GCP Network Engineer Crash Course Lab 1

VPC Exercise 1

- *You can create and manage your own virtual topology network where you can launch your Google Cloud resources using Google Virtual Private Cloud (VPC). (Sandbox)*
- *A VPC spans all the zones in the region.*
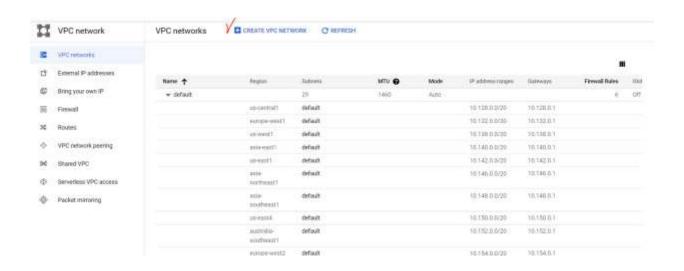- *After creating a VPC, you can add one or more subnets in each zone.*

Let's create a New VPC

(Note this VPC will be used in the VPC Peering Exercise 2)

Log in to your Google Cloud Platform Account

- Determine the project you will be creating the VPC in.
- Go to VPC

Figure 1 – VPC

After selecting Create VPC Network

- Enter a name
- Select for Subnets Automatic.

Figure 2 Create a VPC network Part 1

(Some notes to consider)

Auto mode VPC networks create subnets in each region automatically.

These automatically created subnets use a set of predefined IP ranges that fit within the 10.128.0.0/9 CIDR block.

Custom mode VPC networks start with no subnets giving you full control.

You can create more than one subnet per region.

You can switch a VPC network from auto mode to custom mode.

This is a one-way conversion which means custom mode VPC networks cannot be changed to auto mode VPC networks.

Firewall rules are defined at the network level.

They only apply to the network where they are created but the name defined for each of them must be unique to the project.

When you create a VPC network, it includes a system-generated default route which serves as a path out of the VPC network, including the path to the Internet, and provides the standard path for Private Google Access.

Now enter/Select

- **VPC Firewall rules**
- **Dynamic Routing Mode – Regional**
- **Select Create**

Figure 3 – Create a VPC Part 2

← Create a VPC network

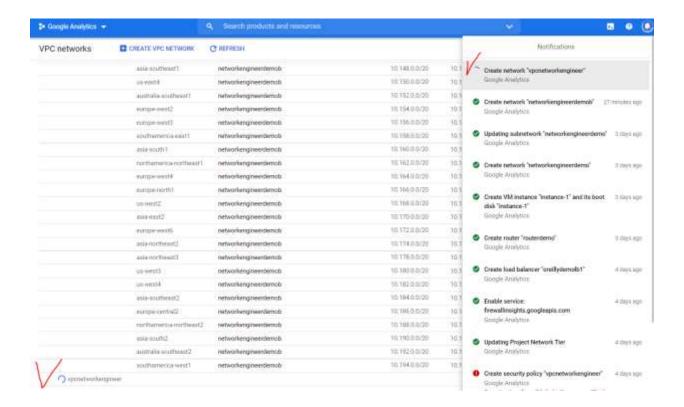firewall rules on the Firewall rules page.

	Name	Type	Targets	Filters	Protocols / ports	Action	Priority ↑
☑	vpcnetworkengineer-allow-icmp ❓	Ingress	Apply to all	IP ranges: 0.0.0.0/0	icmp	Allow	65,534
☑	vpcnetworkengineer-allow-internal ❓	Ingress	Apply to all	IP ranges: 10.128.0.0/9	all	Allow	65,534
☑	vpcnetworkengineer-allow-rdp ❓	Ingress	Apply to all	IP ranges: 0.0.0.0/0	tcp:3389	Allow	65,534
☑	vpcnetworkengineer-allow-ssh ❓	Ingress	Apply to all	IP ranges: 0.0.0.0/0	tcp:22	Allow	65,534
	vpcnetworkengineer-deny-all-ingress ❓	Ingress	Apply to all	IP ranges: 0.0.0.0/0	all	Deny	65,535
	vpcnetworkengineer-allow-all-egress ❓	Egress	Apply to all	IP ranges: 0.0.0.0/0	all	Allow	65,535

Dynamic routing mode ❓

◉ Regional
Cloud Routers will learn routes only in the region in which they were created

○ Global
Global routing lets you dynamically learn routes to and from all regions with a single VPN or interconnect and Cloud Router

ℹ️ Enable DNS API to pick a DNS policy   ENABLE

Maximum transmission unit (MTU)
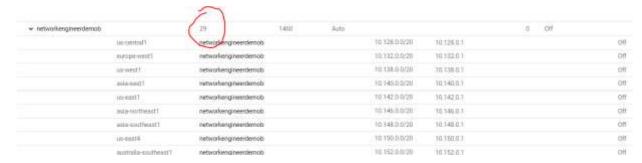1460   ▾

CREATE   CANCEL

The VPC will be created and can take up to three minutes. It will show this in both Notifications and the VPC dashboard.

Figure 4 - Notifications

Once the VPC is created you will see the vpc created. Note the number of subnets.

Figure 5 - VPC Created

For the next exercise we will be peering this VPC we created with another VPC.

End.