

DevOps Lab

CLOUD COMPUTE - GCP

Compute: Virtual Machine creation

Home task

Legal Notice:

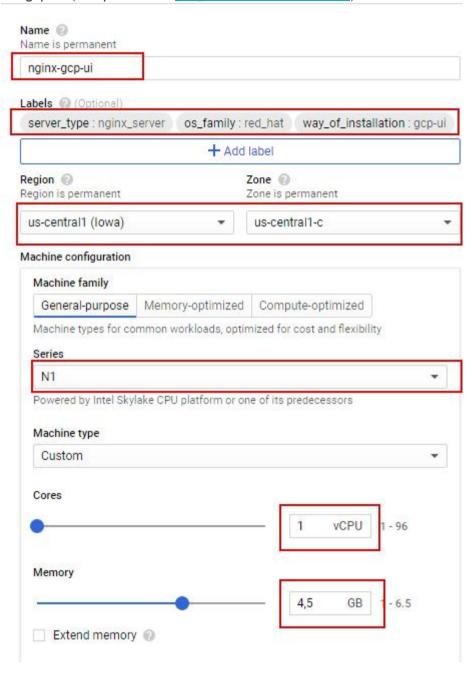
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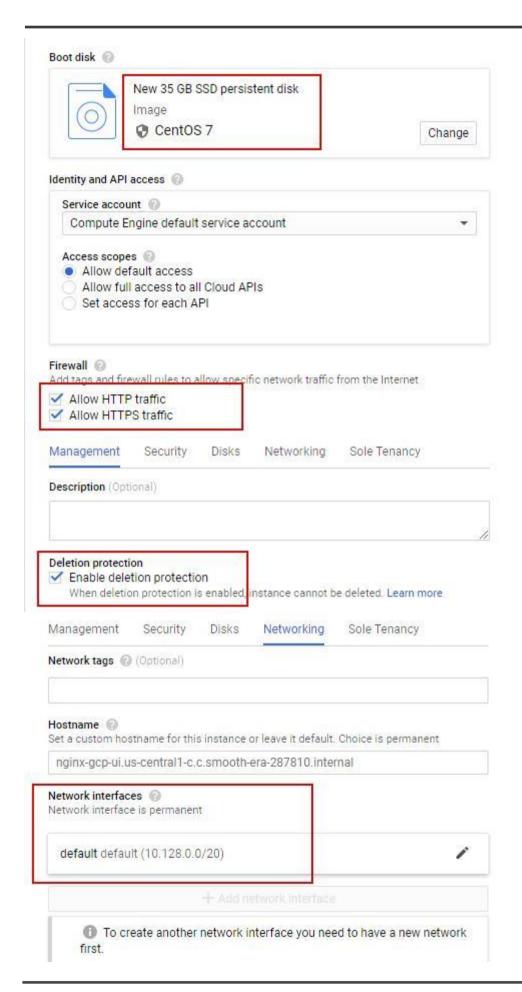
TASK 1

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

Create Virtual Machine in Google cloud by the following ways:

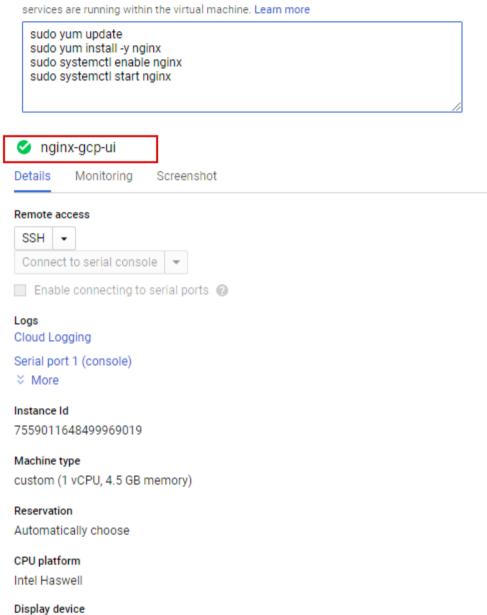
- gcp-ui (complete Lab: google codelabs: VM creation)





Automation Startup script (Optional)

You can choose to specify a startup script that will run when your instance boots up or restarts. Startup scripts can be used to install software and updates, and to ensure that



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

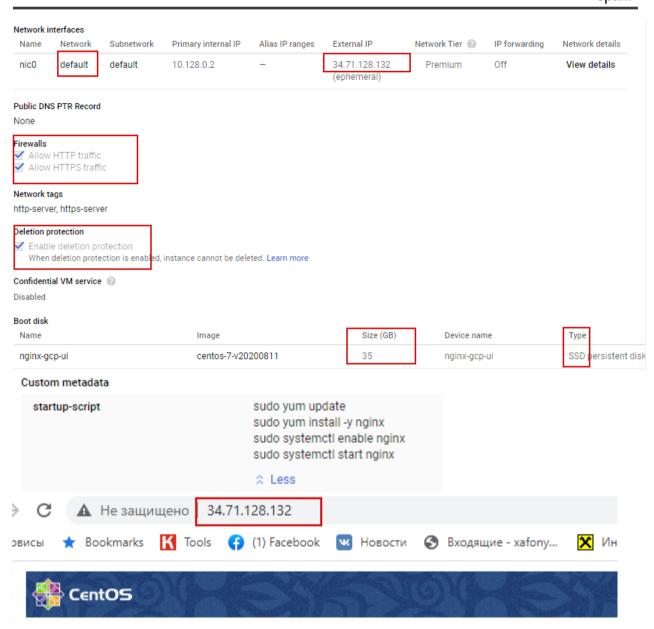
Turn on display device

Zone

us-central1-c

Labels

os_family:red_hat server_type:nginx_server way_of_ins...:gcp-ui



Welcome to CentOS

The Community ENTerprise Operating System

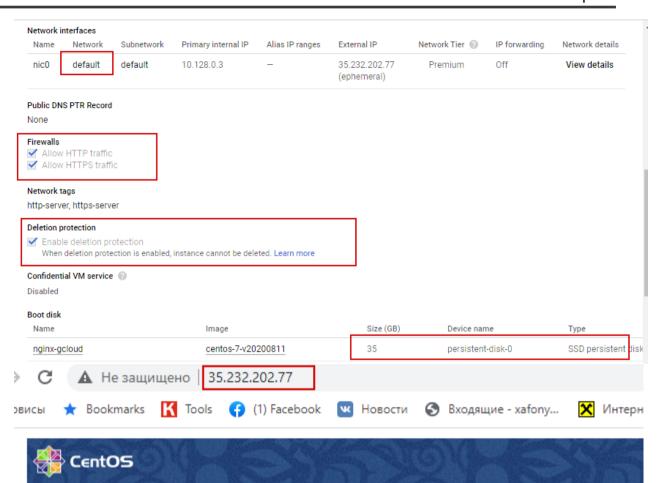
CentOS is an Enterprise-class Linux Distribution derived from sources freely provided to the predistribution policy and aims to be functionally compatible. (CentOS mainly changes package

CentOS is developed by a small but growing team of core developers. In turn the core developers enterprise users, managers, core Linux contributors and Linux enthusiasts from around the w

CentOS has numerous advantages including: an active and growing user community, quickly responsive, Special Interest Groups (SIGs) to add functionality to the core CentOS distribution an FAQ.

gcloud

```
#!/bin/bash
gcloud compute instances create nginx-gcloud \
--zone=us-central1-c \
--custom-vm-type n1 \
--custom-cpu=1 \
--custom-memory=4608MB \
--boot-disk-type=pd-ssd \
--boot-disk-size=35GB \
--image=centos-7 \
--tags="http-server", "https-server" \
--labels="server type=nginx server", "os family=red hat", "way of installation=gcloud" \
--deletion-protection \
--metadata startup-script="sudo yum update
sudo yum install -y nginx
sudo systemctl enable nginx
sudo systemctl start nginx" \
--network=default
nginx-gcloud
Details
         Monitoring
                       Screenshot
Remote access
 SSH -
 Connect to serial console -
Enable connecting to serial ports ②
Logs
Cloud Logging
Serial port 1 (console)
Instance Id
1733156070758612410
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
 os_family:red_hat server_type:nginx_server way_of_ins...:gcloud
```



Welcome to CentOS

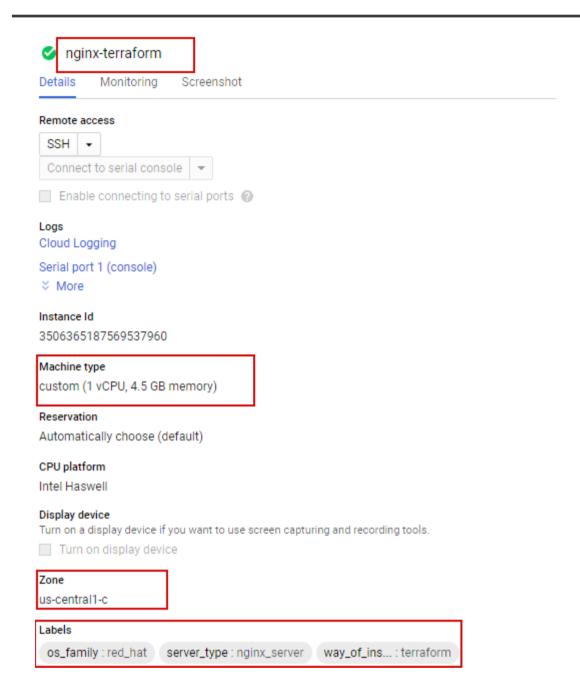
The Community ENTerprise Operating System

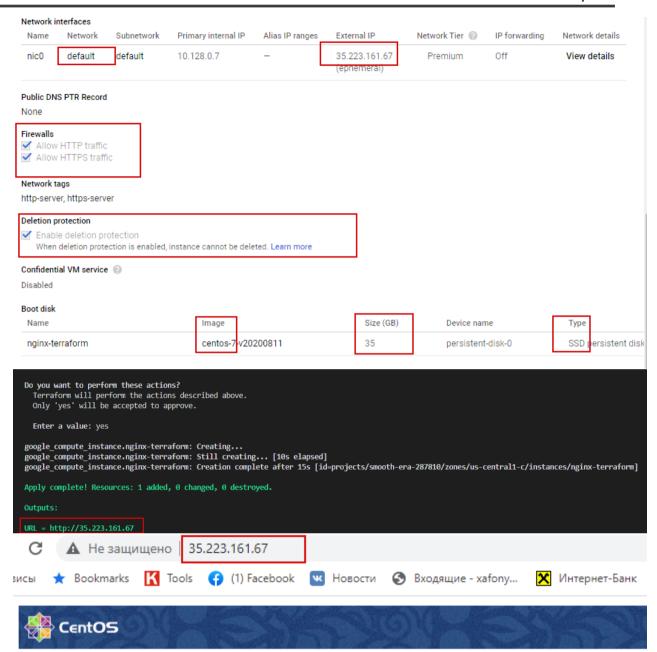
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terraform (all settings should be provided via variables (tfvars), add URL ("http://IP. Address/" to output)





Welcome to CentOS

The Community ENTerprise Operating System

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Virtual Machine Properties:

- InstanceName : nginx-\${creation-way}
- Region: us-central1
- Zone: us-central1-c
- Type: General Purpose, n1, 1CPU 4.5GB RAM, Disk SSD 35Gb;
- OS: Centos7
- Allow http, https traffic
- Labels:
 - ServerType=NginxServer
 - OSFamily=RedHat
 - WayOfInstallation=\${creation-way}
- The instance should be protected for deletion.
- VM should have the up and running Nginx (automatically provisioned after VM is started via yum, default configuration)
- The instance is running in **default** network

P.S.:

For **gcp-ui** way please use the following guide for reference: https://cloud.google.com/compute/docs/quickstart-linux

For **gcloud** way please use the following guide for reference:

https://cloud.google.com/ai-platform/deep-learning-vm/docs/quickstart-cli

For terraform way please use the following guide for reference:

https://www.terraform.ioU/docs/providers/google/guides/getting_started.html https://cloud.google.com/community/tutorials/managing-gcp-projects-with-terraform

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 goolge codelabs: persistent disk with using your VM name
- 2) Create terraform configuration to do the same via terraform (use VM: nginx-gcp-terraform). For reference:
 - google_compute_disk
 - google compute attached disk



All reports/code please place into repository:

https://github.com/MNT-Lab/google-cloud-module into appropriate branches: first char of name + surname.

For example:

Student: Siarhei Ivanou Branch Name: **sivanou**

Format depends on case: README.md/scripts/terraform files

Email pattern: [MNT-CD-10.2]-FirstName-LastName

Email should contain the link to personalized branch.