How to Create a Virtual Machine Using CLI in GCP?

written by sysadmin | 28 April 2025

The previous article explained how to create a virtual machine in GCP using a GUI template. This article will explain how to create a virtual machine on GCP using the CLI.

Problem

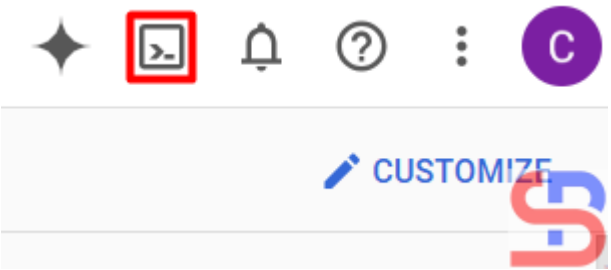
How to create a virtual machine using CLI in GCP?

Solution

These are the steps to create a virtual machine using CLI:

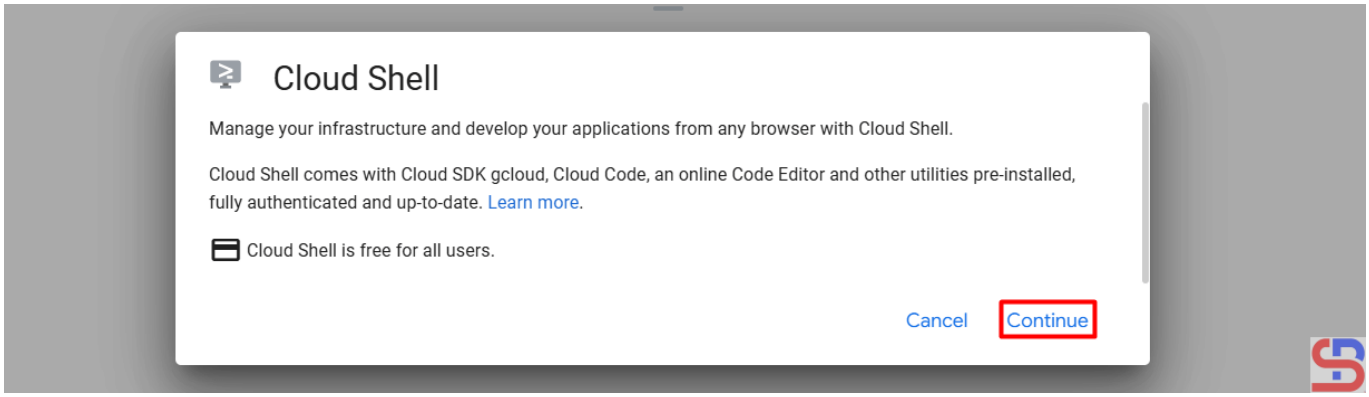
A. Access to the gcloud

If you have already installed gcloud on your laptop, you can go to the next step. But, if you want to use gcloud in your GCP, go to the GCP dashboard, then click the small box as shown in the image below to activate the cloud shell (or you push the **G** then **S** button):



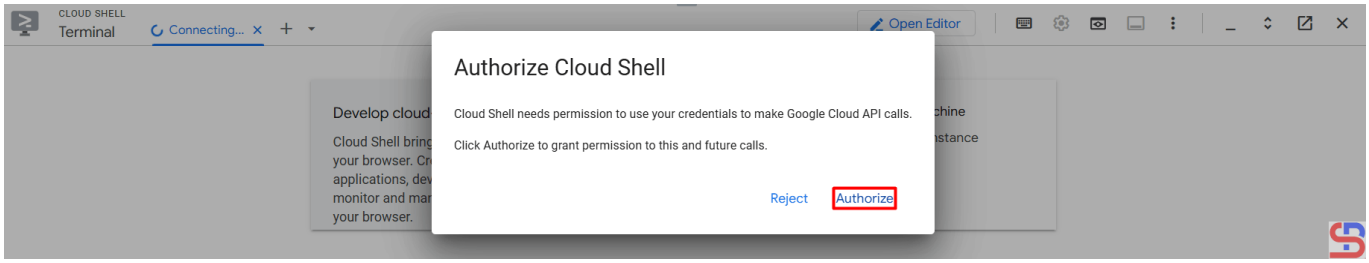
Click the Activate Cloud Shell button

There will be a display below at the bottom:



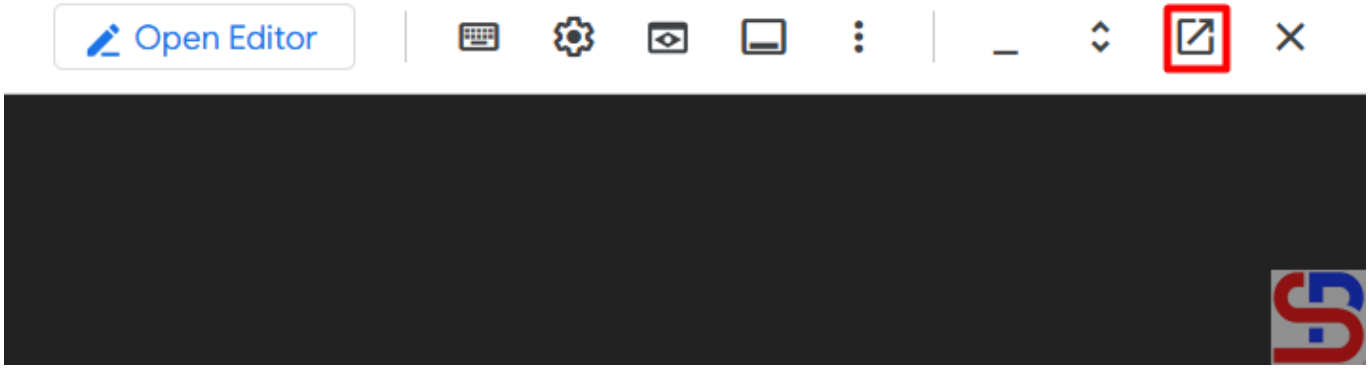
The Cloud Shell

After you click **Continue** and wait a minute, the screen shown in the picture below will appear:



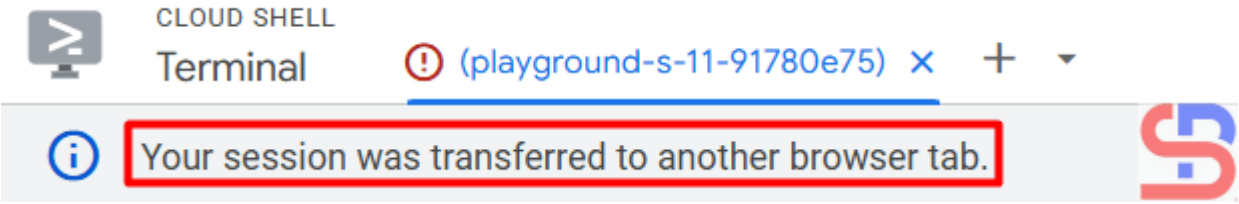
Click Authorize

Click **Authorize**, and the cloud shell is ready to use. If you want the cloud shell to have a larger screen, you can click the button below:



Click the icon

And the existing cloud shell will be inactive, as shown in the image below, so that the cloud shell will move to a new tab:



The inactive cloud shell

B. Run the command

By default, you can use the command below to display the options to create a virtual machine:

```
gcloud compute instances create --help
```

From the image above, you can see that you have many options. But actually, you can only use 3 options to make a VM: the zone, machine types, and image options. You have to know that by default, a VM will automatically get a hard drive size of 10 GB, so you don’t need to determine the size of a hard drive on a VM. To see the available zone options, use the command below:

```
gcloud compute zones list
```

Use the following command to view the machine type you wish to use:

```
gcloud compute machine-types list
```

To see the available images, use the command below:

```
gcloud compute images list
```

So, if you want to create a virtual machine in zone us-central1-c, use machine-type e2-standard-2, and use OS Ubuntu 24.04, use the command below:

```
gcloud compute instances create vm-cloud \
--zone=us-central1-c \
```

```
--machine-type "e2-standard-2" \
--image-project "ubuntu-os-cloud" \
--image-family "ubuntu-2404-lts-amd64" \
--subnet "default"
```

After that, check the existing VM in GCP using the command below:

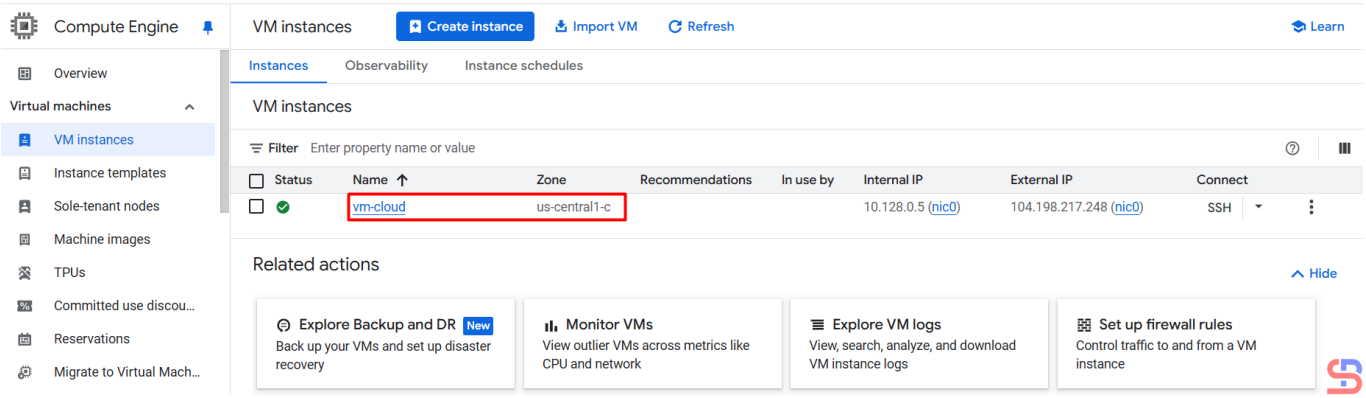
```
gcloud compute instances list
```

The VM should be made as shown below:

```
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$ gcloud compute instances list
Listed 0 items.
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$ gcloud compute instances create vm-cloud \
--zone=us-central1-c \
--machine-type "e2-standard-2" \
--image-project "ubuntu-os-cloud" \
--image-family "ubuntu-2404-lts-amd64" \
--subnet "default"
Created [https://www.googleapis.com/compute/v1/projects/playground-s-11-91780e75/zones/us-central1-c/instances/vm-cloud].
NAME: vm-cloud
ZONE: us-central1-c
MACHINE_TYPE: e2-standard-2
PREEMPTIBLE:
INTERNAL_IP: 10.128.0.2
EXTERNAL_IP: 35.224.230.13
STATUS: RUNNING
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$ gcloud compute instances list
NAME: vm-cloud
ZONE: us-central1-c
MACHINE_TYPE: e2-standard-2
PREEMPTIBLE:
INTERNAL_IP: 10.128.0.2
EXTERNAL_IP: 35.224.230.13
STATUS: RUNNING
cloud_user_p_099e306e@cloudshell:~ (playground-s-11-91780e75)$
```

Create the VM using CLI

Or you can see the list of the VMs in the **VM instances** page in the image below:



The new VM appears in the GCP

Note

If you want to create a VM with a 50GB hard drive, use the command below:

```
gcloud compute instances create vm-cloud \
--zone=us-central1-c \
--machine-type "e2-standard-2" \
--image-project "ubuntu-os-cloud" \
--image-family "ubuntu-2404-lts-amd64" \
--boot-disk-size=50GB \
--boot-disk-type=pd-standard \
--subnet "default"
```

References

cloud.google.com
medium.com
diana-moraa.medium.com
youtube.com