GCP Architect Training
support@intellipaat.com - +91-7022374614 - US: 1-800-216-8930 (Toll Free)

GCP Capstone-Project COMPLETED by Nagesha KS
Please check the following screenshots for each question.

You work as a Cloud Engineer in XYZ Corporation. The company has recently set up a new cloud team, and wants them to work on the company's Google Cloud Console.

There are three roles in the team:

- Admins - owner access
- Workers - edit access for VMs
- QA - viewer access for VMs

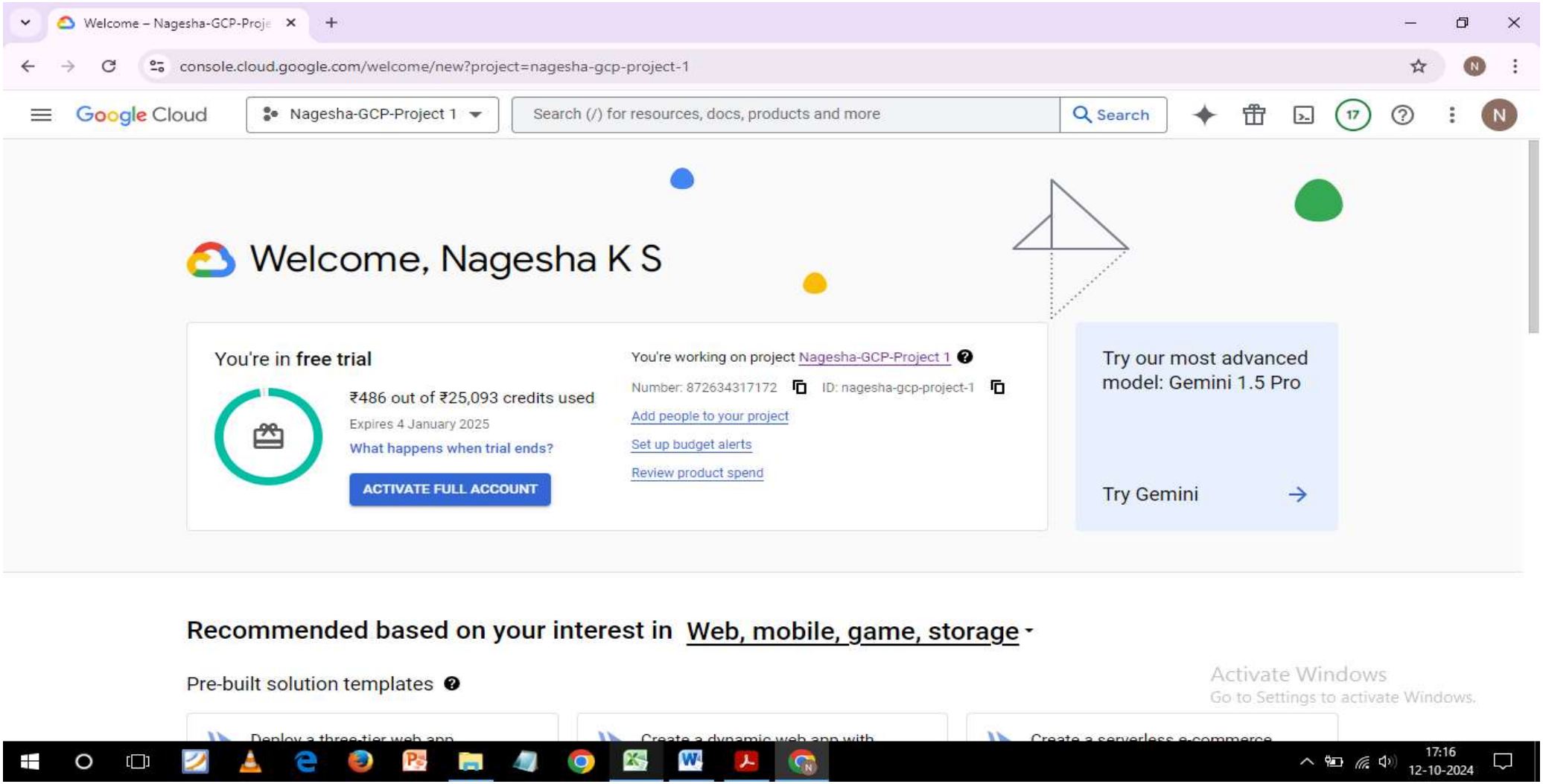
Create three users for the same.

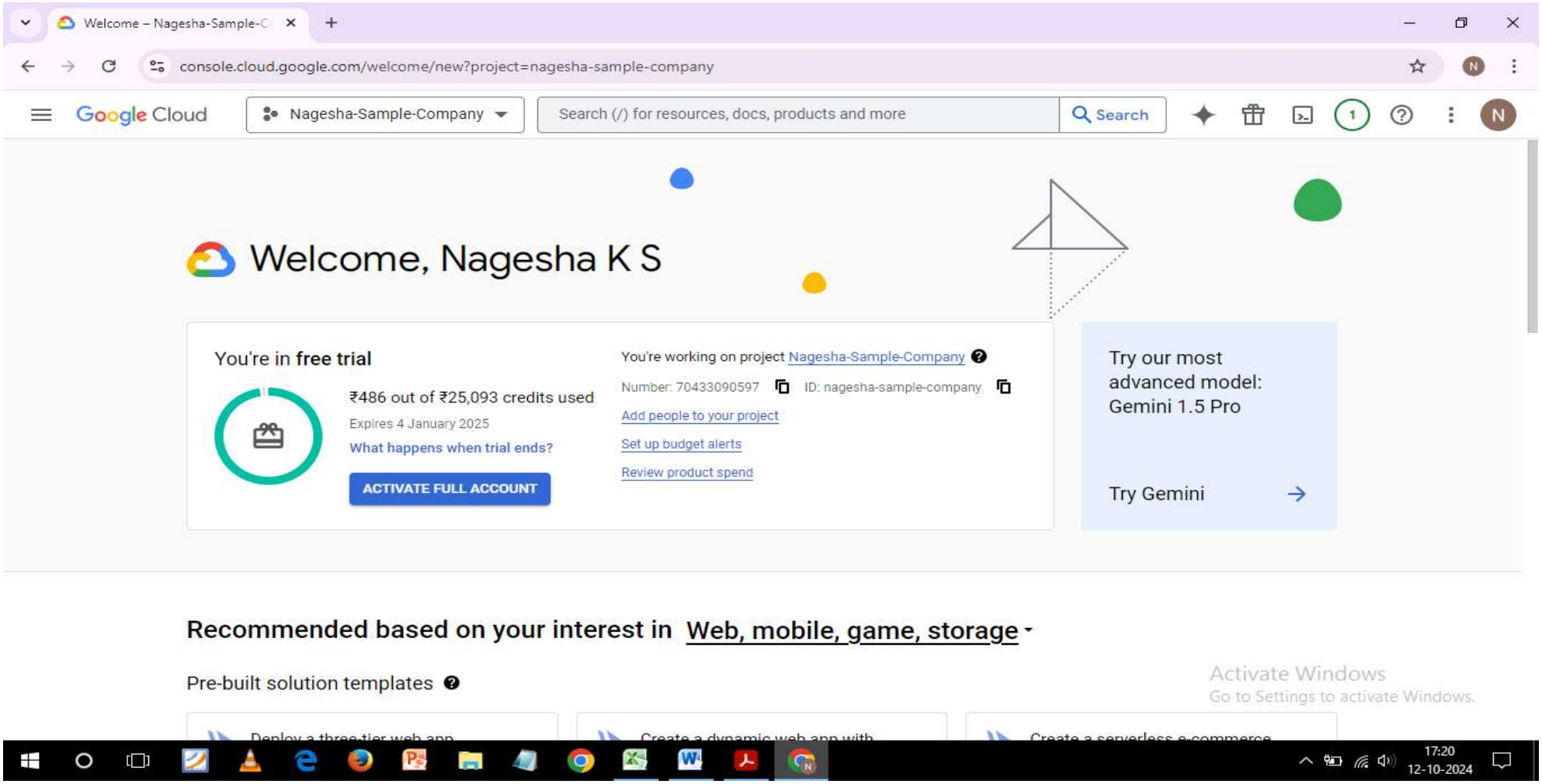
There is a **separate project QA where a storage server** is running.

In the current architecture, the company is running a single server which is high in config for their application needs.
You have been hired to make the architecture more resilient and cost effective. For implementing the same, following are the changes that you suggested:

1. Deploy the application on app service which can be scaled up and down from 2 instances to 10 instances.
   Use apache tools for this for creating traffic for the server.
2. A storage server was deployed in a different project. You have to ensure the app service is able to talk to that server.
   To ensure this, deploy a server in the same VPC as of app service, and check if you are able to ping storage VM in another project.
3. The app service will be interacting with a database. For now, the database exists in a local system. Here is the exported database.
   https://drive.google.com/file/d/15A9HC0wHDKDigGFoyFJVALEkLn095GmE/view?pli=1
   Use this and import in Cloud SQL. The ZIP files have been downloaded here.
4. The company wants to review different versions of the code on the app service. Explain the mechanism using screenshots.
5. Configure Stackdriver monitoring to monitor the storage server. An email should be triggered to the owner of the project in case this server goes down.

The above architecture and requirements have to be shown to the stakeholders using a proof of concept.
Please implement the project and submit screenshots to the support team.


Welcome – Nagesha-GCP-Proje
console.cloud.google.com/welcome/new?project=nagesha-gcp-project-1
Google Cloud
Nagesha-GCP-Project 1
Search (/) for resources, docs, products and more
Search
Welcome, Nagesha K S
You're in free trial
₹486 out of ₹25,093 credits used
Expires 4 January 2025
What happens when trial ends?
ACTIVATE FULL ACCOUNT
You're working on project Nagesha-GCP-Project 1
Number: 872634317172
ID: nagesha-gcp-project-1
Add people to your project
Set up budget alerts
Review product spend
Try our most advanced model: Gemini 1.5 Pro
Try Gemini
Recommended based on your interest in Web, mobile, game, storage
Pre-built solution templates
Activate Windows
Go to Settings to activate Windows.
17:16
12-10-2024


Welcome – Nagesha-Sample-C
console.cloud.google.com/welcome/new?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Welcome, Nagesha K S
You're in free trial
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What happens when trial ends?
ACTIVATE FULL ACCOUNT
You're working on project Nagesha-Sample-Company
Number: 70433090597
ID: nagesha-sample-company
Add people to your project
Set up budget alerts
Review product spend
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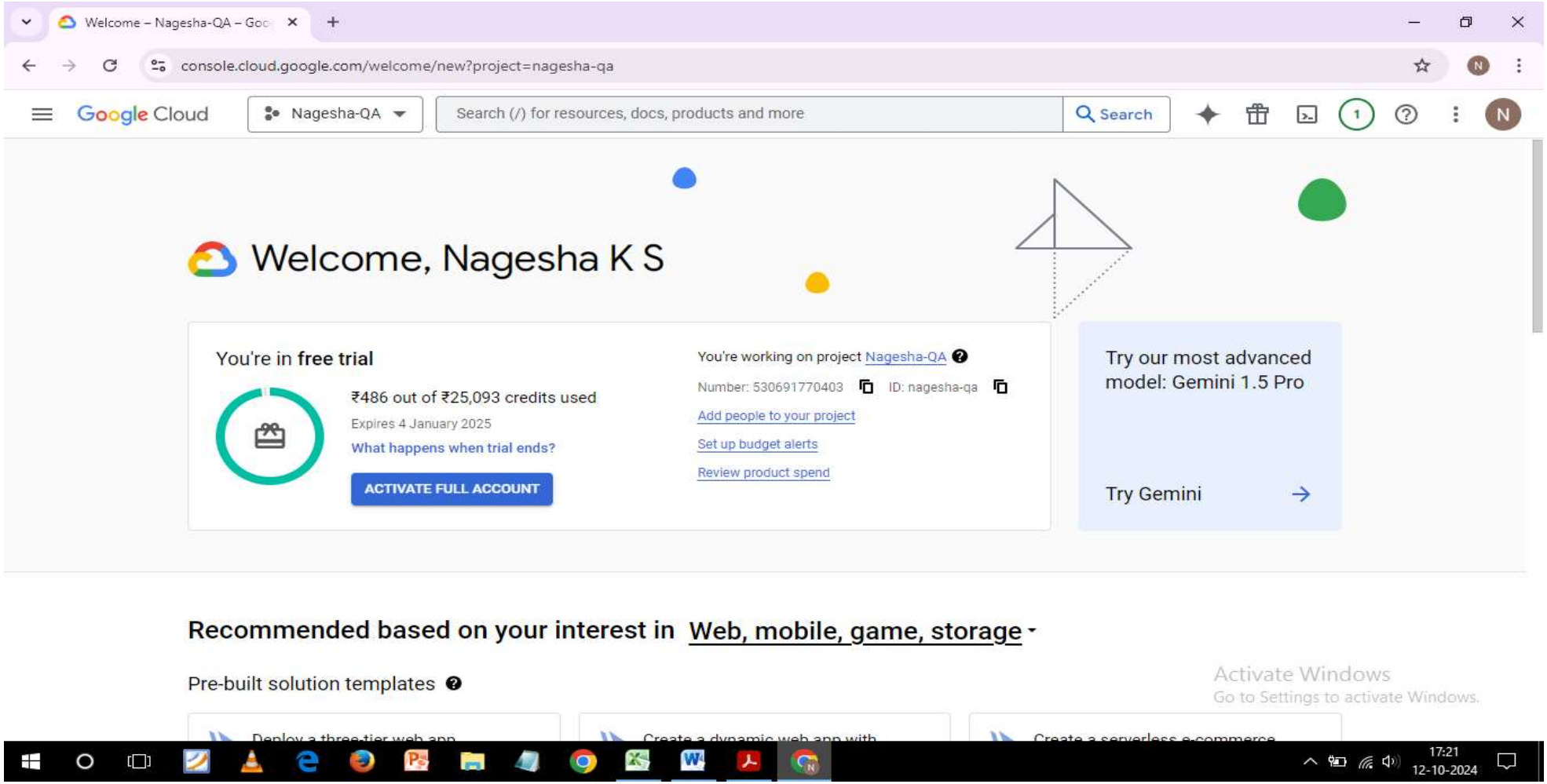
Pre-built solution templates
Activate Windows
Go to Settings to activate Windows.
17:20
12-10-2024


Welcome – Nagesha-QA – Goo
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Google Cloud
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Welcome, Nagesha K S
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What happens when trial ends?
ACTIVATE FULL ACCOUNT
You're working on project Nagesha-QA
Number: 530691770403
ID: nagesha-qa
Add people to your project
Set up budget alerts
Review product spend
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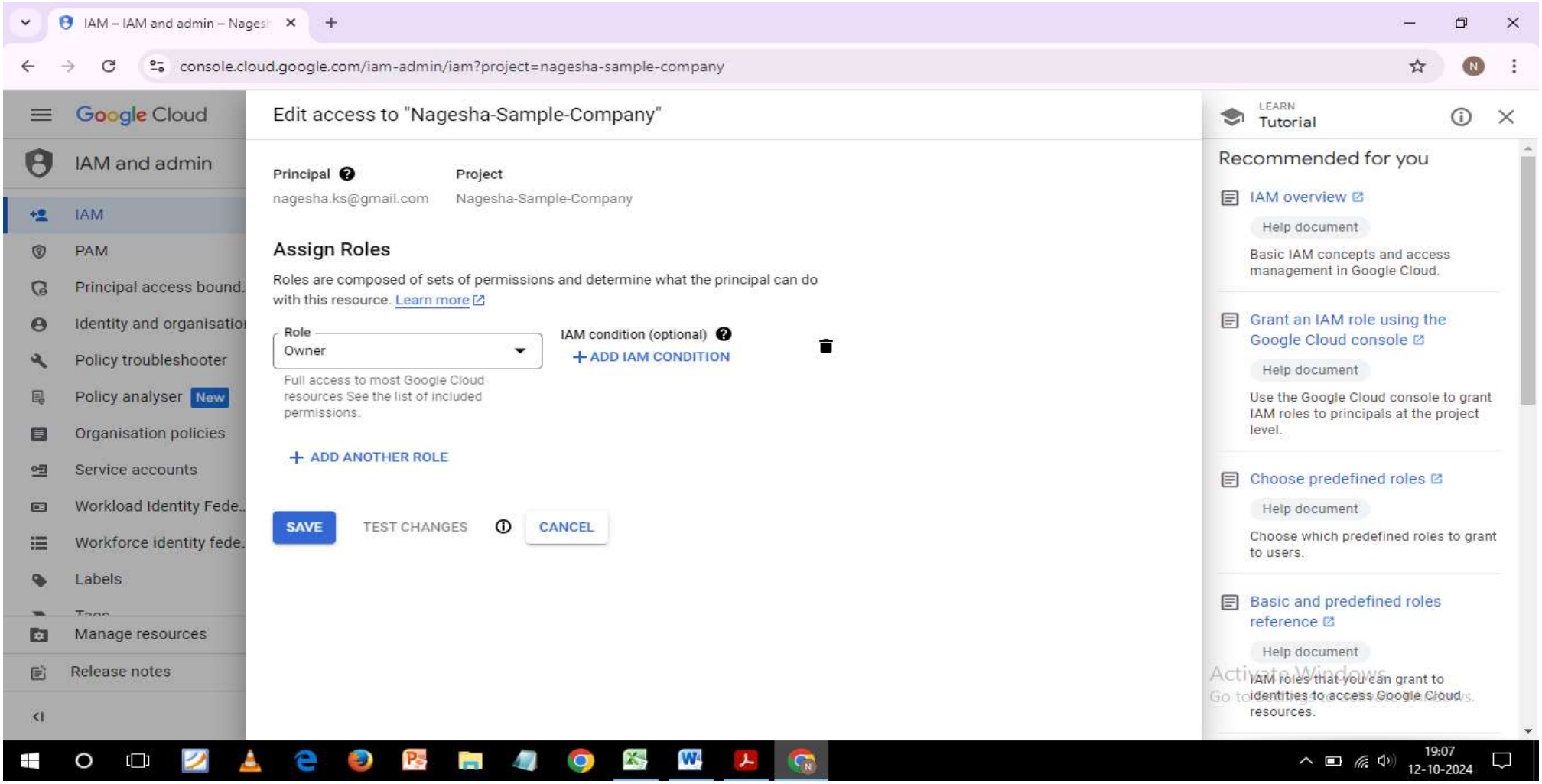
Pre-built solution templates
Activate Windows
Go to Settings to activate Windows.
17:21
12-10-2024


IAM – IAM and admin – Nages
console.cloud.google.com/iam-admin/iam?project=nagesha-sample-company
Google Cloud
IAM and admin
IAM
PAM
Principal access bound.
Identity and organisatio
Policy troubleshooter
Policy analyser New
Organisation policies
Service accounts
Workload Identity Fede..
Workforce identity fede..
Labels
Manage resources
Release notes
Edit access to "Nagesha-Sample-Company"
Principal
nagesha.ks@gmail.com
Project
Nagesha-Sample-Company
Assign Roles
Roles are composed of sets of permissions and determine what the principal can do with this resource. Learn more
Role
Owner
Full access to most Google Cloud resources See the list of included permissions.
IAM condition (optional)
ADD IAM CONDITION
ADD ANOTHER ROLE
SAVE
TEST CHANGES
CANCEL
LEARN
Tutorial
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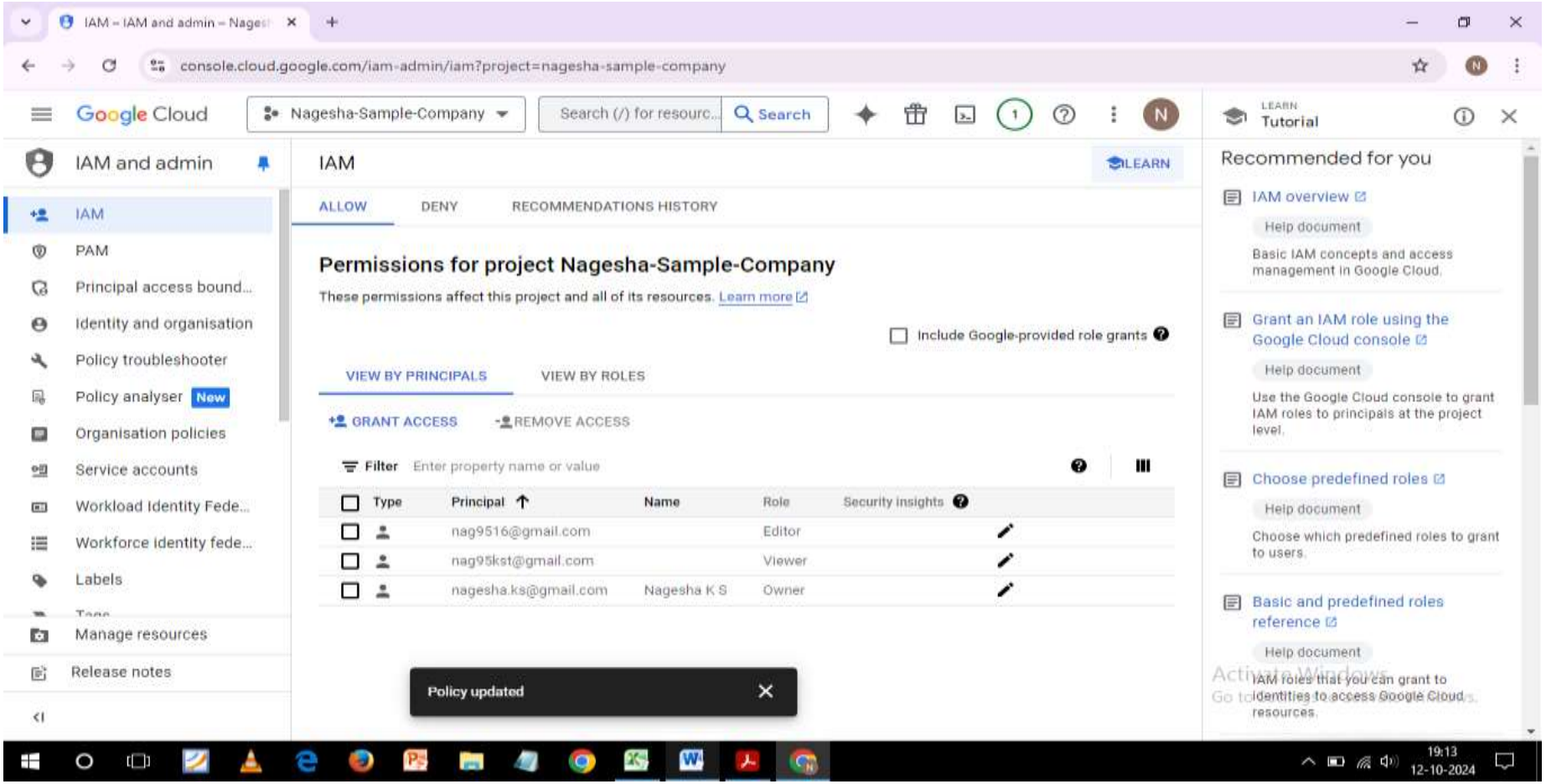
IAM overview
Help document
Basic IAM concepts and access management in Google Cloud.
Grant an IAM role using the Google Cloud console
Help document
Use the Google Cloud console to grant IAM roles to principals at the project level.
Choose predefined roles
Help document
Choose which predefined roles to grant to users.
Basic and predefined roles reference
Help document
IAM roles that you can grant to identities to access Google Cloud resources.
Activate Windows
19:07
12-10-2024


IAM = IAM and admin = Nages
console.cloud.google.com/iam-admin/iam?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resourc...
Search
IAM and admin
IAM
PAM
Principal access bound...
Identity and organisation
Policy troubleshooter
Policy analyser
New
Organisation policies
Service accounts
Workload Identity Fede...
Workforce Identity fede...
Labels
Manage resources
Release notes
IAM
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ALLOW
DENY
RECOMMENDATIONS HISTORY
Permissions for project Nagesha-Sample-Company
These permissions affect this project and all of its resources. Learn more
Include Google-provided role grants
VIEW BY PRINCIPALS
VIEW BY ROLES
GRANT ACCESS
REMOVE ACCESS
Filter
Enter property name or value
Type
Principal
Name
Role
Security insights
nag9516@gmail.com
Editor
nag95kst@gmail.com
Viewer
nagesha.ks@gmail.com
Nagesha K S
Owner
Policy updated
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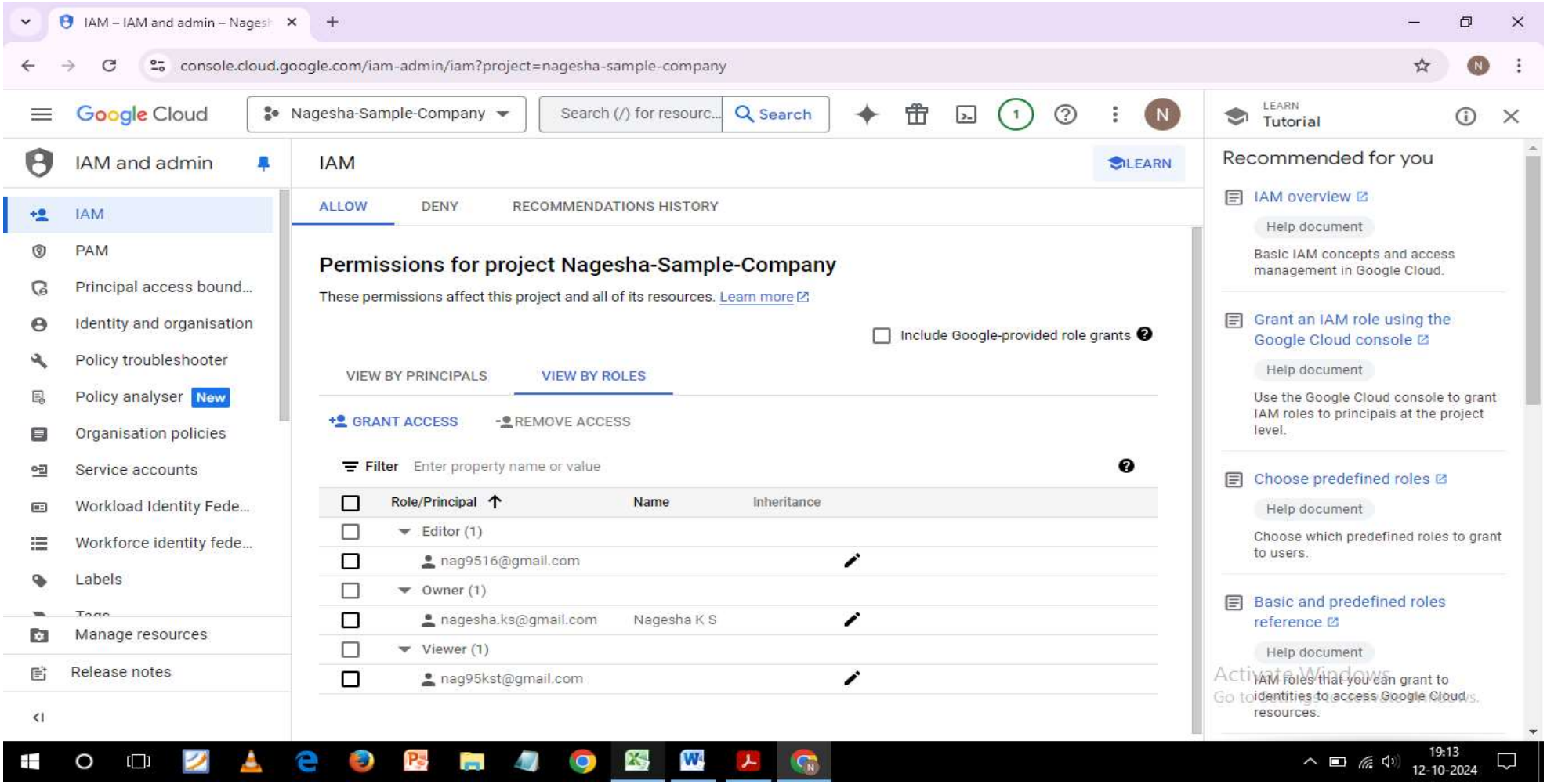
Activate Windows
Go to Settings to activate Windows.
19:13
12-10-2024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Google Cloud
Nagesha-Sample-Company
Search (/) for resourc...
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IAM
PAM
Principal access bound...
Identity and organisation
Policy troubleshooter
Policy analyser
New
Organisation policies
Service accounts
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Labels
Manage resources
Release notes
IAM
LEARN
ALLOW
DENY
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VIEW BY PRINCIPALS
VIEW BY ROLES
GRANT ACCESS
REMOVE ACCESS
Filter
Enter property name or value
Role/Principal
Name
Inheritance
Editor (1)
nag9516@gmail.com
Owner (1)
nagesha.ks@gmail.com
Nagesha K S
Viewer (1)
nag95kst@gmail.com
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Basic IAM concepts and access management in Google Cloud.
Grant an IAM role using the Google Cloud console
Help document
Use the Google Cloud console to grant IAM roles to principals at the project level.
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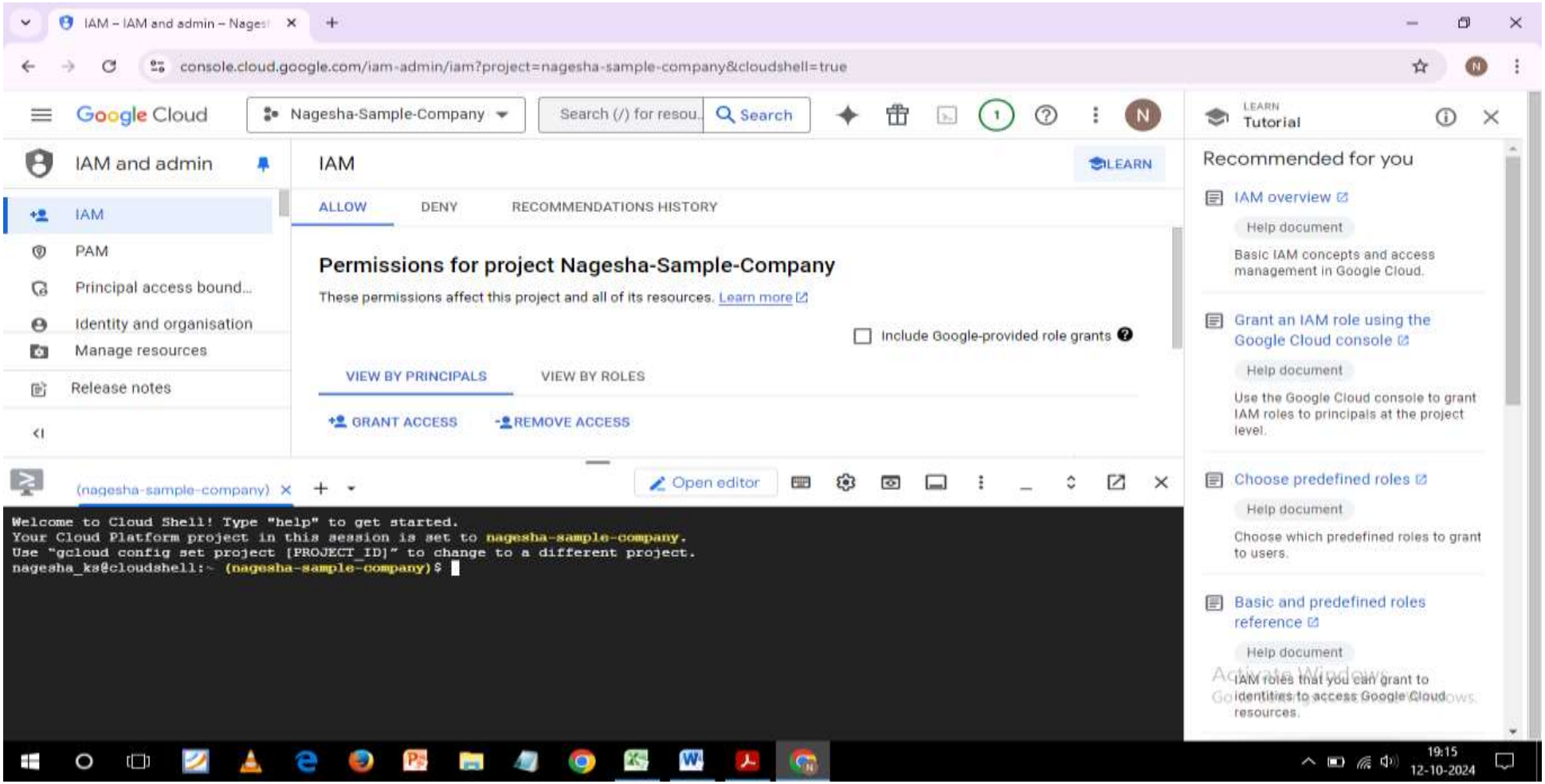
12-10-2024


IAM – IAM and admin – Nages
console.cloud.google.com/iam-admin/iam?project=nagesha-sample-company&cloudshell=true
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
IAM and admin
IAM
PAM
Principal access bound...
Identity and organisation
Manage resources
Release notes
IAM
LEARN
ALLOW
DENY
RECOMMENDATIONS HISTORY
Permissions for project Nagesha-Sample-Company
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VIEW BY ROLES
GRANT ACCESS
REMOVE ACCESS
(nagesha-sample-company)
Open editor
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to nagesha-sample-company.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
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Grant an IAM role using the Google Cloud console
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Choose predefined roles
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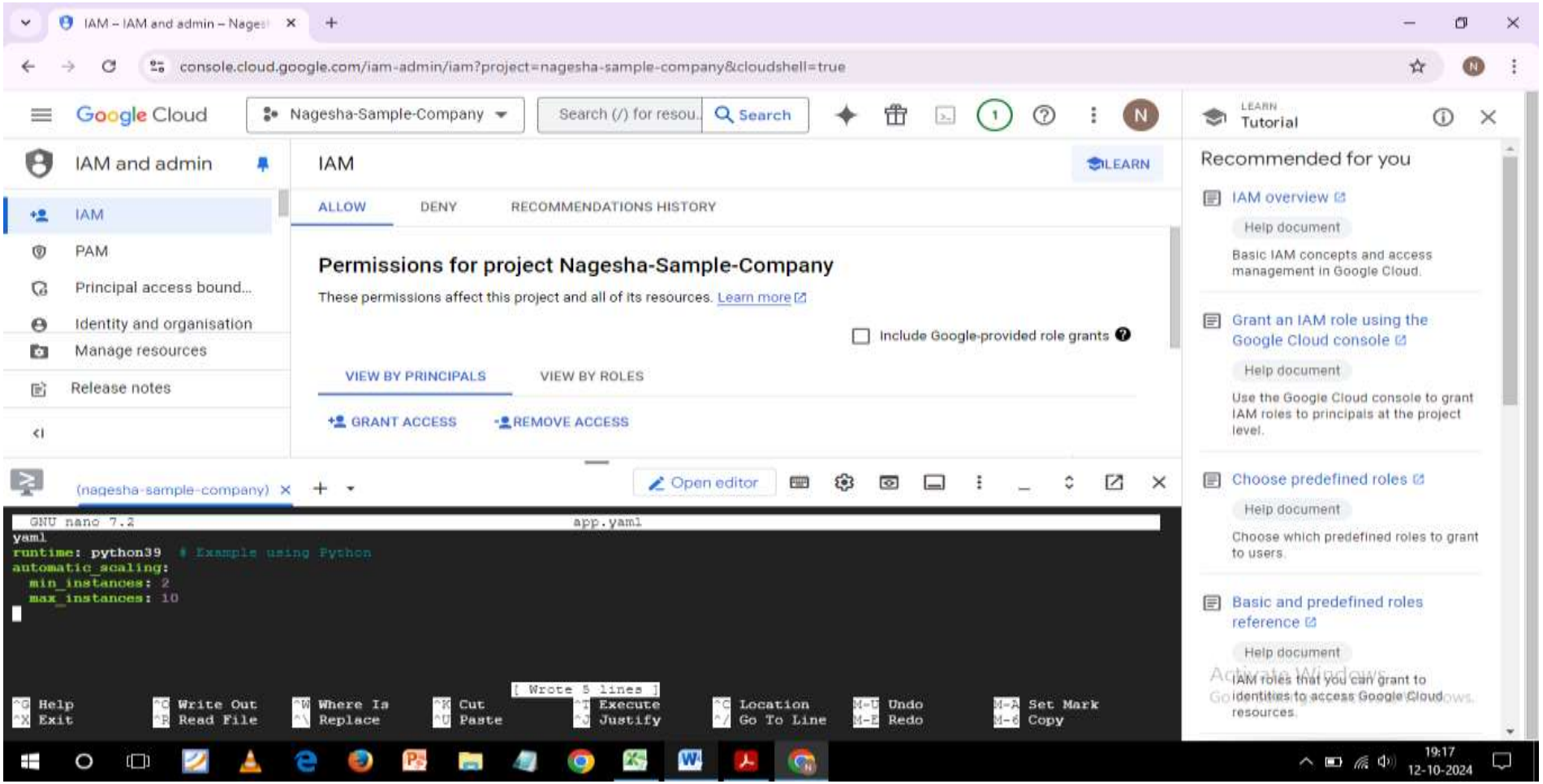
19:15
12-10-2024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console.cloud.google.com/iam-admin/iam?project=nagesha-sample-company&cloudshell=true
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
IAM and admin
IAM
PAM
Principal access bound...
Identity and organisation
Manage resources
Release notes
IAM
LEARN
ALLOW
DENY
RECOMMENDATIONS HISTORY
Permissions for project Nagesha-Sample-Company
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Include Google-provided role grants
VIEW BY PRINCIPALS
VIEW BY ROLES
GRANT ACCESS
REMOVE ACCESS
LEARN
Tutorial
Recommended for you
IAM overview
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Basic IAM concepts and access management in Google Cloud.
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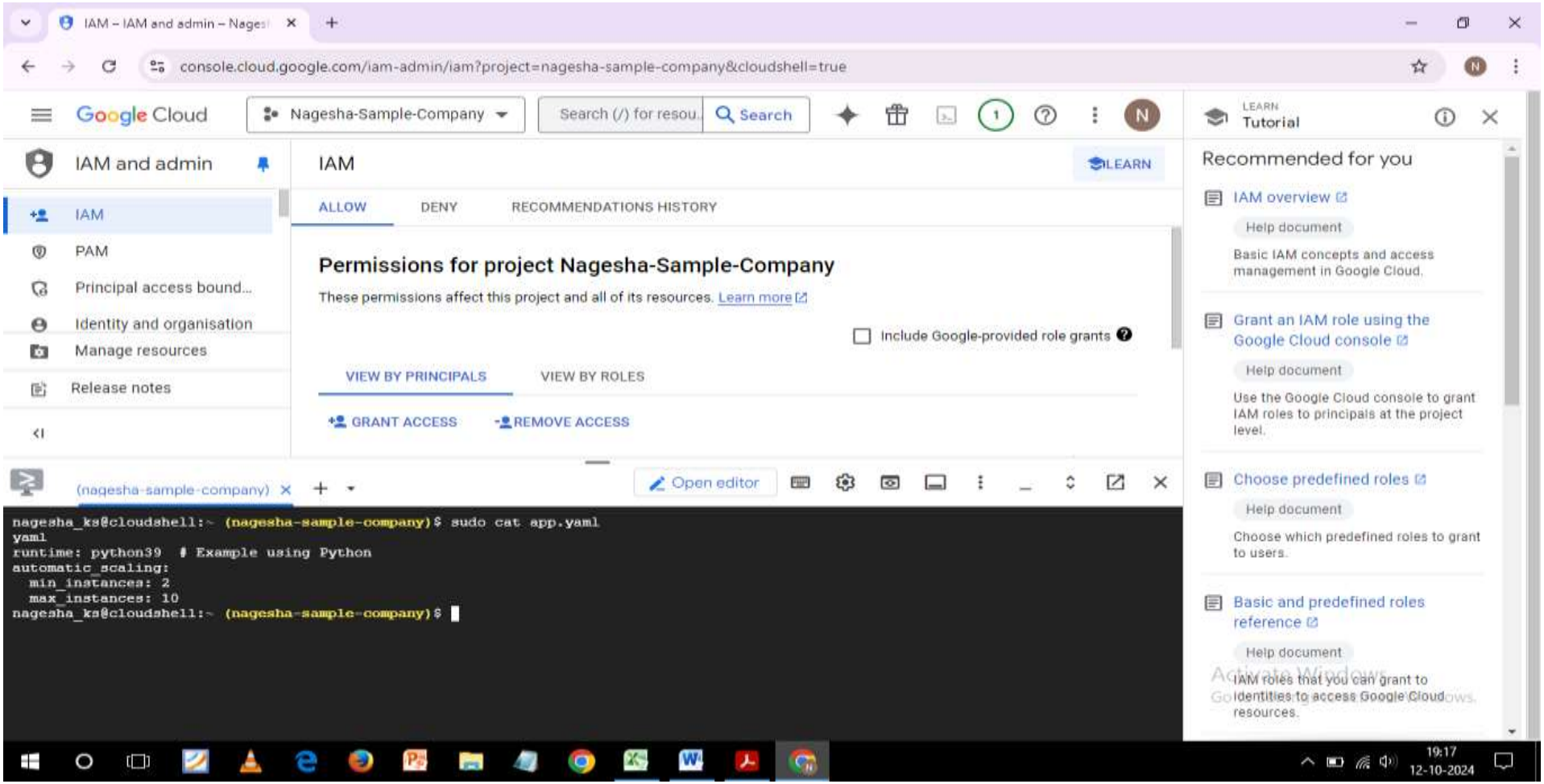
Choose predefined roles
Help document
Choose which predefined roles to grant to users.
Basic and predefined roles reference
Help document
IAM roles that you can grant to identities to access Google Cloud resources.
(nagesha-sample-company)
Open editor
GNU nano 7.2
app.yaml
yaml
runtime: python39 # Example using Python
automatic_scaling:
min_instances: 2
max_instances: 10
[Wrote 5 lines]
^G Help
^X Exit
^O Write Out
^R Read File
^W Where Is
^\ Replace
^K Cut
^U Paste
^T Execute
^J Justify
^C Location
^/ Go To Line
M-U Undo
M-E Redo
M-A Set Mark
M-6 Copy
Activate Windows
19:17
12-10-2024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Search (/) for resou...
Search
IAM and admin
IAM
PAM
Principal access bound...
Identity and organisation
Manage resources
Release notes
IAM
LEARN
ALLOW
DENY
RECOMMENDATIONS HISTORY
Permissions for project Nagesha-Sample-Company
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Include Google-provided role grants
VIEW BY PRINCIPALS
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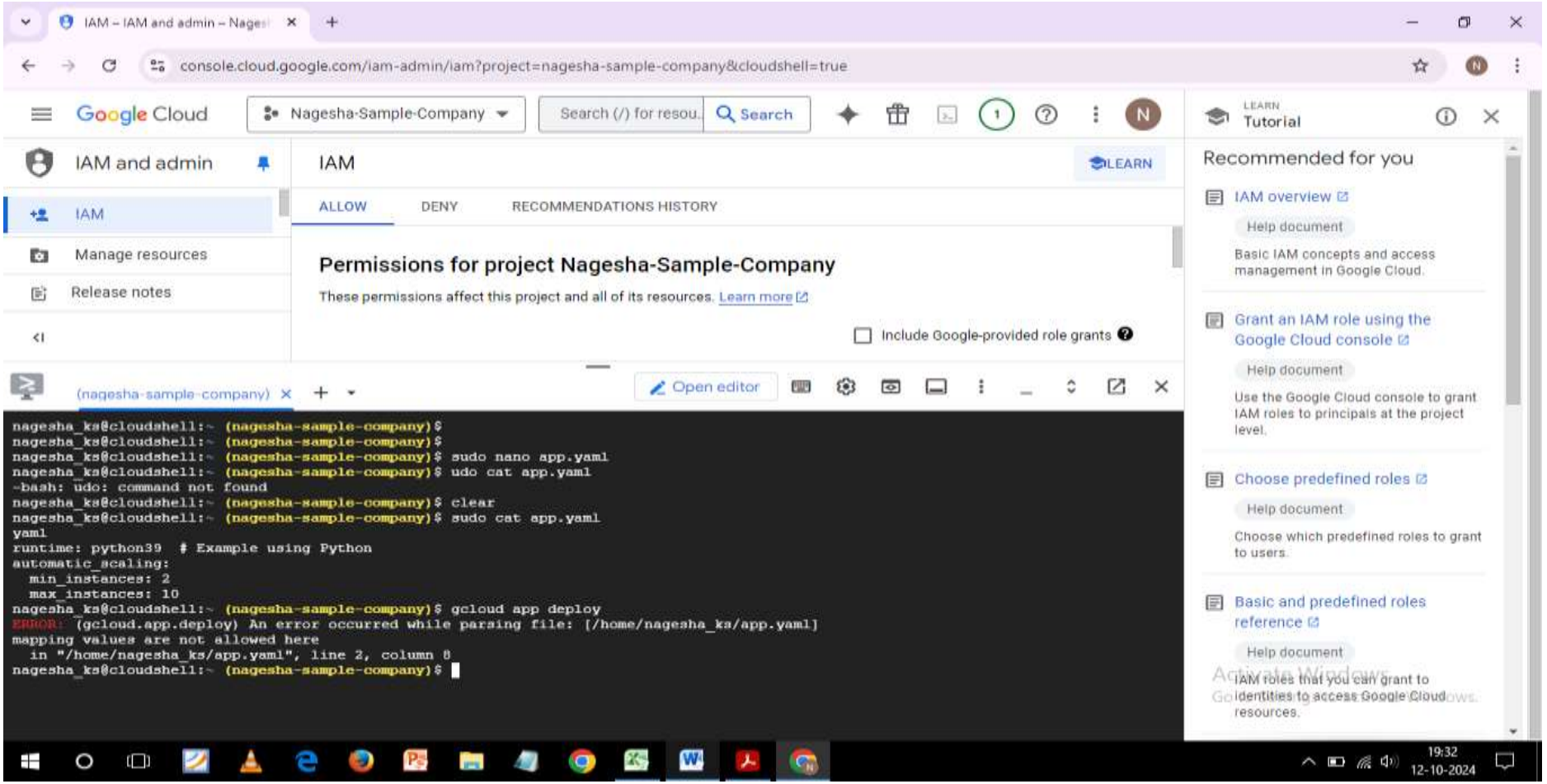
GRANT ACCESS
REMOVE ACCESS
LEARN
Tutorial
Recommended for you
IAM overview
Help document
Basic IAM concepts and access management in Google Cloud.
Grant an IAM role using the Google Cloud console
Help document
Use the Google Cloud console to grant IAM roles to principals at the project level.
Choose predefined roles
Help document
Choose which predefined roles to grant to users.
Basic and predefined roles reference
Help document
IAM roles that you can grant to identities to access Google Cloud resources.
(nagesha-sample-company)
Open editor
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ sudo cat app.yaml
yaml
runtime: python39 # Example using Python
automatic_scaling:
min_instances: 2
max_instances: 10
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
19:17
12-10-2024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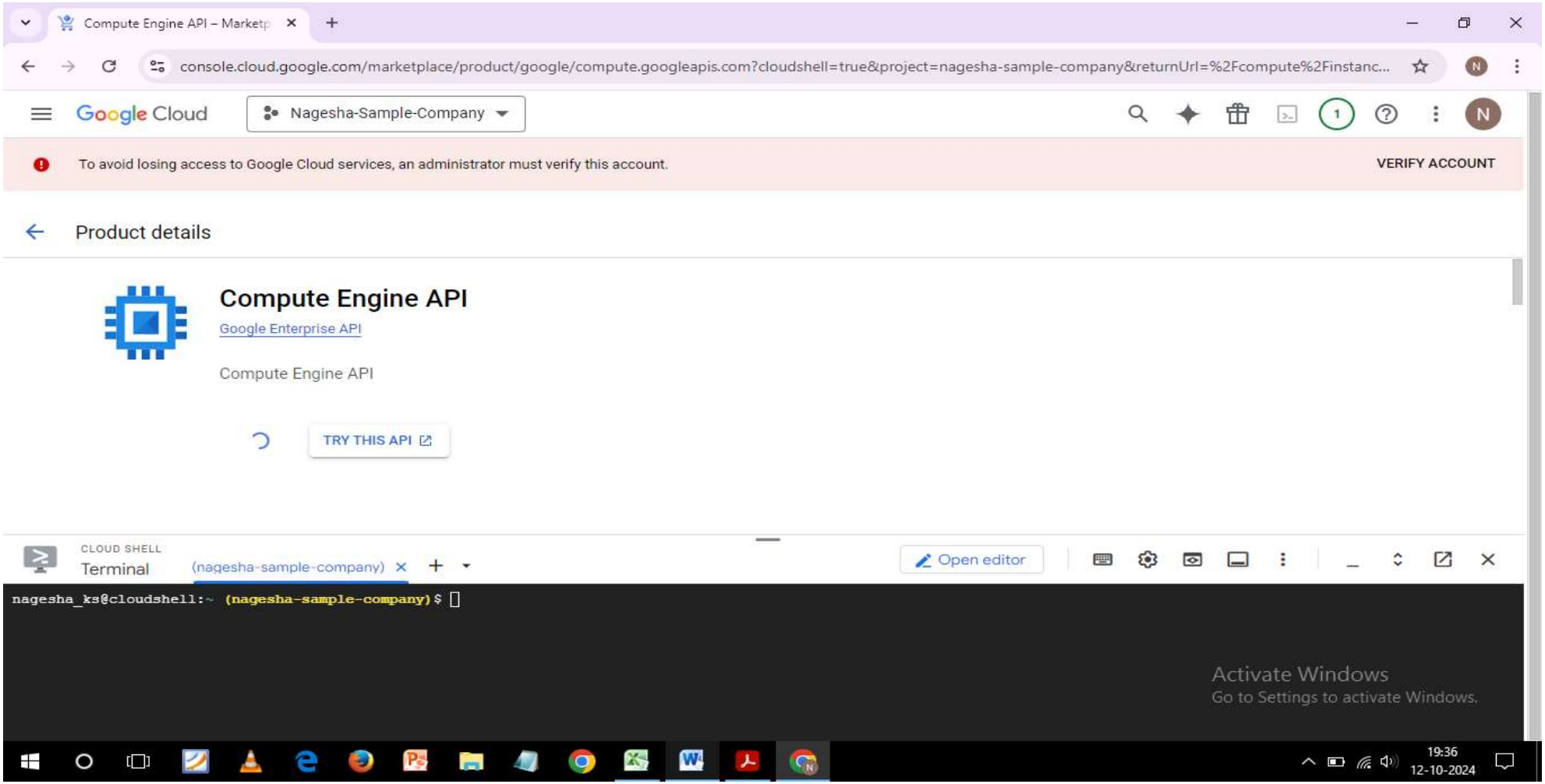
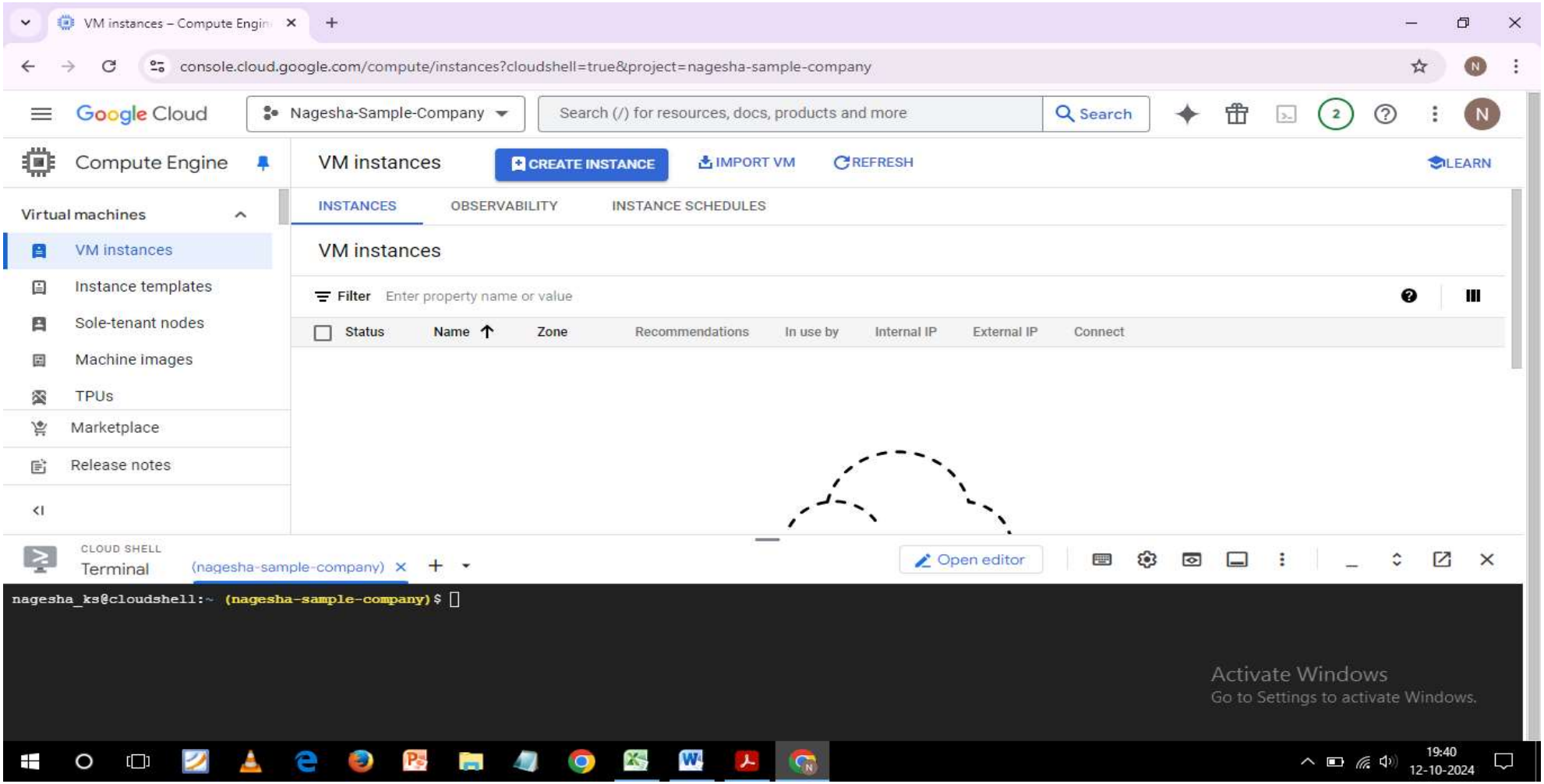
console.cloud.google.com/iam-admin/iam?project=nagesha-sample-company&cloudshell=true
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
IAM and admin
IAM
Manage resources
Release notes
IAM
LEARN
ALLOW
DENY
RECOMMENDATIONS HISTORY
Permissions for project Nagesha-Sample-Company
These permissions affect this project and all of its resources. Learn more
Include Google-provided role grants
LEARN
Tutorial
Recommended for you
IAM overview
Help document
Basic IAM concepts and access management in Google Cloud.
Grant an IAM role using the Google Cloud console
Help document
Use the Google Cloud console to grant IAM roles to principals at the project level.
Choose predefined roles
Help document
Choose which predefined roles to grant to users.
Basic and predefined roles reference
Help document
IAM roles that you can grant to identities to access Google Cloud resources.
(nagesha-sample-company)
Open editor
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ sudo nano app.yaml
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ udo cat app.yaml
-bash: udo: command not found
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ clear
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ sudo cat app.yaml
yaml
runtime: python39 # Example using Python
automatic_scaling:
min_instances: 2
max_instances: 10
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ gcloud app deploy
ERROR: (gcloud.app.deploy) An error occurred while parsing file: [/home/nagesha_ks/app.yaml]
mapping values are not allowed here
in "/home/nagesha_ks/app.yaml", line 2, column 8
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:32
12-10-2024


Compute Engine API – Marketp
console.cloud.google.com/marketplace/product/google/compute.googleapis.com?cloudshell=true&project=nagesha-sample-company&returnUrl=%2Fcompute%2Finstanc...
Google Cloud
Nagesha-Sample-Company
To avoid losing access to Google Cloud services, an administrator must verify this account.
VERIFY ACCOUNT
Product details
Compute Engine API
Google Enterprise API
Compute Engine API
TRY THIS API
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
nagesha_ks@cloudshell:~ (nagesha-sample-company) $
Activate Windows
Go to Settings to activate Windows.
19:36
12-10-2024


VM instances – Compute Engine
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Nagesha-Sample-Company
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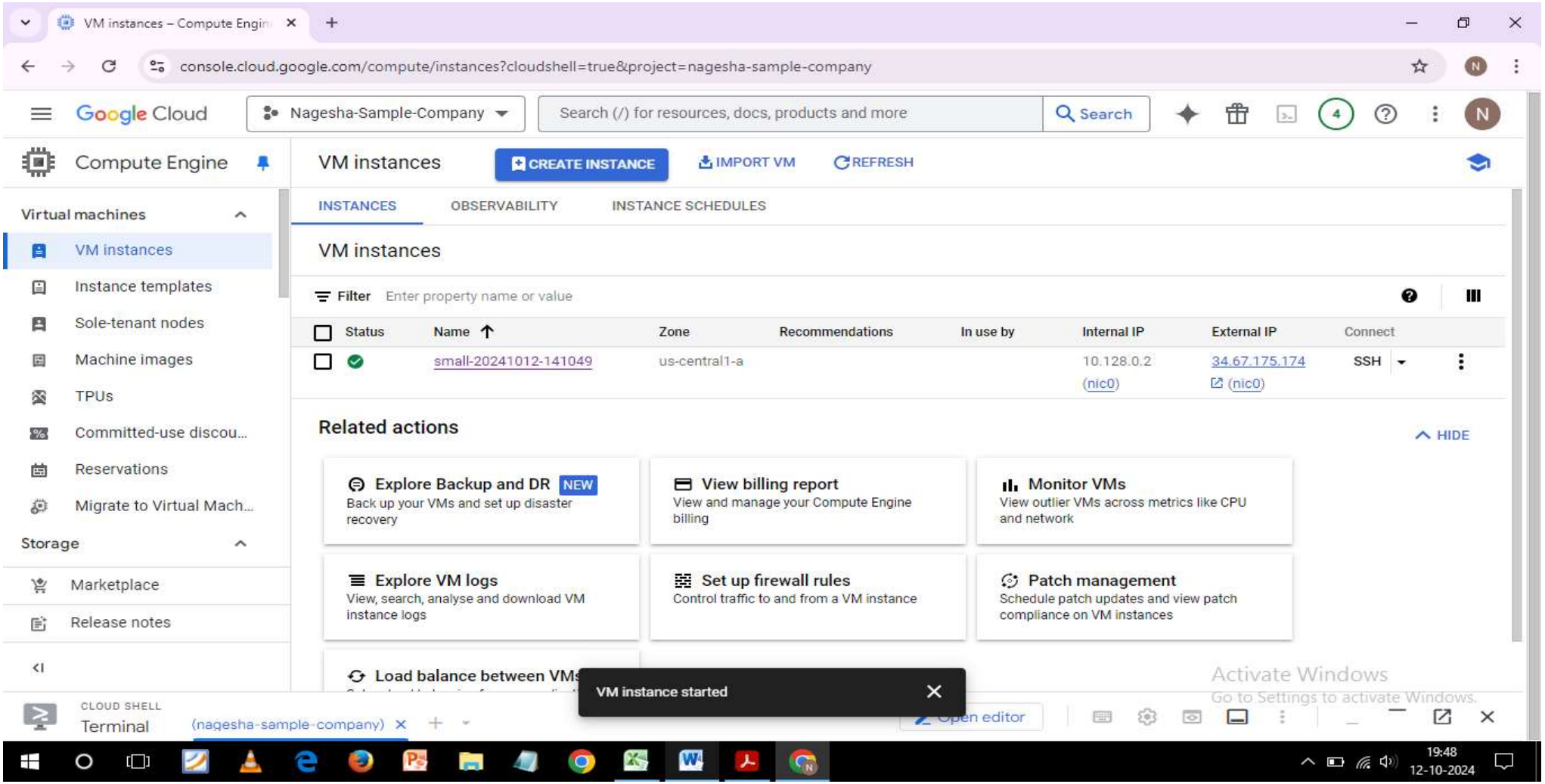
Compute Engine
VM instances
CREATE INSTANCE
IMPORT VM
REFRESH
LEARN
Virtual machines
VM instances
Instance templates
Sole-tenant nodes
Machine images
TPUs
Marketplace
Release notes
INSTANCES
OBSERVABILITY
INSTANCE SCHEDULES
VM instances
Filter
Enter property name or value
Status
Name
Zone
Recommendations
In use by
Internal IP
External IP
Connect
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:40
12-10-2024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Nagesha-Sample-Company
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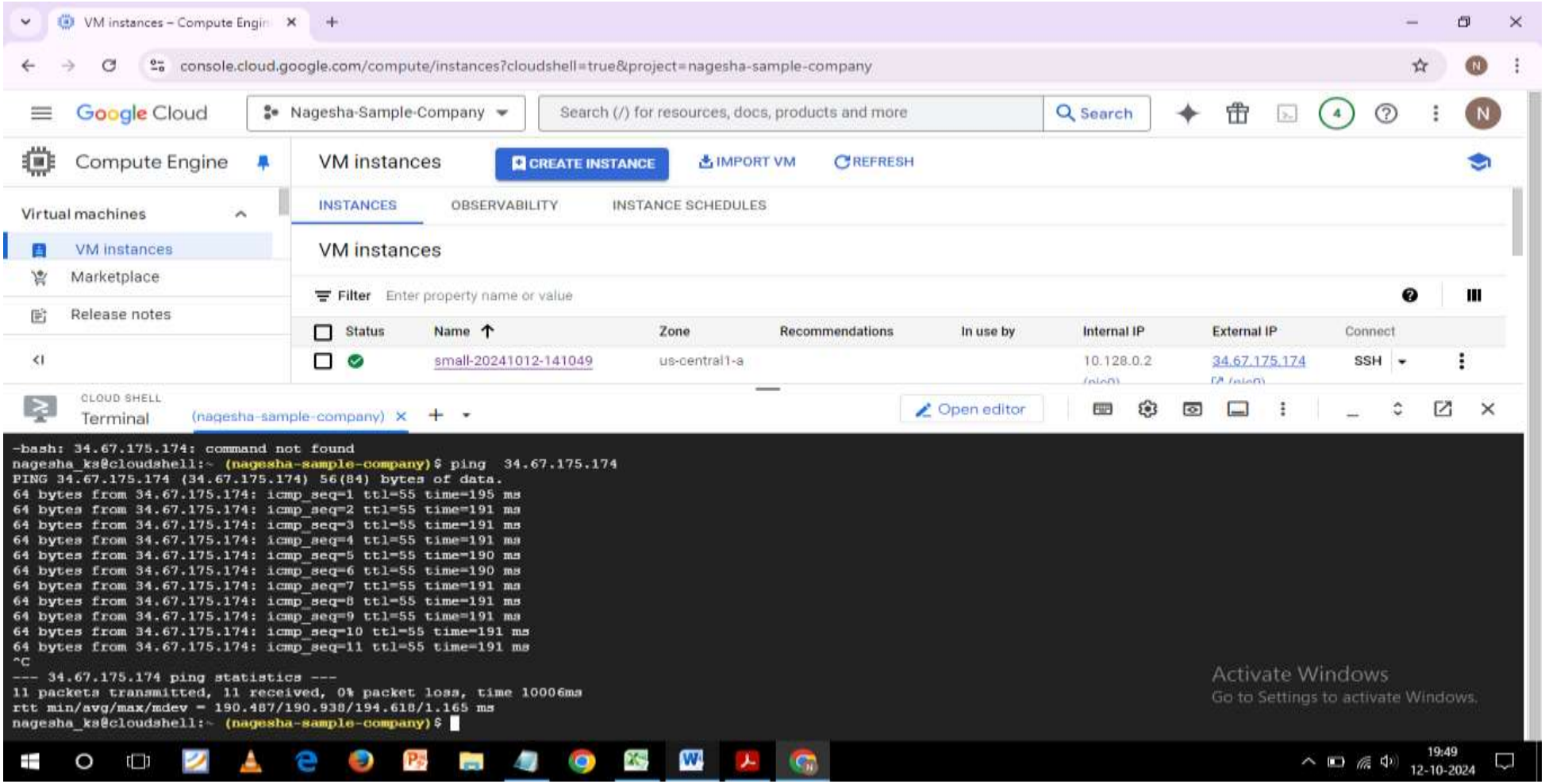
Compute Engine
VM instances
CREATE INSTANCE
IMPORT VM
REFRESH
Virtual machines
VM instances
Instance templates
Sole-tenant nodes
Machine images
TPUs
Committed-use discou...
Reservations
Migrate to Virtual Mach...
Storage
Marketplace
Release notes
INSTANCES
OBSERVABILITY
INSTANCE SCHEDULES
VM instances
Filter
Enter property name or value
Status
Name
Zone
Recommendations
In use by
Internal IP
External IP
Connect
small-20241012-141049
us-central1-a
10.128.0.2 (nic0)
34.67.175.174 (nic0)
SSH
Related actions
HIDE
Explore Backup and DR NEW
Back up your VMs and set up disaster recovery
View billing report
View and manage your Compute Engine billing
Monitor VMs
View outlier VMs across metrics like CPU and network
Explore VM logs
View, search, analyse and download VM instance logs
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
VM instance started
Activate Windows
Go to Settings to activate Windows.
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
19:48
12-10-2024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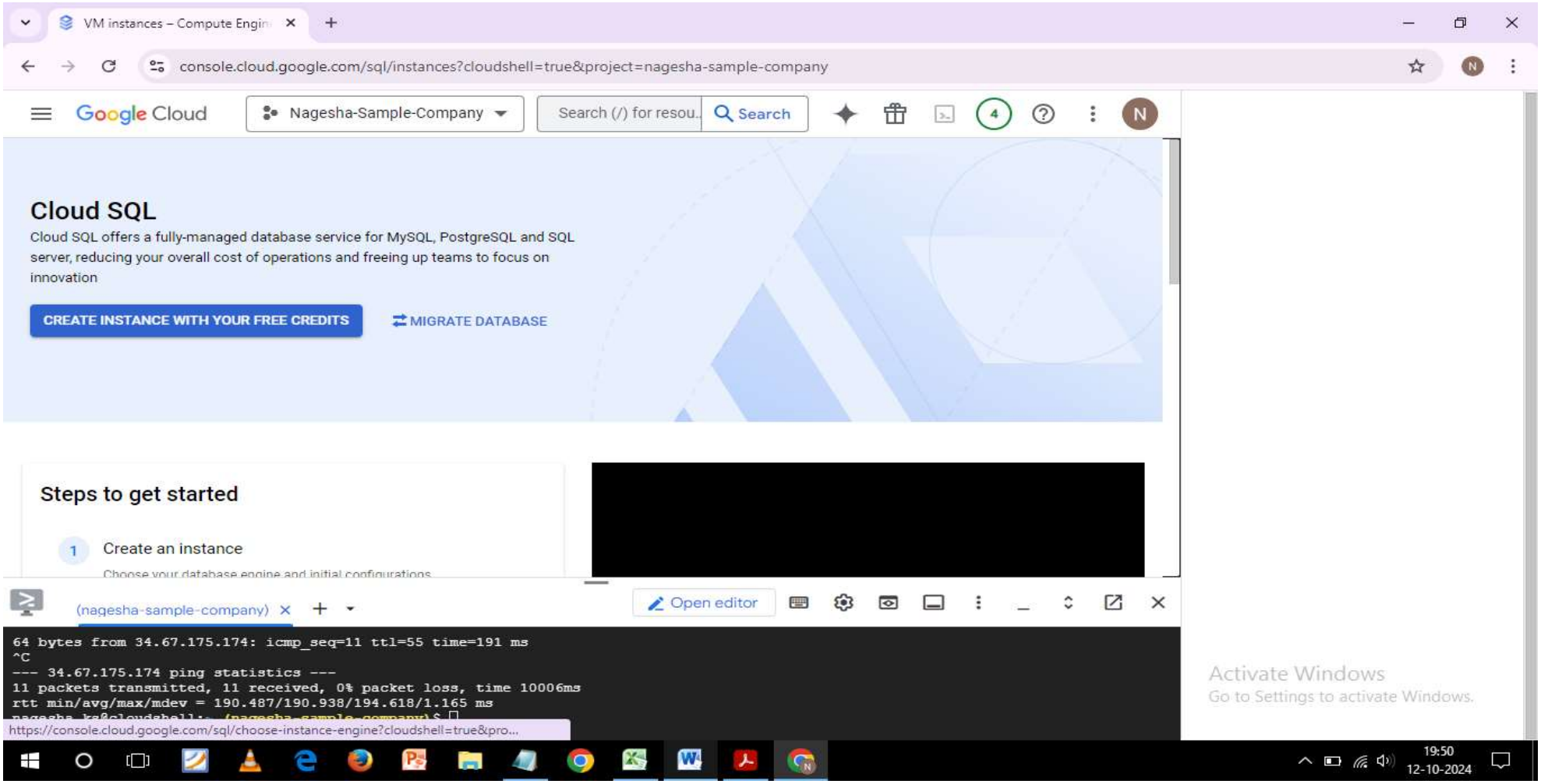
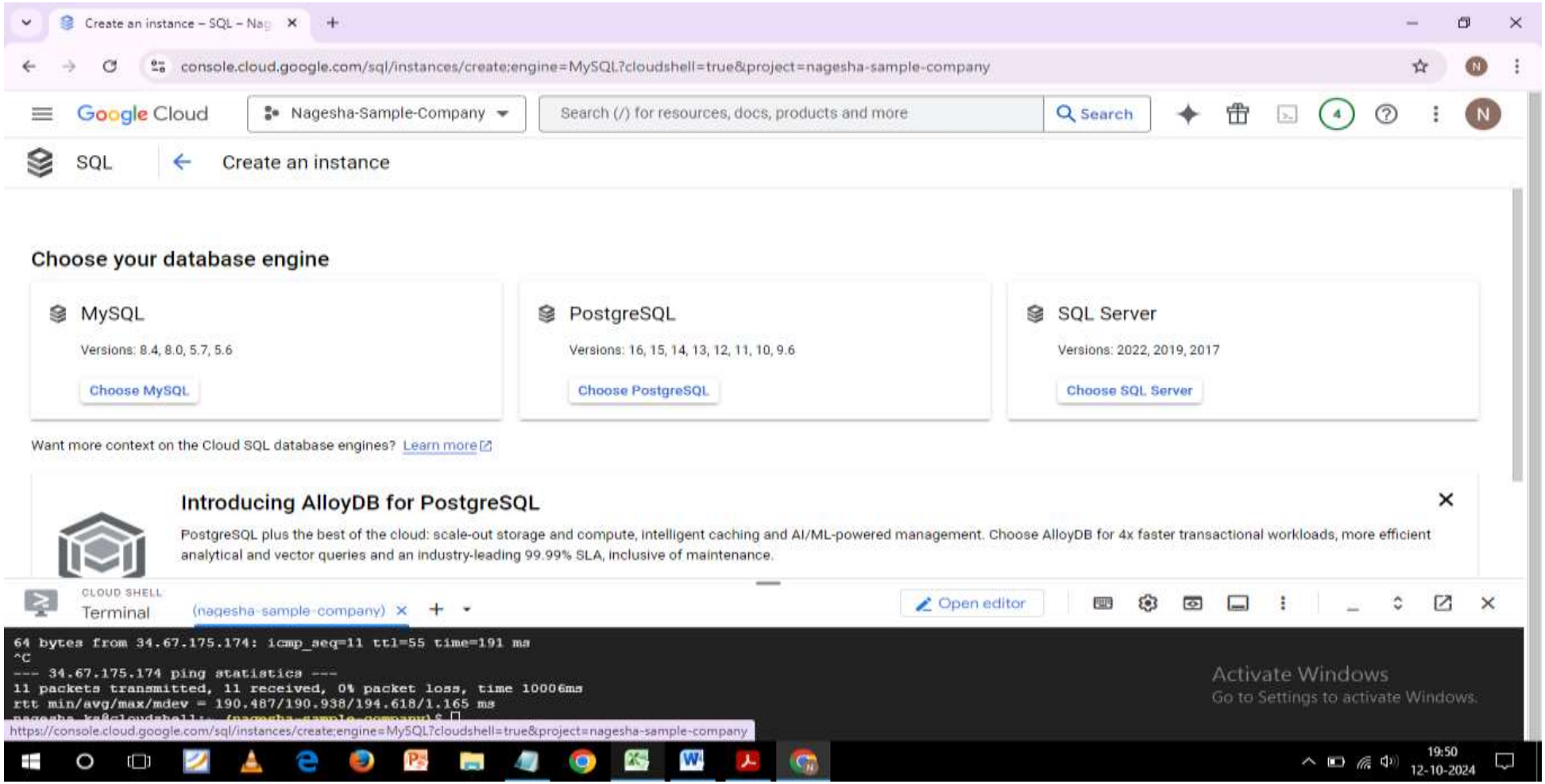
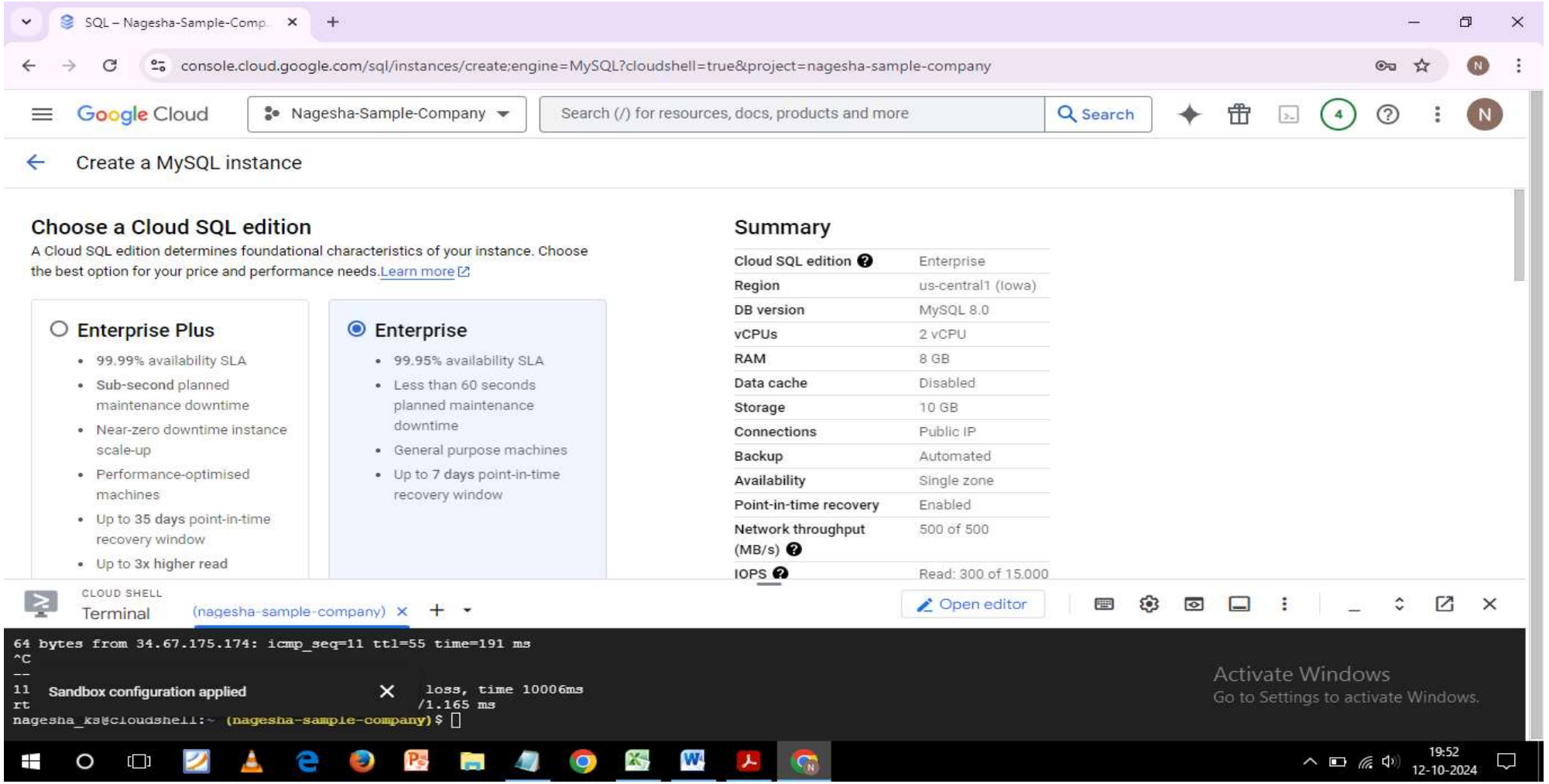
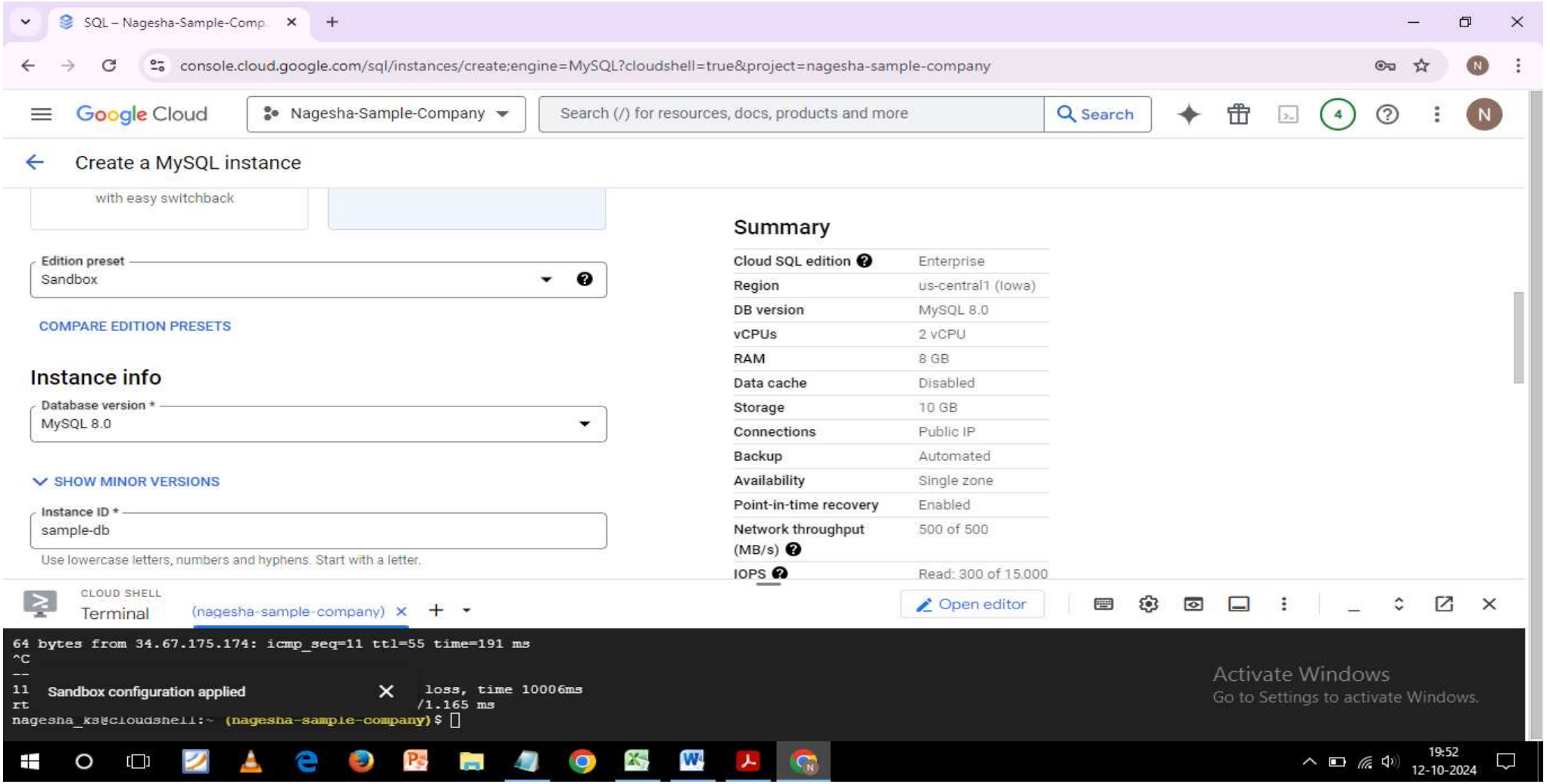
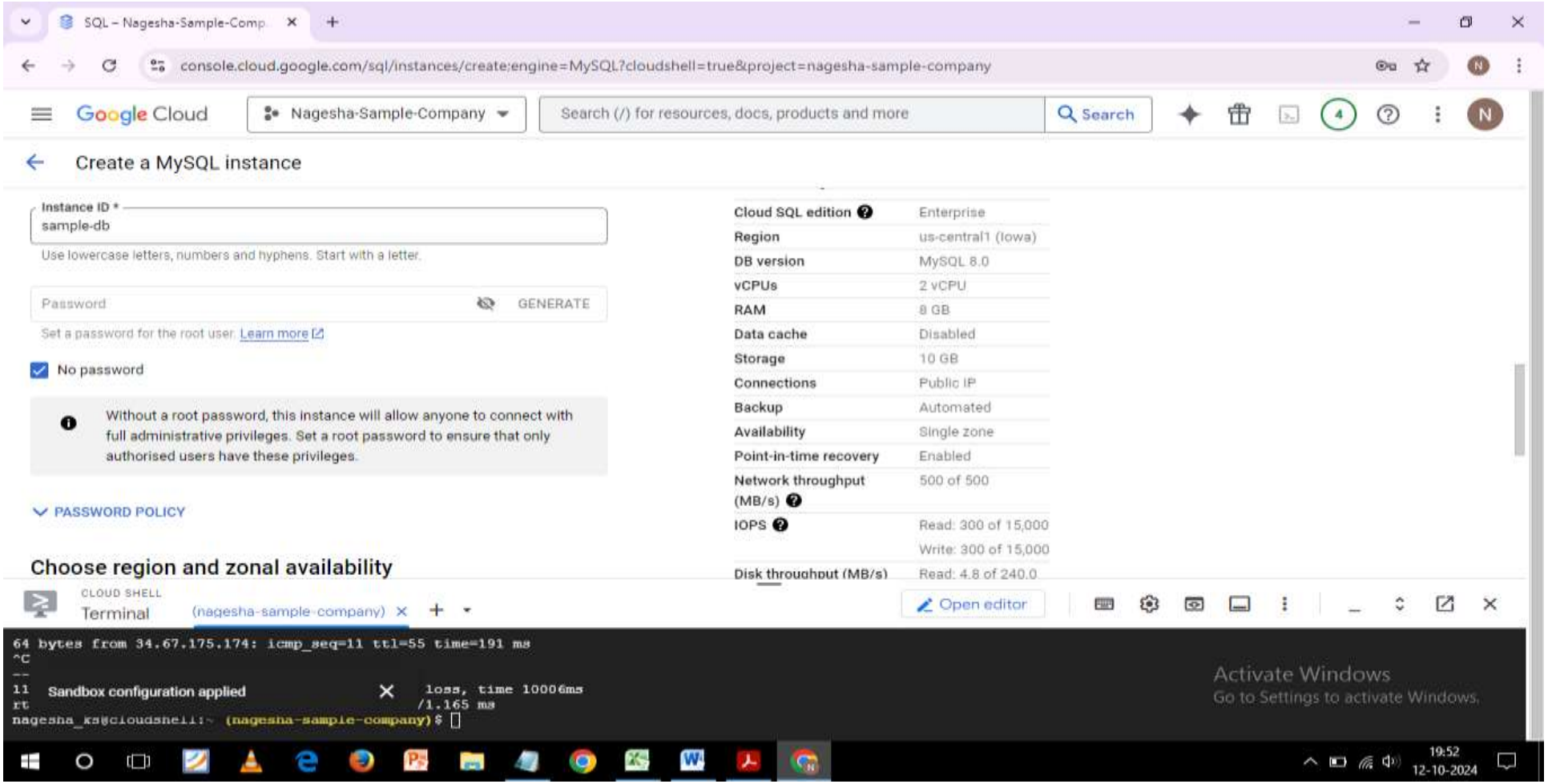
IMPORT VM
REFRESH
Virtual machines
VM instances
Marketplace
Release notes
INSTANCES
OBSERVABILITY
INSTANCE SCHEDULES
VM instances
Filter
Enter property name or value
Status
Name
Zone
Recommendations
In use by
Internal IP
External IP
Connect
small-20241012-141049
us-central1-a
10.128.0.2
34.67.175.174
SSH
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
-bash: 34.67.175.174: command not found
nagesha_ks@cloudshell:~ (nagesha-sample-company)$ ping 34.67.175.174
PING 34.67.175.174 (34.67.175.174) 56(84) bytes of data.
64 bytes from 34.67.175.174: icmp_seq=1 ttl=55 time=195 ms
64 bytes from 34.67.175.174: icmp_seq=2 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=3 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=4 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=5 ttl=55 time=190 ms
64 bytes from 34.67.175.174: icmp_seq=6 ttl=55 time=190 ms
64 bytes from 34.67.175.174: icmp_seq=7 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=8 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=9 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=10 ttl=55 time=191 ms
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--- 34.67.175.174 ping statistics ---
11 packets transmitted, 11 received, 0% packet loss, time 10006ms
rtt min/avg/max/mdev = 190.487/190.938/194.618/1.165 ms
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:49
12-10-2024

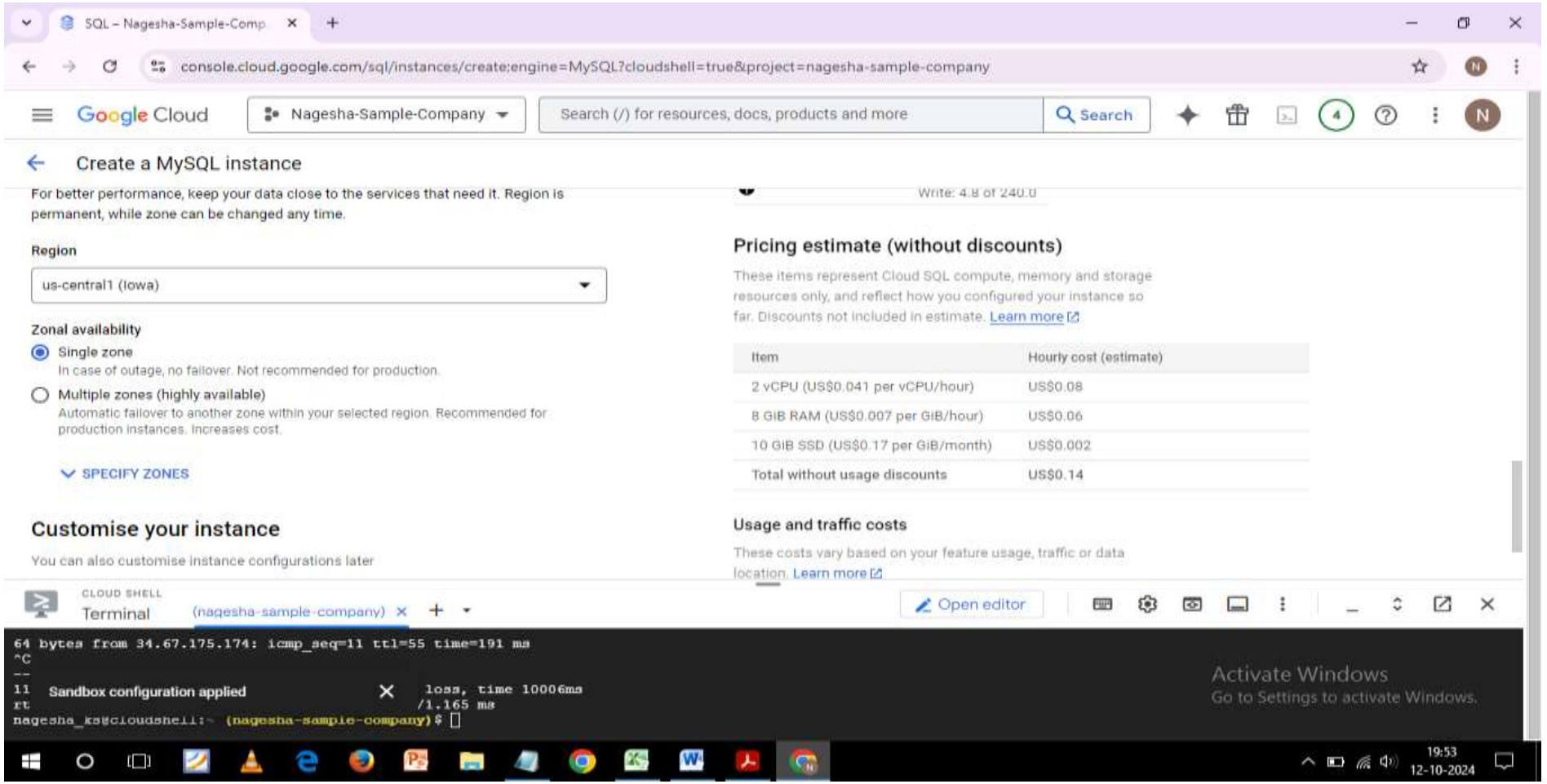

VM instances – Compute Engin
console.cloud.google.com/sql/instances?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
Cloud SQL
Cloud SQL offers a fully-managed database service for MySQL, PostgreSQL and SQL server, reducing your overall cost of operations and freeing up teams to focus on innovation
CREATE INSTANCE WITH YOUR FREE CREDITS
MIGRATE DATABASE
Steps to get started
1
Create an instance
Choose your database engine and initial configurations
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--- 34.67.175.174 ping statistics ---
11 packets transmitted, 11 received, 0% packet loss, time 10006ms
rtt min/avg/max/mdev = 190.487/190.938/194.618/1.165 ms
https://console.cloud.google.com/sql/choose-instance-engine?cloudshell=true&pro...
Activate Windows
Go to Settings to activate Windows.
19:50
12-10-2024

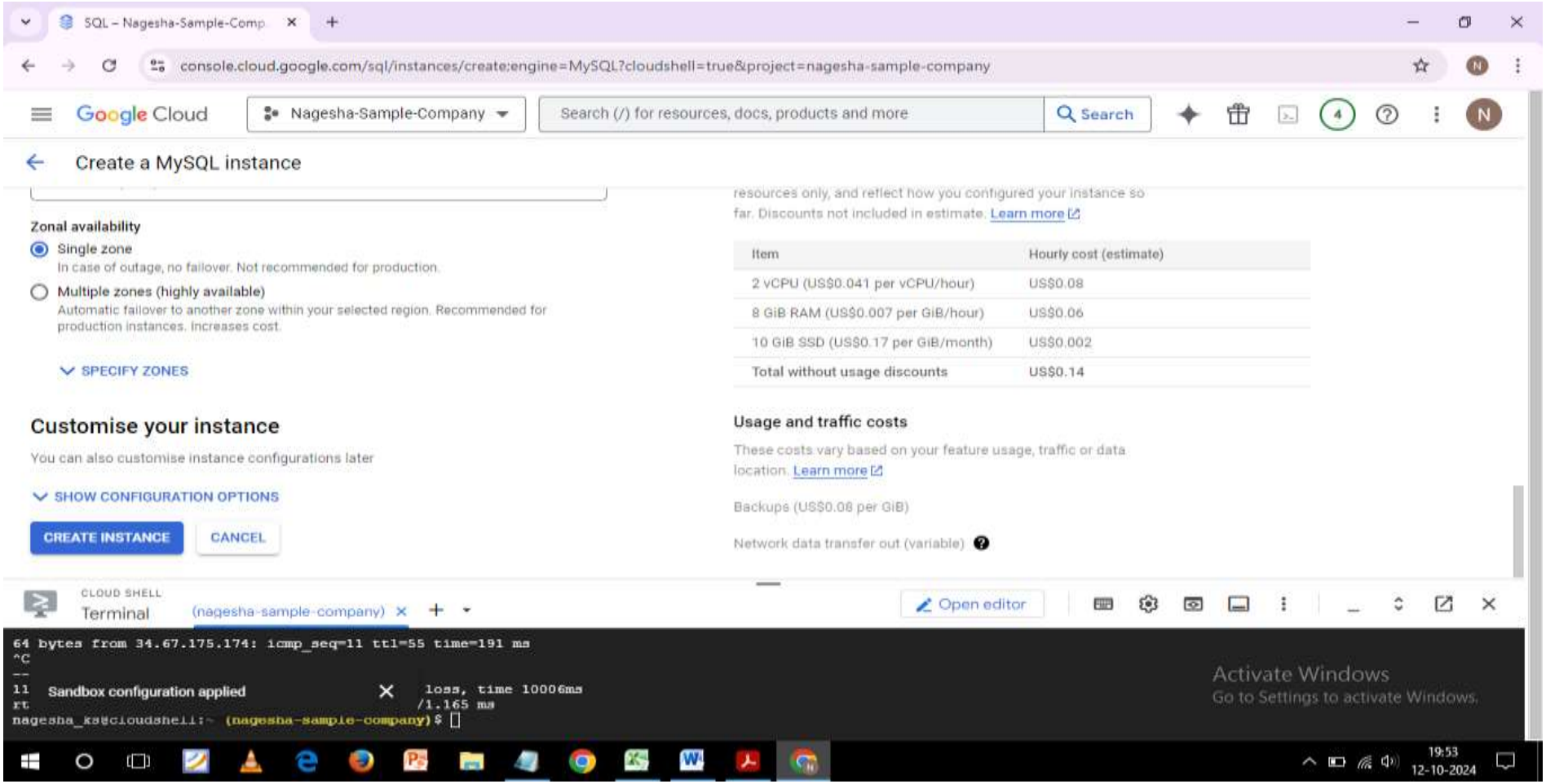

Create an instance – SQL – Nag
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
SQL
Create an instance
Choose your database engine
MySQL
Versions: 8.4, 8.0, 5.7, 5.6
Choose MySQL
PostgreSQL
Versions: 16, 15, 14, 13, 12, 11, 10, 9.6
Choose PostgreSQL
SQL Server
Versions: 2022, 2019, 2017
Choose SQL Server
Want more context on the Cloud SQL database engines? Learn more
Introducing AlloyDB for PostgreSQL
PostgreSQL plus the best of the cloud: scale-out storage and compute, intelligent caching and AI/ML-powered management. Choose AlloyDB for 4x faster transactional workloads, more efficient analytical and vector queries and an industry-leading 99.99% SLA, inclusive of maintenance.
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--- 34.67.175.174 ping statistics ---
11 packets transmitted, 11 received, 0% packet loss, time 10006ms
rtt min/avg/max/mdev = 190.487/190.938/194.618/1.165 ms
Activate Windows
Go to Settings to activate Windows.
https://console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
19:50
12-10-2024

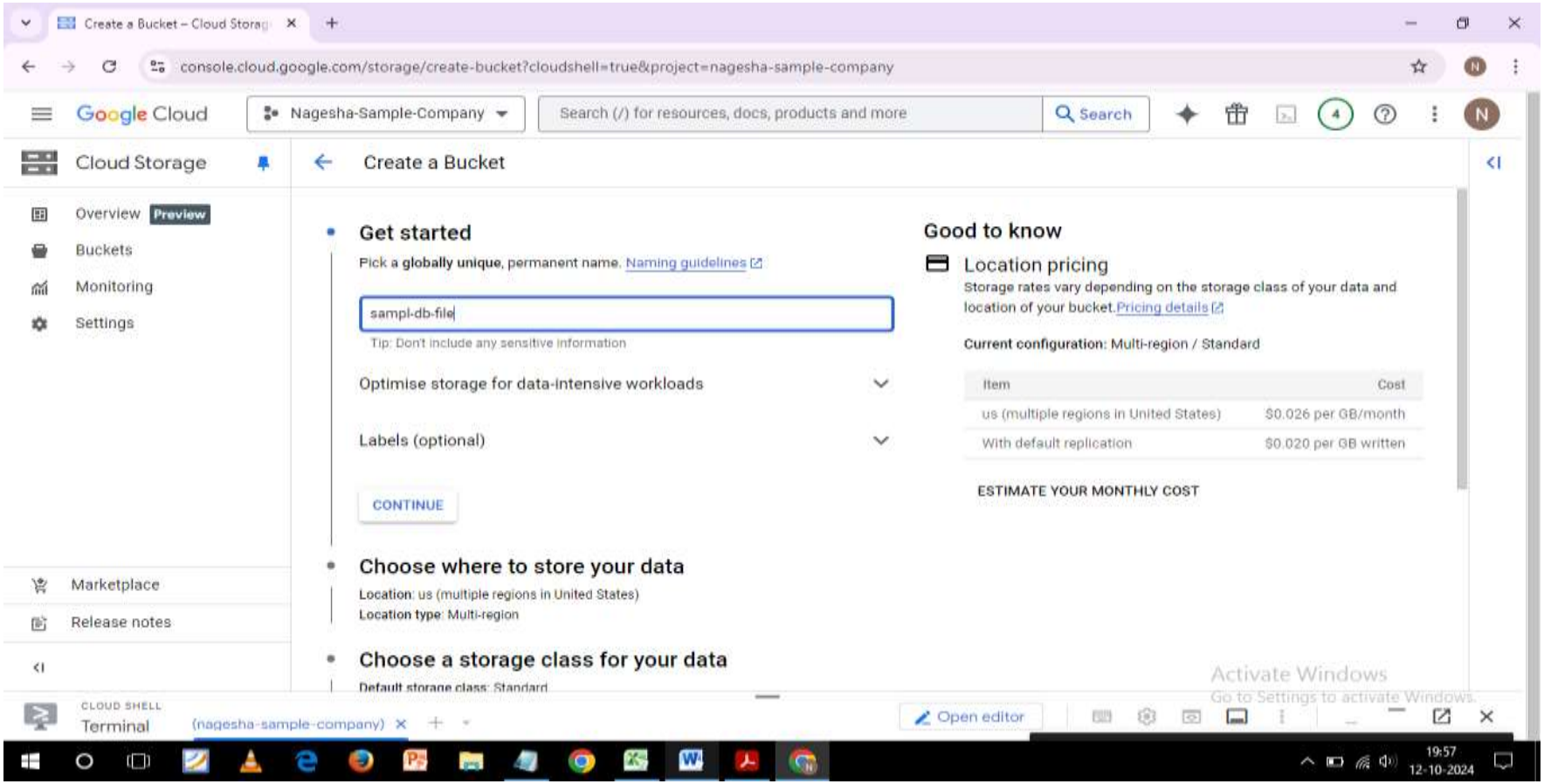

SQL – Nagesha-Sample-Comp
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create a MySQL instance
Choose a Cloud SQL edition
A Cloud SQL edition determines foundational characteristics of your instance. Choose the best option for your price and performance needs.Learn more
Enterprise Plus
99.99% availability SLA
Sub-second planned maintenance downtime
Near-zero downtime instance scale-up
Performance-optimised machines
Up to 35 days point-in-time recovery window
Up to 3x higher read
Enterprise
99.95% availability SLA
Less than 60 seconds planned maintenance downtime
General purpose machines
Up to 7 days point-in-time recovery window
Summary
Cloud SQL edition Enterprise
Region us-central1 (Iowa)
DB version MySQL 8.0
vCPUs 2 vCPU
RAM 8 GB
Data cache Disabled
Storage 10 GB
Connections Public IP
Backup Automated
Availability Single zone
Point-in-time recovery Enabled
Network throughput (MB/s) 500 of 500
IOPS Read: 300 of 15,000
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--
11 loss, time 10006ms
rt /1.165 ms
Sandbox configuration applied
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:52
12-10-2024

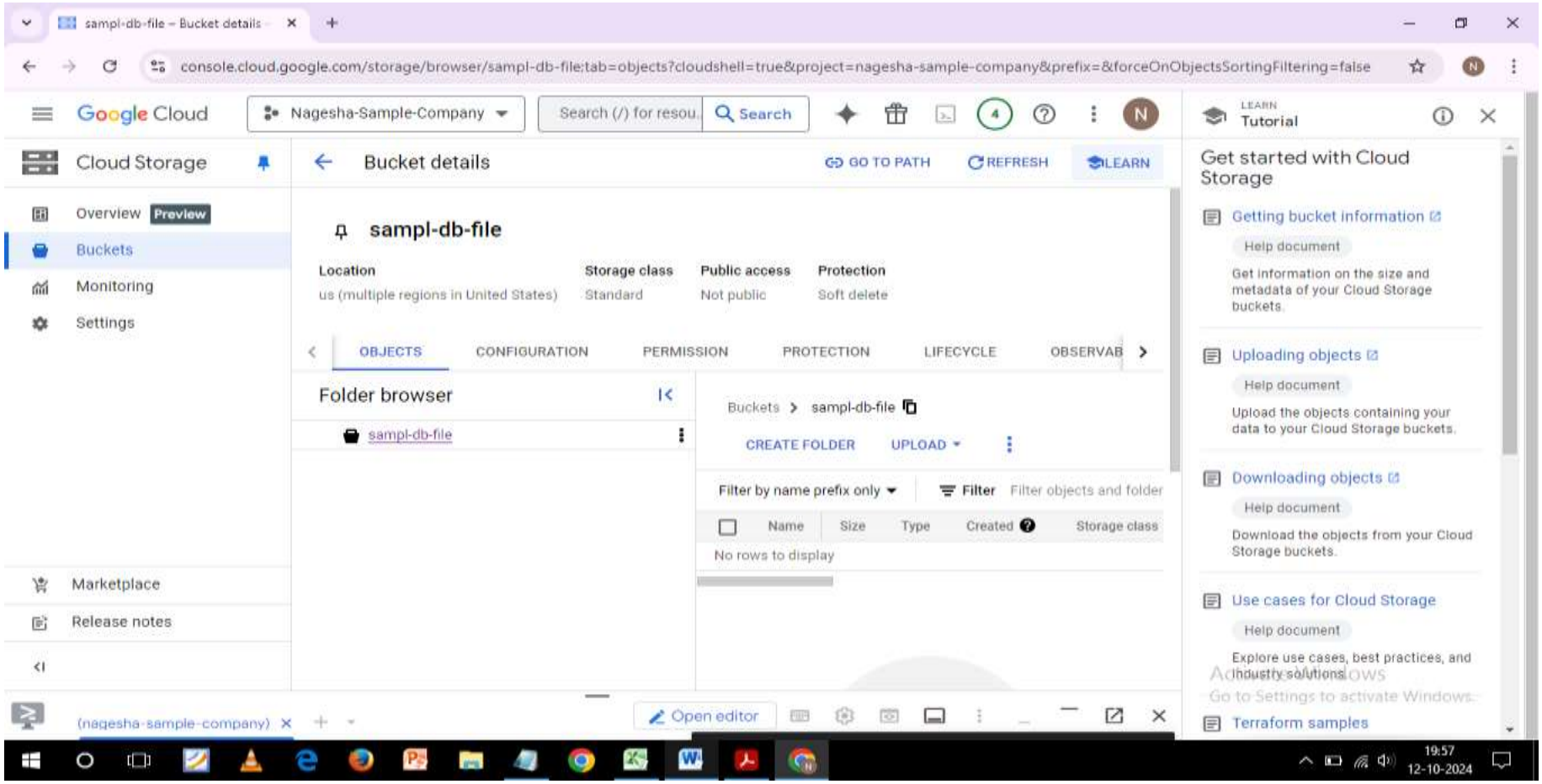

SQL – Nagesha-Sample-Comp
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create a MySQL instance
with easy switchback
Edition preset
Sandbox
COMPARE EDITION PRESETS
Instance info
Database version *
MySQL 8.0
SHOW MINOR VERSIONS
Instance ID *
sample-db
Use lowercase letters, numbers and hyphens. Start with a letter.
Summary
Cloud SQL edition Enterprise
Region us-central1 (Iowa)
DB version MySQL 8.0
vCPUs 2 vCPU
RAM 8 GB
Data cache Disabled
Storage 10 GB
Connections Public IP
Backup Automated
Availability Single zone
Point-in-time recovery Enabled
Network throughput (MB/s) 500 of 500
IOPS Read: 300 of 15,000
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--
11
Sandbox configuration applied
loss, time 10006ms
rt
/1.165 ms
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:52
12-10-2024

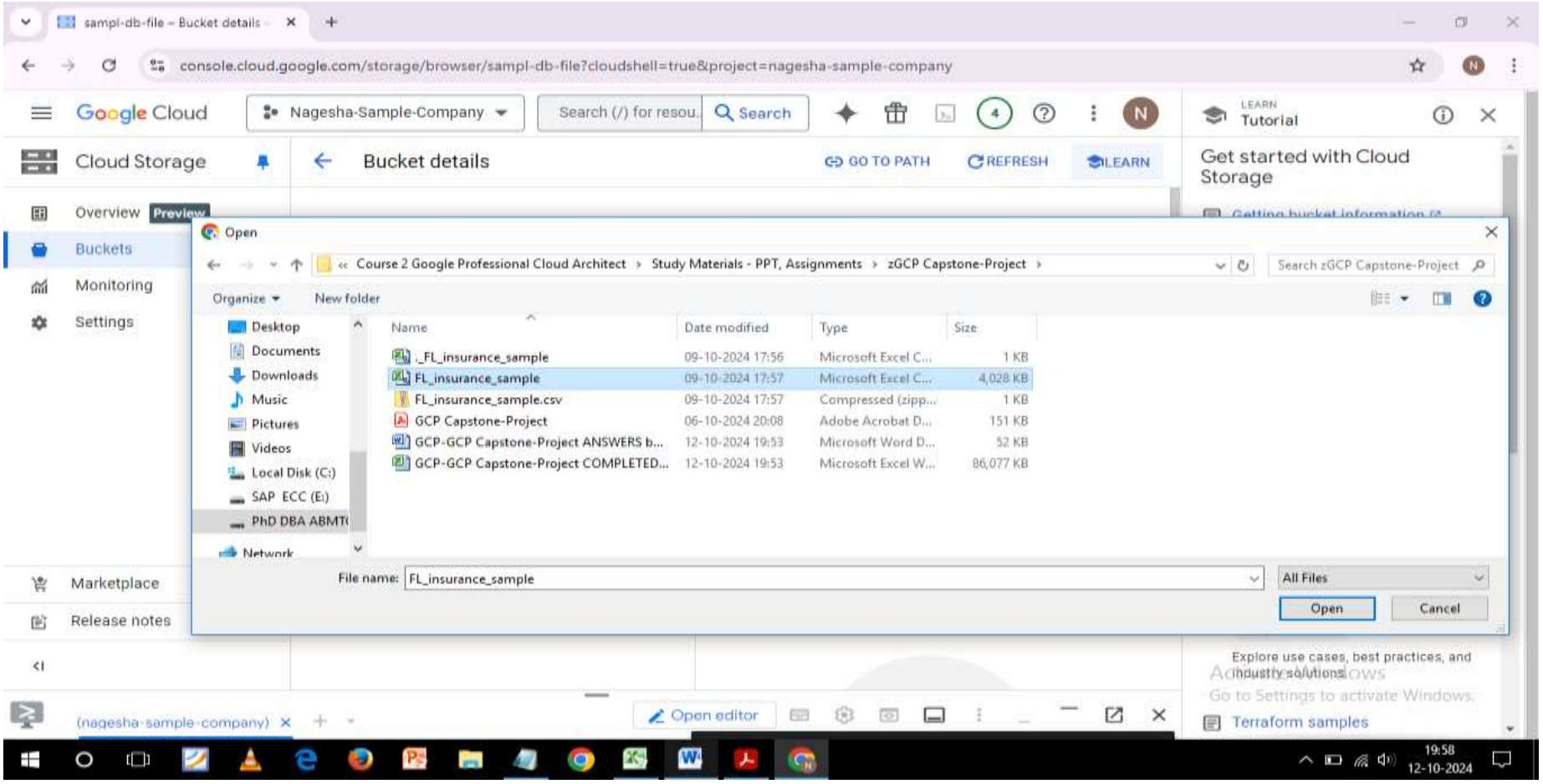

SQL – Nagesha-Sample-Comp
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create a MySQL instance
Instance ID *
sample-db
Use lowercase letters, numbers and hyphens. Start with a letter.
Password
GENERATE
Set a password for the root user. Learn more
No password
Without a root password, this instance will allow anyone to connect with full administrative privileges. Set a root password to ensure that only authorised users have these privileges.
PASSWORD POLICY
Choose region and zonal availability
Cloud SQL edition
Enterprise
Region
us-central1 (Iowa)
DB version
MySQL 8.0
vCPUs
2 vCPU
RAM
8 GB
Data cache
Disabled
Storage
10 GB
Connections
Public IP
Backup
Automated
Availability
Single zone
Point-in-time recovery
Enabled
Network throughput (MB/s)
500 of 500
IOPS
Read: 300 of 15,000
Write: 300 of 15,000
Disk throughput (MB/s)
Read: 4.8 of 240.0
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--
11 Sandbox configuration applied
loss, time 10006ms
rt /1.165 ms
nagesha_ks@cloudshell:~ (nagesha-sample-company) $
Activate Windows
Go to Settings to activate Windows.
19:52
12-10-2024

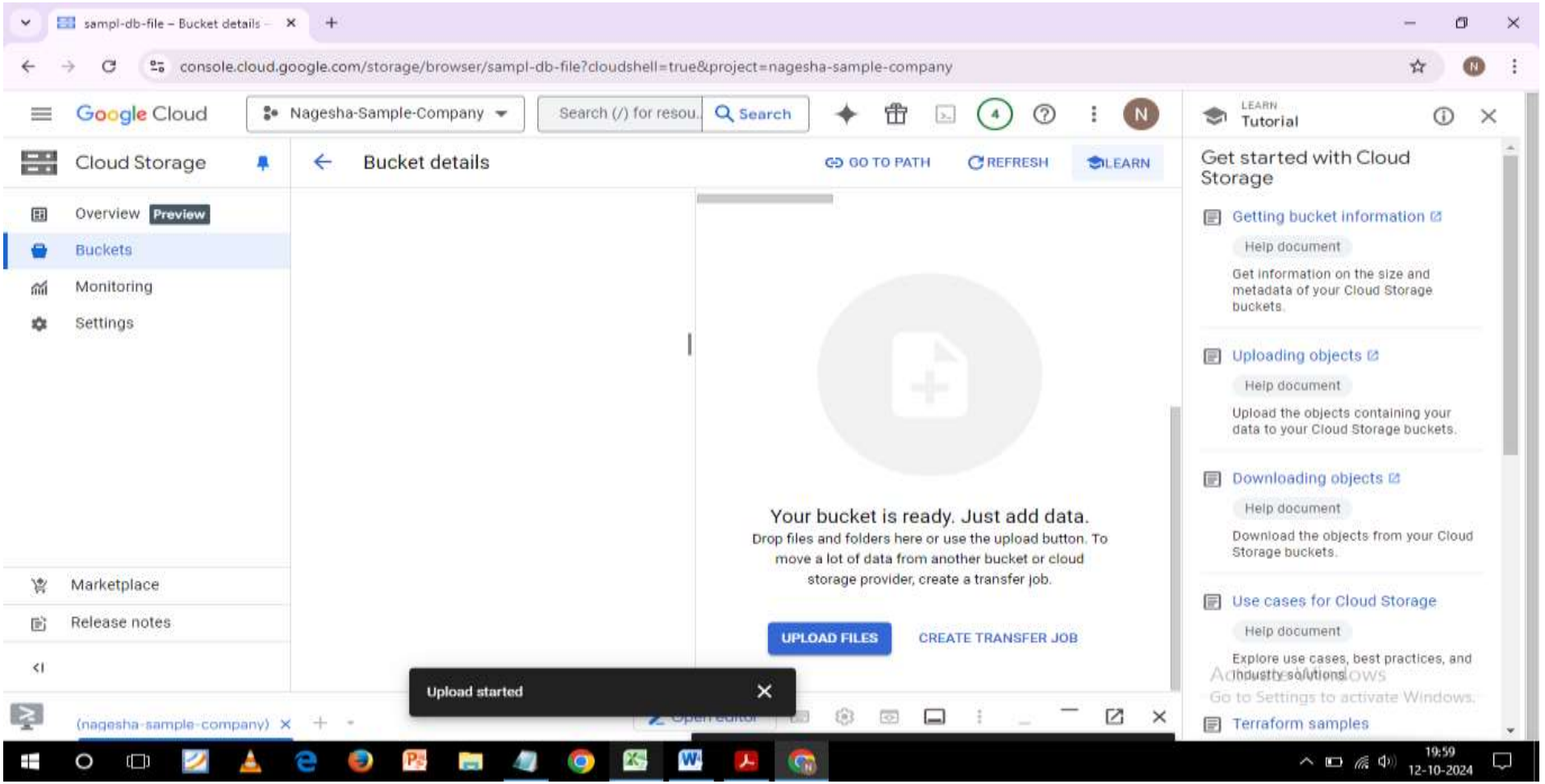

SQL – Nagesha-Sample-Comp
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create a MySQL instance
For better performance, keep your data close to the services that need it. Region is permanent, while zone can be changed any time.
Region
us-central1 (Iowa)
Zonal availability
Single zone
In case of outage, no failover. Not recommended for production.
Multiple zones (highly available)
Automatic failover to another zone within your selected region. Recommended for production instances. Increases cost.
SPECIFY ZONES
Customise your instance
You can also customise instance configurations later
Write: 4.8 of 240.0
Pricing estimate (without discounts)
These items represent Cloud SQL compute, memory and storage resources only, and reflect how you configured your instance so far. Discounts not included in estimate. Learn more
Item
Hourly cost (estimate)
2 vCPU (US$0.041 per vCPU/hour)
US$0.08
8 GiB RAM (US$0.007 per GiB/hour)
US$0.06
10 GiB SSD (US$0.17 per GiB/month)
US$0.002
Total without usage discounts
US$0.14
Usage and traffic costs
These costs vary based on your feature usage, traffic or data location. Learn more
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--
11 Sandbox configuration applied
loss, time 10006ms
/1.165 ms
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
19:53
12-10-2024

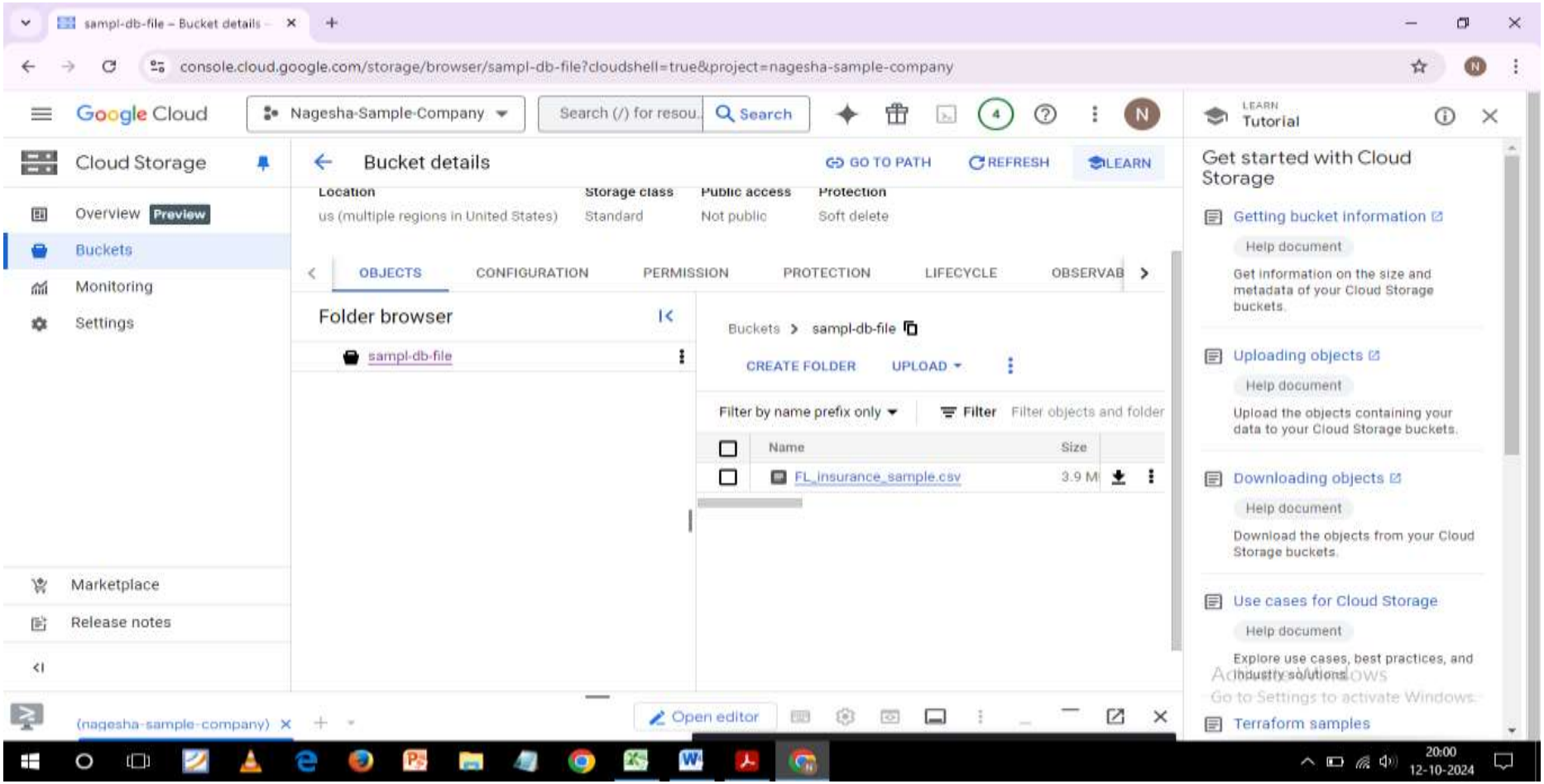

SQL – Nagesha-Sample-Comp
console.cloud.google.com/sql/instances/create;engine=MySQL?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create a MySQL instance
resources only, and reflect how you configured your instance so far. Discounts not included in estimate. Learn more
Zonal availability
Single zone
In case of outage, no failover. Not recommended for production.
Multiple zones (highly available)
Automatic failover to another zone within your selected region. Recommended for production instances. Increases cost.
SPECIFY ZONES
Item
Hourly cost (estimate)
2 vCPU (US$0.041 per vCPU/hour)
US$0.08
8 GiB RAM (US$0.007 per GiB/hour)
US$0.06
10 GiB SSD (US$0.17 per GiB/month)
US$0.002
Total without usage discounts
US$0.14
Customise your instance
You can also customise instance configurations later
SHOW CONFIGURATION OPTIONS
CREATE INSTANCE
CANCEL
Usage and traffic costs
These costs vary based on your feature usage, traffic or data location. Learn more
Backups (US$0.08 per GiB)
Network data transfer out (variable)
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
64 bytes from 34.67.175.174: icmp_seq=11 ttl=55 time=191 ms
^C
--
11 Sandbox configuration applied loss, time 10006ms
rt /1.165 ms
nagesha_ks@cloudshell:~ (nagesha-sample-company) $
Activate Windows
Go to Settings to activate Windows.
19:53
12-10-2024

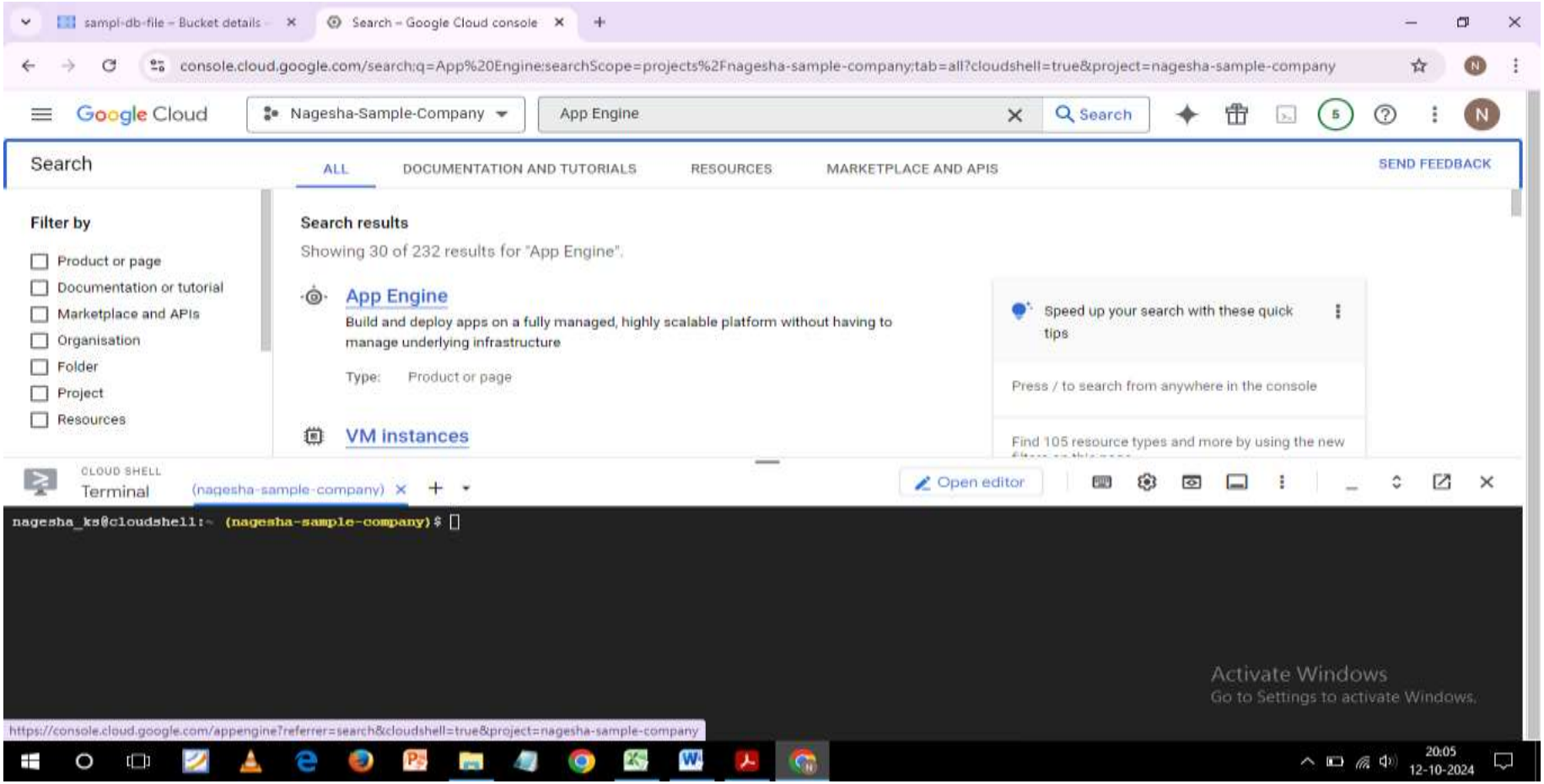

Create a Bucket – Cloud Storag
console.cloud.google.com/storage/create-bucket?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Cloud Storage
Create a Bucket
Overview
Preview
Buckets
Monitoring
Settings
Get started
Pick a globally unique, permanent name. Naming guidelines
sampl-db-file
Tip: Don't include any sensitive information
Optimise storage for data-intensive workloads
Labels (optional)
CONTINUE
Good to know
Location pricing
Storage rates vary depending on the storage class of your data and location of your bucket. Pricing details
Current configuration: Multi-region / Standard
Item
Cost
us (multiple regions in United States)
$0.026 per GB/month
With default replication
$0.020 per GB written
ESTIMATE YOUR MONTHLY COST
Choose where to store your data
Location: us (multiple regions in United States)
Location type: Multi-region
Choose a storage class for your data
Default storage class: Standard
Marketplace
Release notes
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
Activate Windows
Go to Settings to activate Windows.
19:57
12-10-2024

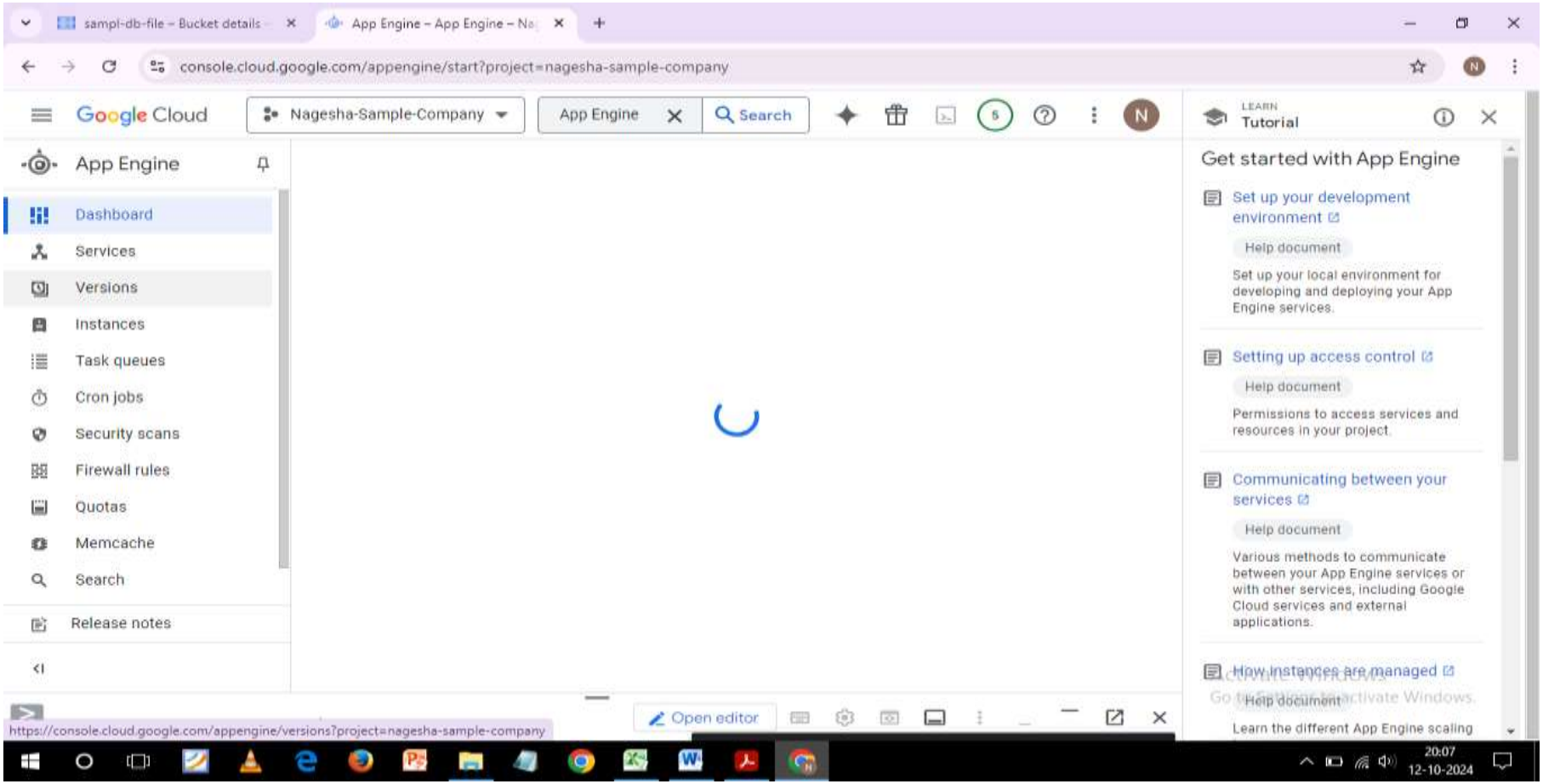

sampl-db-file – Bucket details
console.cloud.google.com/storage/browser/sampl-db-file;tab=objects?cloudshell=true&project=nagesha-sample-company&prefix=&forceOnObjectsSortingFiltering=false
Google Cloud
Nagesha-Sample-Company
Search (/) for resou
Search
Cloud Storage
Overview
Preview
Buckets
Monitoring
Settings
Marketplace
Release notes
Bucket details
GO TO PATH
REFRESH
LEARN
sampl-db-file
Location
us (multiple regions in United States)
Storage class
Standard
Public access
Not public
Protection
Soft delete
OBJECTS
CONFIGURATION
PERMISSION
PROTECTION
LIFECYCLE
OBSERVAB
Folder browser
sampl-db-file
Buckets > sampl-db-file
CREATE FOLDER
UPLOAD
Filter by name prefix only
Filter
Filter objects and folder
Name
Size
Type
Created
Storage class
No rows to display
LEARN
Tutorial
Get started with Cloud Storage
Getting bucket information
Help document
Get information on the size and metadata of your Cloud Storage buckets.
Uploading objects
Help document
Upload the objects containing your data to your Cloud Storage buckets.
Downloading objects
Help document
Download the objects from your Cloud Storage buckets.
Use cases for Cloud Storage
Help document
Explore use cases, best practices, and industry solutions
Terraform samples
(nagesha-sample-company)
Open editor
19:57
12-10-2024

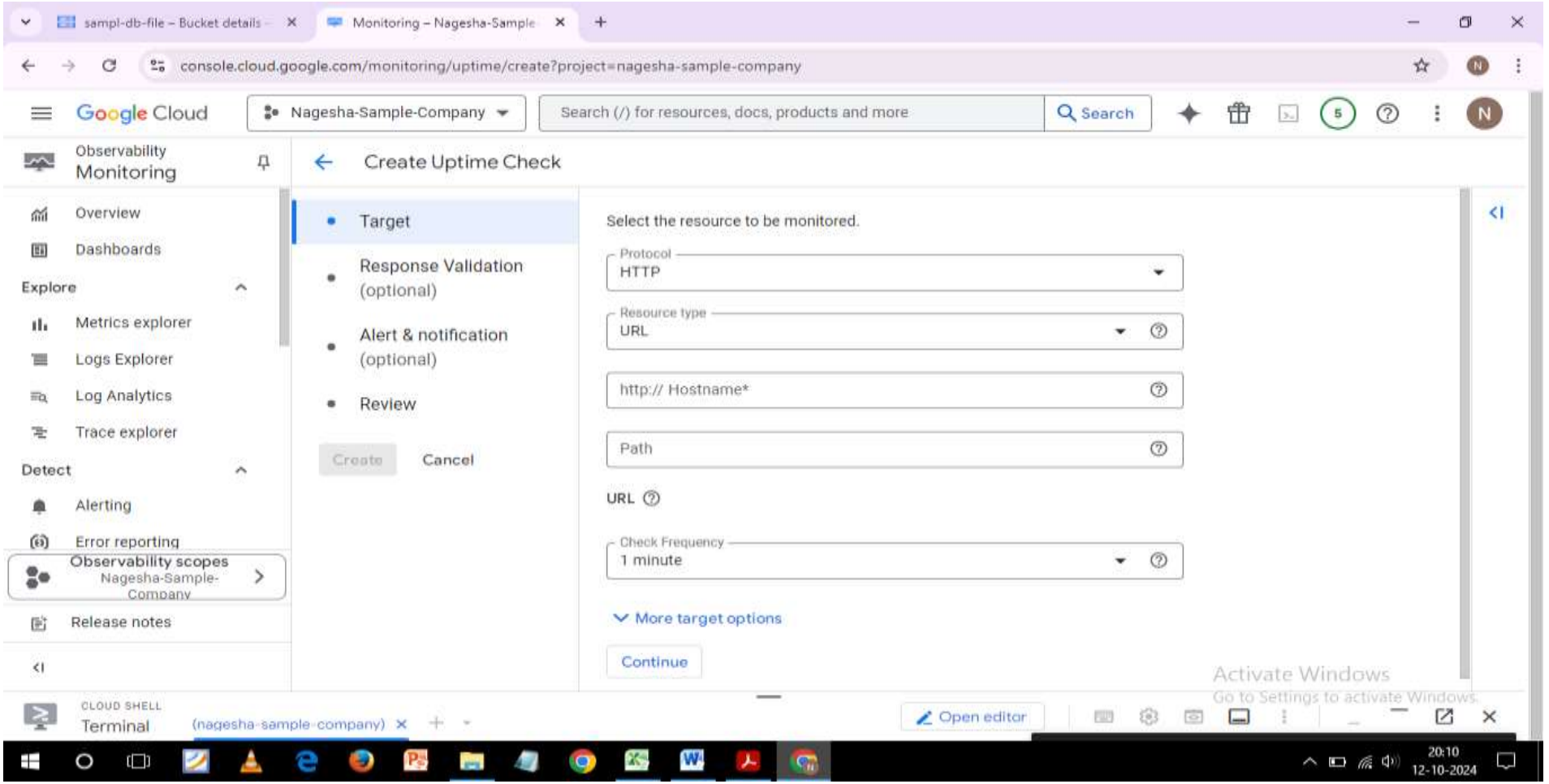

sampl-db-file - Bucket details
console.cloud.google.com/storage/browser/sampl-db-file?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
Cloud Storage
Bucket details
GO TO PATH
REFRESH
LEARN
Overview
Preview
Buckets
Monitoring
Settings
Marketplace
Release notes
Tutorial
Get started with Cloud Storage
Open
Course 2 Google Professional Cloud Architect
Study Materials - PPT, Assignments
zGCP Capstone-Project
Search zGCP Capstone-Project
Organize
New folder
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
SAP ECC (E:)
PhD DBA ABMT
Network
Name
Date modified
Type
Size
._FL_insurance_sample
09-10-2024 17:56
Microsoft Excel C...
1 KB
FL_insurance_sample
09-10-2024 17:57
Microsoft Excel C...
4,028 KB
FL_insurance_sample.csv
09-10-2024 17:57
Compressed (zipp...
1 KB
GCP Capstone-Project
06-10-2024 20:08
Adobe Acrobat D...
151 KB
GCP-GCP Capstone-Project ANSWERS b...
12-10-2024 19:53
Microsoft Word D...
52 KB
GCP-GCP Capstone-Project COMPLETED...
12-10-2024 19:53
Microsoft Excel W...
86,077 KB
File name:
FL_insurance_sample
All Files
Open
Cancel
Explore use cases, best practices, and industry solutions
Terraform samples
(nagesha-sample-company)
Open editor
19:58
12-10-2024

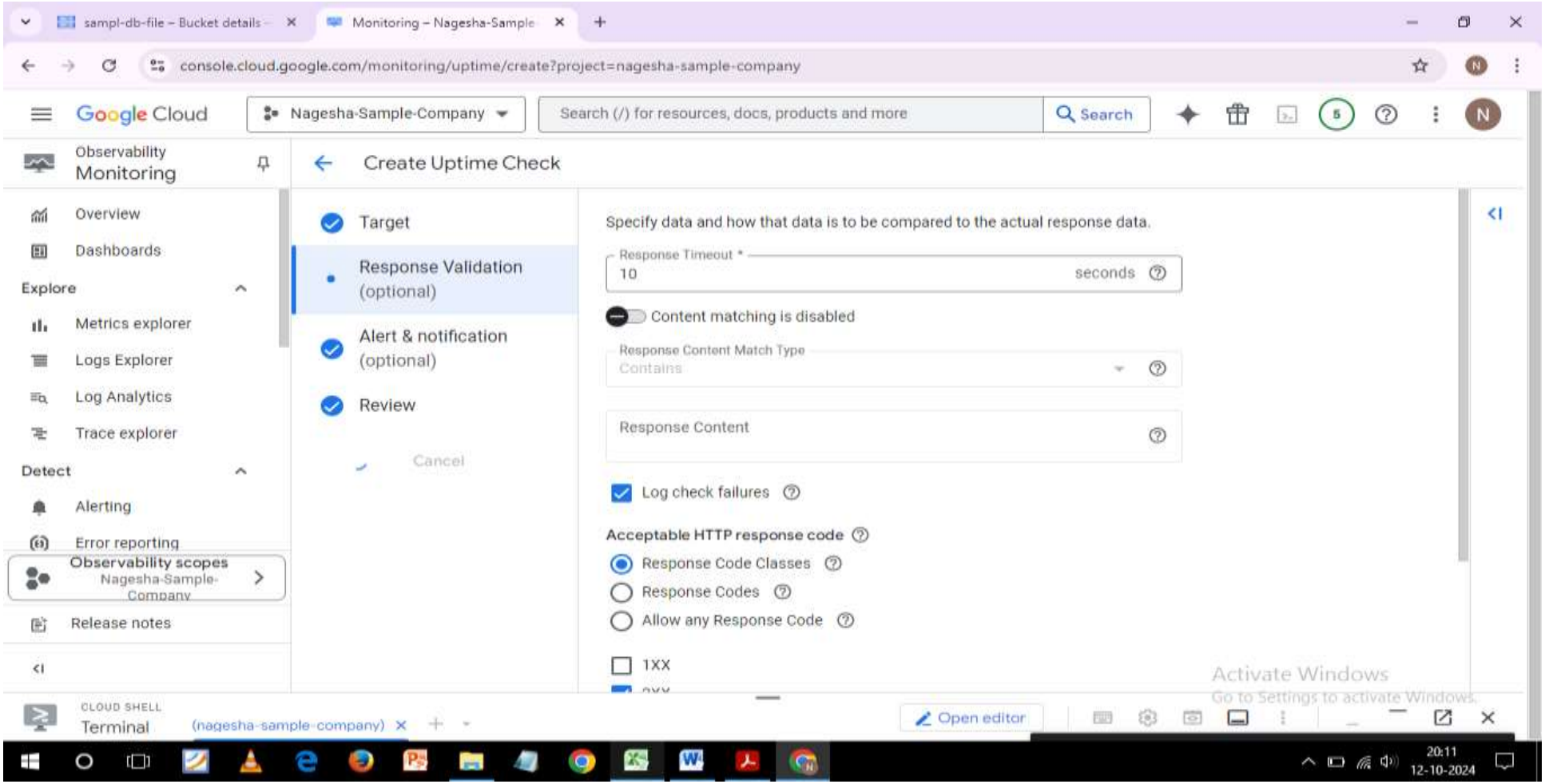

sampl-db-file – Bucket details
console.cloud.google.com/storage/browser/sampl-db-file?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
Cloud Storage
Bucket details
GO TO PATH
REFRESH
LEARN
Overview
Preview
Buckets
Monitoring
Settings
Marketplace
Release notes
Your bucket is ready. Just add data.
Drop files and folders here or use the upload button. To move a lot of data from another bucket or cloud storage provider, create a transfer job.
UPLOAD FILES
CREATE TRANSFER JOB
Upload started
(nagesha-sample-company)
LEARN
Tutorial
Get started with Cloud Storage
Getting bucket information
Help document
Get information on the size and metadata of your Cloud Storage buckets.
Uploading objects
Help document
Upload the objects containing your data to your Cloud Storage buckets.
Downloading objects
Help document
Download the objects from your Cloud Storage buckets.
Use cases for Cloud Storage
Help document
Explore use cases, best practices, and industry solutions
Terraform samples
Activate Windows
Go to Settings to activate Windows.
19:59
12-10-2024

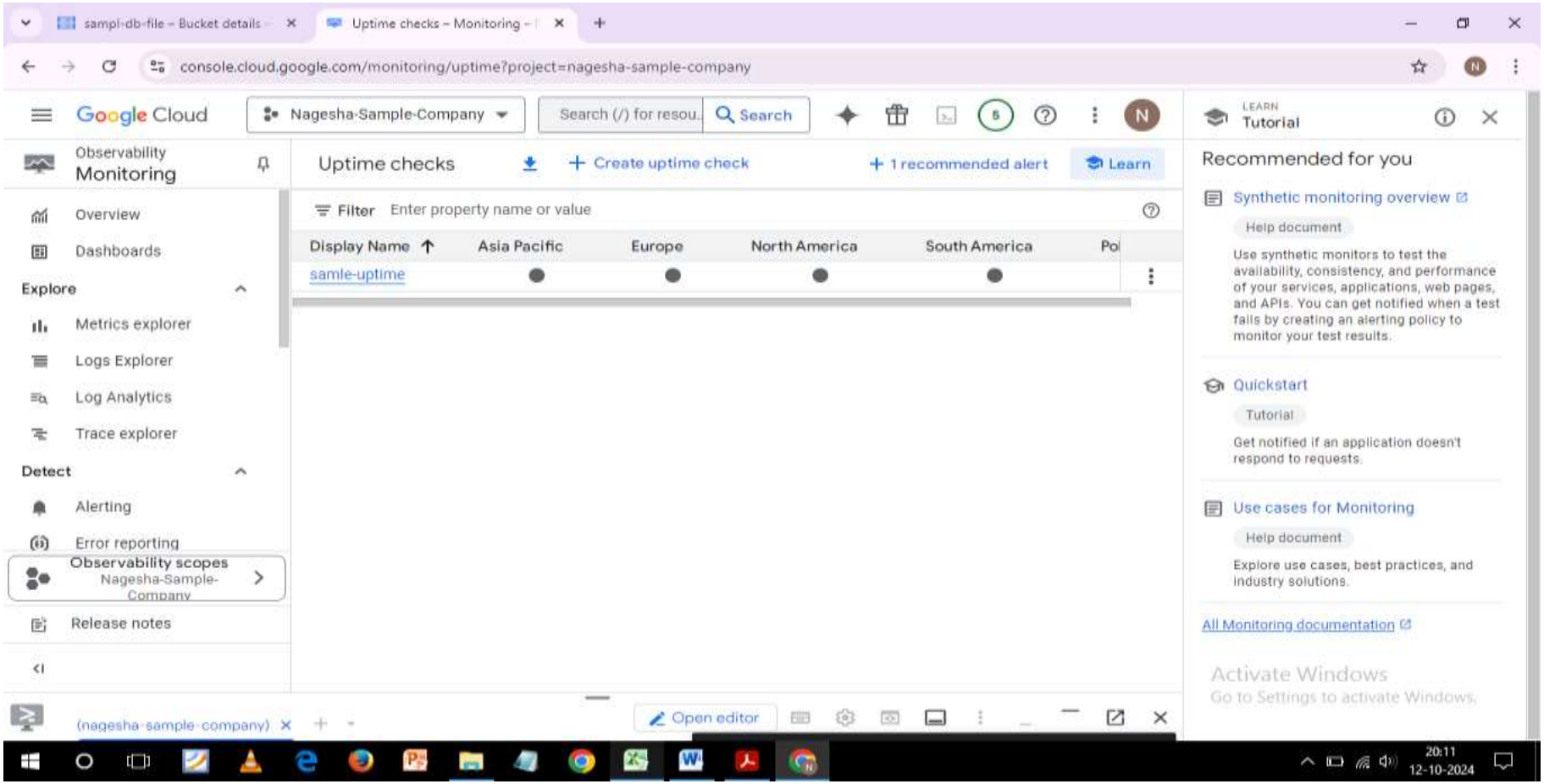

sampl-db-file – Bucket details
console.cloud.google.com/storage/browser/sampl-db-file?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
Cloud Storage
Overview
Preview
Buckets
Monitoring
Settings
Marketplace
Release notes
Bucket details
GO TO PATH
REFRESH
LEARN
Location
us (multiple regions in United States)
Storage class
Standard
Public access
Not public
Protection
Soft delete
OBJECTS
CONFIGURATION
PERMISSION
PROTECTION
LIFECYCLE
OBSERVAB
Folder browser
sampl-db-file
Buckets
sampl-db-file
CREATE FOLDER
UPLOAD
Filter by name prefix only
Filter
Filter objects and folder
Name
Size
FL_insurance_sample.csv
3.9 M
LEARN
Tutorial
Get started with Cloud Storage
Getting bucket information
Help document
Get information on the size and metadata of your Cloud Storage buckets.
Uploading objects
Help document
Upload the objects containing your data to your Cloud Storage buckets.
Downloading objects
Help document
Download the objects from your Cloud Storage buckets.
Use cases for Cloud Storage
Help document
Explore use cases, best practices, and industry solutions.
Terraform samples
(nagesha-sample-company)
Open editor
20:00
12-10-2024

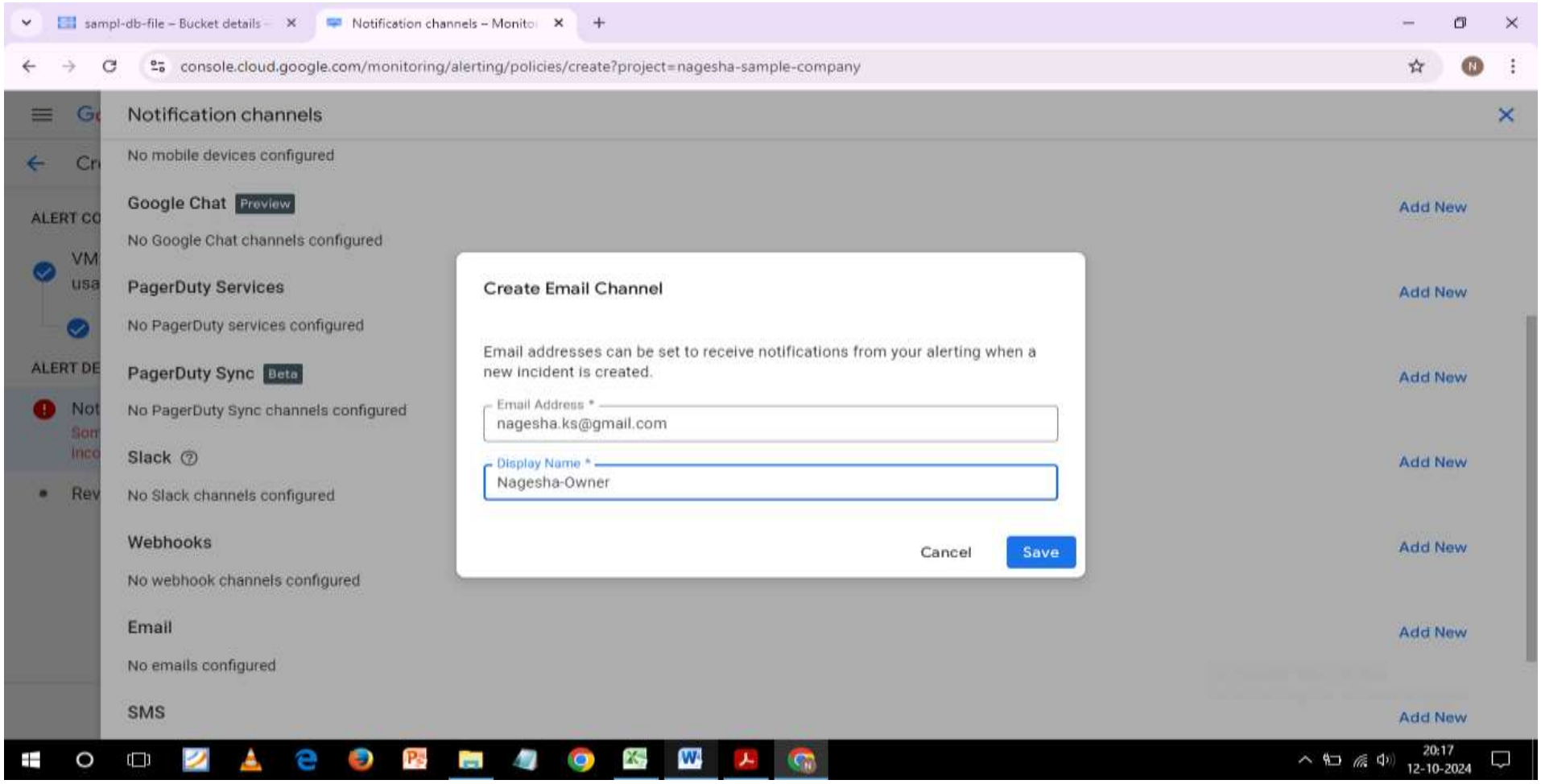

sampl-db-file – Bucket details
Search – Google Cloud console
console.cloud.google.com/search;q=App%20Engine;searchScope=projects%2Fnagesha-sample-company;tab=all?cloudshell=true&project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
App Engine
Search
Search
ALL
DOCUMENTATION AND TUTORIALS
RESOURCES
MARKETPLACE AND APIS
SEND FEEDBACK
Filter by
Product or page
Documentation or tutorial
Marketplace and APIs
Organisation
Folder
Project
Resources
Search results
Showing 30 of 232 results for "App Engine".
App Engine
Build and deploy apps on a fully managed, highly scalable platform without having to manage underlying infrastructure
Type: Product or page
VM instances
Speed up your search with these quick tips
Press / to search from anywhere in the console
Find 105 resource types and more by using the new
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
nagesha_ks@cloudshell:~ (nagesha-sample-company)$
Activate Windows
Go to Settings to activate Windows.
https://console.cloud.google.com/appengine?referrer=search&cloudshell=true&project=nagesha-sample-company
20:05
12-10-2024

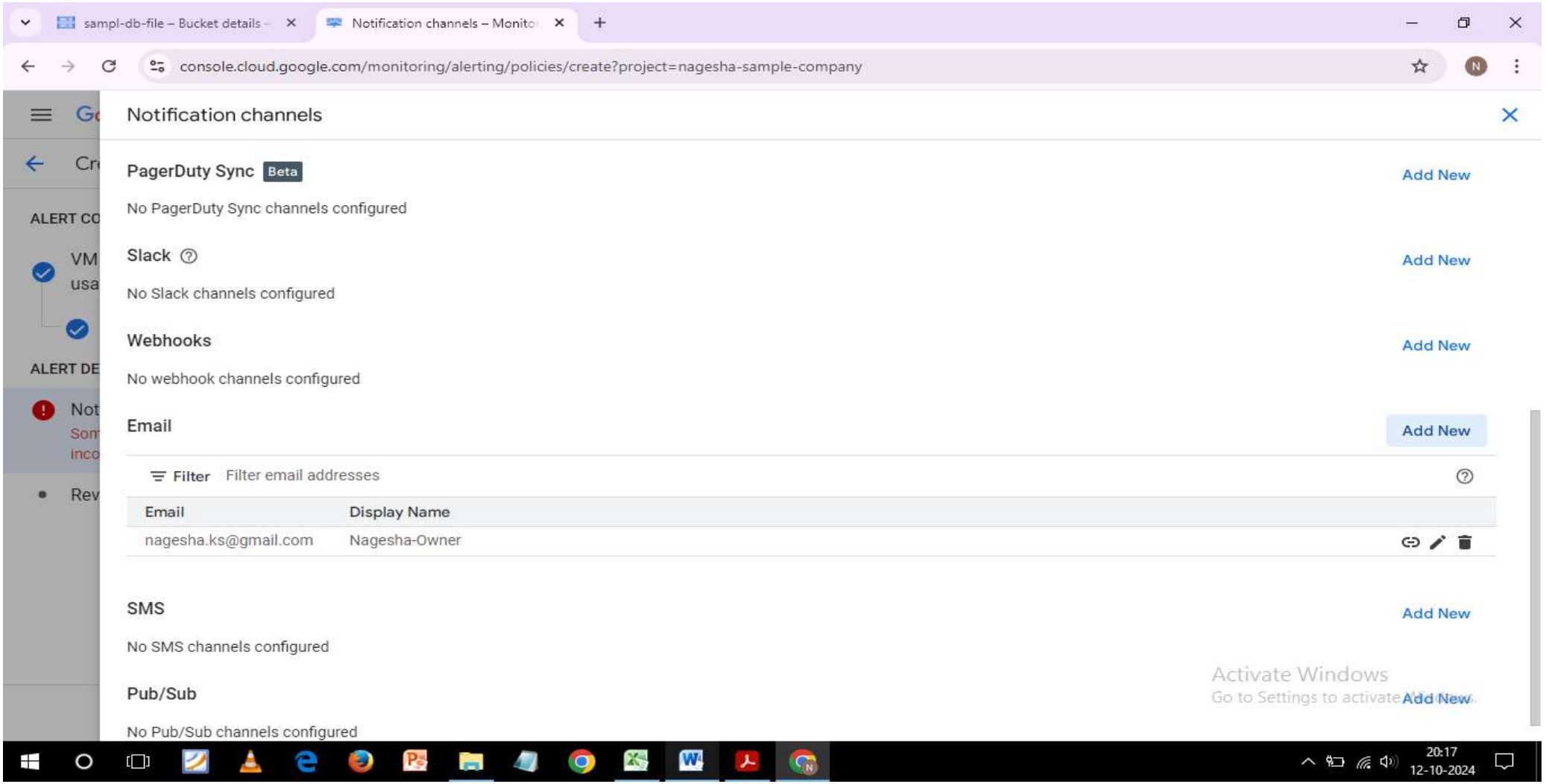

sampl-db-file – Bucket details
App Engine – App Engine – Na
console.cloud.google.com/appengine/start?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
App Engine
Search
App Engine
Dashboard
Services
Versions
Instances
Task queues
Cron jobs
Security scans
Firewall rules
Quotas
Memcache
Search
Release notes
LEARN
Tutorial
Get started with App Engine
Set up your development environment
Help document
Set up your local environment for developing and deploying your App Engine services.
Setting up access control
Help document
Permissions to access services and resources in your project.
Communicating between your services
Help document
Various methods to communicate between your App Engine services or with other services, including Google Cloud services and external applications.
How instances are managed
Help document
Learn the different App Engine scaling
Open editor
https://console.cloud.google.com/appengine/versions?project=nagesha-sample-company
20:07
12-10-2024

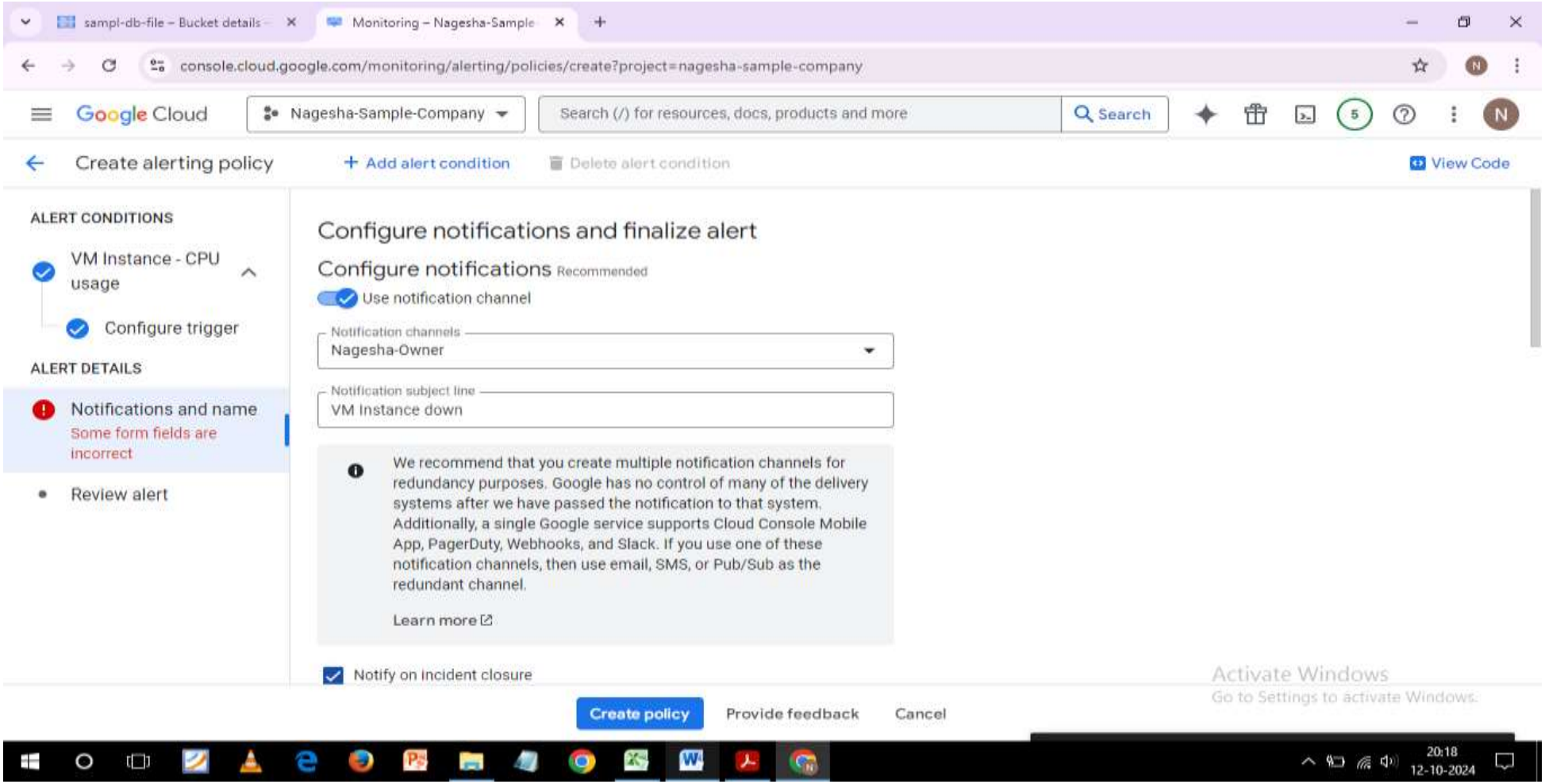

sampl-db-file – Bucket details
Monitoring – Nagesha-Sample
console.cloud.google.com/monitoring/uptime/create?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Observability
Monitoring
Overview
Dashboards
Explore
Metrics explorer
Logs Explorer
Log Analytics
Trace explorer
Detect
Alerting
Error reporting
Observability scopes
Nagesha-Sample-Company
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
URL
http:// Hostname*
Path
URL
Check Frequency
1 minute
More target options
Continue
Activate Windows
Go to Settings to activate Windows.
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
20:10
12-10-2024

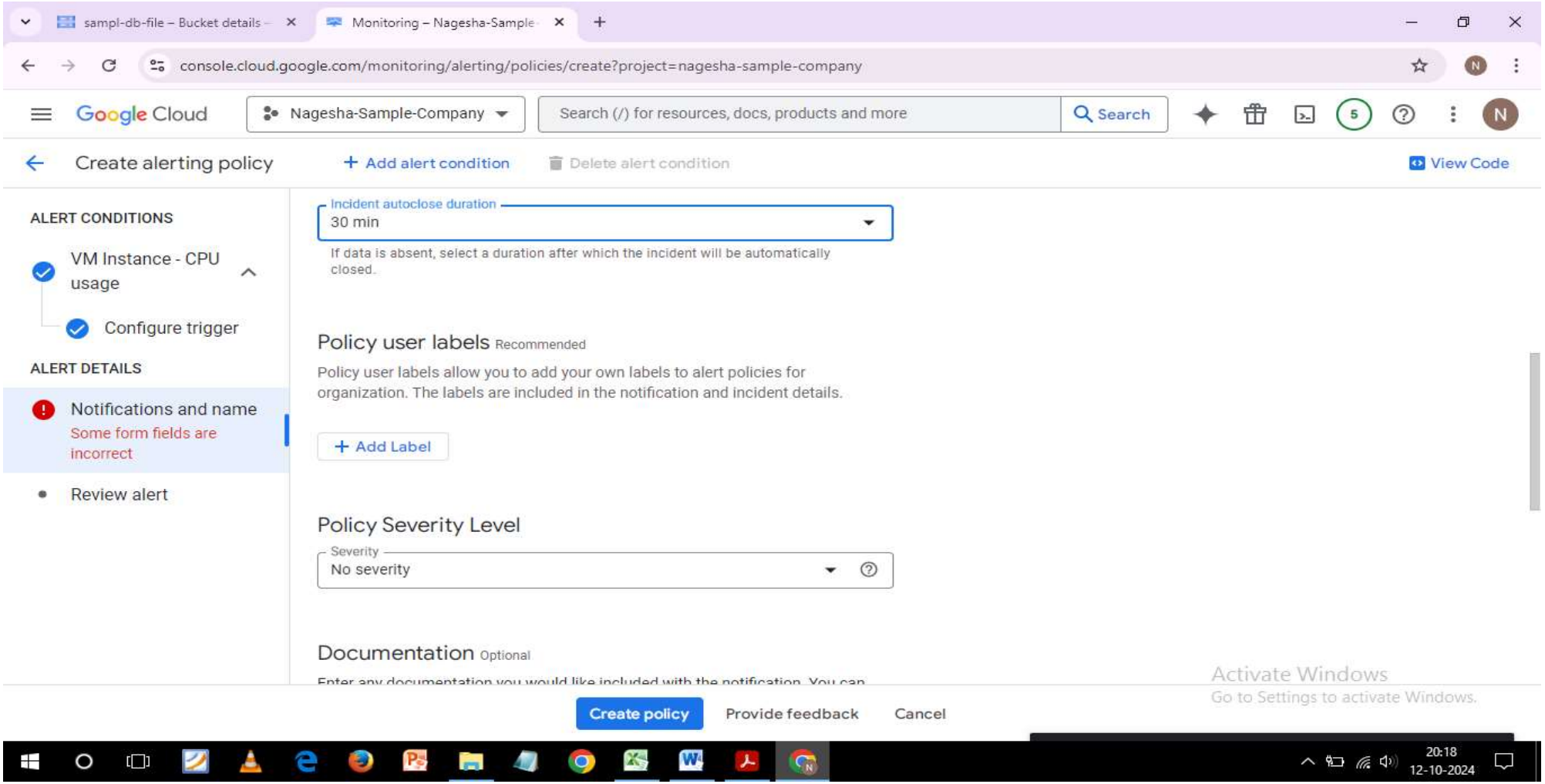

sampl-db-file – Bucket details
Monitoring – Nagesha-Sample
console.cloud.google.com/monitoring/uptime/create?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Observability
Monitoring
Create Uptime Check
Overview
Dashboards
Explore
Metrics explorer
Logs Explorer
Log Analytics
Trace explorer
Detect
Alerting
Error reporting
Observability scopes
Nagesha-Sample-Company
Release notes
Target
Response Validation (optional)
Alert & notification (optional)
Review
Cancel
Specify data and how that data is to be compared to the actual response data.
Response Timeout *
10
seconds
Content matching is disabled
Response Content Match Type
Contains
Response Content
Log check failures
Acceptable HTTP response code
Response Code Classes
Response Codes
Allow any Response Code
1XX
Activate Windows
Go to Settings to activate Windows.
CLOUD SHELL
Terminal
(nagesha-sample-company)
Open editor
20:11
12-10-2024

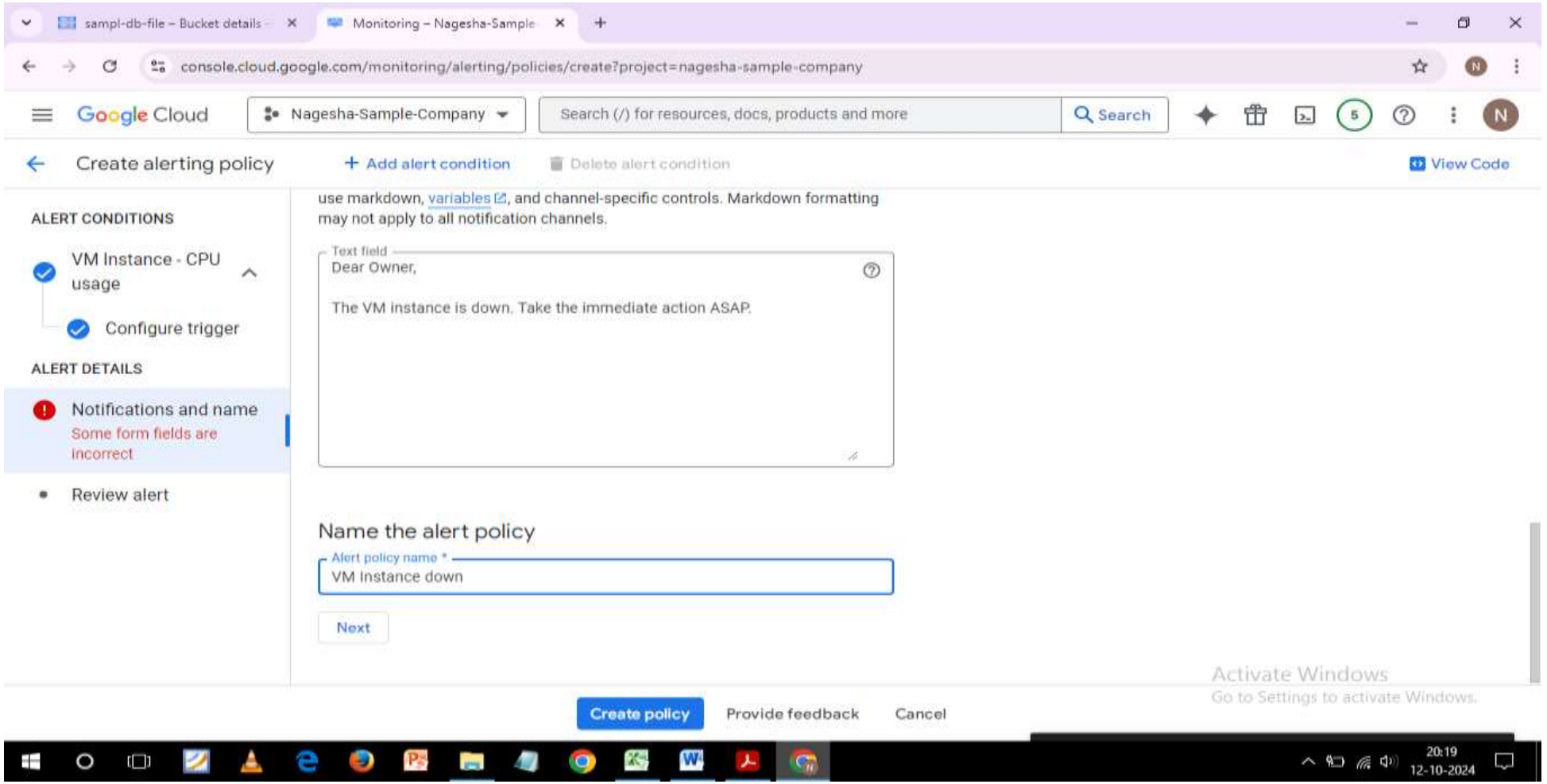

sampl-db-file – Bucket details
Uptime checks – Monitoring
console.cloud.google.com/monitoring/uptime?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resou...
Search
Observability
Monitoring
Uptime checks
Create uptime check
1 recommended alert
Learn
Filter
Enter property name or value
Display Name
Asia Pacific
Europe
North America
South America
samle-uptime
Overview
Dashboards
Explore
Metrics explorer
Logs Explorer
Log Analytics
Trace explorer
Detect
Alerting
Error reporting
Observability scopes
Nagesha-Sample-Company
Release notes
LEARN
Tutorial
Recommended for you
Synthetic monitoring overview
Help document
Use synthetic monitors to test the availability, consistency, and performance of your services, applications, web pages, and APIs. You can get notified when a test fails by creating an alerting policy to monitor your test results.
Quickstart
Tutorial
Get notified if an application doesn't respond to requests.
Use cases for Monitoring
Help document
Explore use cases, best practices, and industry solutions.
All Monitoring documentation
Activate Windows
Go to Settings to activate Windows.
(nagesha-sample-company)
Open editor
20:11
12-10-2024

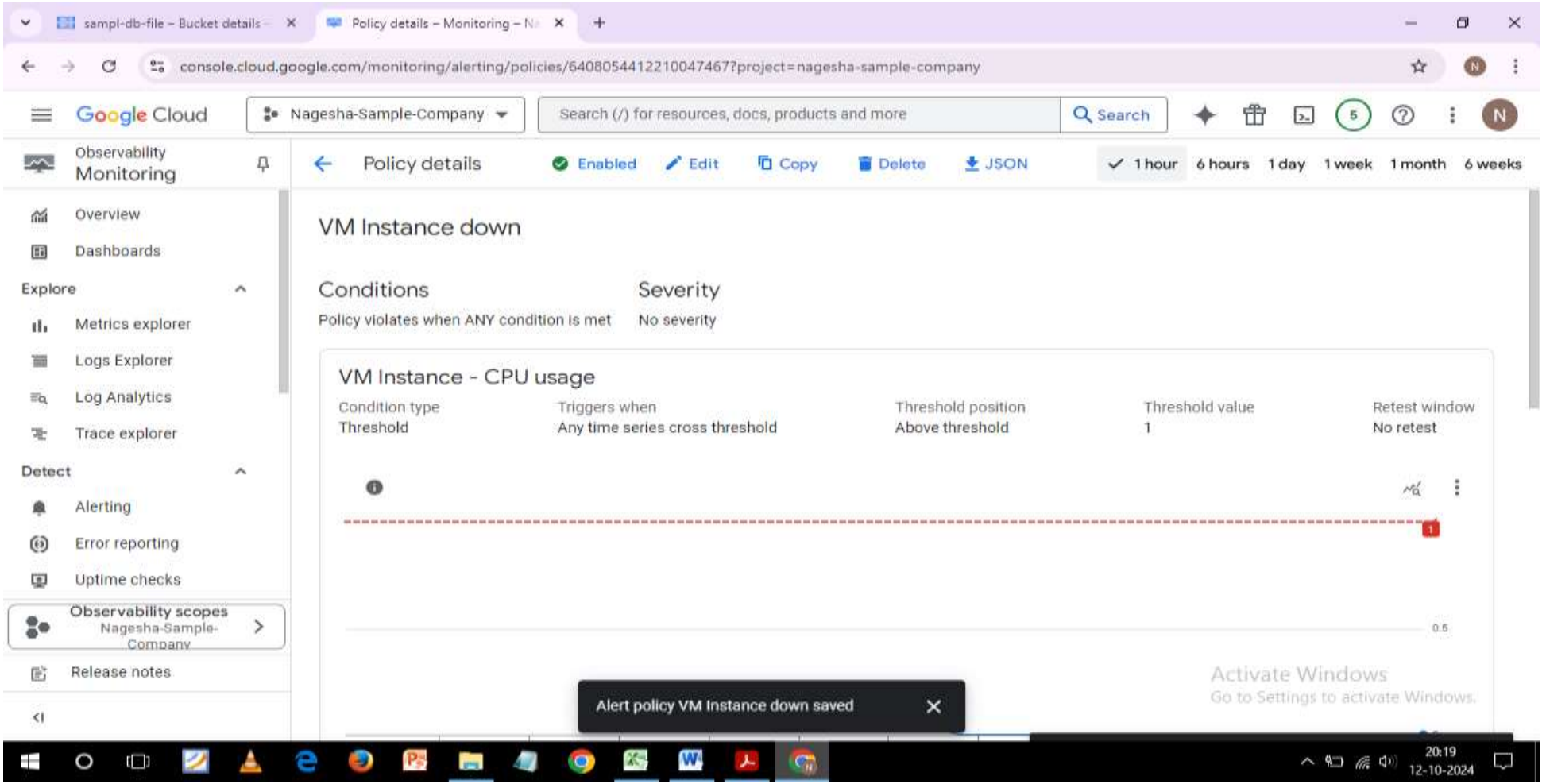

sampl-db-file – Bucket details
Notification channels – Monito
console.cloud.google.com/monitoring/alerting/policies/create?project=nagesha-sample-company
Notification channels
No mobile devices configured
Google Chat Preview
No Google Chat channels configured
Add New
PagerDuty Services
No PagerDuty services configured
Add New
PagerDuty Sync Beta
No PagerDuty Sync channels configured
Add New
Slack
No Slack channels configured
Add New
Webhooks
No webhook channels configured
Add New
Email
No emails configured
Add New
SMS
Add New
Create Email Channel
Email addresses can be set to receive notifications from your alerting when a new incident is created.
Email Address *
nagesha.ks@gmail.com
Display Name *
Nagesha-Owner
Cancel
Save
20:17
12-10-2024


sampl-db-file – Bucket details
Notification channels – Monito
console.cloud.google.com/monitoring/alerting/policies/create?project=nagesha-sample-company
Notification channels
PagerDuty Sync
Beta
Add New
No PagerDuty Sync channels configured
Slack
Add New
No Slack channels configured
Webhooks
Add New
No webhook channels configured
Email
Add New
Filter
Filter email addresses
Email
Display Name
nagesha.ks@gmail.com
Nagesha-Owner
SMS
Add New
No SMS channels configured
Pub/Sub
Add New
No Pub/Sub channels configured
Activate Windows
Go to Settings to activate
20:17
12-10-2024


sampl-db-file – Bucket details
Monitoring – Nagesha-Sample
console.cloud.google.com/monitoring/alerting/policies/create?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create alerting policy
+ Add alert condition
Delete alert condition
View Code
ALERT CONDITIONS
VM Instance - CPU usage
Configure trigger
ALERT DETAILS
Notifications and name
Some form fields are incorrect
Review alert
Configure notifications and finalize alert
Configure notifications Recommended
Use notification channel
Notification channels
Nagesha-Owner
Notification subject line
VM Instance down
We recommend that you create multiple notification channels for redundancy purposes. Google has no control of many of the delivery systems after we have passed the notification to that system. Additionally, a single Google service supports Cloud Console Mobile App, PagerDuty, Webhooks, and Slack. If you use one of these notification channels, then use email, SMS, or Pub/Sub as the redundant channel.
Learn more
Notify on incident closure
Activate Windows
Go to Settings to activate Windows.
Create policy
Provide feedback
Cancel
20:18
12-10-2024


sampl-db-file – Bucket details
Monitoring – Nagesha-Sample
console.cloud.google.com/monitoring/alerting/policies/create?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create alerting policy
Add alert condition
Delete alert condition
View Code
ALERT CONDITIONS
VM Instance - CPU usage
Configure trigger
ALERT DETAILS
Notifications and name
Some form fields are incorrect
Review alert
Incident autoclose duration
30 min
If data is absent, select a duration after which the incident will be automatically closed.
Policy user labels Recommended
Policy user labels allow you to add your own labels to alert policies for organization. The labels are included in the notification and incident details.
Add Label
Policy Severity Level
Severity
No severity
Documentation Optional
Activate Windows
Go to Settings to activate Windows.
Create policy
Provide feedback
Cancel
20:18
12-10-2024


sampl-db-file – Bucket details
Monitoring – Nagesha-Sample
console.cloud.google.com/monitoring/alerting/policies/create?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Create alerting policy
+ Add alert condition
Delete alert condition
View Code
ALERT CONDITIONS
VM Instance - CPU usage
Configure trigger
ALERT DETAILS
Notifications and name
Some form fields are incorrect
Review alert
use markdown, variables, and channel-specific controls. Markdown formatting may not apply to all notification channels.
Text field
Dear Owner,
The VM instance is down. Take the immediate action ASAP.
Name the alert policy
Alert policy name *
VM Instance down
Next
Activate Windows
Go to Settings to activate Windows.
Create policy
Provide feedback
Cancel
20:19
12-10-2024


sampl-db-file – Bucket details
Policy details – Monitoring – N
console.cloud.google.com/monitoring/alerting/policies/6408054412210047467?project=nagesha-sample-company
Google Cloud
Nagesha-Sample-Company
Search (/) for resources, docs, products and more
Search
Observability
Monitoring
Policy details
Enabled
Edit
Copy
Delete
JSON
1 hour
6 hours
1 day
1 week
1 month
6 weeks
Overview
Dashboards
Explore
Metrics explorer
Logs Explorer
Log Analytics
Trace explorer
Detect
Alerting
Error reporting
Uptime checks
Observability scopes
Nagesha-Sample-Company
Release notes
VM Instance down
Conditions
Policy violates when ANY condition is met
Severity
No severity
VM Instance - CPU usage
Condition type
Threshold
Triggers when
Any time series cross threshold
Threshold position
Above threshold
Threshold value
1
Retest window
No retest
0.5
Activate Windows
Go to Settings to activate Windows.
Alert policy VM Instance down saved
20:19
12-10-2024

Commands

Created project "Nagesha-sample company"

Created Users and Assigned Roles

Go **to IAM & Admin > IAM**> **Grant Access > Add**

Assigned the Owner role to the Admin

Assigned the Compute Engine Editor role to the Worker

Assigned the Compute Engine Viewer role to the QA team member

Deployed Application on App Engine (Scalable Service)

Created an app.yaml file for App Engine configuration:

sudo nano app.yaml

yaml

```
runtime python39  # Example using Python
automatic_scaling:
  min_instances: 2
  max_instances: 10
```

gcloud app deploy

Enabled Communication with Storage Server

Created a VM Instance in the Same VPC:

Go to **Compute Engine > VM instances**.

Ping Storage Server:

ping <STORAGE_SERVER_IP>

ping 34.67.175.174

Imported Database into Cloud SQL

Created a Cloud SQL Instance:

Go to **SQL > Create Instance>MySQL> named as sample-db**

Imported the Database:

Downloaded the ZIP file to my local drive and extracted the database.

Done through Dashboard as well as **gcloud command** to import the SQL dump into Cloud SQL:

gcloud sql import sql <INSTANCE_NAME> gs://<BUCKET_NAME>/<DATABASE_FILE>

gcloud sql import csv small-20241012-141049 gs:// sampl-db-file/ FL_insurance_sample

Managing App Versions on App Engine

Go to **App Engine > Versions**

gcloud app deploy --version v2

Configured Monitoring with Stackdriver

Go to **Monitoring > Create Workspace**.

Created Uptime Check:

Go to **Monitoring > Uptime checks**.

Created Alerting Policy:

Go to **Monitoring > Alerting > Create Policy**.

Set a condition for "Cloud storage and message as "VM Instance down".

Set notification to send an email to the project owner's email id: Nagesha.ks@gmail.com