

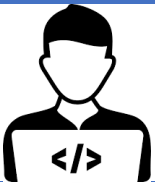


Google Cloud

Google cloud platform project

Apache Web Server on Google Cloud

Creator information



Abdullah Alowaydi



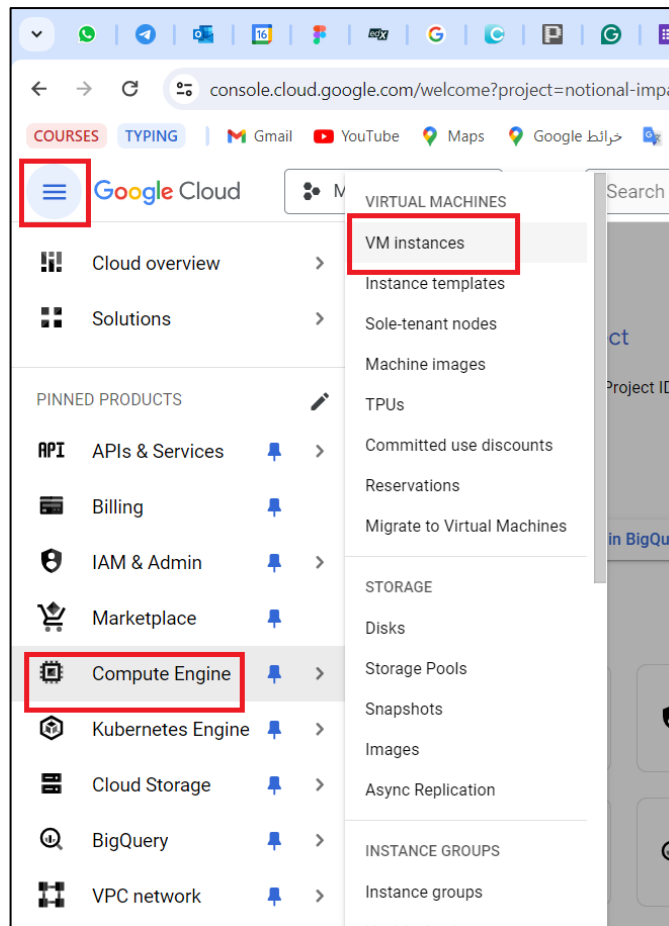
<https://github.com/3abd787>



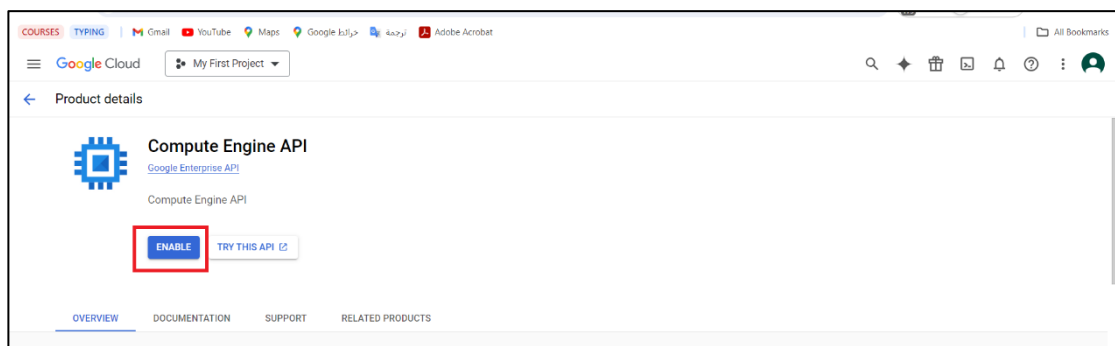
<https://www.linkedin.com/in/abdullah-alowaydi>

Guidelines:

- 1- Make your own GCP account. Through URL: <https://cloud.google.com/>
- 2- From The Navigation Menu, go to Compute Engine.
- 3- Create a virtual machine by choosing VM Instance.



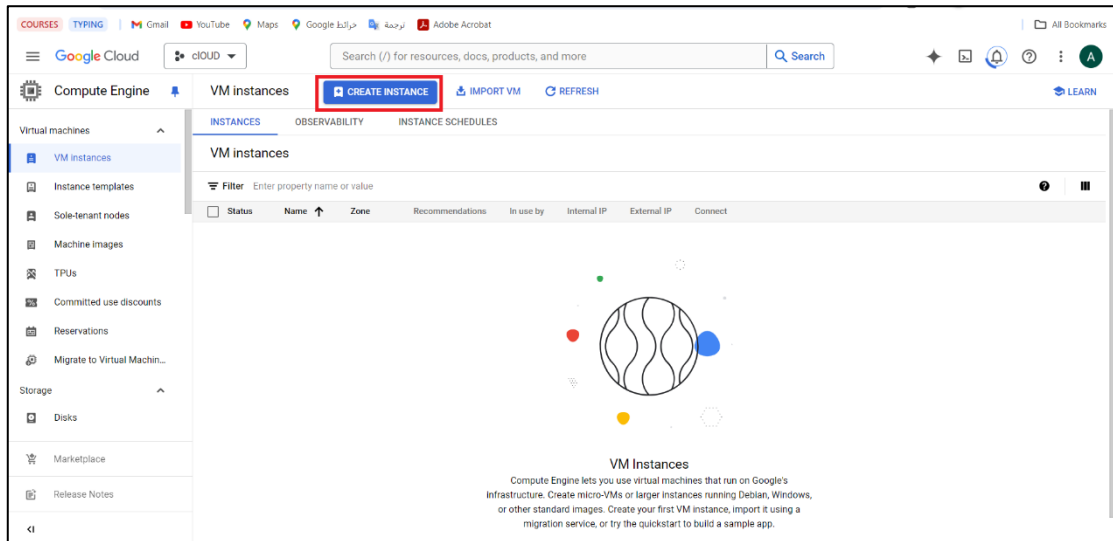
- 4- Enable Compute Engine.



Setting up the VM Instance


Create a Virtual Machine (VM)

1. Press “CREATE INSTANCE”.



2. View The boot disk default settings (Can be changed by pressing the “Change” button).

Boot disk ?

Name	instance-20240515-223155
Type	New balanced persistent disk
Size	10 GB
License type ?	Free
Image	 Debian GNU/Linux 12 (bookworm)

CHANGE

3. FireWall section: Allow HTTP & HTTPS traffic.

Firewall ?

Add tags and firewall rules to allow specific network traffic from the Internet

- ☒ Allow HTTP traffic
- ☒ Allow HTTPS traffic
- ☐ Allow Load Balancer Health Checks

Setting up VM SSH

1. Run SSH by clicking the “SSH” button.

The screenshot shows the Google Cloud VM instances page. At the top, there are tabs for 'INSTANCES', 'OBSERVABILITY', and 'INSTANCE SCHEDULES'. Below the tabs, there's a 'Filter' bar and a table of VM instances. The table has columns for Status, Name, Zone, Recommendations, In use by, Internal IP, External IP, and Connect. One instance is listed: 'instance-20240515-223155' in the 'us-central1-a' zone. The 'Connect' column for this instance has a red box around the 'SSH' button. Below the table, there are several 'Related actions' cards, including 'Explore Backup and DR', 'View billing report', 'Monitor VMs', 'Explore VM logs', 'Set up firewall rules', 'Patch management', and 'Load balance between VMs'.

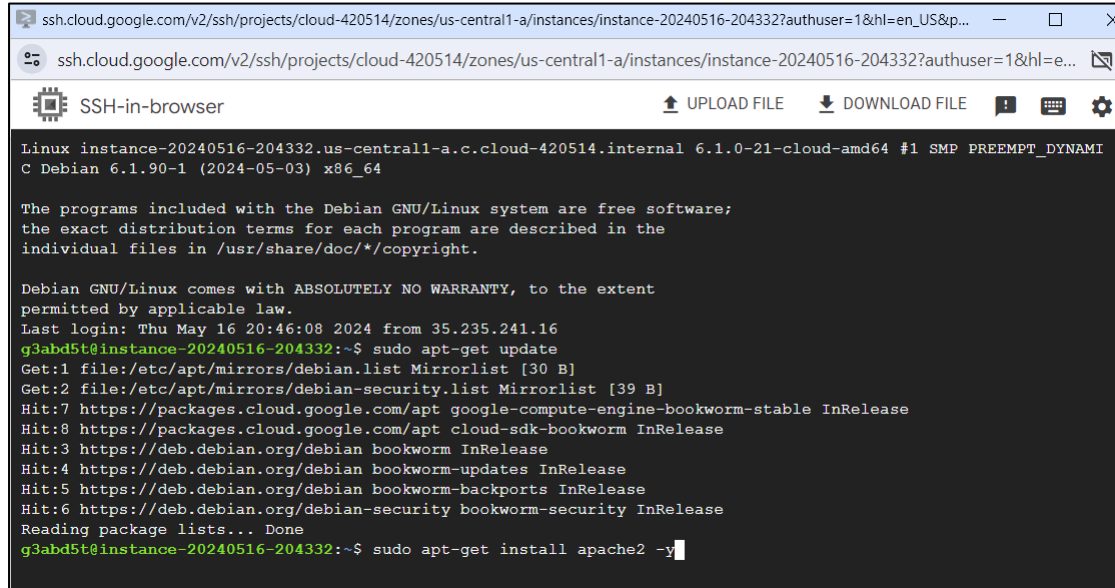
2. An SSH window will open.

3. Update packages using the Command Line by writing the cmd: **apt-get update**:

The screenshot shows an SSH terminal window. The terminal prompt is 'g3abd5t@instance-20240516-204332:~\$'. The user has entered the command 'sudo apt-get update'. The terminal output shows the Debian GNU/Linux system's free software notice and the last login time. The command is still being executed, as indicated by the cursor at the end of the command line.

4. Install apache2 server using the Command Line by writing:

```
sudo apt-get install apache2 -y
```



```
Linux instance-20240516-204332.us-central1-a.c.cloud-420514.internal 6.1.0-21-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.90-1 (2024-05-03) 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.

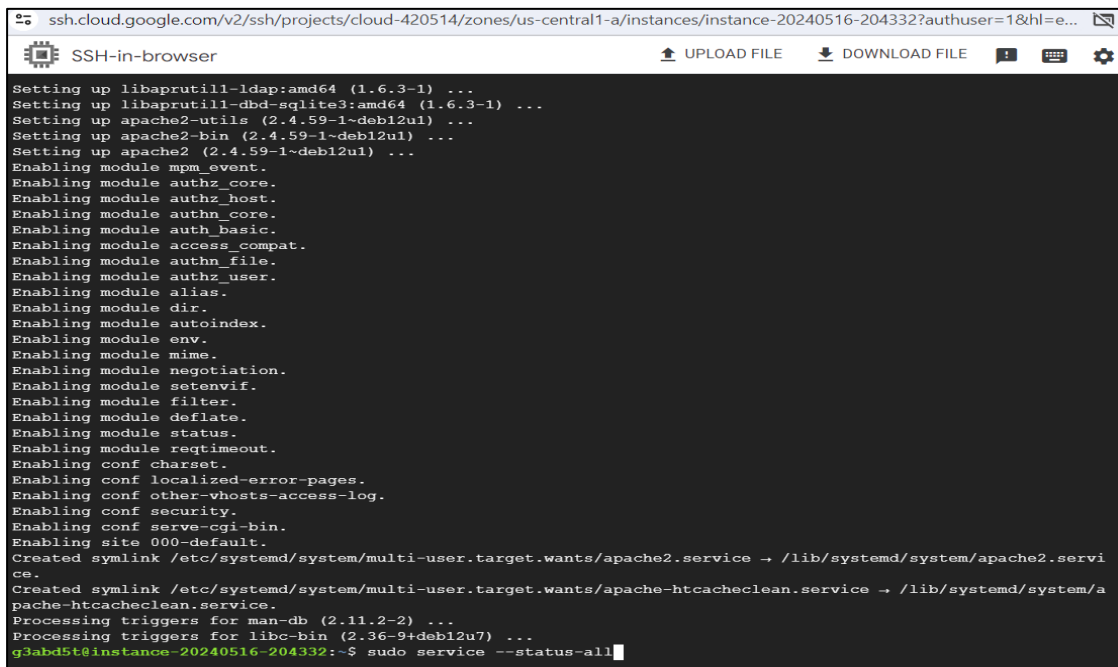
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu May 16 20:46:08 2024 from 35.235.241.16
g3abd5t@instance-20240516-204332:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:2 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Hit:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease
Hit:8 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease
Hit:3 https://deb.debian.org/debian bookworm InRelease
Hit:4 https://deb.debian.org/debian bookworm-updates InRelease
Hit:5 https://deb.debian.org/debian bookworm-backports InRelease
Hit:6 https://deb.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
g3abd5t@instance-20240516-204332:~$ sudo apt-get install apache2 -y
```

Now the Server is installed on the VM.

Running the server

1. To check if the server is working use the Command Line by writing:

```
sudo service --status-all
```

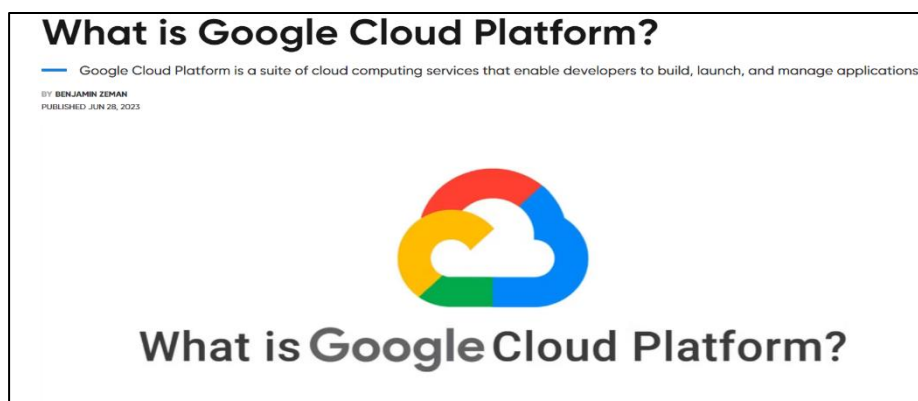
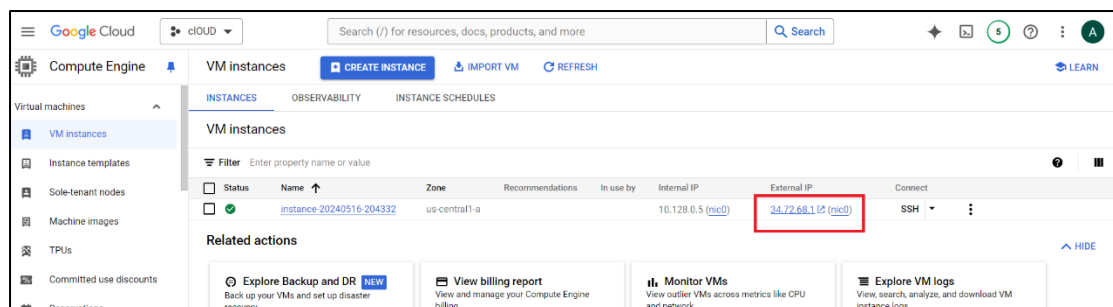


```
Setting up libaprutil1-ldap:amd64 (1.6.3-1) ...
Setting up libaprutil1-dbd-sqlite3:amd64 (1.6.3-1) ...
Setting up apache2-utils (2.4.59-1~deb12u1) ...
Setting up apache2-bin (2.4.59-1~deb12u1) ...
Setting up apache2 (2.4.59-1~deb12u1) ...
Enabling module mpm_event.
Enabling module authz_core.
Enabling module authz_host.
Enabling module authn_core.
Enabling module auth_basic.
Enabling module access_compat.
Enabling module authn_file.
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for man-db (2.11.2-2) ...
Processing triggers for libc-bin (2.36-9+deb12u7) ...
g3abd5t@instance-20240516-204332:~$ sudo service --status-all
```

```
SSH-in-browser
[+] UPLOAD FILE
[-] DOWNLOAD FILE
[!]
[?]
[⚙]

Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.servi
ce.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/a
pache-htcacheclean.service.
Processing triggers for man-db (2.11.2-2) ...
Processing triggers for libc-bin (2.36-9+deb12u7) ...
g3abd5t@instance-20240516-204332:~$ sudo service --status-all
[ + ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uuidd
g3abd5t@instance-20240516-204332:~$
```

Note: if you have index.html upload it and move it to **/var/www/html** Finally after you upload your website now go to your external IP and click on it.



I hope that the project will help you.