

Container Optimized OS for VMs:

If you want to create containers directly on the Google Compute VMs then Google recommends something called as: Container-Optimized OS for hosting docker containers on the GCE.

Container-Optimized OS is an operating system image for your Compute Engine VMs that is optimized for running Docker containers, and is Google's recommended OS for running containers on Google Cloud.

- Preinstalled Docker
- Automatic Updates
- Locked down - you cannot install 3rd party kernel modules
- More secured and less potential risk of attacks.

Home work demo to create COS VM in Google Cloud:

Google console:

1. Compute Engine > VM instances, then click on Create
2. Fill details like below:

Name	containerized-vm
Zone	us-central1-a
Machine Type	1 vCPU This is a (n1-standard-1), 3.75GB RAM instance
Container	Check the box labeled Deploy a container image to this instance
Container Image	nginx
Boot disk	Container-Optimized OS (default value)
Firewall	Check Allow HTTP traffic

3. Screenshot:

[←](#) Create an instance

Name ⓘ

Zone ⓘ

Machine type
Customize to select cores, memory and GPUs.


3.75 GB memory [Customize](#)

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

Container image ⓘ

[⌵ Advanced container options](#)

Boot disk ⓘ

 New 10 GB standard persistent disk
Image
Container-Optimized OS 64-10176.62.... [Change](#)

Identity and API access ⓘ

Service account ⓘ

Access scopes ⓘ
☒ Allow default access
☐ Allow full access to all Cloud APIs
☐ Set access for each API

Firewall ⓘ
Add tags and firewall rules to allow specific network traffic from the Internet
☒ Allow HTTP traffic
☐ Allow HTTPS traffic

4. Click Create
5. Open SSH session of the VM
6. Run: `sudo docker ps`

Edureka-GCP-Project

Search Products, resources, docs (/)

VM instances CREATE INSTANCE IMPORT VM REFRESH OPERATIONS HELP ASSISTANT SHOW INFO PANEL LEARN

INSTANCES INSTANCE SCHEDULES

VM instances are highly configurable virtual machines for running workloads on Google infrastructure. [Learn more](#)

Filter Enter property name or value

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
<input checked="" type="checkbox"/>	containerized-vm	us-central1-a			10.128.0.18 (nic0)	35.184.77.60 (nic0)	SSH

Related https://ssh.cloud.google.com/v2/ssh/projects/centered-flash-353712/zones/us-central1-a/instances/containerized-vm?authuser=3&hl=en_US&projectNumber=288225639148&us...

SSH-in-browser

```
##### Welcome #####
# You have logged in to the guest OS.
# To access your containers use 'docker attach' command
#####

edurekagcpbatch18062022@containerized-vm ~ $ sudo docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS          PORTS          NAMES
cf02046b845c   nginx    "/docker-entrypoint..." 27 seconds ago   Up 24 seconds   80/tcp         klt-containerized-vm-vufh
edurekagcpbatch18062022@containerized-vm ~ $
```

7. Check browser: http://EXTERNAL_IP_OF_VM

Screenshot:

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.