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**.

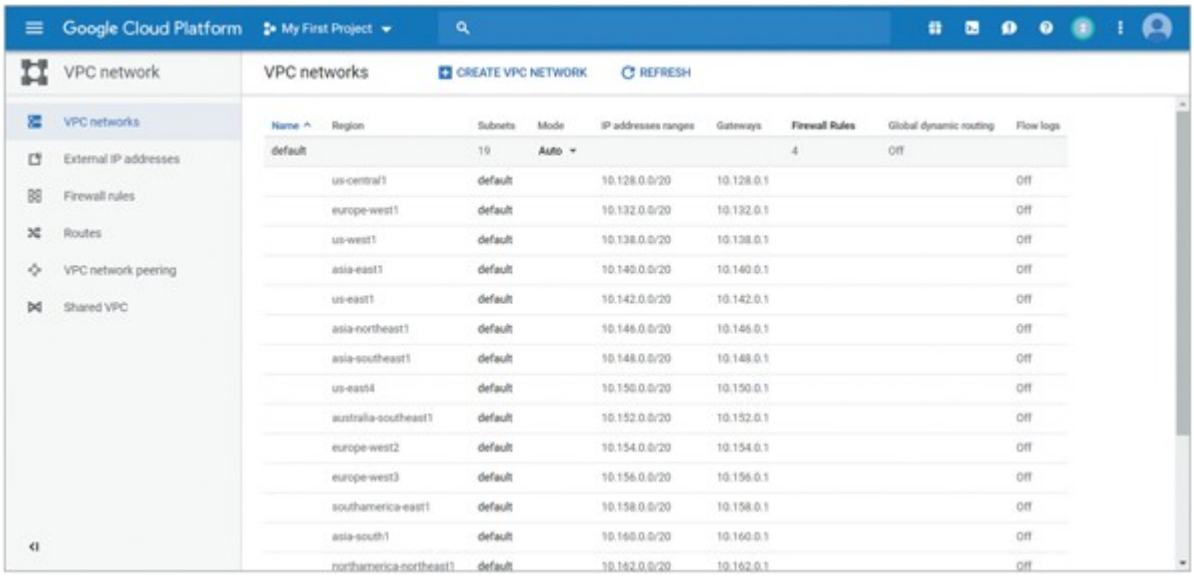
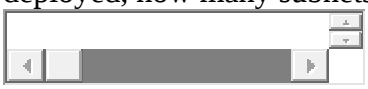


Figure 4-27 The GCP VPC network dashboard

Source: Google LLC

2. 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?



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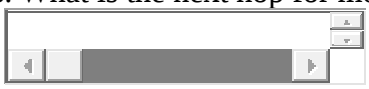
3. Click the VPC name, and then click **Routes**. What is the next hop for most of the routes?

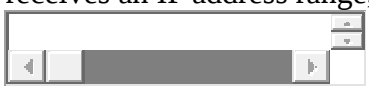


What is the next hop for the Internet route? **the next hop is Virtual network myautovpc**

Default internet gateway

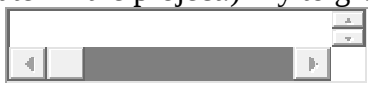
Description	Destination IP range	Priority	Instance tags	Next hop	Network
Default local route to the subnetwork 10.188.0.0/20.	10.188.0.0/20	0	None	Virtual network default	default
Default local route to the subnetwork 10.172.0.0/20.	10.172.0.0/20	0	None	Virtual network myautovpc	myautovpc
Default route 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

4. 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

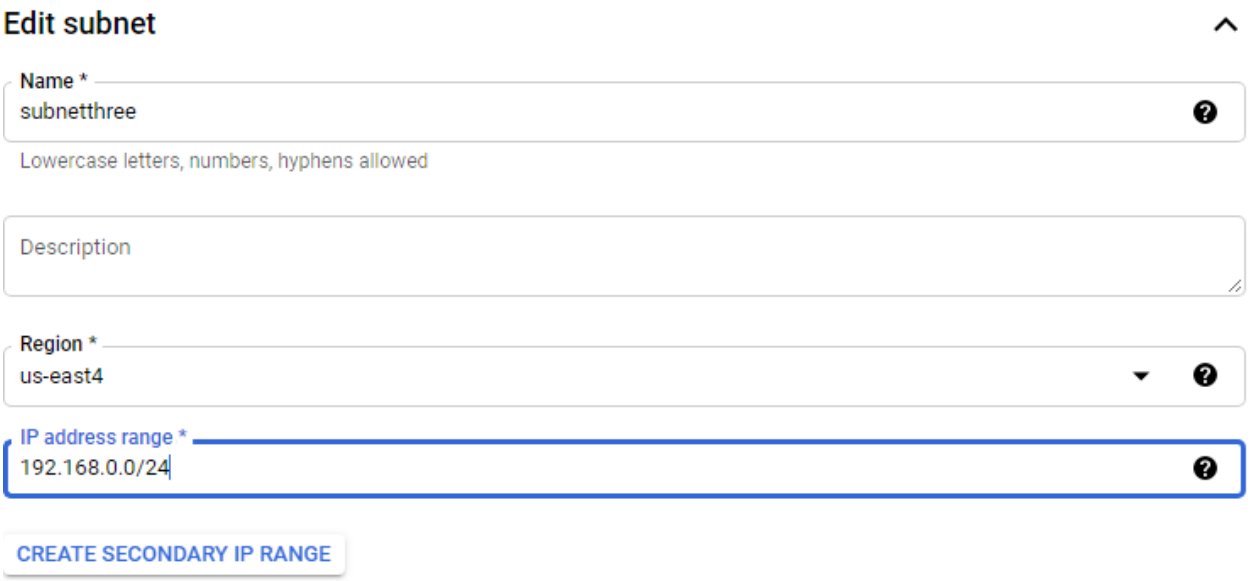


the VPC does not. What CIDR range did you choose?
192.168.0.0/24

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.

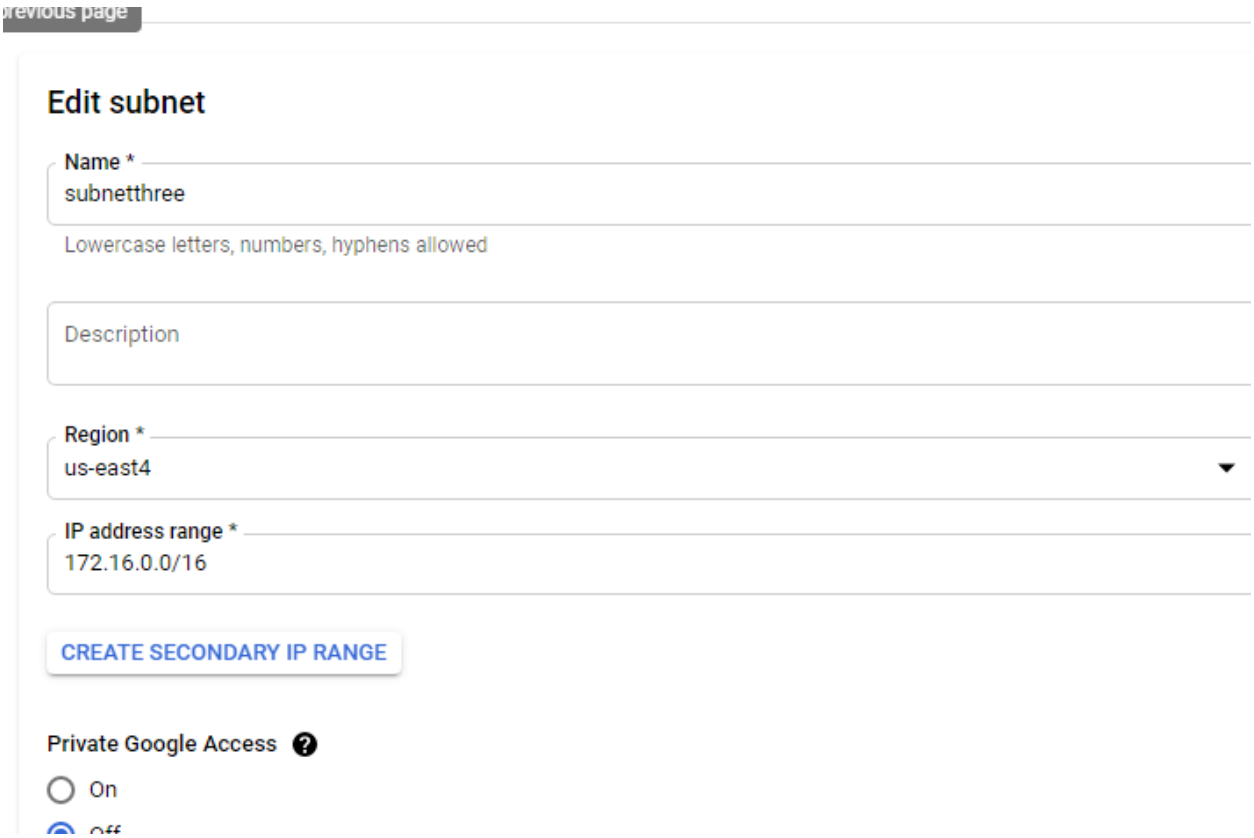


What happens? **Created successfully (No error)**



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? **it was successfully implemented (no error)**



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

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

Name	Description	Destination IP range	Priority	Instance tags	Next hop	Network
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
default-route-081e4d699d4c9b79	Default route to the Internet.	0.0.0.0/0	1000	None	Default internet gateway	mycustomvpc
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.