaasnannaka_cloudrepo'
   - '-Dsonar.host.url=https://sonarcloud.io'
   - '-Dsonar.login=418dafbb1bebe15e5d4c053e8bceb8cdfaaeb346'
   - '-Dsonar.sources=.'
   - '-Dsonar.tests=src/test'
   - '-Dsonar.test.inclusions=src/test/java/org/springframework/samples/petclinic'
   - '-Dsonar.exclusions=src/main'
```

STEP27:

NOW LOGIN TO THE SONARCLOUD https://sonarcloud.io/projects **WITH GITHUB ACCOUNT**

AND GENERATE A TOKEN IN THE SECURITY AND USE IT IN THE CLOUD BUILD CONFIGURATION FILE (CLOUDBUILD.YAML)



Madhuhaas Nannaka

Tokens

If you want to enforce security by not providing credentials of a real SonarCloud user to run your code scan or to invoke web services, you can provide a User Token as a replacement of the user login. This will increase the security of your installation by not letting your analysis user's password going through your network.

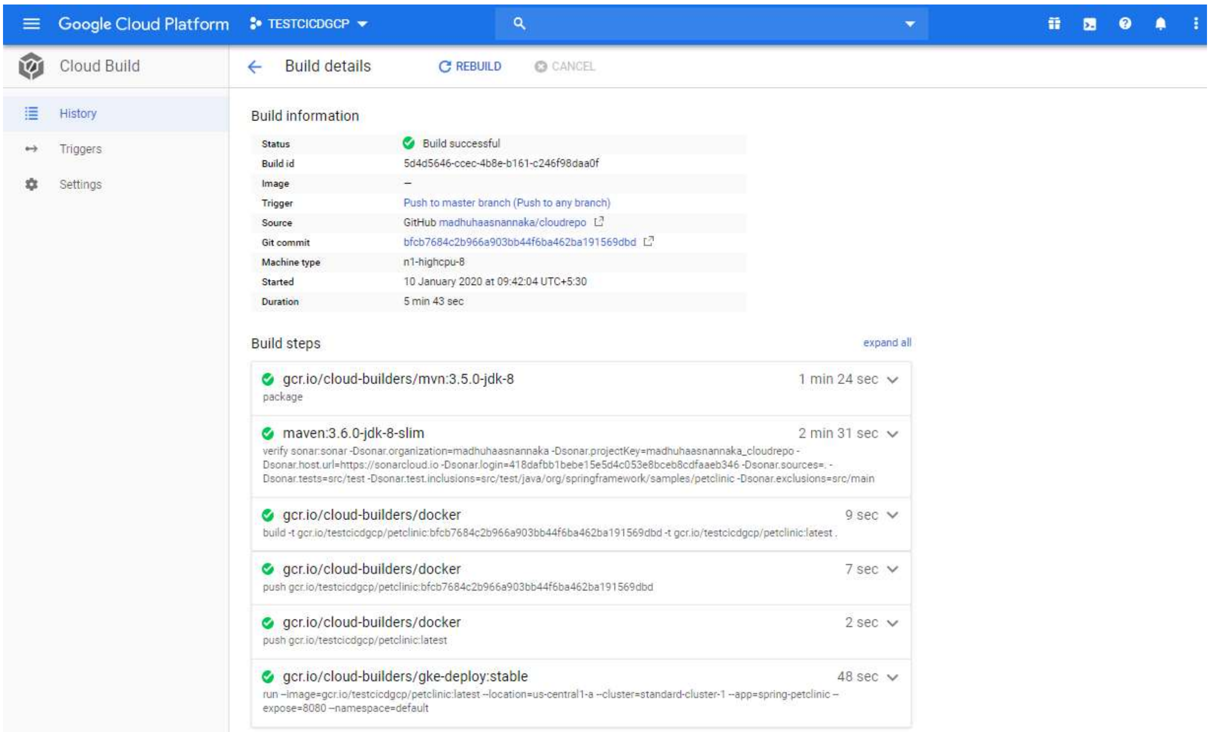
Generate Tokens

Enter Token Name

Name	Last use	Created	
cicddemo	14 hours ago	January 9, 2020	Revoke

STEP28:

NOW RUN THE TRIGGER OR PUSH SOME CHANGES IN TO THE SOURCE CODE REPOSITORY. THEN THE BUILD STARTS AND ANALYSIS OF CODE WILL BE UPLOADED TO SONAR CLOUD.

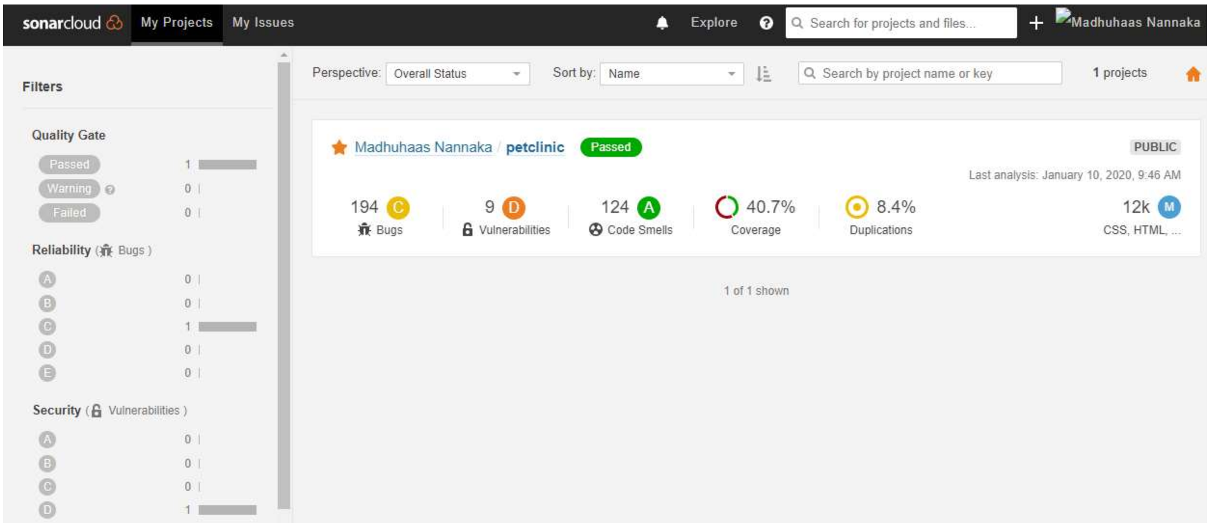


Build information

Status	✓ Build successful
Build id	5d4d5646-ccec-4b8e-b161-c246f98daa0f
Image	–
Trigger	Push to master branch (Push to any branch)
Source	GitHub madhuhaasnannaka/cloudrepo
Git commit	bfcb7684c2b966a903bb44f6ba462ba191569dbd
Machine type	n1-highcpu-8
Started	10 January 2020 at 09:42:04 UTC+5:30
Duration	5 min 43 sec

Build steps

```
✓ gcr.io/cloud-builders/mvn:3.5.0-jdk-8                                   1 min 24 sec
package

✓ maven:3.6.0-jdk-8-slim                                                  2 min 31 sec
verify sonar:sonar -Dsonar.organization=madhuhaasnannaka -Dsonar.projectKey=madhuhaasnannaka_cloudrepo -
Dsonar.host.url=https://sonarcloud.io -Dsonar.login=418dafbb1bebe15e5d4c053e8bceb8cdfaaeb346 -Dsonar.sources=. -
Dsonar.tests=src/test -Dsonar.test.inclusions=src/test/java/org/springframework/samples/petclinic -Dsonar.exclusions=src/main

✓ gcr.io/cloud-builders/docker                                            9 sec
build -t gcr.io/testcicdgcp/petclinic:bfcb7684c2b966a903bb44f6ba462ba191569dbd -t gcr.io/testcicdgcp/petclinic:latest .

✓ gcr.io/cloud-builders/docker                                            7 sec
push gcr.io/testcicdgcp/petclinic:bfcb7684c2b966a903bb44f6ba462ba191569dbd

✓ gcr.io/cloud-builders/docker                                            2 sec
push gcr.io/testcicdgcp/petclinic:latest

✓ gcr.io/cloud-builders/gke-deploy:stable                                 48 sec
run –image=gcr.io/testcicdgcp/petclinic:latest –location=us-central1-a –cluster=standard-cluster-1 –app=spring-petclinic –
expose=8080 –namespace=default
```



Quality Gate

Passed	1
Warning	0
Failed	0

Reliability (Bugs)

A	0
B	0
C	1
D	0
E	0

Security (Vulnerabilities)

A	0
B	0
C	0
D	1

★ Madhuhaas Nannaka / petclinic Passed PUBLIC

Last analysis: January 10, 2020, 9:46 AM

194 C	9 D	124 A	40.7%	8.4%	12k M
Bugs	Vulnerabilities	Code Smells	Coverage	Duplications	CSS, HTML, ...

1 of 1 shown

THANK YOU