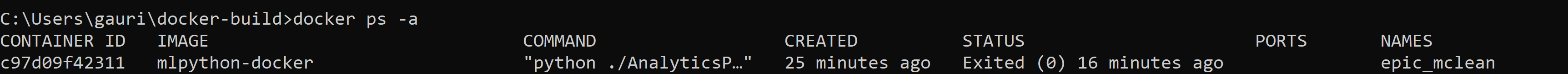
**STEPS FOR DOCKER CONTAINER CREATION AND DEPLOYING THE APPLICATION TO GCP KUBERNETES CLUSTER**

Create Docker Image and Container on local

=====================================

docker build --tag mlpython-docker .

docker run mlpython-docker



Push the Image to Docker Hub

===========================================

docker tag mlpython-docker gauridocker08/mlpythonanalytics:v1

docker commit 11eb24e0babb gauridocker08/mlpythonanalytics:v1

docker login -u "gauridocker08" -p "\*\*\*\*\*\*\*" docker.io

docker push gauridocker08/mlpythonanalytics:v1

<https://hub.docker.com/repository/docker/gauridocker08/mlpythonanalytics>

Deploying the Application to GCP Kubernetes cluster

Reference Doc : https://cloud.google.com/kubernetes-engine/docs/tutorials/hello-app

Execute below commands on GCP Cloud Shell

Create a Project in GCP as first step

export PROJECT\_ID=retailanalytics-321116

echo $PROJECT\_ID

gcloud config set project $PROJECT\_ID

Create Repository

==============================

gcloud artifacts repositories create mldatapipeline-repo \

--repository-format=docker \

--location=us-west1 \

--description="Docker repository"

Create Docker Image and Push to Google Artifact Registry

=============================================

git clone <https://github.com/Gauri-CO/docker-build.git>

cd docker-build

docker build -t us-west1-docker.pkg.dev/${PROJECT\_ID}/mldatapipeline-repo/mldatapipeline-app:v1 .

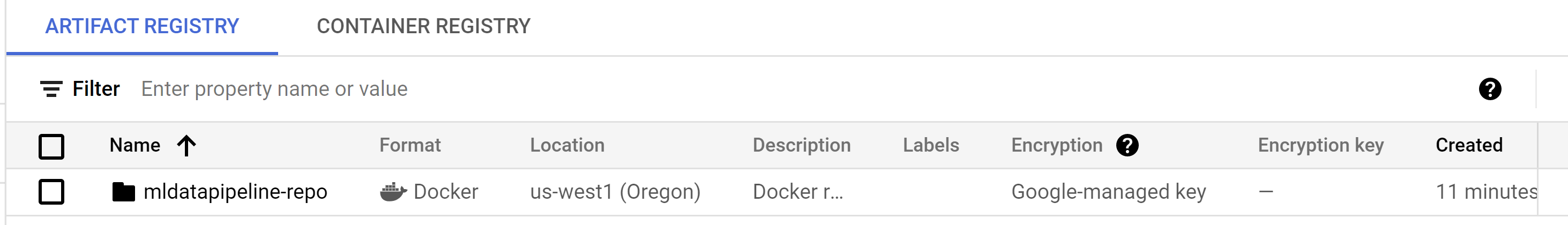
docker images

docker run us-west1-docker.pkg.dev/${PROJECT\_ID}/mldatapipeline-repo/mldatapipeline-app:v1

gcloud auth configure-docker us-west1-docker.pkg.dev

docker push us-west1-docker.pkg.dev/${PROJECT\_ID}/mldatapipeline-repo/mldatapipeline-app:v1

https://console.cloud.google.com/artifacts/docker/retailanalytics-321116/us-west1/mldatapipeline-repo?cloudshell=false&project=retailanalytics-321116



Create Kubernetes Cluster and Deploy the application

gcloud config set compute/zone us-west1-a

gcloud container clusters create mldatapipeline-cluster

kubectl get nodes

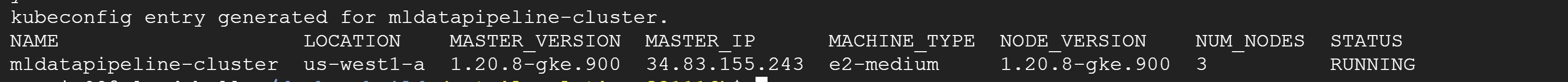
gcloud container clusters get-credentials mldatapipeline-cluster --zone us-west1-a

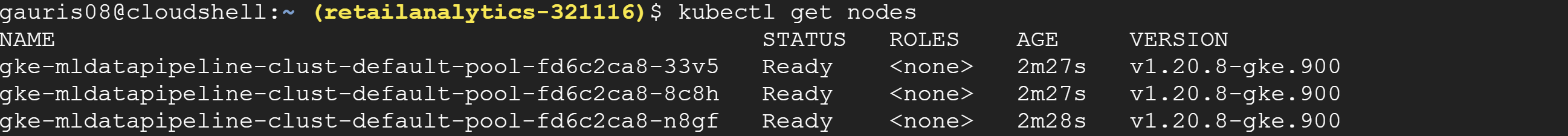
kubectl create deployment mldatapipeline-app --image=us-west1-docker.pkg.dev/${PROJECT\_ID}/mldatapipeline-repo/mldatapipeline-app:v1

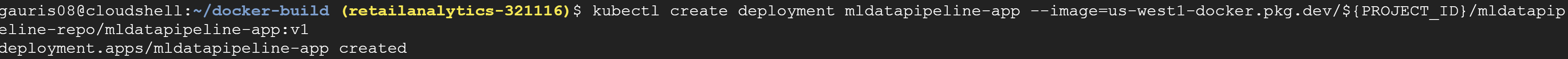
kubectl get pods

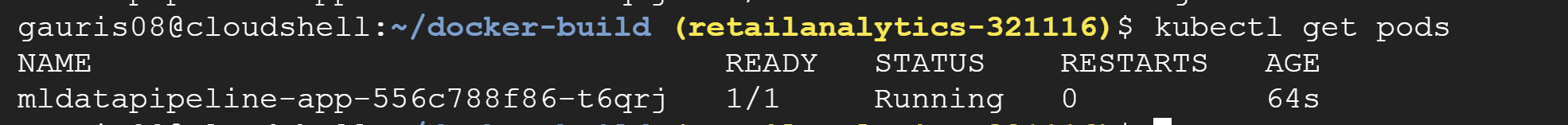
kubectl exec --stdin --tty mldatapipeline-app-897c98d58-kxrjz -- /bin/bash

kubectl expose deployment mldatapipeline-app --name=mldatapipeline-app-service --type=LoadBalancer









Email triggered to notify start and end of process :

