

# Goggle cloud platform lab 1

## Apache Web Server on Goggle Cloud

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# Guidelines

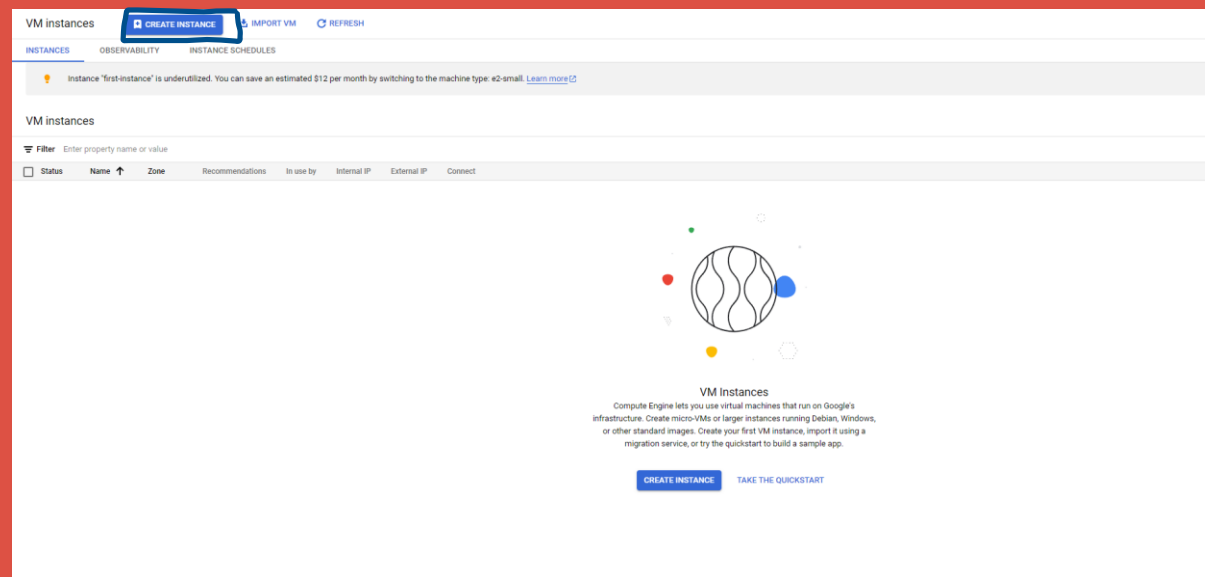


- Guidelines:
- First make your own GCP account.
- Second after you make your account enable compute engine.
- Third create your first virtual machine (VM).

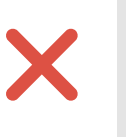
# Hands-on-deck




- VM Settings:
- Here you make you first VM.



# Boot disk settings



Boot disk <span>?</span>	
Name	instance-20240507-132748
Type	New balanced persistent disk
Size	10 GB
License type <span>?</span>	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



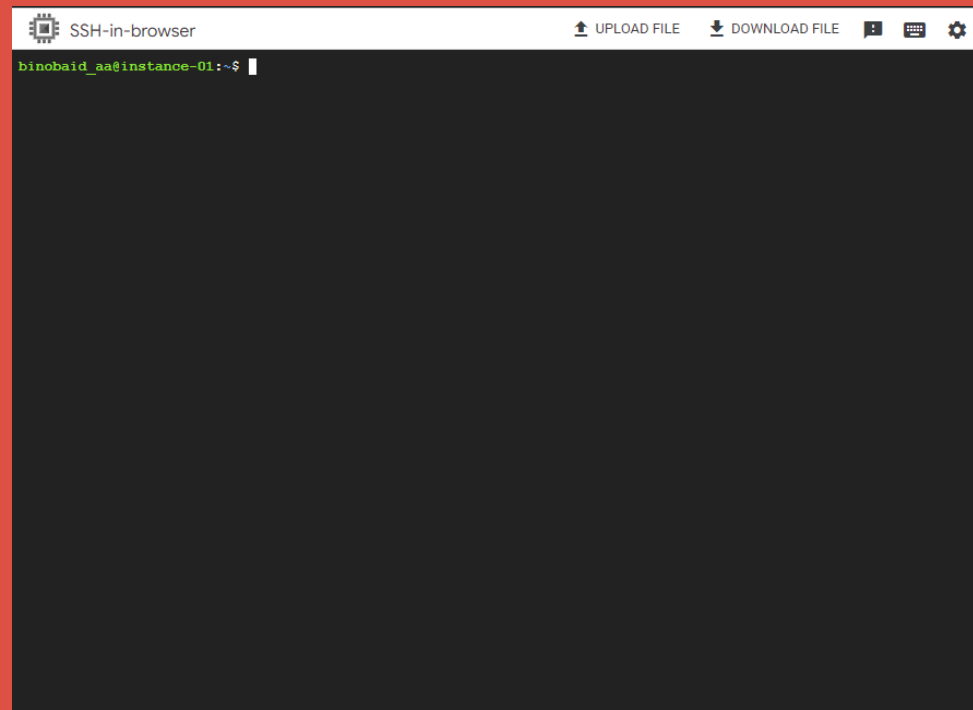
- After we create our first VM , we 'll run SSH from clicking the SSH button

<input type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✓	<a href="#">instance-01</a>	us-central1-a			10.128.0.8 (nic0)	<a href="#">34.69.246.116</a> <a href="#">↗</a> (nic0)	SSH ▾

# SSH window



- Now we open SSH window.



# SSH window



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

```
SSH-in-browser  UPLOAD FILE  DOWNLOAD FILE  [chat icon] [terminal icon] [settings icon]
binobaid_aa@instance-01:~$ apt-get update
Reading package lists... Done
E: Could not open lock file /var/lib/apt/lists/lock - open (13: Permission denied)
E: Unable to lock directory /var/lib/apt/lists/
binobaid_aa@instance-01:~$
```



# SSH window



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

```
binobaid aa@instance-01:~$ 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 lib
  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-sql
  libjansson4 liblua5.3-0 ssl-cert
0 upgraded, 11 newly installed, 0 to remove and 0 not upgraded.
Need to get 2341 kB of archives.
After this operation, 8389 kB of additional disk space will be used.
Get:1 file:///etc/apt/mirrors/debian.list Mirrorlist [30 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
Get:4 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-dbd-sqlite3 amd64 1.
Get:5 https://deb.debian.org/debian bookworm/main amd64 libaprutil1-ldap amd64 1.6.3-1 [
Get:6 https://deb.debian.org/debian bookworm/main amd64 libjansson4 amd64 2.14-2 [40.8 k
Get:7 https://deb.debian.org/debian bookworm/main amd64 liblua5.3-0 amd64 5.3.6-2 [123 k
Get:8 https://deb.debian.org/debian bookworm/main amd64 apache2-bin amd64 2.4.57-2 [1364
Get:9 https://deb.debian.org/debian bookworm/main amd64 apache2-data all 2.4.57-2 [160 k
Get:10 https://deb.debian.org/debian bookworm/main amd64 apache2-utils amd64 2.4.57-2 [2
Get:11 https://deb.debian.org/debian bookworm/main amd64 apache2 amd64 2.4.57-2 [215 kB]
Get:12 https://deb.debian.org/debian bookworm/main amd64 ssl-cert all 1.1.2 [21.1 kB]
Fetched 2341 kB in 1s (4567 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libapr1:amd64.
(Reading database ... 67169 files and directories currently installed.)
Preparing to unpack .../00-libapr1_1.7.2-3_amd64.deb ...
```

# SSH window



- We have installed apache2 server successfully but how to check if the server is working , we write in cmd : **sudo service -status-all**

```
SSH-in-browser  UPLOAD FILE  DOWNLOAD FILE  [Icons]

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Tue May  7 13:40:20 2024 from 35.235.241.19
binobaia_d_aa@instance-01:~$ apt-get update
Reading package lists... Done
E: Could not open lock file /var/lib/apt/lists/lock - open (13: Permission denied)
E: Unable to lock directory /var/lib/apt/lists/
W: Problem unlinking the file /var/cache/apt/pkgcache.bin - RemoveCaches (13: Permission denied)
W: Problem unlinking the file /var/cache/apt/srcpkgcache.bin - RemoveCaches (13: Permission denied)
binobaia_d_aa@instance-01:~$ apt-get install apache2 -y
E: Could not open lock file /var/lib/dpkg/lock-frontent - open (13: Permission denied)
E: Unable to acquire the dpkg frontend lock (/var/lib/dpkg/lock-frontent), are you root?
binobaia_d_aa@instance-01:~$ sudo apt-get install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.57-2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
binobaia_d_aa@instance-01:~$ service --status-all
-bash: service: command not found
binobaia_d_aa@instance-01:~$ sudo service --status-all
[ + ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uuid
binobaia_d_aa@instance-01:~$
```

# SSH window



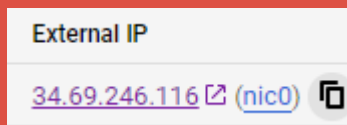
- The check is completed.

```
binobaid_aa@instance-01:~$ sudo service --status-all
[ + ] apache-htcacheclean
[ + ] apache2
[ + ] apparmor
[ + ] cron
[ + ] dbus
[ + ] exim4
[ + ] haveged
[ - ] hwclock.sh
[ + ] kmod
[ + ] procps
[ - ] screen-cleanup
[ + ] ssh
[ - ] sudo
[ + ] udev
[ + ] unattended-upgrades
[ - ] uuid
```

# SSH window



- 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.



Thank You!