

Project 4-5: Configure a VPC in GCP

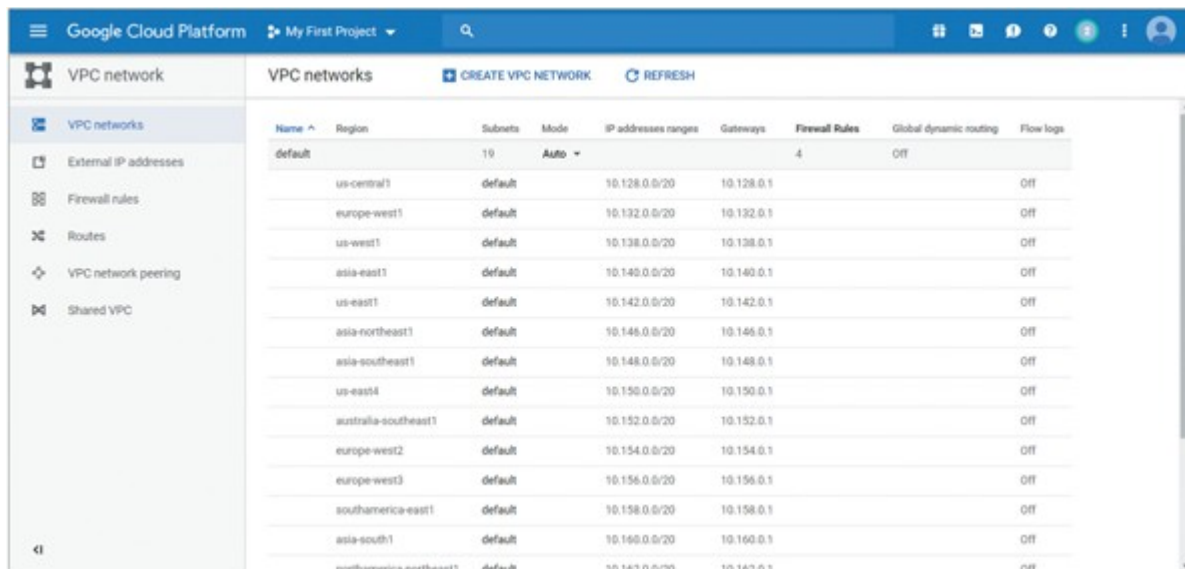
Est. completion time: 20 minutes

Note

Public cloud platforms and related account options change frequently. While the instructions given here were accurate at the time of writing, you might need to adjust the steps or options according to later changes.

Recall that in Project 1-5, you surveyed available GCP account options and had the opportunity to create a GCP account. In this project, you'll explore VPC configuration options in GCP. Complete the following steps:

1. In your GCP console, go to the VPC network dashboard (see Figure 4-27). Click **CREATE VPC NETWORK**. Give the network a name, such as myautovpc. Under Subnet creation mode, click **Automatic**. Leave all other default settings, and click **Create**.



Name	Region	Subnets	Mode	IP addresses ranges	Gateways	Firewall Rules	Global dynamic routing	Flow logs
default		19	Auto		4	Off		
	us-central1	default		10.128.0.0/20	10.128.0.1			Off
	eu-west-1	default		10.132.0.0/20	10.132.0.1			Off
	us-west1	default		10.138.0.0/20	10.138.0.1			Off
	asia-east1	default		10.140.0.0/20	10.140.0.1			Off
	us-east1	default		10.142.0.0/20	10.142.0.1			Off
	asia-northeast1	default		10.146.0.0/20	10.146.0.1			Off
	asia-southeast1	default		10.148.0.0/20	10.148.0.1			Off
	us-east4	default		10.150.0.0/20	10.150.0.1			Off
	australia-southeast1	default		10.152.0.0/20	10.152.0.1			Off
	eu-west2	default		10.154.0.0/20	10.154.0.1			Off
	eu-west3	default		10.156.0.0/20	10.156.0.1			Off
	southamerica-east1	default		10.158.0.0/20	10.158.0.1			Off
	asia-south1	default		10.160.0.0/20	10.160.0.1			Off
	northamerica-northeast1	default		10.162.0.0/20	10.162.0.1			Off

Figure 4-27 The GCP VPC network dashboard

Source: Google LLC

- On your VPC networks page, scroll down to find your new VPC. After it's fully deployed, how many subnets are included in your new VPC?



28

Name	Region	Subnets	MTU
▶ default		28	14
▼ myautovpc		28	14

- Click the VPC name, and then click **Routes**. What is the next hop for most of the routes?



What is the next hop for the Internet route?
Virtual network myautovpc

the next hop is

Default internet gateway

Description	Destination IP range	Priority	Instance tags	Next hop	Network
Default local route to the subnetwork 10.188.0.0/20.	10.188.0.0/20	0	None	Virtual network default	default
Default local route to the subnetwork 10.172.0.0/20.	10.172.0.0/20	0	None	Virtual network myautovpc	myautovpc
Default route to the Internet.	0.0.0.0/0	1000	None	Default internet gateway	myautovpc
Default local route to the subnetwork 10.162.0.0/20.	10.162.0.0/20	0	None	Virtual network myautovpc	myautovpc
Default local route to the subnetwork 10.146.0.0/20.	10.146.0.0/20	0	None	Virtual network default	default
Default local route to the subnetwork 10.190.0.0/20.	10.190.0.0/20	0	None	Virtual network myautovpc	myautovpc

- Return to your list of VPC networks, and create a new VPC. This time, use the custom subnet creation mode. Name the subnet and select a region. (Do not select a region in Asia, as it will cause an error later in the project.) Assign an IP address range to the subnet, such as 192.168.0.0/24. Notice that the subnet receives an IP address range, but



the VPC does not. What CIDR range did you choose?
192.168.0.0/24

Name *
subnetcustom ?

Lowercase letters, numbers, hyphens allowed

Description

Region *
us-east1 ▼ ?

IP address range *
192.168.0.0/24 ?

5. Create a second subnet in a different region. (Do not select a region in Asia, as it will cause an error later in the project.) Try to give it the same CIDR range as the first subnet.



What happens?

Created successfully (No error)

Edit subnet

Name *
subnetthree ?

Lowercase letters, numbers, hyphens allowed

Description

Region *
us-east4 ▼ ?

IP address range *
192.168.0.0/24 ?

CREATE SECONDARY IP RANGE

6. Try to give the second subnet a CIDR range that is not in the same class as the first subnet's CIDR range. For example, if you used 192.168.0.0/24, try 172.16.0.0/16 for the



second subnet. What happens?
implemented (no error)

it was successfully

[previous page](#)

Edit subnet

Name *

subnetthree

Lowercase letters, numbers, hyphens allowed

Description

Region *

us-east4

IP address range *

172.16.0.0/16

[CREATE SECONDARY IP RANGE](#)

Private Google Access ?

☐ On

☒ Off

7. Finish creating the VPC with the two subnets. After it's fully deployed, how many subnets are included in the newest VPC? Which two regions did you use?



2 subnets

us-east1 and us-east4

▼ mycustomvpc	2	1460	Custom
us-east1	subnetcustom	192.168.0.0/24	192.168.0.1
us-east4	subnetthree	172.16.0.0/16	172.16.0.1

8. Check the routes for this VPC. How many routes are included? Where do they each go?



3 routes

192.168.0.0/24

0.0.0.0/0

172.16.0.0/16

<input type="checkbox"/>	Name ↑	Description	Destination IP range	Priority	Instance tags	Next hop	Network
<input type="checkbox"/>	default-route-02fb1b6abca0fd07	Default local route to the subnetwork 192.168.0.0/24.	192.168.0.0/24	0	None	Virtual network mycustomvpc	mycustomvpc
<input type="checkbox"/>	default-route-081e4d699d4c9b79	Default route to the Internet.	0.0.0.0/0	1000	None	Default internet gateway	mycustomvpc
<input type="checkbox"/>	default-route-6f9ecba4d9ec321e	Default local route to the subnetwork 172.16.0.0/16.	172.16.0.0/16	0	None	Virtual network mycustomvpc	mycustomvpc

9. Delete all the resources you created in this project, including both VPCs and all subnets. In what order did you delete these resources? What error messages did you encounter? How did you handle these problems? Check through your account to confirm that all related resources have been deleted.

My order is deleting myautovpc and mycustomvpc.

No issues encountered during deleting.