



GCP Cluster Creation And Cloud Credit Redemption

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Agenda

- **GCP Cluster Creation**
- **GCP Coupon Redemption and Cloud Access**

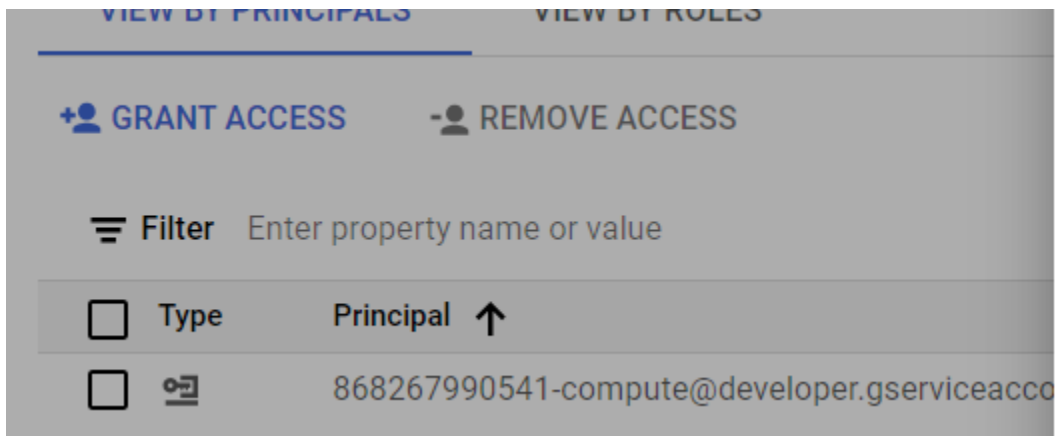
GCP Cluster Creation

Enablers for Your GCP Cluster Creation

Enable the following APIs:

- Cloud Dataproc API
- Compute Engine API
- Cloud Resource Manager API

In IAM Admin, add “Storage Admin” role.



Full access to most Google Cloud resources. See the list of included permissions.

Role

Storage Admin

Grants full control of buckets and objects.

IAM condition (optional) ?

+ ADD IAM CONDITION


During Cluster Creation

1. Create a “Single Node” cluster
2. Enable “Component Gateway” and select “Jupyter Notebook”.
3. Update “Primary disk type” dropdown to “Standard Persistent Disk”.
4. Update Machine “Series” to “E2”.
5. Uncheck “Internal IP Only”

Create a Dataproc cluster on Compute Engine

- **Set up cluster**
Begin by providing basic information.
- **Configure nodes (optional)**
Change node compute and storage capabilities.
- **Customize cluster (optional)**
Add cluster properties, features, and actions.
- **Manage security (optional)**
Change access, encryption, and security settings.

Internal IP only

☐ Configure all instances to have only internal IP addresses. [Learn more](#) 

Labels

A list of key:value pairs to attach to the cluster for tracking.

[+ ADD LABELS](#)

Cluster properties

Use cluster properties to add or modify configuration files when creating a cluster.

Billing Note

- Stop your virtual machine (or cluster) after each use.
- Don't forget to disable billing after each use.
 - Don't keep your VM (or cluster) running overnight.
 - Wait for your VM or cluster to completely stop before disabling the billing.

Get Cloud Credits via GCP Coupons

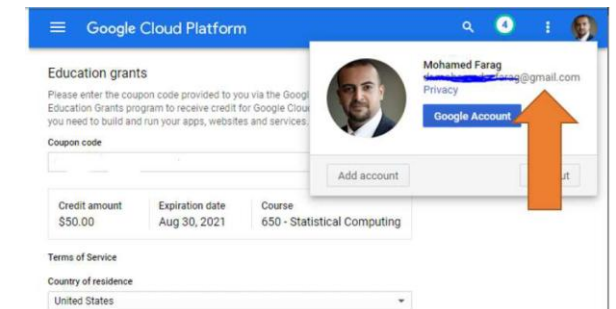
1. General Note
2. Redeem your GCP Coupon
3. Validate Successful Redemption of the Coupon
4. Disable Account Billing
5. Operational Note
6. Run out of Credits?!

1. General Notes

- When redeeming **GCP** coupon code, you must use a Gmail account. **Please DO NOT use your Andrew email.**
- Your Gmail account should not have used Free Trial Credits before.
 - If you are unsure whether your Gmail account used Free Trial credits, create a new Gmail account and use it.

2. Redeem Your GCP Coupon

- Click on the GCP Coupon Redemption Link on Canvas
- Fill in Your First Name, Last Name and Andrew Email ID
- You will receive an email on your @andrew.cmu.edu email to verify your email. Click on the Link inside the email to verify it.
- You will receive another email on your @andrew.cmu.edu with the coupon.
- Copy the Coupon code and navigate to:
<https://console.cloud.google.com/education>
- **Switch to Your Gmail email (from top-right corner) prior to pasting your code. Then paste your coupon, and redeem it.**



3. Validate Your Successful Credit Redemption

- Navigate to the “Billing” section.
- Click on the “Credits” section from the left navigate menu.

Google Cloud

dataproc

×

Search

Billing / Credits / All Credits

Overview

Credits

Cost management

Reports

Cost table

Cost breakdown

Budgets & alerts

Billing export

Anomalies

Cost optimization

FinOps hub

Committed use discou...

CUD analysis

Pricing

Cost estimation

Credits

Billing management

All Credits

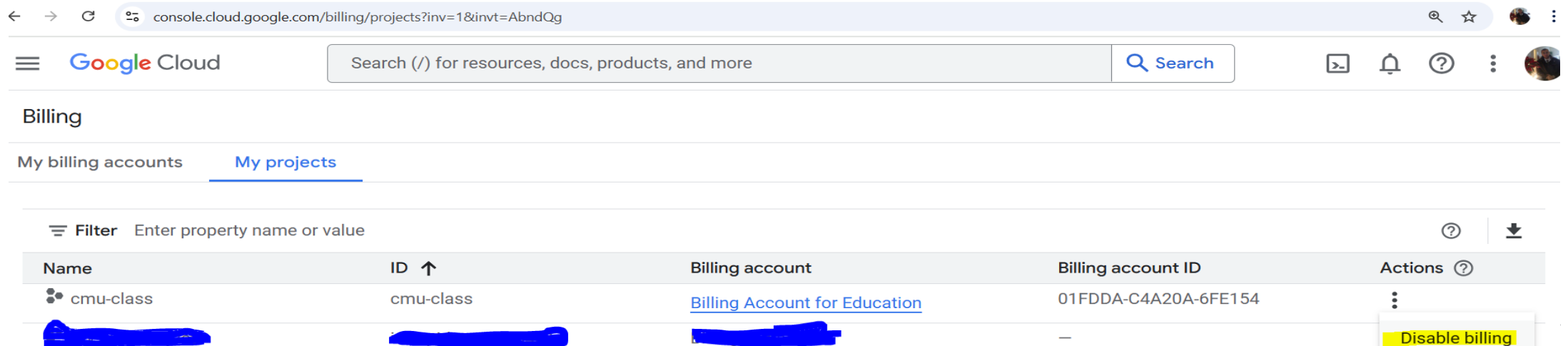
View and download credit details here. Active committed use discounts are not included here and can be viewed on the [Commitments page](#).

Filter Filter credits

Credit name	Status ↑	Percent remaining	Remaining value	Original value	Type	Cred
14763 - Systems and Toolchains for AI Engineers	Available	100%	\$50.00	\$50.00	One-time	0AF3

4. Disable Account Billing

- Disable your Gmail account billing by navigating to the billing section and choose to manage your billing account.
- Click on the three vertical dots next to your project name to disable the billing



The screenshot shows the Google Cloud Billing console interface. The browser address bar displays the URL: `console.cloud.google.com/billing/projects?inv=1&inv=AbndQg`. The page header includes the Google Cloud logo, a search bar, and navigation icons. The main content area is titled "Billing" and has two tabs: "My billing accounts" and "My projects". The "My projects" tab is active, showing a table of projects. The table has columns for Name, ID, Billing account, Billing account ID, and Actions. The first row shows a project named "cmu-class" with ID "cmu-class", associated with the "Billing Account for Education" (ID: 01FDDA-C4A20A-6FE154). The Actions column for this project shows a menu with the option "Disable billing" highlighted in yellow.

Name	ID	Billing account	Billing account ID	Actions
cmu-class	cmu-class	Billing Account for Education	01FDDA-C4A20A-6FE154	⋮ Disable billing

5. Operational Note

- After you reenable the billing, wait for 5 minutes and check your cluster's VM instances to make sure all VMs are up and running.
- If your VMs are stopped, stop the cluster and start it again.

← Cluster details Submit Job Refresh ▶ Start Stop Delete View Logs

i For PD-Standard without local SSDs, we strongly recommend provisioning 1TB or larger to ensure consistently high I/O performance. See <https://cloud.google.com/compute/docs/disks/performance> for information on disk I/O performance. [More](#)

Name	cluster-d1b5
Cluster UUID	3547e705-e5d4-4922-a3ad-f73d4301bb42
Type	Dataproc Cluster
Status	✓ Running

Monitoring Jobs **VM Instances** Configuration Web Interfaces

Filter Filter instances ?

	Name	Role	Machine type
✓	cluster-d1b5-m	Master	SSH e2-standard-2

A decorative plaid pattern with intersecting red, green, and yellow lines on a dark blue background, located on the left side of the slide.

6. Run out of credits?!

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- Monitor your cloud use by checking the “Credits” section.
 - Email farag@cmu.edu if you are near the end of your credits.
 - Allow for 24-48 hours delay to receive a new coupon.