

LATIHAN PRAKTIKUM CLOUD COMPUTING PERTEMUAN KE-7

LATIHAN 1

The screenshot shows the Google Cloud Platform console interface. The top navigation bar includes the Google Cloud Platform logo, the project name 'calvina', and a search bar. The left sidebar shows the 'Cloud Storage' section with options for 'Browser', 'Monitoring', and 'Settings'. The main content area is titled 'Browser' and displays a table of storage buckets. The table has columns for 'Name', 'Created', 'Location type', 'Location', 'Default storage class', and 'Updated'. A single bucket is listed: 'artifacts.calvina01.appspot.com', created on 'Apr 7, 2021, 11:02:37 AM', located in 'us (multiple re...)', with a 'Standard' storage class, and updated on 'Apr 7, 2021, 11:02:37 AM'. The bottom status bar shows system information like 'U: 0.00 kbit/s', 'D: 0.00 kbit/s', and the time '9:48'.

Name	Created	Location type	Location	Default storage class	Updated
artifacts.calvina01.appspot.com	Apr 7, 2021, 11:02:37 AM	Multi-region	us (multiple re...)	Standard	Apr 7, 2021, 11:02:37 AM

```
vinac2625@cloudshell:~ (calvina01)$ gsutil mb -l asia-southeast1 gs://calvinavuysan/
Creating gs://calvinavuysan/...
vinac2625@cloudshell:~ (calvina01)$ gsutil ls
gs://artifacts.calvina01.appspot.com/
gs://calvinavuysan/
```

This screenshot shows the Google Cloud Platform console with the Cloud Storage browser view and a Cloud Shell terminal window open. The browser view is identical to the previous screenshot, showing the 'artifacts.calvina01.appspot.com' bucket. The Cloud Shell terminal window is titled 'Terminal (calvina01)' and shows the execution of the same commands as in the previous block. A context menu is visible over the terminal, with options: 'Restart', 'Upload File', 'Download File', 'Default Mode' (which is selected), and 'Safe Mode'. The bottom status bar shows system information like 'U: 0.00 kbit/s', 'D: 0.00 kbit/s', and the time '9:55'.

```
vinac2625@cloudshell:~ (calvina01)$ gsutil mb -l asia-southeast1 gs://calvinavuysan
Creating gs://calvinavuysan/...
You are attempting to access protected data with no configured
credentials. Please visit https://cloud.google.com/console#/project
and sign up for an account, and then run the "gcloud auth login"
command to configure gsutil to use these credentials.
vinac2625@cloudshell:~ (calvina01)$ gsutil ls
gs://artifacts.calvina01.appspot.com/
vinac2625@cloudshell:~ (calvina01)$ gsutil mb -l asia-southeast1 gs://calvinavuysan/
Creating gs://calvinavuysan/...
vinac2625@cloudshell:~ (calvina01)$ gsutil ls
gs://artifacts.calvina01.appspot.com/
gs://calvinavuysan/
vinac2625@cloudshell:~ (calvina01)$
```

Dashboard Course: Praktikum Cloud Comp... MODUL 5 PRAKTIKUM.pdf - Goc... Browser - Cloud Storage - calvin

console.cloud.google.com/storage/browser?project=calvina01&prefix&cloudshell=true

Google Cloud Platform calvina Search products and resources

Cloud Storage Browser CREATE BUCKET DELETE REFRESH SHOW INFO PANEL

Filter Filter buckets No buckets selected.

Name	Created	Location type	Location	Default storage class	Updated
artifacts.calvina01.appspot.com	Apr 7, 2021, 11:02:37 AM	Multi-region	us (multiple re...	Standard	Apr 7, 2021, 11:02:37

CLOUD SHELL Terminal (calvina01) Open Editor

```
vinac2625@cloudshell:~ (calvina01)$ gsutil mb -l asia-southeast1 gs://calvinawuysan
Creating gs://calvinawuysan/...
You are attempting to access protected data with no configured
credentials. Please visit https://cloud.google.com/console#/project
and sign up for an account, and then run the "gcloud auth login"
command to configure gsutil to use these credentials.
vinac2625@cloudshell:~ (calvina01)$ gsutil ls
gs://artifacts.calvina01.appspot.com/
vinac2625@cloudshell:~ (calvina01)$ gsutil mb -l asia-southeast1 gs://calvinawuysan/
Creating gs://calvinawuysan/...
vinac2625@cloudshell:~ (calvina01)$ gsutil ls
gs://artifacts.calvina01.appspot.com/
gs://calvinawuysan/
vinac2625@cloudshell:~ (calvina01)$
```

Transferred 1 item

2020-07-08 11.47....

U: 0.00 kbit/s EN 9:56

```
vinac2625@cloudshell:~ (calvina01)$ ls
'2020-07-08 11.47.36.png' CloudPHP README-cloudshell.txt
vinac2625@cloudshell:~ (calvina01)$
```

```
vinac2625@cloudshell:~ (calvina01)$ gsutil cp '2020-07-08 11.47.36.png' gs://calvinawuysan
Copying file://2020-07-08 11.47.36.png [Content-Type=image/png]...
/ [1 files][368.1 KiB/368.1 KiB]
Operation completed over 1 objects/368.1 KiB.
vinac2625@cloudshell:~ (calvina01)$ gsutil ls gs://calvinawuysan
gs://calvinawuysan/2020-07-08 11.47.36.png
vinac2625@cloudshell:~ (calvina01)$ gsutil acl ch -u AllUsers:R gs://calvinawuysan/'2020-07-08 11.47.36.png'
Updated ACL on gs://calvinawuysan/2020-07-08 11.47.36.png
vinac2625@cloudshell:~ (calvina01)$
```

Dashboard Course: Praktikum Cloud Com... MODUL 5 PRAKTIKUM.pdf - Goc... Browser - Cloud Storage - calvin 2020-07-08 11.47.36.png (694 x 1000)

storage.googleapis.com/calvinawuysan/2020-07-08%2011.47.36.png

MHL 1/125 OPEN 3dB

U: 0.00 kbit/s EN 10:04

```

vinac2625@cloudshell:~ (calvina01)$ gsutil versioning set on gs://calvinawuysan
Enabling versioning for gs://calvinawuysan/...
vinac2625@cloudshell:~ (calvina01)$ gsutil versioning get gs://calvinawuysan
gs://calvinawuysan: Enabled
vinac2625@cloudshell:~ (calvina01)$ gsutil ls -a gs://calvinawuysan
gs://calvinawuysan/2020-07-08 11.47.36.png#1619488726716243
vinac2625@cloudshell:~ (calvina01)$

```

LATIHAN 2

The screenshot shows the Google Cloud Platform console interface. The left sidebar contains navigation links for Cloud Storage, Monitoring, and Settings. The main area displays the 'Browser' view for the 'calvina' project. A table lists the buckets:

Name	Created	Location type	Location	Default storage class	Updated
artifacts.calvina01.appspot.com	Apr 7, 2021, 11:02:37 AM	Multi-region	us (multiple re...	Standard	Apr 7, 2021, 11:02:37
calvinawuysan	Apr 27, 2021, 9:54:26 AM	Region	asia-southeas...	Standard	Apr 27, 2021, 10:05:47

The screenshot shows the 'Create a bucket' wizard in the Google Cloud Platform console. The 'Name your bucket' step is active, with the name 'calvinawuysan2' entered. The 'Monthly cost estimate' sidebar is also visible, showing storage and retrieval costs.

Name your bucket
 Pick a globally unique, permanent name. [Naming guidelines](#)

calvinawuysan2

Tip: Don't include any sensitive information

Choose where to store your data

Choose a default storage class for your data

Choose how to control access to objects

Advanced settings (optional)

Monthly cost estimate

Enter values below to check this bucket's monthly cost. For guidance only. [Pricing details](#)

Storage and retrieval

Storage size: GB
 \$0.026 per GB-month

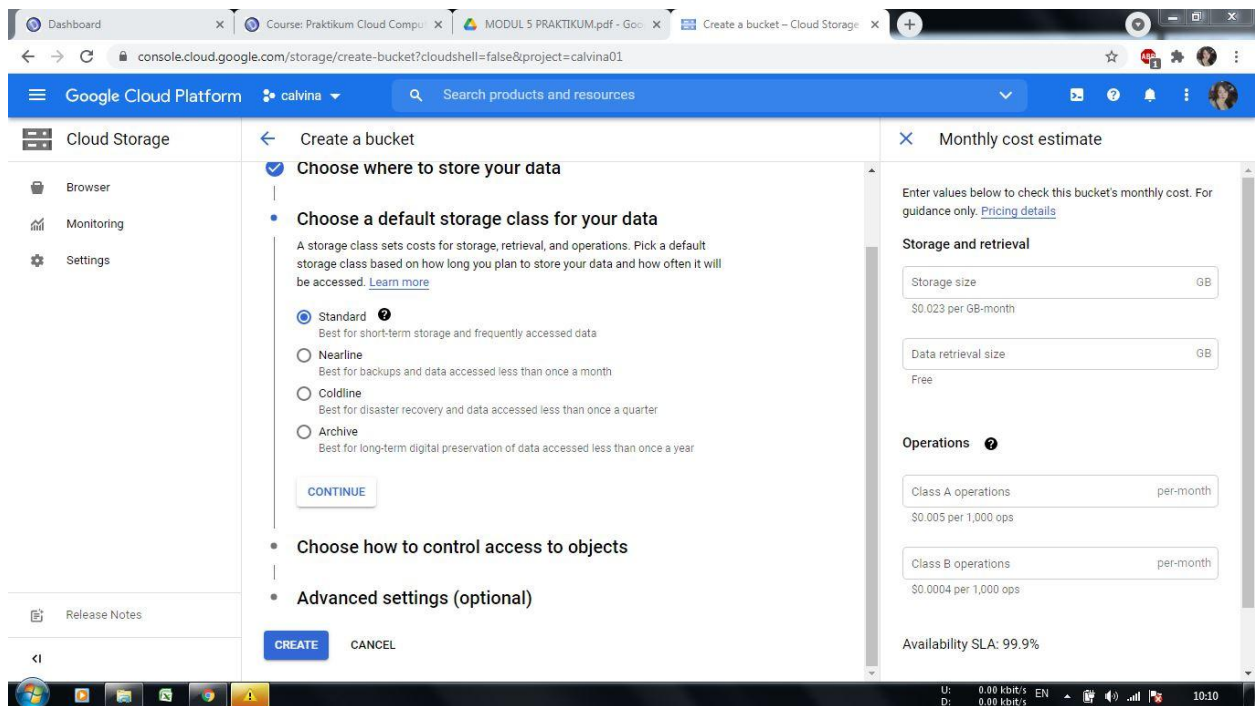
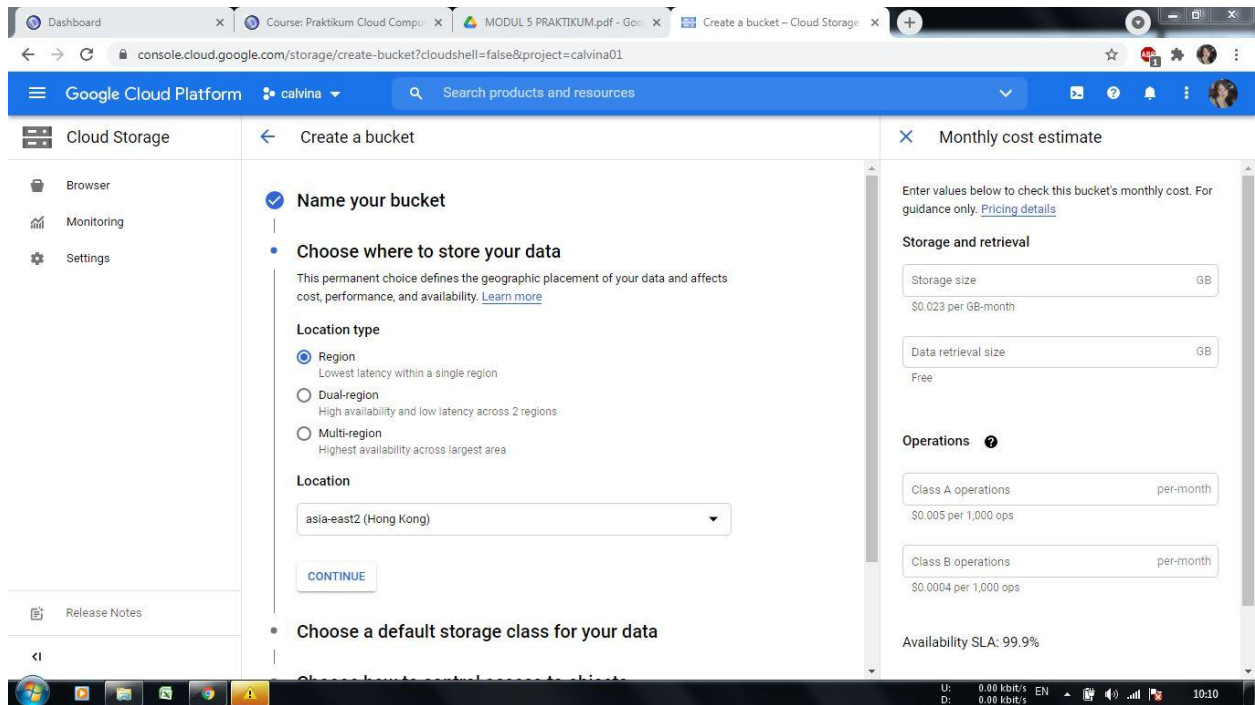
Data retrieval size: GB
 Free

Operations

Class A operations: per-month
 \$0.005 per 1,000 ops

Class B operations: per-month
 \$0.0004 per 1,000 ops

Availability SLA: 99.95%



Google Cloud Platform console showing the 'Bucket details' page for 'calvinawuysan2'. The page includes tabs for OBJECTS, CONFIGURATION, PERMISSIONS, RETENTION, and LIFECYCLE. The OBJECTS tab is active, displaying a table with columns: Name, Size, Type, Created time, Storage class, Last modified, Public access, and Encryption. The table is currently empty, showing 'No rows to display'. The right sidebar contains 'Recommended for you' and 'You might also like' sections. The bottom status bar shows network activity and system time (10:11).

Google Cloud Platform console showing the 'Bucket details' page for 'calvinawuysan2'. The 'UPLOAD FILES' button is highlighted. An 'Uploading 1 item' dialog box is visible, showing the upload of '2020-07-08 11.47.36.png' (368.1 KB, image/png) to the 'Standard' storage class, completed at 'Apr 27, 2021, 1...'. The table below the dialog shows the uploaded file.

Name	Size	Type	Created time	Storage class	Last modified
2020-07-08 11.47.36.png	368.1 KB	image/png	Apr 27, 2021, 1...	Standard	Apr 27, 2021, 1...

Google Cloud Platform console showing the 'Bucket details' page for 'calvinawuysan2'. The page includes tabs for OBJECTS, CONFIGURATION, PERMISSIONS, RETENTION, and LIFECYCLE. The OBJECTS tab is active, displaying a table of objects. A context menu is open over the object '2020-07-08 11.47.36.png', showing options like Edit metadata, Edit permissions, Copy, Move, Rename, Export to Cloud, Pub/Sub, Scan with Cloud Data Loss Prevention, and Tutorials.

Name	Size	Type	Created time	Storage class	Last modified
2020-07-08 11.47.36.png	368.1 KB	image/png	Apr 27, 2021, 1...	Standard	Apr 2...

Google Cloud Platform console showing the 'Bucket details' page for 'calvinawuysan2'. A modal dialog titled 'Edit 2020-07-08 11.47.36.png permissions' is open, allowing configuration of permissions. The dialog includes fields for Entity (User), Name (allUsers), and Access (Reader), along with an 'ADD ENTRY' button and 'CANCEL'/'SAVE' options.

Edit 2020-07-08 11.47.36.png permissions

If you don't rely on individual object-level permissions, you can start managing all permissions uniformly at the bucket-level. Go to the bucket's Permissions tab to get started. [Learn more](#)

Entity *	Name	Access *
User	allUsers	Reader

[+ ADD ENTRY](#)

[CANCEL](#) [SAVE](#)

Dashboard Course: Praktikum Cloud Comi MODUL 5 PRAKTIKUM.pdf calvinawuysan2 - Bucket deta calvinawuysan2 - Bucket deta

console.cloud.google.com/storage/browser/calvinawuysan2?tab=objects?cloudshell=false&project=calvina01&prefix=&forceOnObjectsSortingFiltering=false

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Cloud Storage

Browser Monitoring Settings

Bucket details REFRESH

calvinawuysan2

Public to internet: This bucket is publicly accessible because allUsers or allAuthenticatedUsers have one or more permissions. Remove these members to stop public access.

EDIT PERMISSIONS DISMISS

OBJECTS CONFIGURATION PERMISSIONS RETENTION LIFECYCLE

Buckets > calvinawuysan2

UPLOAD FILES UPLOAD FOLDER CREATE FOLDER MANAGE HOLDS DOWNLOAD DELETE

Filter by name prefix only Filter Filter objects and folders

<input type="checkbox"/>	Name	Last modified	Public access	Encryption
<input type="checkbox"/>	2020-07-08 11.47.36.png	7/27, 20...	Public to internet Copy URL	Google-managed key

Release Notes

Recommended for you

Control access to data

Learn how to manage and maintain data access and prevent unintended exposure.

Access control

Make data public

Set up your objects to be publicly readable by anyone on the internet with the link.

Access control

Manage object lifecycles

Save costs by setting rules to move objects to cooler Cloud Storage classes over time.

Tutorials

You might also like

Tutorials

Walkthroughs and guides

Concepts

Deep dive explanations

APIs & references

Not seeing what you need? Give feedback

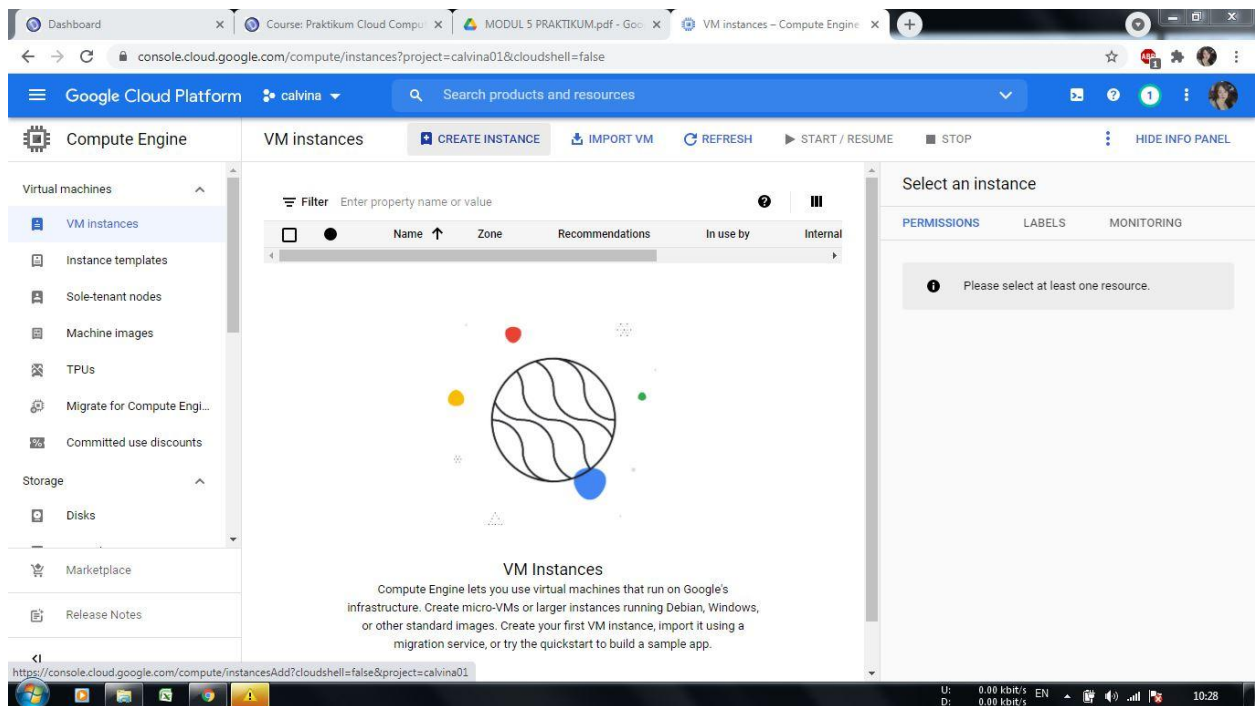
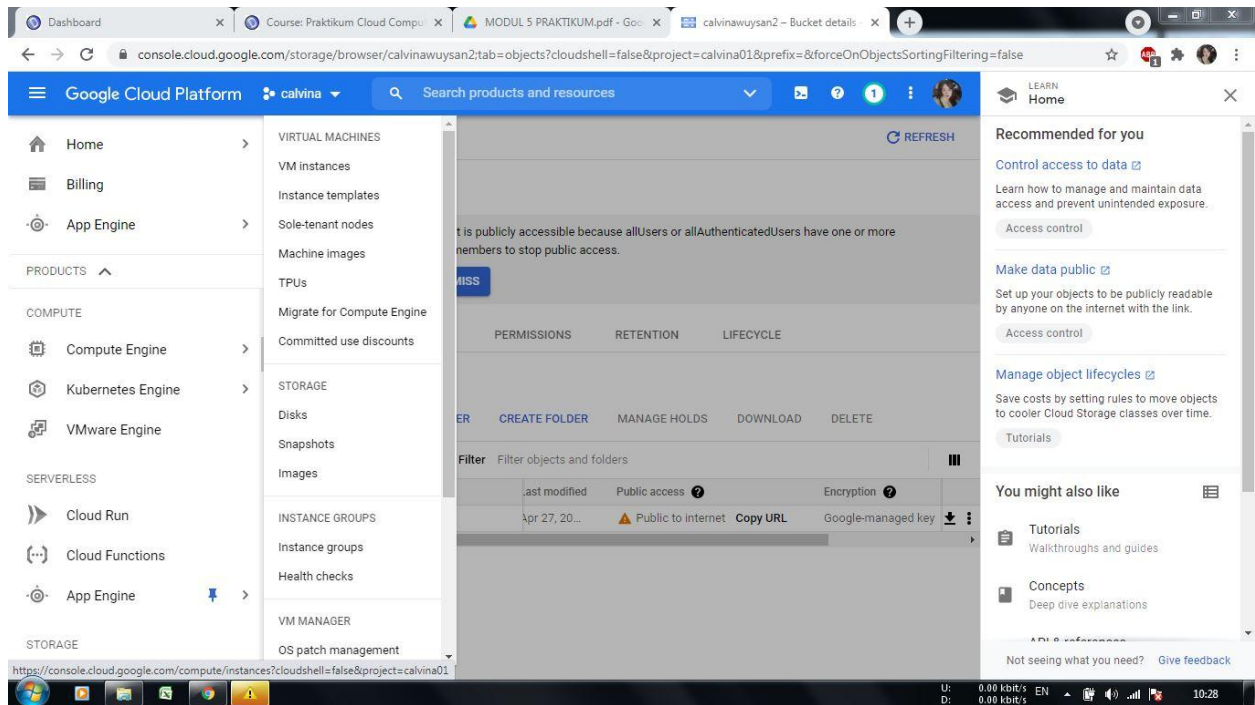
U: 0.00 kbit/s EN 10:23

Dashboard Course: Praktikum Cloud Comi MODUL 5 PRAKTIKUM.pdf calvinawuysan2 - Buck calvinawuysan2 - Buck 2020-07-08 11.47.36.png

storage.googleapis.com/calvinawuysan2/2020-07-08%2011.47.36.png

MHL 1/125 OPEN 3dB

U: 0.00 kbit/s EN 10:27



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console.cloud.google.com/compute/instancesAdd?cloudshell=false&project=calvina01&rif_reserved

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Create an instance

To create a VM instance, select one of the options:

- New VM instance**
Create a single VM instance from scratch
- New VM instance from template**
Create a single VM instance from an existing template
- New VM instance from machine image**
Create a single VM instance from an existing machine image
- Marketplace**
Deploy a ready-to-go solution onto a VM instance

Name
Name is permanent
calvinavm

Labels (Optional)
+ Add label

Region
Region is permanent
us-central1 (Iowa)

Zone
Zone is permanent
us-central1-a

Machine configuration

Machine family
General-purpose Compute-optimized Memory-optimized GPU
Machine types for common workloads, optimized for cost and flexibility

Series
E2
CPU platform selection based on availability

Machine type
e2-medium (2 vCPU, 4 GB memory)

vCPU 1 shared core Memory 4 GB GPUs

~ CPU platform and GPU

You have Rp4,220,785.093358 free trial credits remaining
\$25.46 monthly estimate
That's about \$0.035 hourly
Pay for what you use: No upfront costs and per second billing
Details

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console.cloud.google.com/compute/instancesAdd?cloudshell=false&project=calvina01&rif_reserved

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Create an instance

Image
Debian GNU/Linux 10 (buster) Change

Identity and API access

Service account
Compute Engine default service account

Access scopes
☒ Allow default access
☐ Allow full access to all Cloud APIs
☐ Set access for each API

Firewall
Add tags and firewall rules to allow specific network traffic from the Internet
☒ Allow HTTP traffic
☐ Allow HTTPS traffic
Management, security, disks, networking, sole tenancy

You will be billed for this instance. Compute Engine pricing

Create Cancel

Equivalent REST or command line

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console.cloud.google.com/compute/instances?project=calvina01&cloudshell=false&onCreate=true

Google Cloud Platform

calvina

Search products and resources

Compute Engine

Virtual machines

- VM instances
- Instance templates
- Sole-tenant nodes
- Machine images
- TPUs
- Migrate for Compute Engi...
- Committed use discounts

Storage

- Disks
- Marketplace
- Release Notes

VM instances

CREATE INSTANCE IMPORT VM REFRESH START / RESUME STOP HIDE INFO PANEL LEARN

INSTANCES INSTANCE SCHEDULE

Filter Enter property name or value

<input type="checkbox"/>	<input type="checkbox"/>	Name	Zone	Recommendations	In use by	Internal IP
<input type="checkbox"/>	<input checked="" type="checkbox"/>	calvinavm	us-central1-a			10.128.0.1 (nic0)

Select an instance

PERMISSIONS LABELS MONITORING

Please select at least one resource.

Related Actions

DISMISS

- 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, analyze, and download VM instance logs
- Setup Firewall Rules**
Control traffic to and from a VM instance
- Patch Management**
Schedule updates and view patch compliance VM instance

https://console.cloud.google.com/compute/instanceTemplates/list?cloudshell=false...

U: 0.00 kbit/s EN D: 0.00 kbit/s 10:30

vinac2625@calvinavm: ~ - Google Chrome

ssh.cloud.google.com/projects/calvina01/zones/us-central1-a/instances/calvinavm?authuser=0&hl=en_US&projectNumber=106392606...

```
Connected, host fingerprint: ssh-rsa 0:13:AO:50:0C:11:00:D4:56:38:04:39:CS:AE:13:59:0A:E7:FA:AE:68:30:B5:A8:7A:EA:3E:0E:8A:8A:79:36:7C
Linux calvinavm 4.19.0-16-cloud-amd64 #1 SMP Debian 4.19.181-1 (2021-03-19) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
vinac2625@calvinavm:~$ sudo apt-get install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core geopip-database libfontconfig1 libgd3 libgeoip1 libicu63 libjpeg62-turbo libnginx-mod-http-auth-pam libnginx-mod-http-dav-ext libnginx-mod-http-echo
  libnginx-mod-http-geoip libnginx-mod-http-image-filter libnginx-mod-http-subst-filter
  libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5
  libwebp6 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 nginx-common nginx-full
Suggested packages:
  libgd-tools geopip-bin fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core geopip-database libfontconfig1 libgd3 libgeoip1 libicu63 libjpeg62-turbo libnginx-mod-http-auth-pam libnginx-mod-http-dav-ext libnginx-mod-http-echo
  libnginx-mod-http-geoip libnginx-mod-http-image-filter libnginx-mod-http-subst-filter
  libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5
  libwebp6 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 nginx-common nginx-full
0 upgraded, 32 newly installed, 0 to remove and 0 not upgraded.
Need to get 17.3 MB of archives.
After this operation, 56.6 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Select an instance

PERMISSIONS LABELS MONITORING

Please select at least one resource.

U: 0.00 kbit/s EN D: 0.00 kbit/s 10:31

Dashboard Course: Praktikum Cloud Comp... MODUL 5 PRAKTIKUM.pdf - Google VM instances - Compute Engine

console.cloud.google.com/compute/instances?project=calvina01&cloudshell=false&onCreate=true

Google Cloud Platform calvina Search products and resources

Compute Engine VM instances CREATE INSTANCE IMPORT VM REFRESH START / RESUME STOP HIDE INFO PANEL LEARN

Virtual machines VM instances Instance templates Sole-tenant nodes Machine images TPUs Migrate for Compute Eng... Committed use discounts Storage Disks Marketplace Release Notes

INSTANCES INSTANCE SCHEDULE

Filter Enter property name or value

Zone	Recommendations	In use by	Internal IP	External IP	Connect
us-central1-a			10.128.0.13 (nic0)	35.226.38.46	SSH

Related Actions DISMISS

- 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, analyze, and download VM instance logs
- Setup Firewall Rules Control traffic to and from a VM instance
- Patch Management Schedule patch updates and view patch compliance VM instance

Select an instance PERMISSIONS LABELS MONITORING

Please select at least one resource.

35.226.38.46

U: 0.00 kbit/s D: 0.00 kbit/s EN 10:32

Dashboard Course: Praktikum Cloud Comp... MODUL 5 PRAKTIKUM.pdf - Google VM instances - Compute Engine Welcome to nginx!

Not secure | 35.226.38.46

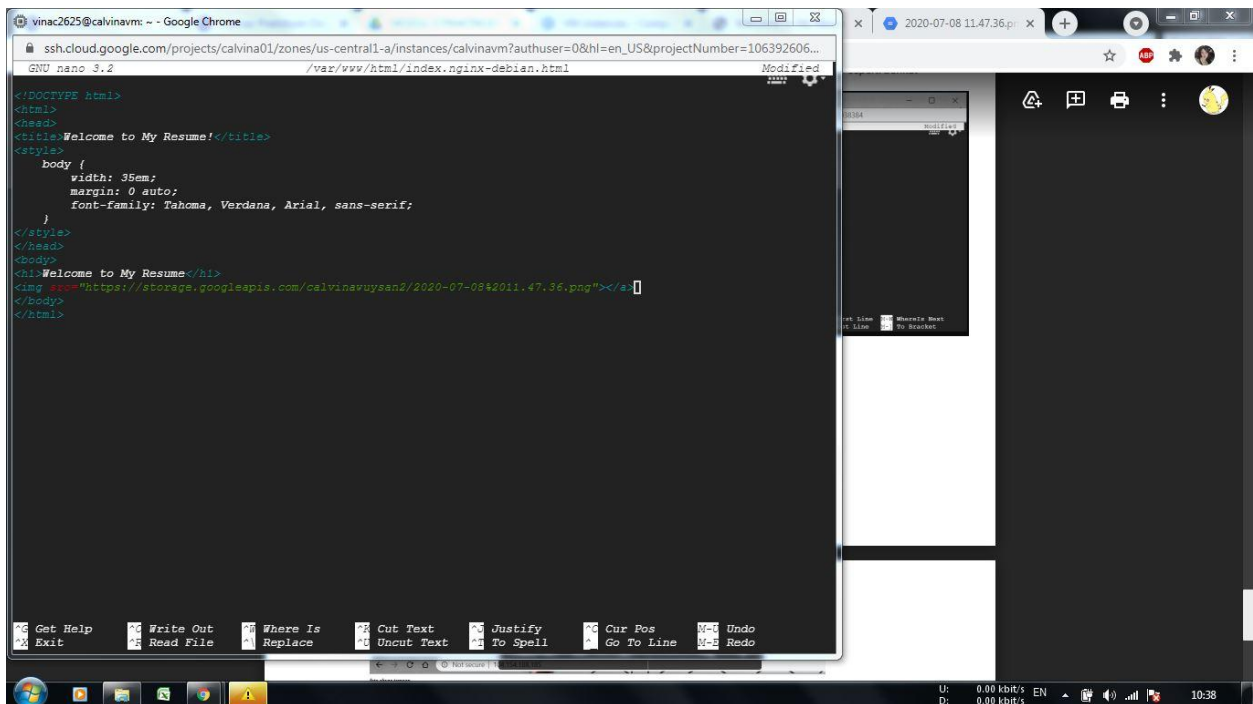
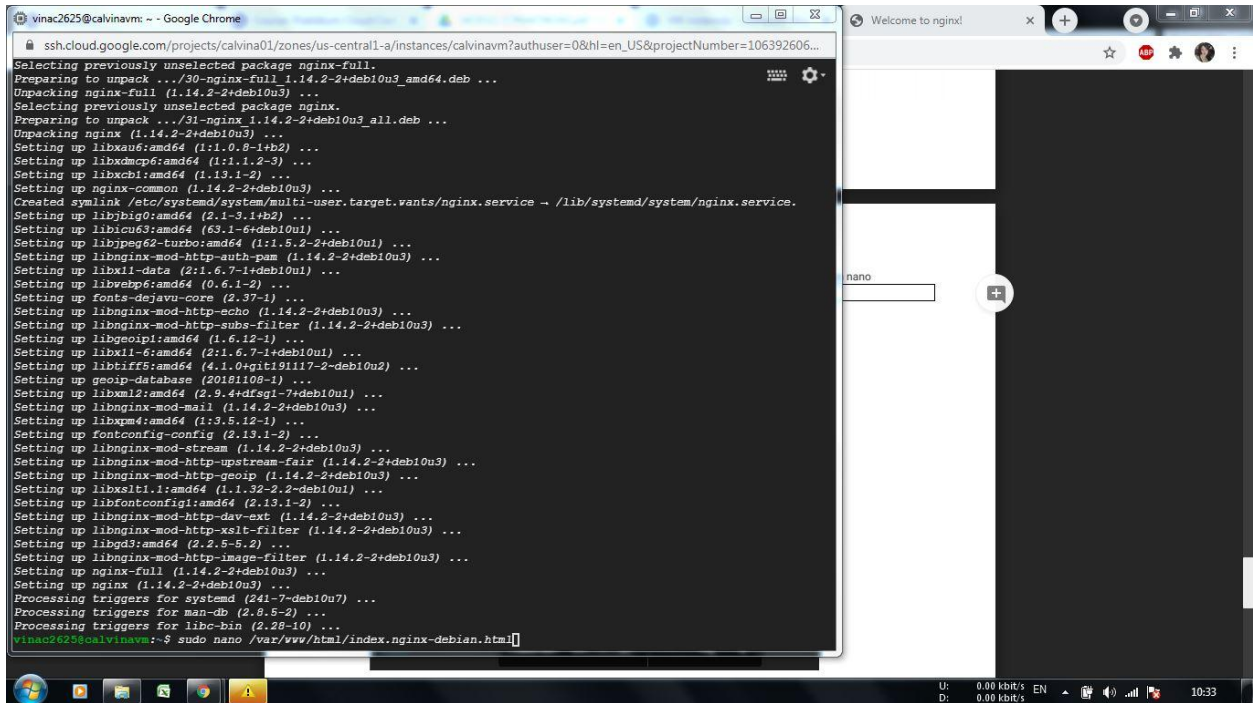
Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

U: 0.00 kbit/s D: 0.00 kbit/s EN 10:33



Dashboard

Course: Praktikum Cloud

MODUL 5 PRAKTIKUM

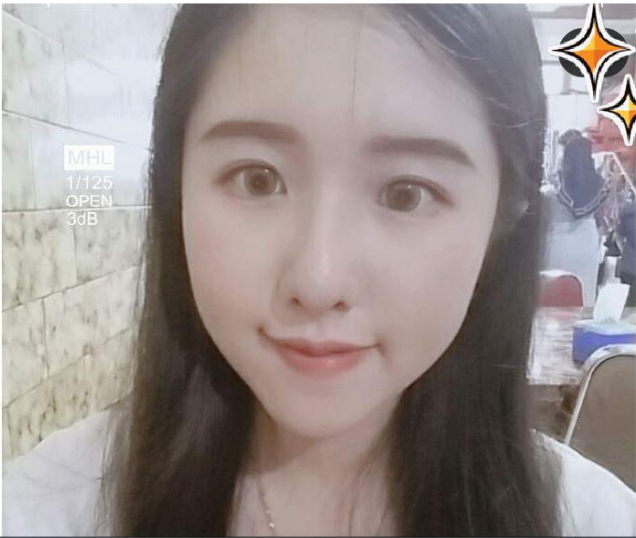
VM instances - Comput

Welcome to My Resume

2020-07-08 11:47:36

Not secure | 35.226.38.46

Welcome to My Resume



U: 0.00 kbit/s

D: 0.00 kbit/s

EN

10:38