

Seif Eldin Mohamed Aboelhassan Mohamed Hendawy

Lab 2

1. Create a VPC with the automatic mode called “dev-vpc” and another one called “prod-vpc” with 2 subnets:

- subneta => region -> us-east1, cidr -> 10.1.0.0/16
- subnetb => region -> asia-east1, cidr -> 192.168.1.0/24

Filter Enter property name or value

Name ↑	Subnets	MTU ?	Mode	Internal IP ranges	Gateways	Firewall rules	Global dynamic routing
default	39	1460	Auto			4	Off
dev-vpc	39	1460	Auto			0	Off
prod-vpc	2	1460	Custom			0	Off

Subnets

+ ADD SUBNET

≡ FLOW LOGS ▾

Filter Enter property name or value

<input type="checkbox"/>	Name ↑	Region	Stack Type	Internal IP ranges
<input type="checkbox"/>	subneta	us-east1	IPv4	10.1.0.0/16
<input type="checkbox"/>	subnetb	asia-east1	IPv4	192.168.1.0/24

2. Can we edit the vpc subnets after the creation?

Yes



Subnet details



DELETE

subneta

VPC Network

[prod-vpc](#)

Region

us-east1

3. Can you delete routes from “dev-vpc” region us-central1

NO

 DELETE

Local routes cannot be deleted

218d35a21f85

4. Create all required firewall rules to allow your localhost to ssh and curl all instances in subneta

☒ Specified protocols and ports

☒ TCP

Ports

22,80

E.g. 20, 50-60

<input type="checkbox"/>	allow-ssh-and-curl	Ingress	allow-ssh-curl	IP ranges: 10.1.0.0, 192.168.1.8, 197.46.16.19, 10.1.255.255	tcp:22, 80	Allow	1000	prod-vpc	^
--------------------------	------------------------------------	---------	----------------	--	------------	-------	------	--------------------------	---

5. Block the internet reachability from dev-vpc

block-internet

Logs ?

Off

[view in Logs Explorer](#)

Network

dev-vpc

Priority

1000

Direction

Ingress

Action on match

Deny

Targets

Target tags	block
-------------	-------

Source filters

IP ranges	0.0.0.0/0
-----------	-----------

Protocols and ports

all

6.Create instance “server-1” in subneta with automation script for apache installation and home page with txt “Hello GCP, this is \$your_name”

VM instances

CREATE INSTANCE

IMPORT VM

REFRESH

INSTANCES

OBSERVABILITY

INSTANCE SCHEDULES

VM instances

Filter

Enter property name or value

	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✓	server-1	us-east1-b			10.1.0.2 (nic0)	34.139.165.17 (nic0)	SSH ▾ ⋮

← server-1

EDIT

RESET

CREATE MACHINE IMAGE

CREATE SIMILAR

START / RESUME

STOP

SUSPEND

DETAILS

OBSERVABILITY

OS INFO

SCREENSHOT

Name ↑	Network	Subnetwork	Primary internal IP address	Alias IP ranges	IP stack type	External IP address	Network
nic0	prod-vpc	subneta	10.1.0.2		IPv4	34.139.165.17 (Ephemeral)	Premi...

Copied

Storage

Boot disk

Name ↑	Image	Interface type	Size (GB)	Device name	Type	Architecture	Encryption	Mode	Wh
server-1	debian-11-bullseye-v20231004	SCSI	10	server-1	Balanced persistent disk	x86_64	Google-managed	Boot, read/write	Del

Local disks

None

Additional disks

Name ↑	Image	Interface type	Size (GB)	Device name	Type	Architecture	Encryption	Mode	Wh
disk-1	—	SCSI	100	disk-1	Balanced persistent disk	—	Google-managed	Read/write	Ke

← → ↺

⚠ Not secure

34.139.165.17

Hello GCP, this is Seif Hendawy

7. Create instance “server-2” in subnetb which can ping “server-1” but can’t access to the internet
* note: all servers are linux based

<input type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✓	server-1	us-east1-b			10.1.0.2 (nic0)	34.139.165.17 (nic0)	SSH ▾ ⋮
<input type="checkbox"/>	✓	server-2	asia-east1-a			192.168.1.2 (nic0)	35.206.232.167 (nic0)	SSH ▾ ⋮

[←](#) server-2

[EDIT](#)

[RESET](#)

[+ CREATE MACHINE IMAGE](#)

[+ CREATE SIMILAR](#)

[▶ START / RESUME](#)

[■ STOP](#)

[|| SUSPEND](#)

[DETAILS](#)

[OBSERVABILITY](#)

[OS INFO](#)

[SCREENSHOT](#)

Network tags

None

Network interfaces

Name ↑	Network	Subnetwork	Primary internal IP address	Alias IP ranges	IP stack type	External IP address	Network
nic0	prod-vpc	subnetb	192.168.1.2		IPv4	35.206.232.167 (Ephemeral)	Standards

Storage

Boot disk

Name ↑	Image	Interface type	Size (GB)	Device name	Type	Architecture	Encryption	Mode	Wh
server-2	debian-11-bullseye-v20231004	SCSI	10	server-2	Balanced persistent disk	x86/64	Google-managed	Boot, read/write	Del

[←](#) server-1

[EDIT](#)

[RESET](#)

[+ CREATE MACHINE IMAGE](#)

[DETAILS](#)

[OBSERVABILITY](#)

[OS INFO](#)

[SCREENSHOT](#)

Network interfaces

Name ↑	Network	Subnetwork	Primary internal IP address
nic0	prod-vpc	subneta	10.1.0.2

<input type="checkbox"/>	block-internet	Ingress	block	IP ranges: 0.0.0.0/0	all	Deny	1000	dev-vpc	Off
<input type="checkbox"/>	allow-http	Ingress	Apply to all	IP ranges: 192.168.1.2	tcp:22, 3389 icmp	Allow	1000	prod-vpc	Off
<input type="checkbox"/>	allow-ssh-and-curl	Ingress	Apply to all	IP ranges: 35.235.240.0/20	tcp:22, 80	Allow	1000	prod-vpc	Off



Linux server-1 5.10.0-25-cloud-amd64 #1 SMP Debian 5.10.191-1 (2023-08-16) 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.

```
seifhendawy1@server-1:~$ ping 10.1.0.2
PING 10.1.0.2 (10.1.0.2) 56(84) bytes of data.
64 bytes from 10.1.0.2: icmp_seq=1 ttl=64 time=0.018 ms
64 bytes from 10.1.0.2: icmp_seq=2 ttl=64 time=0.037 ms
64 bytes from 10.1.0.2: icmp_seq=3 ttl=64 time=0.036 ms
64 bytes from 10.1.0.2: icmp_seq=4 ttl=64 time=0.036 ms
64 bytes from 10.1.0.2: icmp_seq=5 ttl=64 time=0.034 ms
64 bytes from 10.1.0.2: icmp_seq=6 ttl=64 time=0.038 ms
64 bytes from 10.1.0.2: icmp_seq=7 ttl=64 time=0.037 ms
64 bytes from 10.1.0.2: icmp_seq=8 ttl=64 time=0.037 ms
```

```
seifhendawy1@server-2:~$ ping 10.1.0.2
PING 10.1.0.2 (10.1.0.2) 56(84) bytes of data.
64 bytes from 10.1.0.2: icmp_seq=1 ttl=64 time=190 ms
64 bytes from 10.1.0.2: icmp_seq=2 ttl=64 time=188 ms
64 bytes from 10.1.0.2: icmp_seq=3 ttl=64 time=188 ms
64 bytes from 10.1.0.2: icmp_seq=4 ttl=64 time=193 ms
64 bytes from 10.1.0.2: icmp_seq=5 ttl=64 time=193 ms
64 bytes from 10.1.0.2: icmp_seq=6 ttl=64 time=193 ms
64 bytes from 10.1.0.2: icmp_seq=7 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=8 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=9 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=10 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=11 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=12 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=13 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=14 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=15 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=16 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=17 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=18 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=19 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=20 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=21 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=22 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=23 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=24 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=25 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=26 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=27 ttl=64 time=198 ms
64 bytes from 10.1.0.2: icmp_seq=28 ttl=64 time=198 ms
```