

Create VM using Bash

Last updated by | shakibesaib | Sep 29, 2023 at 3:00 PM GMT+6

1. Installing Google Cloud SDK on Linux Mint

- Run the command below to add Google Cloud SDK repository to sources.list file
`echo "deb [signed-by=/usr/share/keyrings/cloud.google.gpg] https://packages.cloud.google.com/apt cloud-sdk main" | sudo tee -a /etc/apt/sources.list.d/google-cloud-sdk.list`
- Installed required dependencies as below:
`sudo apt-get install apt-transport-https ca-certificates gnupg`
- Next, we import Google cloud SDK public key
`curl https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key --keyring /usr/share/keyrings/cloud.google.gpg add -`
- Finally, update and install Google Cloud SDK
`sudo apt update`
`sudo apt install google-cloud-sdk`

The tools that will be installed as part of Google Cloud SDK include:

- gcloud – called default gcloud CLI command is the tool for interacting with Google Cloud. It works with Google Compute Engine and can be compared to AWS EC2)
- bq (BigQuery Command Line tool) – is the tool that enables working with data in Google BigQuery. Can be compared to AWS Redshift
- gsutil (Cloud storage Command Line) – Used with any operations to do with Google Cloud storage just like AWS S3.
- alpha (gcloud CLI alpha commands) – gcloud CLI commands at the alpha release level.
- beta (gcloud CLI beta commands) – gcloud CLI commands at the alpha release level.

2. Initialize Google Cloud SDK

```
gcloud init
```

```
devops@devops-Lenovo-G410:~$ gcloud init
Welcome! This command will take you through the configuration of gcloud.

Your current configuration has been set to: [default]

You can skip diagnostics next time by using the following flag:
  gcloud init --skip-diagnostics

Network diagnostic detects and fixes local network connection issues.
Checking network connection...done.
Reachability Check passed.
Network diagnostic passed (1/1 checks passed).

You must log in to continue. Would you like to log in (Y/n)? y
```

Type Y

Your browser has been opened to visit:

```
https://accounts.google.com/o/oauth2/auth?response_type=code&client_id=32555940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%2F&scope=openid+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fsqlservice.login+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Faccounts.reauth&state=3BVEGHEzVoTE4j75k7SAFNV3ijGhvs&access_type=offline&code_challenge=-NEPJy3-TLuVzxv23dAClT9ywdmd2wnfpeR7NPh8_48&code_challenge_method=S256
```

You are logged in as: [shakibesaib@gmail.com].

Pick cloud project to use:

[1] devopslearning-396112

[2] Enter a project ID

[3] Create a new project

Please enter numeric choice or text value (must exactly match list item):

Chose your GCP account and accept GCP terms and conditation.

Pick a number to choose your project.

Please enter numeric choice or text value (must exactly match list item): 1

Your current project has been set to: [devopslearning-396112].

Do you want to configure a default Compute Region and Zone? (Y/n)? n

if want to configure a default Compute Region and Zone select yes

```

Do you want to configure a default Compute Region and Zone? (Y/n)? y

Which Google Compute Engine zone would you like to use as project default?
If you do not specify a zone via a command line flag while working with Compute
Engine resources, the default is assumed.
[1] us-east1-b
[2] us-east1-c
[3] us-east1-d
[4] us-east4-c
[5] us-east4-b
[6] us-east4-a
[7] us-central1-c
[8] us-central1-a
[9] us-central1-f
[10] us-central1-b
[11] us-west1-b
[12] us-west1-c
[13] us-west1-a
[14] europe-west4-a
[15] europe-west4-b
[16] europe-west4-c
[17] europe-west1-b
[18] europe-west1-d
[19] europe-west1-c
[20] europe-west3-c
[21] europe-west3-a
[22] europe-west3-b
[23] europe-west2-c
[24] europe-west2-b
[25] europe-west2-a
[26] asia-east1-b
[27] asia-east1-a
[28] asia-east1-c
[29] asia-southeast1-b
[30] asia-southeast1-a
[31] asia-southeast1-c
[32] asia-northeast1-b
[33] asia-northeast1-c
Too many options [116]. Enter "list" at prompt to print choices fully.
Please enter numeric choice or text value (must exactly match list item): 31

Your project default Compute Engine zone has been set to [asia-southeast1-c].
You can change it by running [gcloud config set compute/zone NAME].

Your project default Compute Engine region has been set to [asia-southeast1].
You can change it by running [gcloud config set compute/region NAME].

Created a default .boto configuration file at [/home/devops/.boto]. See this file and
[https://cloud.google.com/storage/docs/gsutil/commands/config] for more
information about configuring Google Cloud Storage.
Your Google Cloud SDK is configured and ready to use!

* Commands that require authentication will use shakibesaib@gmail.com by default
* Commands will reference project 'devopslearning-396112' by default
* Compute Engine commands will use region 'asia-southeast1' by default
* Compute Engine commands will use zone 'asia-southeast1-c' by default

Run 'gcloud help config' to learn how to change individual settings

This gcloud configuration is called [default]. You can create additional configurations if you work with multiple accounts and/or projects.
Run 'gcloud topic configurations' to learn more.

Some things to try next:

* Run 'gcloud --help' to see the Cloud Platform services you can interact with. And run 'gcloud help COMMAND' to get help on any gcloud command.
* Run 'gcloud topic --help' to learn about advanced features of the SDK like arg files and output formatting
* Run 'gcloud cheat-sheet' to see a roster of go-to 'gcloud' commands.

```

3. Using Google Cloud SDK

Creating a VM:

```

gcloud compute instances create shakibe-test \
  --machine-type=e2-micro \
  --boot-disk-size=10GB \
  --image-family=ubuntu-2004-lts \
  --image-project=ubuntu-os-cloud

```

```
devops@devops-Lenovo-G410:~$ gcloud compute instances create shakibe-test \
--machine-type=e2-micro \
--boot-disk-size=10GB \
--image-family=ubuntu-2004-lts \
--image-project=ubuntu-os-cloud
WARNING: You have selected a disk size of under [200GB]. This may result in poor I/O performance. For more information, see: https://developers.google.com/compute/docs/disks#performance.
Created [https://www.googleapis.com/compute/v1/projects/devopslearning-396112/zones/asia-southeast1-c/instances/shakibe-test].
NAME          ZONE          MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERNAL_IP  STATUS
shakibe-test  asia-southeast1-c  e2-micro      10.148.0.2   34.124.150.15  RUNNING
```

VM instances [CREATE INSTANCE](#) [IMPORT VM](#) [REFRESH](#) [HELP ASSISTANT](#) [LEARN](#)

INSTANCES OBSERVABILITY INSTANCE SCHEDULES

1 instance selected [START / RESUME](#) [STOP](#) [SUSPEND](#) [RESET](#) [DELETE](#) [LABELS](#) [PERMISSIONS](#)

Filter Enter property name or value

<input checked="" type="checkbox"/>	Status	Name ↑	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input checked="" type="checkbox"/>	✓	shakibe-test	asia-southeast1-c			10.148.0.2 (nic0)	34.124.150.15 (nic0)	SSH ▾ ⋮

Related actions [HIDE](#)