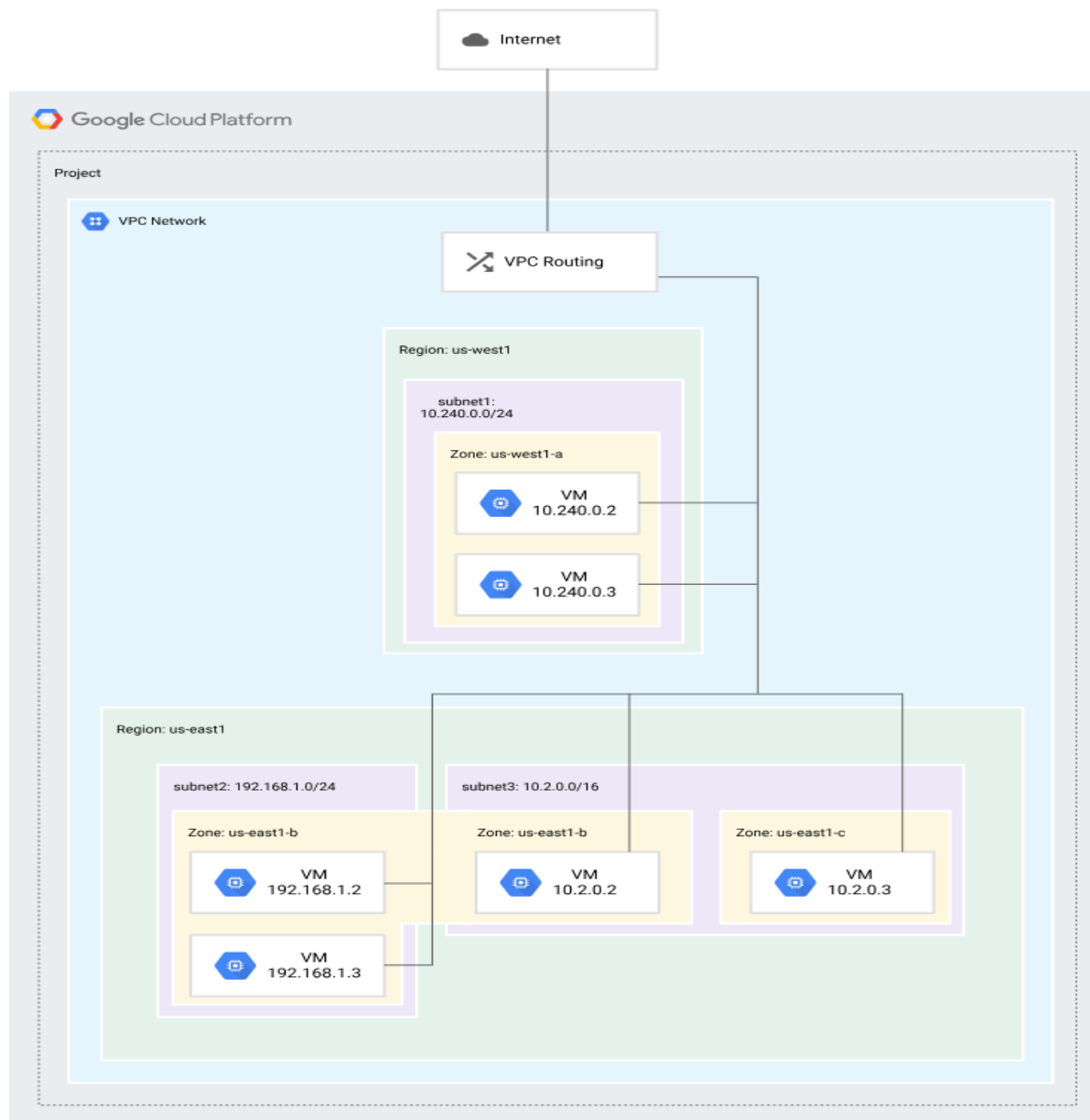


# VPC TASK-1

- Create 1 custom VPC network
- Create 2 subnets (Private subnets)
- Create 1 VM in each subnet. (VM should have only private IPs and no Public IPs)

## Task:

1. Look at the VPC routes without any subnets in it.
2. Look at the VPC routes after subnet creation.
3. Look at the VPC route to the internet gateway.
4. Demonstrate how to ping from VM1 to VM2, but not from VM2 to VM1



## Implementation:

- Configure 2 private subnets in a vpc network

VPC network details

EDIT

DELETE VPC NETWORK

HELP ASSISTANT

SHOW INFO PANEL

vpc-a

Subnet creation mode

Custom subnets

Dynamic routing mode

Regional

VPC network ULA internal IPv6 range

Disabled

DNS server policy

None

Maximum transmission unit

1460

SUBNETS

STATIC INTERNAL IP ADDRESSES

FIREWALLS

FIREWALL ENDPOINTS

ROUTES

VPC NETWORK PEERING

PRIVATE SERVICE CONNECTION

ADD SUBNET

FLOW LOGS

Filter



Enter property name or value

?

III

<input type="checkbox"/>	Name	Region	Stack Type	Internal IP ranges	External IP ranges	Secondary IPv4 ranges	Gateway	Private Google Access	Flow logs
<input type="checkbox"/>	<a href="#">subnet-a</a>	us-central1	IPv4	10.0.1.0/24	None	None	10.0.1.1	Off	Off

- Create two compute instances with external ip address as *None*.
- Note down the internal-ip address
- All the instances will belong to the CIDR range that we had provided to the Subnet of respective vpc's.

<input type="checkbox"/>		<a href="#">vm-a</a>	us-central1-a	10.0.1.2	<a href="#">(nic0)</a>	SSH	▼	⋮
<input type="checkbox"/>		<a href="#">vm-b</a>	us-central1-a	10.0.2.5	<a href="#">(nic0)</a>	SSH	▼	⋮

Now observe the following points in the Routes-

- 1. Without subnets being created you only view the default static route to 0.0.0.0/0 going to the default internet gateway.


 Filter

Enter property name or value





Name ↑	Type	IP version	Destination IP range	Priority	Instance tags	Next hop
<a href="#">default-route-6d42abba96155c83</a>	Static	IPv4	0.0.0.0/0	1000	None	Default internet gateway


- 2.After Creating the subnets,check the system-generated subnet route  
Created automatically for each subnet IP address range which forwards packets to VMs and internal load balancers.


 VPC network


Routes


 HELP ASSISTANT


 VPC networks


 IP addresses


 Bring your own IP


 Firewall

 Routes

 VPC network peering

 Shared VPC

 Serverless VPC access

 Packet mirroring

EFFECTIVE ROUTES

ROUTE MANAGEMENT


Select the VPC network and region for which you want to view routes

Network \*  
custom-vpc


Region \*  
us-central1 (Iowa)

VIEW

REFRESH

 Filter

Enter property name or value



Name ↑	Type	IP version	Destination IP range	Priority	Instance tags	Next hop
<a href="#">default-route-15cfa44e726d8e0d</a>	Subnet	IPv4	10.1.2.0/24	0	None	Virtual network <a href="#">custom-vpc</a>
<a href="#">default-route-dba64b2f41dcb789</a>	Subnet	IPv4	10.1.1.0/24	0	None	Virtual network <a href="#">custom-vpc</a>
<a href="#">default-route-eee470d4aad1dc27</a>	Static	IPv4	0.0.0.0/0	1000	None	Default internet gateway

**VM-1 address 10.1.1.2**

**VM-2 address 10.1.2.2**

Now u have to ping VM-2 from VM-1, but not VM-1 from VM-2

By default ping is off, so we can ignore second condition

So what does the statement “ ping VM-2 from VM-1” mean?

It simply means when you ssh into VM-1 and try to access VM-2 from there you should be able to do that .

- in your custom-vpc, set a firewall rule to ingress requests from source ranges of the subnet containing VM-1.

VM-1 SSH (Can access VM-2 from VM-1)

```
lakshya_datir2001@vm-1:~$ ping 10.1.2.2
PING 10.1.2.2 (10.1.2.2) 56(84) bytes of data.
64 bytes from 10.1.2.2: icmp_seq=1 ttl=64 time=0.228 ms
64 bytes from 10.1.2.2: icmp_seq=2 ttl=64 time=0.254 ms
64 bytes from 10.1.2.2: icmp_seq=3 ttl=64 time=0.336 ms
64 bytes from 10.1.2.2: icmp_seq=4 ttl=64 time=0.401 ms
64 bytes from 10.1.2.2: icmp_seq=5 ttl=64 time=0.359 ms
64 bytes from 10.1.2.2: icmp_seq=6 ttl=64 time=0.281 ms
64 bytes from 10.1.2.2: icmp_seq=7 ttl=64 time=0.307 ms
64 bytes from 10.1.2.2: icmp_seq=8 ttl=64 time=0.241 ms
64 bytes from 10.1.2.2: icmp_seq=9 ttl=64 time=0.275 ms
```

VM-2 SSH (Can't access VM-1 from VM-2)

```
rtt min/avg/max/mdev = 0.034/0.046/0.055/0.006 ms
lakshya_datir2001@vm-2:~$ ping 10.1.1.2
PING 10.1.1.2 (10.1.1.2) 56(84) bytes of data.
```