

# Google Cloud Platform project

Apache Web Server on Google Cloud



April 2024

by Norah Altwijri

LinkedIn: @Norahaltwijri

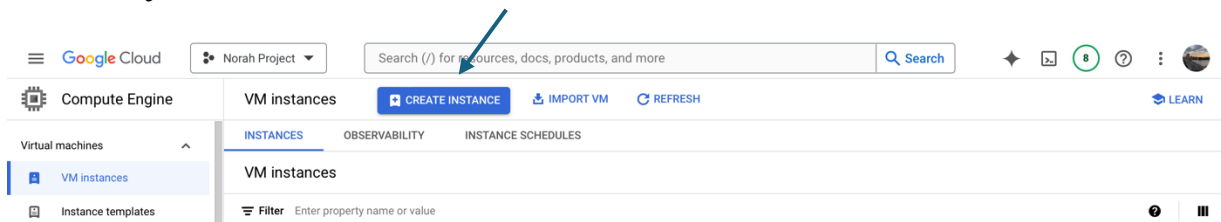
## Guidelines:

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

## Hands-on-deck:

### VM settings:

#### Create your VM



#### The boot disk settings:

### Boot disk ?

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

Allow HTTP and 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

## VM SSH:

After we create our first VM, we'll run SSH by clicking the SSH button.

The screenshot shows the Google Cloud Platform console for the 'Norah Project'. The left sidebar lists various services under 'Compute Engine', 'Storage', and 'Instance groups'. The main panel displays 'VM instances' with a table of two instances: 'instance-20240417-134300' and 'webnorah'. The 'SSH' button in the 'Connect' column for the 'webnorah' instance is circled in blue with an arrow pointing to it. 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
<input checked="" type="checkbox"/>	<a href="#">instance-20240417-134300</a>	us-central1-a			10.128.0.3 (nic0)	35.192.142.138 (nic0)	SSH
<input checked="" type="checkbox"/>	<a href="#">webnorah</a>	us-central1-a			10.128.0.4 (nic0)	<a href="#">34.72.153.162</a> (nic0)	SSH

Now we open the SSH window.

```
SSH-in-browser

Linux webnorah.us-central1-a.c.norah-project-420513.internal 6.1.0-20-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.85-1 (2024-04-11) 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.
```

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

```
SSH-in-browser

Linux webnorah.us-central1-a.c.norah-project-420513.internal 6.1.0-20-cloud-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.85-1 (2024-04-11) 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.

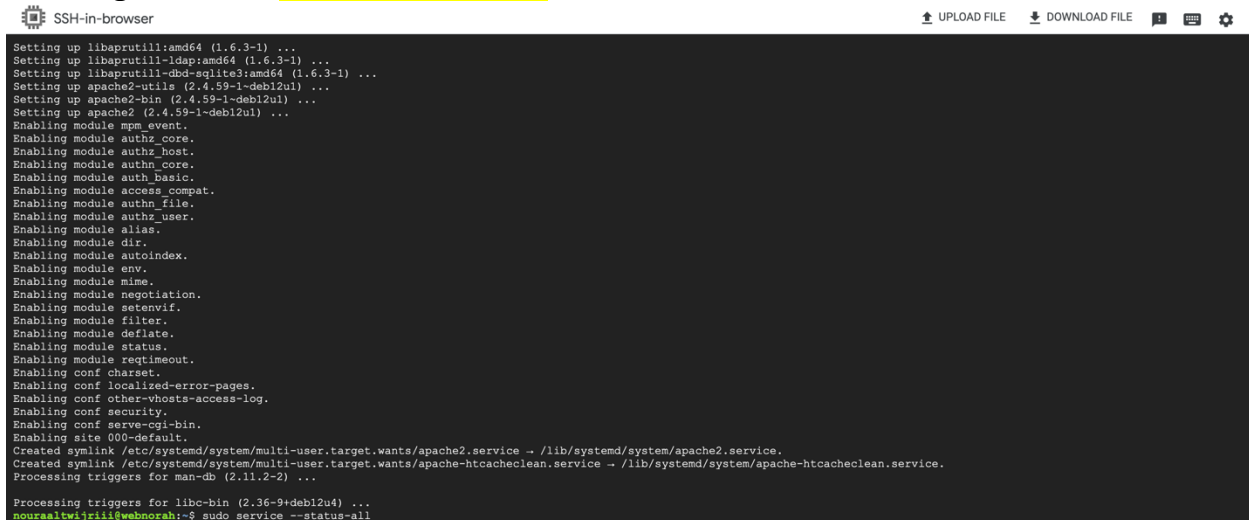
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
nouzaaltwjrlii@webnorah:~$ sudo apt-get update
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:5 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Get:7 https://packages.cloud.google.com/apt/google-compute-engine-bookworm-stable InRelease [5146 B]
Get:8 https://packages.cloud.google.com/apt/cloud-sdk-bookworm InRelease [6406 B]
Get:2 https://deb.debian.org/debian bookworm InRelease [151 kB]
Get:3 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:9 https://packages.cloud.google.com/apt/cloud-sdk-bookworm/main amd64 Packages [477 kB]
Get:10 https://deb.debian.org/debian bookworm-backports/main Sources.diff/Index [63.3 kB]
Get:11 https://deb.debian.org/debian bookworm-backports/main amd64 Packages.diff/Index [63.3 kB]
Get:15 https://deb.debian.org/debian bookworm-backports/main Sources T-2024-04-16-1405:22-F-2024-04-15-2018.42.pdiff [1400 B]
Get:16 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-04-16-1405:22-F-2024-04-15-2018.42.pdiff [1365 B]
Get:12 https://deb.debian.org/debian-security bookworm-security/main Sources [90.3 kB]
Get:13 https://deb.debian.org/debian-security bookworm-security/main amd64 Packages [154 kB]
Get:14 https://deb.debian.org/debian-security bookworm-security/main Translation-en [93.6 kB]
Fetched 1267 kB in 1s (895 kB/s)
Reading package lists... Done
```

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

```
SSH-in-browser

nouzaaltwjrlii@webnorah:~$ sudo apt-get install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libjansson4 liblua5.3-0 ssl-cert
```

we installed the apache2 server successfully but how to check if the server is working the cmd: **service --status-all**



```
SSH-in-browser
Setting up libaprutil1: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) ...
noureaaltwijrii@webnorah:~$ sudo service --status-all
```

The check is completed.



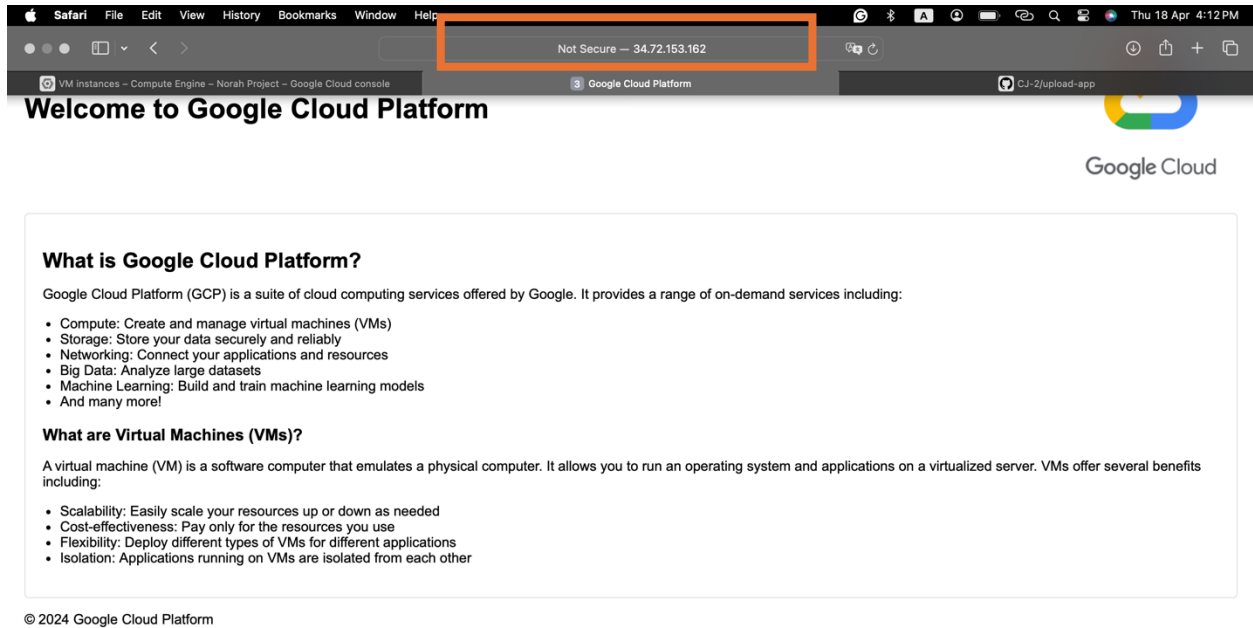
```
noureaaltwijrii@webnorah:~$ sudo service --status-all
[ + ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uuid
noureaaltwijrii@webnorah:~$
```

**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.

[34.72.153.162](http://34.72.153.162) [↗](#) (nic0)



That's it! I hope this helps and inspires you.