

# GOOGL CLOUD PLATFORM PROJECT

## APACHE WEB SERVER ON GOOGLE CLOUD

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### GUIDELINES:

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

### HANDS-ON-DECK \$:~


VM setting:

Create your VM.

The screenshot displays the Google Cloud Platform console interface. The top navigation bar includes the Google Cloud logo, a 'Cloud project' dropdown, a search bar, and various utility icons. The left sidebar shows the 'Compute Engine' section expanded, with 'VM instances' selected. The main content area is titled 'VM instances' and features a 'CREATE INSTANCE' button. Below this, there are tabs for 'INSTANCES', 'OBSERVABILITY', and 'INSTANCE SCHEDULES'. The 'INSTANCES' tab is active, showing a table with columns for Status, Name, Zone, Recommendations, and Connect. A single instance is listed with the name 'instance-20240417-132904' and zone 'us-central1-a'. Below the table, there are 'Related actions' such as 'Explore Backup and DR', 'View billing report', 'Monitor VMs', and 'Explore VM logs'. On the right side, there is a 'Tutorial' panel titled 'Get started with Compute Engine' with several steps, including 'Create a website or application', 'Create a "hello world" website on IIS', 'Create a "hello world" website on Apache', and 'Transfer files to a Windows VM'.

The boot disk settings.

## Boot disk ?

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

[CHANGE](#)

Allow HTTP and HTTPS traffic.

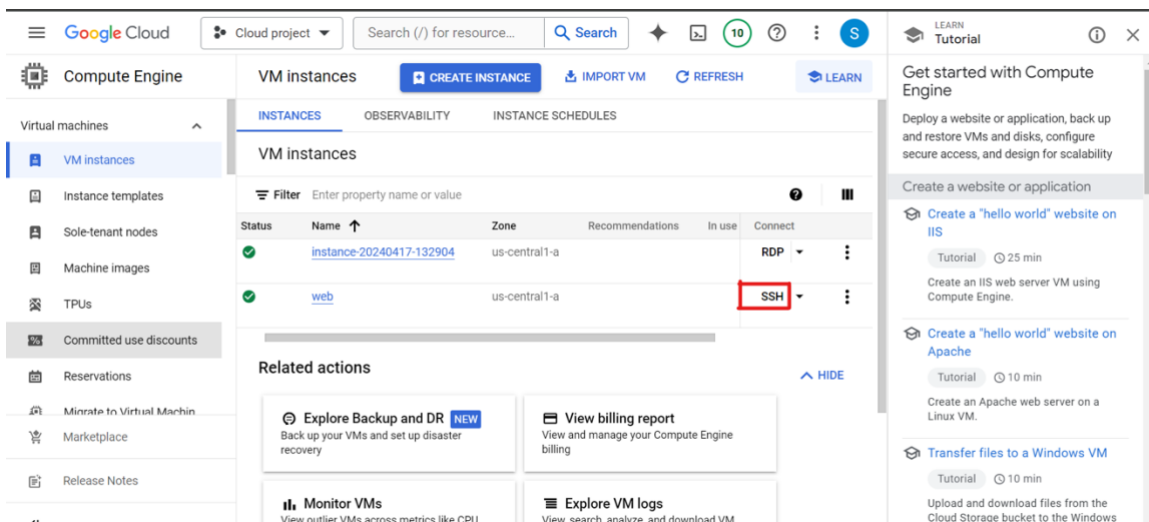
## Firewall ?

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 creating VM, you will run SSH from clicking the SSH button.



The screenshot shows the Google Cloud Platform console interface. On the left, the 'Compute Engine' sidebar is visible with 'VM instances' selected. The main panel displays a table of VM instances. The first instance is 'instance-20240417-132904' and the second is 'web'. The 'web' instance is highlighted. In the 'Connect' column for the 'web' instance, the 'SSH' button is highlighted with a red box. Below the table, there are 'Related actions' such as 'Explore Backup and DR', 'View billing report', 'Monitor VMs', and 'Explore VM logs'. On the right, there is a 'Get started with Compute Engine' sidebar with various tutorials.

Now you can see the SSH window.

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

```
SSH-in-browser  UPLOAD FILE  DOWNLOAD FILE  ?  ?  ?

sh4had_123@web:~$ 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]
Hit:7 https://packages.cloud.google.com/apt google-compute-engine-bookworm-stable InRelease
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:9 https://packages.cloud.google.com/apt cloud-sdk-bookworm/main amd64 Packages [477 kB]
Get:6 https://deb.debian.org/debian-security bookworm-security InRelease [48.0 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.p
diff [1400 B]
Get:15 https://deb.debian.org/debian bookworm-backports/main Sources T-2024-04-16-1405.22-F-2024-04-15-2018.42.p
diff [1400 B]
Get:16 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-04-16-1405.22-F-2024-04-15-20
18.42.pdiff [1365 B]
Get:16 https://deb.debian.org/debian bookworm-backports/main amd64 Packages T-2024-04-16-1405.22-F-2024-04-15-20
18.42.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 1262 kB in 1s (997 kB/s)
Reading package lists... Done
```

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

```
sh4had_123@web:~$ 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
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libjansson4 liblua5.3-0 ssl-cert
0 upgraded, 11 newly installed, 0 to remove and 1 not upgraded.
Need to get 2367 kB of archives.
After this operation, 8454 kB of additional disk space will be used.
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [30 B]
Get:6 file:/etc/apt/mirrors/debian-security.list Mirrorlist [39 B]
Get:2 https://deb.debian.org/debian bookworm/main amd64 libapr1 amd64 1.7.2-3 [102 kB]
Get:3 https://deb.debian.org/debian bookworm/main amd64 libaprutil1 amd64 1.6.3-1 [87.8 kB]
Get:4 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1 [13.6 kB]
Get:5 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-ldap amd64 1.6.3-1 [11.8 kB]
Get:7 https://deb.debian.org/debian bookworm/main amd64 libjansson4 amd64 2.14-2 [40.8 kB]
Get:8 https://deb.debian.org/debian bookworm/main amd64 liblua5.3-0 amd64 5.3.6-2 [123 kB]
Get:9 https://deb.debian.org/debian bookworm/main amd64 ssl-cert all 1.1.2 [21.1 kB]
Get:10 https://deb.debian.org/debian-security bookworm-security/main amd64 apache2-bin amd64 2.4.59-1~deb12u1 [1
380 kB]
Get:11 https://deb.debian.org/debian-security bookworm-security/main amd64 apache2-data all 2.4.59-1~deb12u1 [16
0 kB]
Get:12 https://deb.debian.org/debian-security bookworm-security/main amd64 apache2-utils amd64 2.4.59-1~deb12u1
[207 kB]
Get:13 https://deb.debian.org/debian-security bookworm-security/main amd64 apache2 amd64 2.4.59-1~deb12u1 [220 k
B]
Fetched 2367 kB in 0s (5352 kB/s)
Preconfiguring packages ...
```

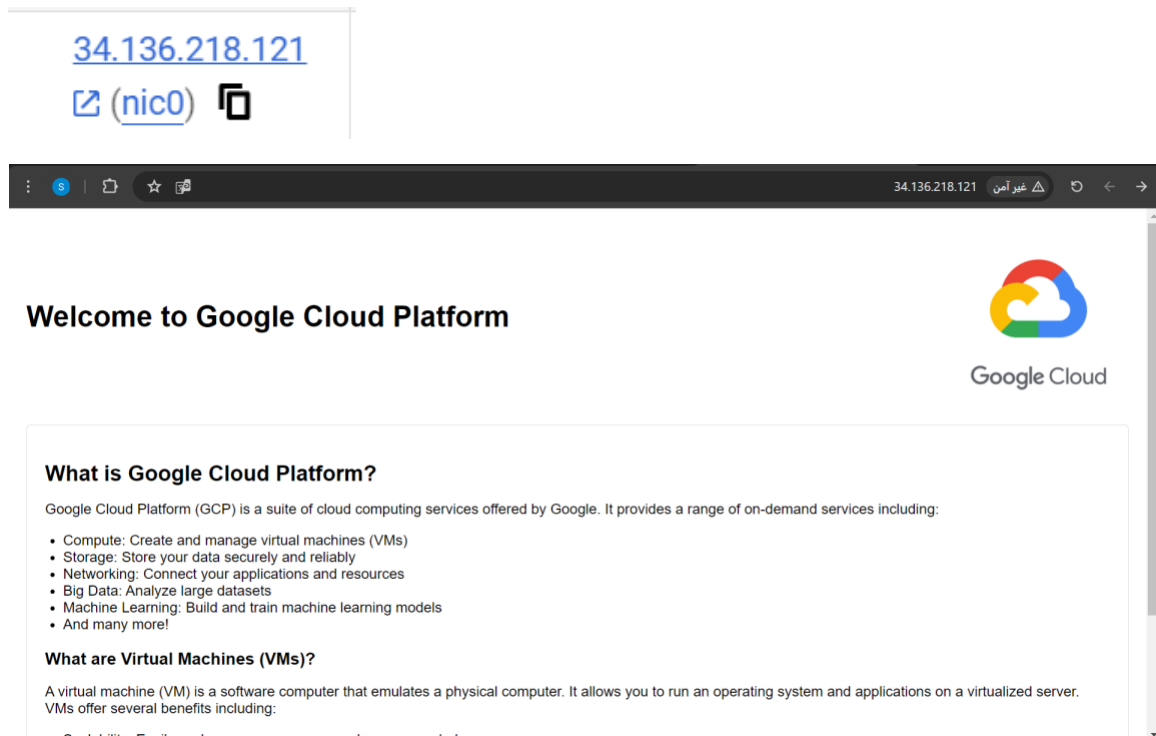
we install apache2 server successfully but how to check if the server is working the cmd:  
**service -status-all**

```
sh4had_123@web:~$ sudo service --status-all
[ + ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uidd
```

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.



And there we go, all finished! I hope the project helps you.