

TASK 1

Create Virtual Machine in Google cloud by the following ways:

- gcp-ui

New Tab x MNT-Lab/google-clo x Mail - Aliaksandr Skv x my-first123-project x Compute Engine: Virt x Quickstart using a Lin x Overview - Billing - C x

https://console.cloud.google.com/compute/instancesAdd?project=my-first123-project&folder=&organizationId

Google Cloud Platform my-first123-project

Create an instance

- New VM instance**
Create a single VM instance from scratch
- New VM instance from template**
Create a single VM instance from an existing template
- Marketplace**
Deploy a ready-to-go solution onto a VM instance

nginx-gcp-ui

Region [?]
Region is permanent
us-central1 (Iowa)

Zone [?]
Zone is permanent
us-central1-c

Machine configuration [?]

Machine family
General-purpose Memory-optimized Compute-optimized
Machine types for common workloads, optimized for cost and flexibility

Series
N1
Powered by Intel Skylake CPU platform or one of its predecessors

Machine type
Custom

Cores
1 vCPU 1 - 96

Memory
4.5 GB 1 - 6.5

☐ Extend memory [?]

[CPU platform and GPU](#)

Container [?]
☐ Deploy a container image to this VM instance. [Learn more](#)

Boot disk [?]
New 35 GB SSD persistent disk
Image
CentOS 7 [Change](#)

Identity and API access [?]

Service account [?]
my-first123-project

Access scopes [?]
Use IAM roles with service accounts to control VM access [Learn more](#)

\$33.13 monthly estimate
That's about \$0.045 hourly
Pay for what you use: No upfront costs and per second billing
[Details](#)

my-first123-project

VM instance details

EDITRESETCREATE SIMILARSTOPDELETE

nginx-gcp-ui

DetailsMonitoring

Remote access

SSHConnect to serial console

Enable connecting to serial ports

Logs

Stackdriver Logging

Serial port 1 (console)

More

Instance id

25915121862128177

Machine type

custom (1 vCPU, 4.5 GB memory)

Reservation

Automatically choose

CPU platform

Intel Haswell

Display device

Turn on a display device if you want to use screen capturing and recording tools.

Turn on display device

Zone

us-central1-c

Labels

osfamily: redhat

servertype: nginxserver

way_of_ins...: gcp-ui

Creation time

Feb 17, 2020, 3:53:51 PM

Network interfaces

Name	Network	Subnetwork	Primary internal IP	Alias IP ranges	External IP	Network Tier	IP forwarding	Network details
nic0	default	default	10.128.0.2	—	35.232.140.201 (ephemeral)	Premium	Off	View details

Public DNS PTR Record

- gcloud

ApplicationsPlacesTerminal

mc [root@Lab.Dlink]:~/google-cloud-sdk/Day2

[root@EPBYMINW2782 Day2]# gcloud compute instances create nginx-gcloud \> --zone=us-central1-c \> --image-project centos-cloud \> --image-family=centos-7 \> --subnet=default \> --custom-cpu=1 \> --custom-memory=4608MB \> --metadata-from-file startup-script=script.sh

Created [https://www.googleapis.com/compute/v1/projects/my-first123-project/zones/us-central1-c/instances/nginx-gcloud].

NAME	ZONE	MACHINE_TYPE	PREEMPTIBLE	INTERNAL_IP	EXTERNAL_IP	STATUS
nginx-gcloud	us-central1-c	custom (1 vCPU, 4.50 GiB)		10.128.0.5	35.232.79.87	RUNNING

✔ nginx-gcloud

DetailsMonitoring

Remote access

SSHConnect to serial console

☐ Enable connecting to serial ports

Logs

Stackdriver Logging

Serial port 1 (console)

More

Instance Id

4563457459161061635

Machine type

custom (1 vCPU, 4.5 GB memory)

Reservation

Automatically choose (default)

CPU platform

Intel Haswell

Display device

Turn on a display device if you want to use screen capturing and recording tools.

☐ Turn on display device

Zone

us-central1-c

Labels

None

Creation time

Feb 18, 2020, 7:28:28 AM

Network interfaces

Name	Network	Subnetwork	Primary internal IP	Alias IP ranges	External IP	Network Tier	IP forwarding	Network details
nic0	default	default	10.128.0.5	—	35.232.79.87 (ephemeral)	Premium	Off	View details

Public DNS PTR Record

None

- terraform (all settings should be provided via variables (tfvars), add URL ("http://IP.Address/") to output)

```

Applications  Places  Terminal

mc [root@Lab.Dlink]:~/google-cloud-sdk

boot_disk.0.mode:      "" => "READ_WRITE"
can_ip_forward:        "" => "false"
cpu_platform:          "" => "<computed>"
deletion_protection:   "" => "true"
guest_accelerator.#:   "" => "<computed>"
instance_id:           "" => "<computed>"
label_fingerprint:     "" => "<computed>"
labels.%:              "" => "3"
labels.osfamily:        "" => "redhat"
labels.servertype:      "" => "nginxserver"
labels.wayofinstalation: "" => "terraform"
machine_type:          "" => "custom-1-4608"
metadata_fingerprint:  "" => "<computed>"
metadata_startup_script: "" => "sudo yum install nginx -y"
name:                  "" => "nginx-terraform"
network_interface.#:   "" => "1"
network_interface.0.access_config.#: "" => "1"
network_interface.0.access_config.0.assigned_nat_ip: "" => "<computed>"
network_interface.0.access_config.0.nat_ip: "" => "<computed>"
network_interface.0.access_config.0.network_tier: "" => "<computed>"
network_interface.0.address: "" => "<computed>"
network_interface.0.name: "" => "<computed>"
network_interface.0.network: "" => "default"
network_interface.0.network_ip: "" => "<computed>"
network_interface.0.subnetwork_project: "" => "<computed>"
project:               "" => "my-first123-project"
scheduling.#:          "" => "<computed>"
self_link:              "" => "<computed>"
tags.#:                "" => "2"
tags.1936433573:       "" => "https-server"
tags.988335155:        "" => "http-server"
tags_fingerprint:      "" => "<computed>"
zone:                  "" => "us-central1-c"
google_compute_disk.nginx-gcp-terraform: Creation complete after 5s (ID: nginx-gcp-terraform)
google_compute_instance.nginx-terraform: Still creating... (10s elapsed)
google_compute_instance.nginx-terraform: Creation complete after 19s (ID: nginx-terraform)
google_compute_attached_disk.default: Creating...
  device_name: "" => "<computed>"
  disk:        "" => "https://www.googleapis.com/compute/v1/projects/my-first123-project/zones/us-central1-c/disks/nginx-gcp-terraform"
  instance:    "" => "https://www.googleapis.com/compute/v1/projects/my-first123-project/zones/us-central1-c/instances/nginx-terraform"
  mode:        "" => "READ_WRITE"
  project:     "" => "<computed>"
  zone:       "" => "<computed>"
google_compute_attached_disk.default: Creation complete after 9s (ID: nginx-terraform:nginx-gcp-terraform)

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.

Outputs:

http = http://34.69.125.59

```

my-first123-project

VM instance details

EDITRESETCREATE SIMILARSTOPDELETE

nginx-terraform

DetailsMonitoring

Remote access

SSHConnect to serial console

Enable connecting to serial ports

Logs

Stackdriver Logging

Serial port 1 (console)

More

Instance Id

8778415634764976559

Machine type

custom (1 vCPU, 4.5 GB memory)

Reservation

Automatically choose (default)

CPU platform

Intel Haswell

Display device

Turn on a display device if you want to use screen capturing and recording tools.

Turn on display device

Zone

us-central1-c

Labels

osfamily: redhat

servertype: nginxserver

wayofinsta...: terraform

Creation time

Feb 18, 2020, 7:59:45 AM

Network interfaces

Name	Network	Subnetwork	Primary internal IP	Alias IP ranges	External IP	Network Tier	IP forwarding	Network details
nic0	default	default	10.128.0.6	—	34.69.125.59 (ephemeral)	Premium	Off	View details

Public DNS PTR Record

console.cloud.google.com/compute/instances?project=my-first123-project&instanceSize=50

Google Cloud Platform

my-first123-project

VM instances

CREATE INSTANCIMPORT VMREFRESHSTARTSTOPRESETDELETE

SHOW INFO PANEL

VM instances

Instance groups

Instance templates

Sole-tenant nodes

Disks

Snapshots

Images

TPUs

Filter VM instances

Columns

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
nginx-gcloud	us-central1-c			10.128.0.5 (nic0)	35.232.79.87	SSH
nginx-gcp-ui	us-central1-c			10.128.0.2 (nic0)	35.232.140.201	SSH
nginx-terraform	us-central1-c			10.128.0.6 (nic0)	34.69.125.59	SSH

Related Actions

Dismiss

TASK 2

It's aiming to gain knowledge about the mechanisms of Persistent disk creation in Google Cloud.

Create Persistent Disk and attach it to one of existing Virtual machine (nginx-gcp-ui).

- 1) Complete Lab [google codelabs: persistent disk](#) with using your VM name

[←](#) Create a disk

Name ?
Name is permanent

Description (Optional)

Type ?

Standard persistent disk

☐ Replicate this disk within region ?

Region ?
Region is permanent

us-central1 (Iowa)

Zone ?
Zone is permanent

us-central1-c

Snapshot schedule
Use snapshot schedules to automate disk backups. [Scheduled snapshots](#) ↗

No schedule

Create snapshot schedules to automatically back up your data. [Learn more about creating snapshot schedules](#) ↗

Dismiss

Source type ?

Blank disk Image Snapshot

Size (GB) ?

You have entered a volume size of under 200 GB. This may result in reduced performance. [Learn more](#)

Estimated performance ?

Operation type	Read	Write
Sustained random IOPS limit	7.50	15.00
Sustained throughput limit (MB/s)	1.20	1.20

my-first123-project

← VM instance details

EDIT

RESET

CREATE SIMILA

Used to reference the device for mounting or resizing.

nginx-gcp-ui

Additional disks (Optional)

Existing disk (disk-1new)

Disk

disk-1new Standard persistent disk, 10 GB, not attached

☐ Force-attach disk

Mode

☒ Read/write

☐ Read only

Deletion rule

When deleting instance

☒ Keep disk

☐ Delete disk

Device name

Used to reference the device for mounting or resizing.

Based on disk name (default)

disk-1new

Done

Cancel

+ Add new disk

+ Attach existing disk

Local disks

None

Shielded VM

Select a shielded image to use shielded VM features.

Turn on all settings for the most secure configuration.

- 2) Create terraform configuration to do the same via terraform (use VM: nginx-gcp-terraform).

For reference:

- [google_compute_disk](#)
 - [google_compute_attached_disk](#)
-