

Name:Idris Love
Email:idrisloove@gmail.com
Task:translate lab into 100% command line
project Title: Working with multiple VPC

Create custom mode VPC networks with firewall rules

Create two custom networks, managementnet and privatenet, along with firewall rules to allow SSH, ICMP, and RDP ingress traffic.
Create the managementnet network

command:

```
=====>gcloud compute networks create managementnet --project=qwiklabs-gcp-01-e83552426f75 --subnet-mode=custom --bgp-routing-mode=regional
```

```
=====>gcloud compute networks subnets create managementsubnet-us --project=qwiklabs-gcp-01-e83552426f75 --range=10.130.0.0/20 --network=managementnet --region=us-central1
```

2. create a privatenet vpc

command:

to create privatenet network

```
=====> gcloud compute networks create privatenet --subnet-mode=custom
```

3. privatenet us subnet

```
=====>gcloud compute networks subnets create privatesubnet--us --network=privatenet --region=us-central1 --range=172.16.0.0/24
```

4. privatnet eu subnet

```
=====>gcloud compute networks subnets create privatesubnet-eu --network=privatenet --region=europe-west1 --range=172.20.0.0/20
```

to check the list of networks

```
=====>gcloud compute networks list
```

5. list sorted by network

```
=====>gcloud compute networks subnets list --sort-by=NETWORK
```

6. creating firewall rule for managmentnet

comand:

```
=====>gcloud compute --project=qwiklabs-gcp-01-e83552426f75 firewall-rules create managementnet-allow-icmp-ssh-rdp --direction=INGRESS --priority=1000 --network=managementnet --action=ALLOW --rules=tcp:22,tcp:3389,icmp --source-ranges=0.0.0.0/0
```

7. Create the firewall rules for privatenet

```
=====>gcloud compute firewall-rules create privatenet-allow-icmp-ssh-rdp --direction=INGRESS --priority=1000 --network=privatenet --action=ALLOW --rules=icmp,tcp:22,tcp:3389 --source-ranges=0.0.0.0/0
```

8. creating virtual machine

```
=====>gcloud beta compute --project=qwiklabs-gcp-01-e83552426f75 instances create managementnet-us-vm --zone=us-central1-c --machine-type=n1-standard-1 --subnet=managementsubnet-us --network-tier=PREMIUM --maintenance-policy=MIGRATE --service-account=64937332247-compute@developer.gserviceaccount.com --scopes=https://www.googleapis.com/auth/devstorage.read_only,https://www.google
```

```
apis.com/auth/logging.write,https://www.googleapis.com/auth/monitoring.write,https://www.googleapis.com/auth/servicecontrol,https://www.googleapis.com/auth/service.management.readonly,https://www.googleapis.com/auth/trace.append
--image=debian-10-buster-v20200902 --image-project=debian-cloud --boot-disk-size=10GB --boot-disk-type=pd-standard --boot-disk-device-name=managementnet-us-vm --no-shielded-secure-boot --no-shielded-vtpm --no-shielded-integrity-monitoring --reservation-affinity=any
```

9. create virtual machine for privatenet-us-vm

```
=====>gcloud compute instances create privatenet-us-vm --zone=us-central1-c
--machine-type=n1-standard-1 --subnet=privatesubnet-us
```

10. list all vm instance and soorted by zone

```
=====>gcloud compute instances list --sort-by=ZONE
```

11. vm with multiple network interface

```
=====>gcloud beta compute --project=qwiklabs-gcp-01-e83552426f75 instances
create vm-appliance --zone=us-central1-c --machine-type=n1-standard-4
--subnet=managementsubnet-us --network-tier=PREMIUM --maintenance-policy=MIGRATE
--service-account=64937332247-compute@developer.gserviceaccount.com
--scopes=https://www.googleapis.com/auth/devstorage.read_only,https://www.googleapis.com/auth/logging.write,https://www.googleapis.com/auth/monitoring.write,https://www.googleapis.com/auth/servicecontrol,https://www.googleapis.com/auth/service.management.readonly,https://www.googleapis.com/auth/trace.append
--image=debian-10-buster-v20200902 --image-project=debian-cloud --boot-disk-size=10GB --boot-disk-type=pd-standard --boot-disk-device-name=vm-appliance
--no-shielded-secure-boot --no-shielded-vtpm --no-shielded-integrity-monitoring
--reservation-affinity=any
```

CONCLUSION:

they all can connect with there internal iP addresses except for munet-eu-vm