

# GOOGLE CLOUD PLATFORM PROJECT

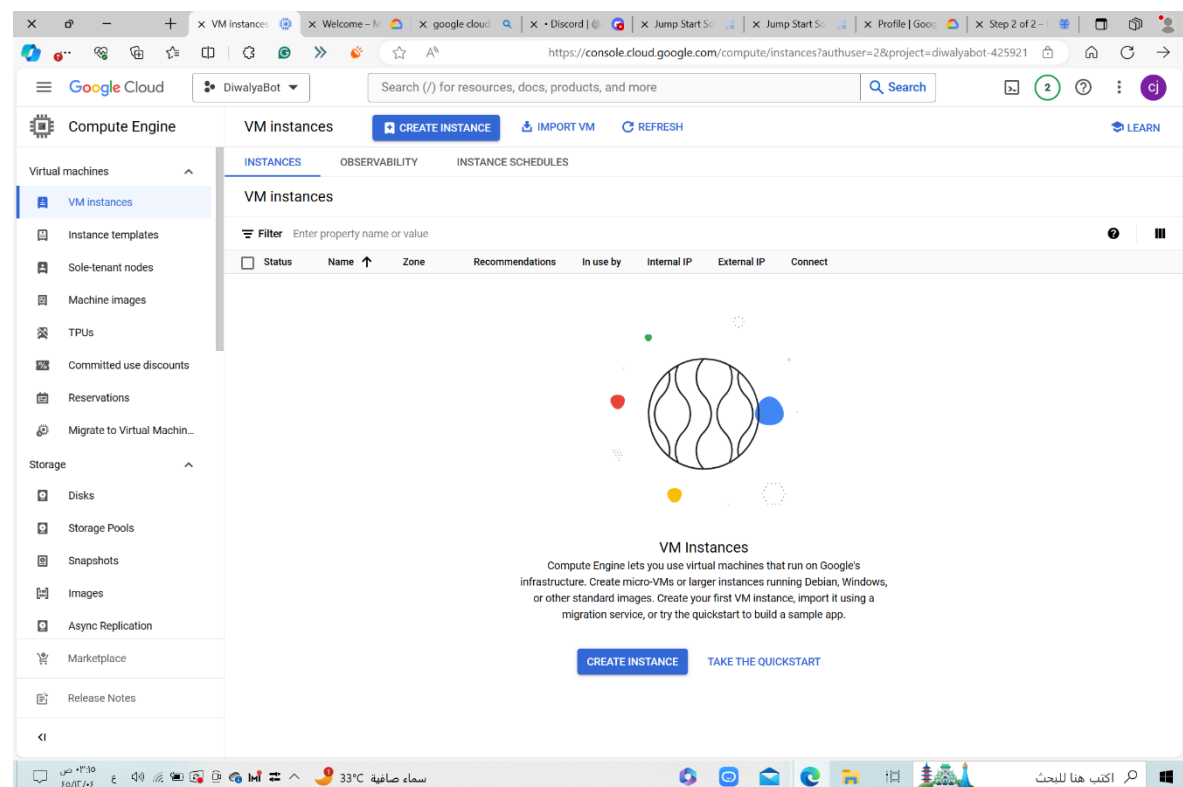
## Apache Web Server on Google

by Noura alhenaki

### Guidelines:

- First make your own GCP account. project Cloud
- second after you make your account enable compute engine
- third create your first virtual machine

. **VM settings:** here you make your first VM.



The boot disk settings.

### Boot disk ?

Name	instance-1
Type	New balanced persistent disk
Size	10 GB
License type ?	Free
Image	Debian GNU/Linux 11 (bullseye)

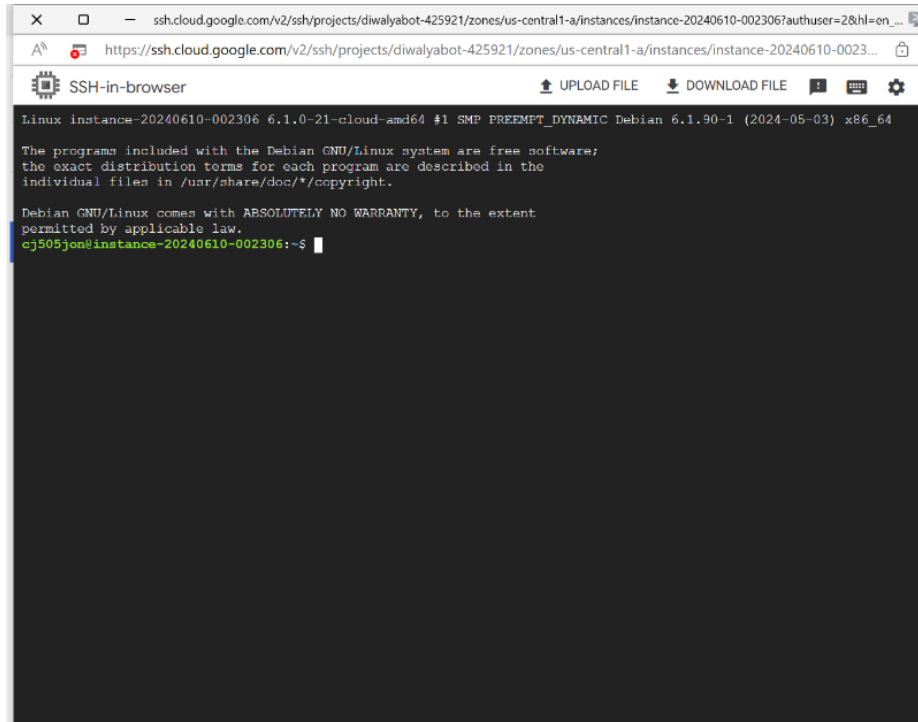
Allow HTTP and HTTPS traffic.

**VM SSH:** After we create our first VM, we'll run SSH from clicking the SSH button.

The screenshot shows the Google Cloud console interface for VM instances. The left sidebar contains navigation options for Compute Engine, Storage, and Marketplace. The main content area displays a table of VM instances with columns for Status, Name, Zone, Recommendations, In use by, Internal IP, External IP, and Connect. A single instance is listed with the name 'instance-20240610-002306' and an SSH button. Below the table, there are several 'Related actions' cards such as 'Explore Backup and DR', 'View billing report', 'Monitor VMs', 'Explore VM logs', 'Set up firewall rules', 'Patch management', and 'Load balance between VMs'.

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
Running	instance-20240610-002306	us-central1-a			10.128.0.2 (nic0)	34.71.63.4 (nic0)	SSH

Now we open the SSH window.



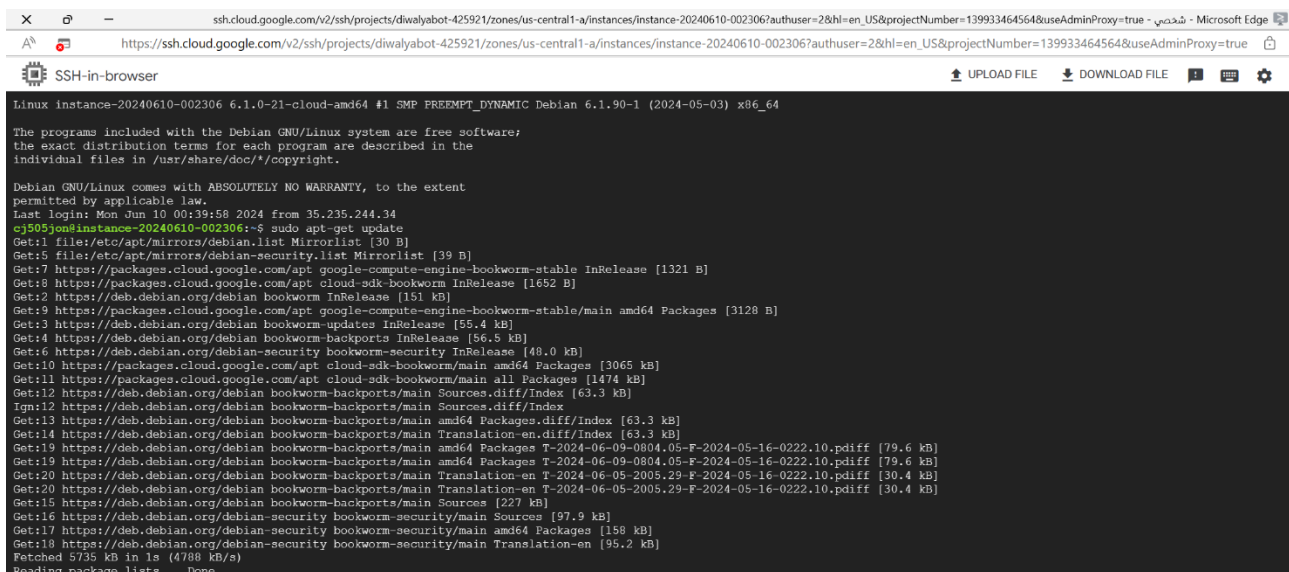
The screenshot shows a web browser window titled "SSH-in-browser" with a URL bar containing a Google Cloud SSH session link. The terminal window displays the following text:

```
Linux instance-20240610-002306 6.1.0-21-cloud-amd64 #1 SMP FREEMPT_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.
cj505jon@instance-20240610-002306:~$
```

First thing is to update packages by the cmd: **apt-get update**



The screenshot shows the same SSH-in-browser window after running the 'apt-get update' command. The terminal output is as follows:

```
Linux instance-20240610-002306 6.1.0-21-cloud-amd64 #1 SMP FREEMPT_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: Mon Jun 10 00:39:58 2024 from 35.235.244.34
cj505jon@instance-20240610-002306:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:5 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Get:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease [1321 B]
Get:8 https://packages.cloud.google.com/apt cloud-sdk-bookworm InRelease [1652 B]
Get:12 https://deb.debian.org/debian bookworm InRelease [151 kB]
Get:9 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable/main amd64 Packages [3128 B]
Get:13 https://deb.debian.org/debian bookworm-updates InRelease [55.4 kB]
Get:4 https://deb.debian.org/debian bookworm-backports InRelease [56.5 kB]
Get:6 https://deb.debian.org/debian-security bookworm-security InRelease [48.0 kB]
Get:10 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main amd64 Packages [3065 kB]
Get:11 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main all Packages [1474 kB]
Get:12 https://deb.debian.org/debian bookworm-backports/main Sources.diff/Index [63.3 kB]
Ign:12 https://deb.debian.org/debian bookworm-backports/main Sources.diff/Index
Get:13 https://deb.debian.org/debian bookworm-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:14 https://deb.debian.org/debian bookworm-backports/main Translation-en.diff/Index [63.3 kB]
Get:19 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-06-09-0804.05-F-2024-05-16-0222.10.pdiff [79.6 kB]
Get:19 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-06-09-0804.05-F-2024-05-16-0222.10.pdiff [79.6 kB]
Get:20 https://deb.debian.org/debian bookworm-backports/main Translation-en T-2024-06-05-2005.29-F-2024-05-16-0222.10.pdiff [30.4 kB]
Get:20 https://deb.debian.org/debian bookworm-backports/main Translation-en T-2024-06-05-2005.29-F-2024-05-16-0222.10.pdiff [30.4 kB]
Get:15 https://deb.debian.org/debian bookworm-backports/main Sources [227 kB]
Get:16 https://deb.debian.org/debian-security bookworm-security/main Sources [97.9 kB]
Get:17 https://deb.debian.org/debian-security bookworm-security/main amd64 Packages [158 kB]
Get:18 https://deb.debian.org/debian-security bookworm-security/main Translation-en [95.2 kB]
Fetched 5735 kB in 1s (4788 kB/s)
Reading package lists... Done
```

After that install apache2 server the cmd: `apt-get install apache2-y`

```
Reading package lists... Done
cj505jon@instance-20240610-002306:~$ sudo apt-get install
apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
0 upgraded, 0 newly installed, 0 to remove and 4 not upgraded.
-bash: apache2: command not found
```

We installa pache2

server successfully but how to check if the server is working the cmd: `service-status-all`

```
status all: unrecognized service
cj505jon@instance-20240610-002306:~$ sudo service --status-all
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uuid
cj505jon@instance-20240610-002306:~$
```