GitLab GCP Installation Tutorial

This tutorial is based on how the GCP dashboard looked like on October 2020

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Create project

Creation

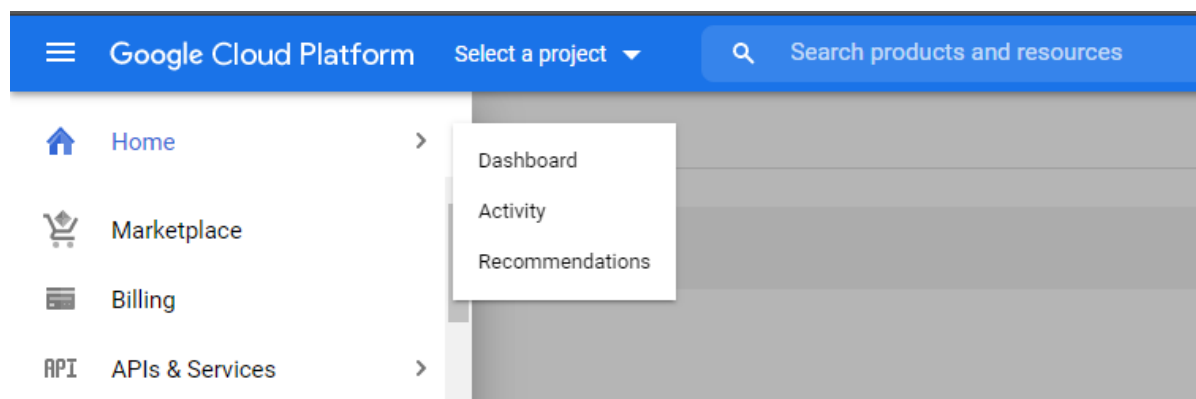Go to projects by

Menu -> Home

And click the project dropdown

Dashboard

> ⓘ To view this page, select a project.

Select a recent project

In the popup, select NEW PROJECT

Choose a name for your project,

For location, leave it as No organization

and press CREATE

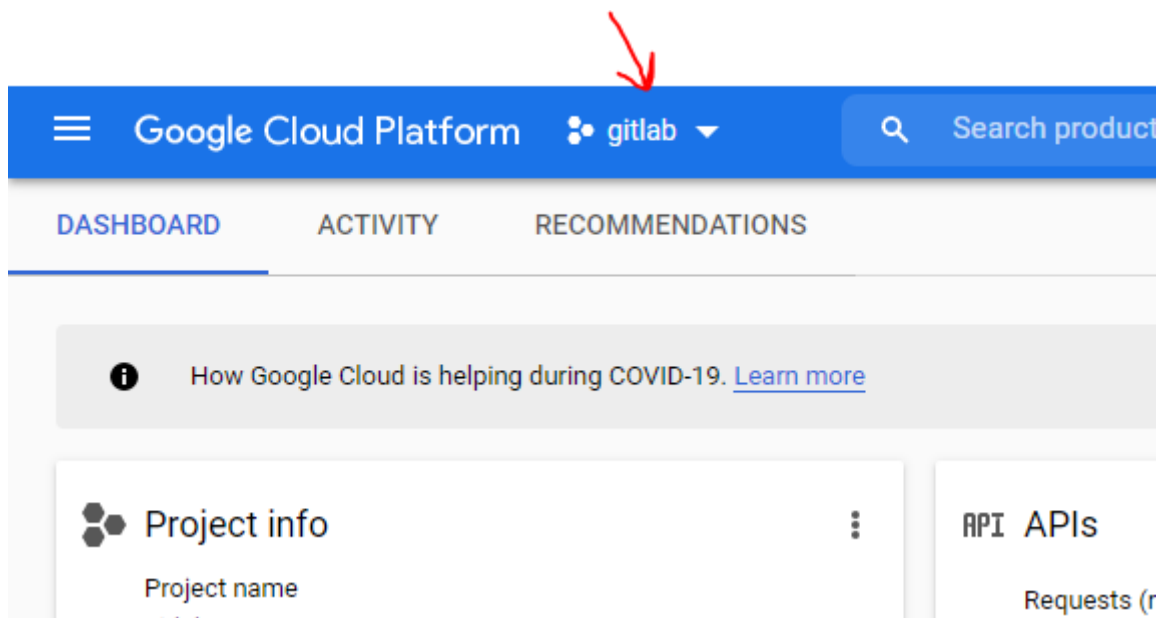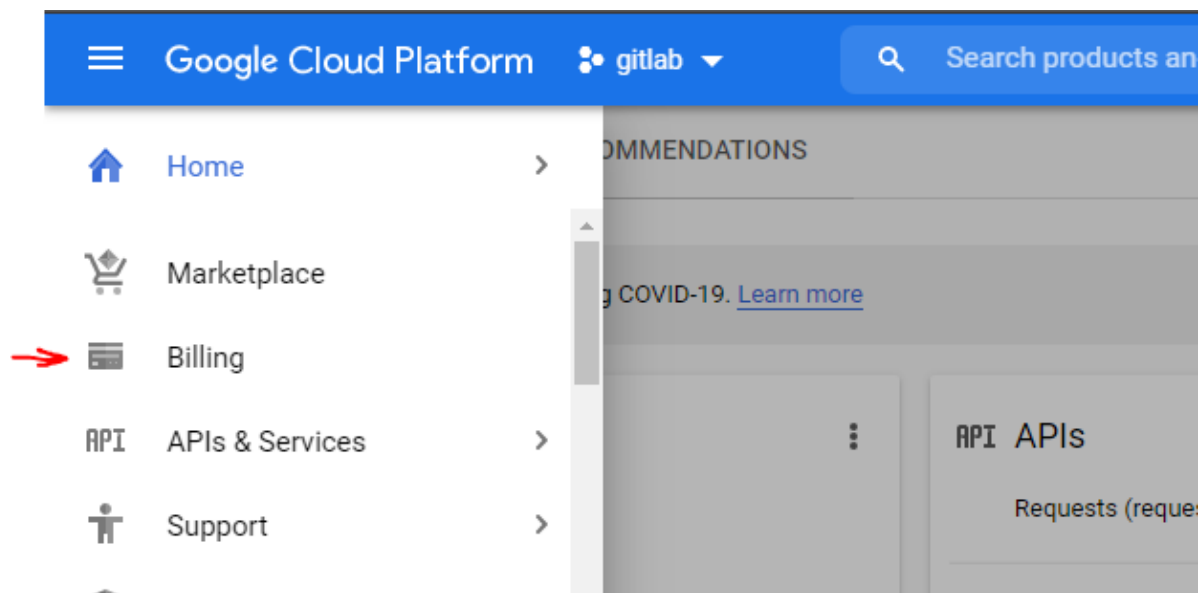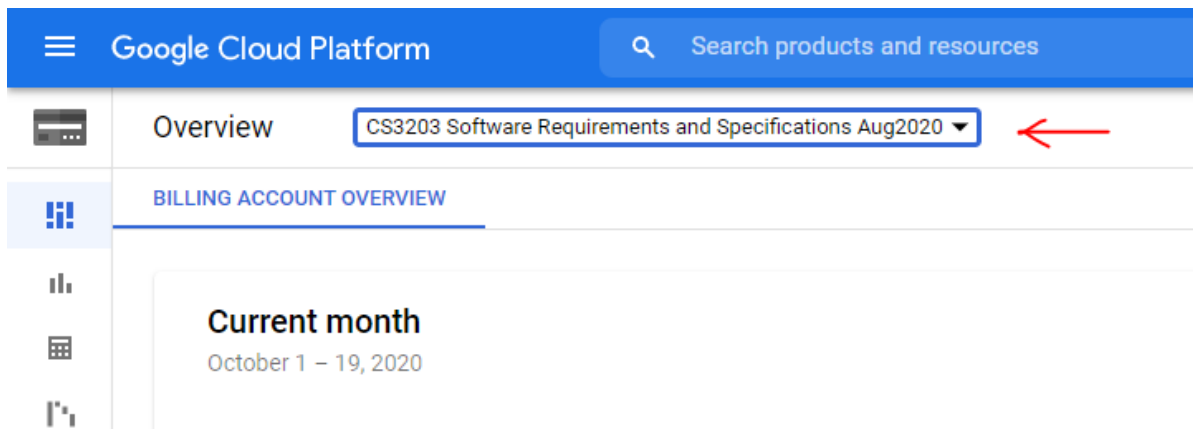Wait until project is created, and make sure you are within the project scope by checking

Billing

By default, the class credit billing account would be selected for your project. However, to make sure,

From left side menu, click Billing

And, make sure that the proper billing account linked to the project:

Create VM

From left side menu,

Select Compute Engine
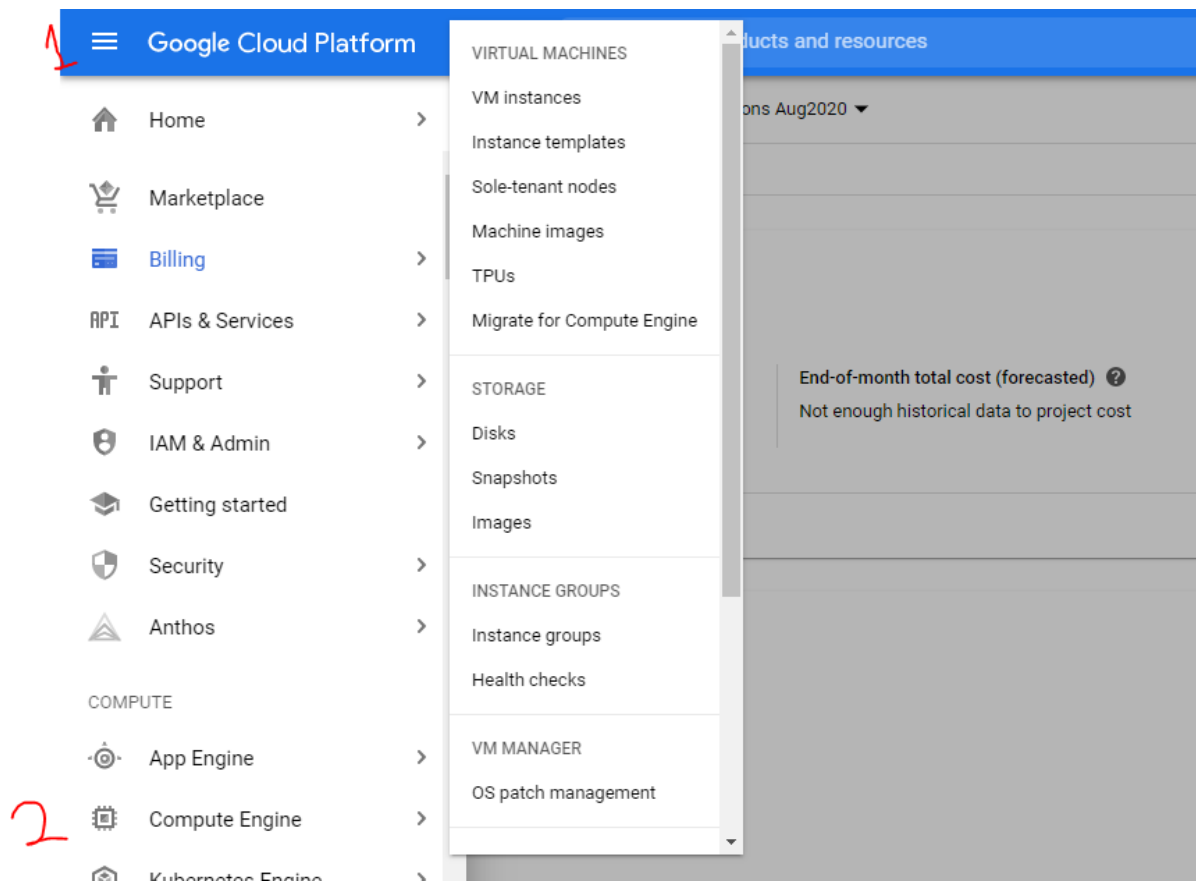
Select Create to create a new VM:

Configurations

1- For the instance **Name**, choose a proper name, for example `gitlab-instance`

 2- For **Machine configuration**; make sure to select the following

configuration	Value
Machine family	General Purpose
Series	E2
Machine type	e2-medium (2 vCPU, 4 GB memory)

For the boot disk:

Change it to *Ubuntu 20.04 LTS*

For this, click the Change under boot disk:

Select following configurations and click Select

Under firewall, make sure to have both

Allow HTTP traffic

Allow HTTPS traffic

is selected!

Warning!

- Not allowing HTTP/HTTPS traffic will prevent access to the gitlab server, or any server! Make sure you have them checked!

Re-check the settings and make sure the proper options are selected.

Configuration summary

configuration	Value
name	As you pleased (gitlab-instance for best)
Region/Zone	us-central1(Iowa)/us-central1-a
Machine family	General Purpose
Series	E2
Machine type	e2-medium (2 vCPU, 4 GB memory)
OS	Ubuntu
OS version	20.04 LTS
Identity and API access	Allow default access
Firewall	ALLOW HTTP and HTTPS

Then click Create to create your VM.

Install GitLab

Configure static IP

GCP assigns a dynamic IP to VM by default. This will cases changes the address of GitLab server when ever server shuts down. This case problems for the GitLab installation. To prevent this, we can assign an static IP to the VM.

In order to do that, in the left menu,

Under Compute Engine , select VM Instances
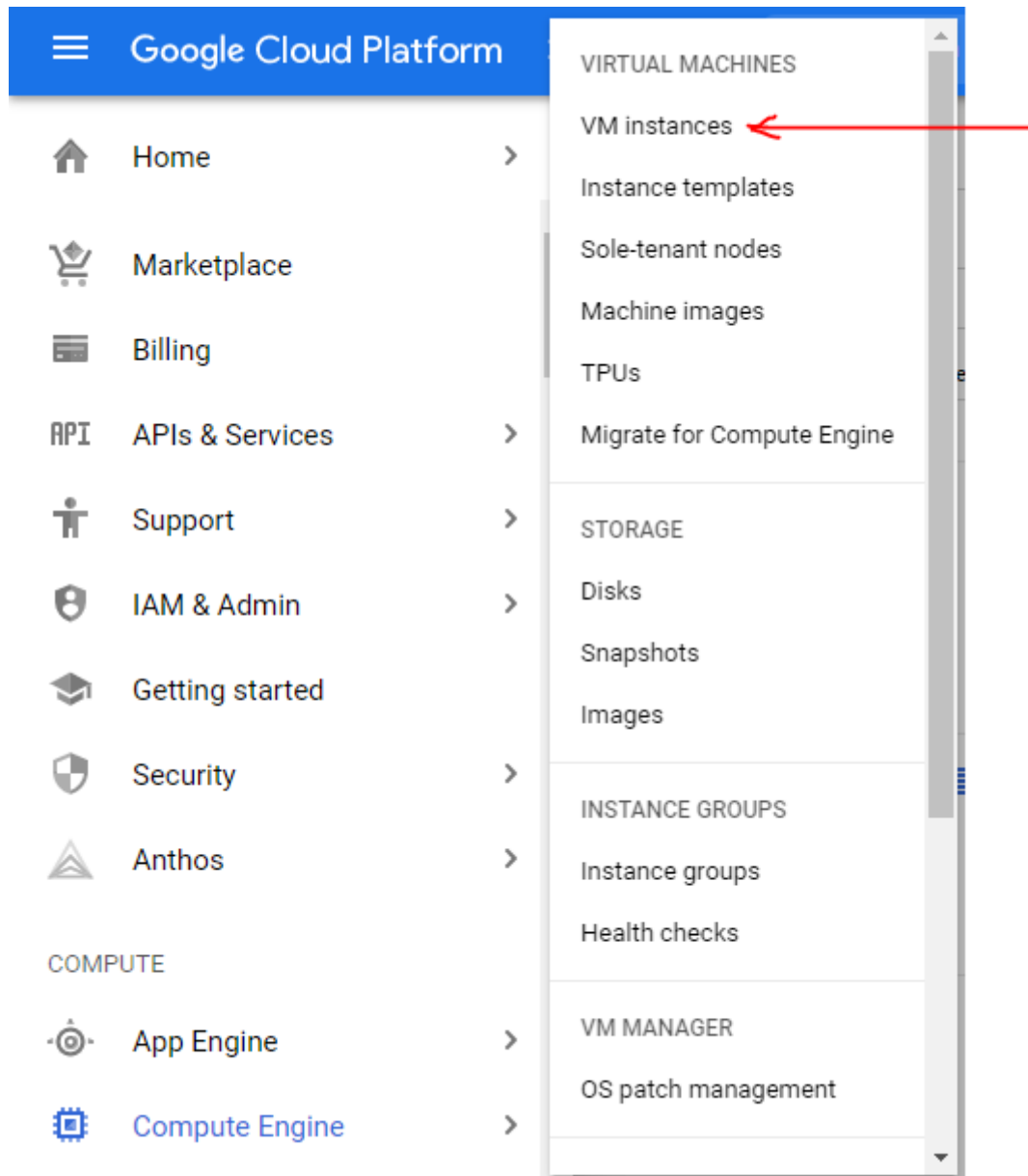
Here, you find the list of your VMs, which at least one them should be your newly created GitLab-instance.

Click on the instance name:

And press EDIT

← VM instance details ✏️ EDIT

✅ gitlab-instance

Details Monitoring Screenshot

Click to edit **Network interfaces**

Creation time
Oct 19, 2020, 8:33:29 PM

Network interfaces ❓

nic0: default default ✏️

➕ Add item

Firewalls
☑ Allow HTTP traffic
☑ Allow HTTPS traffic
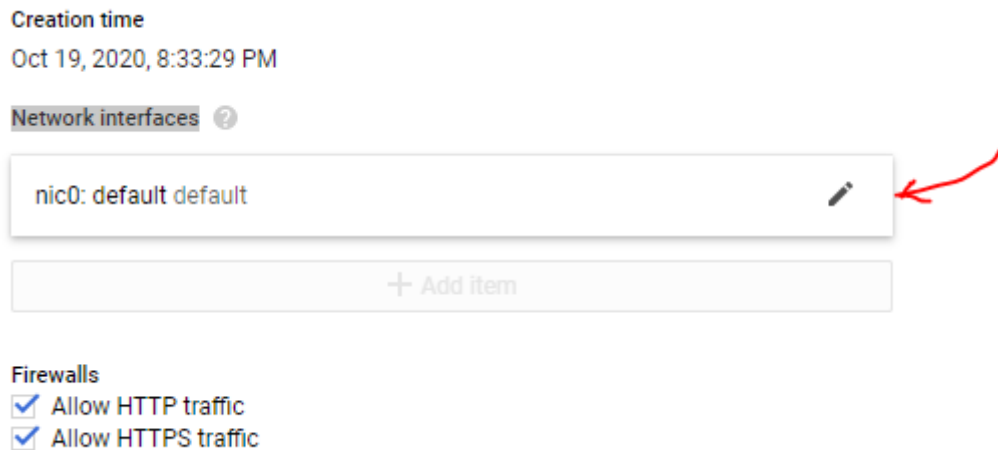
Find **External IP** option and click the drop box and select *Create IP address*

In the pop-up, assign a name, select **Standard** for service tier and click RESERVE

Reserve a new static IP address

Name ❓
Name is permanent

gitlab-ip

Description (Optional)

|

Network Service Tier ❓
○ Premium (Current project-level tier, change) ❓
● Standard ❓
Region
us-central1

ℹ Standard tier uses the same region as your VM instance

CANCEL RESERVE
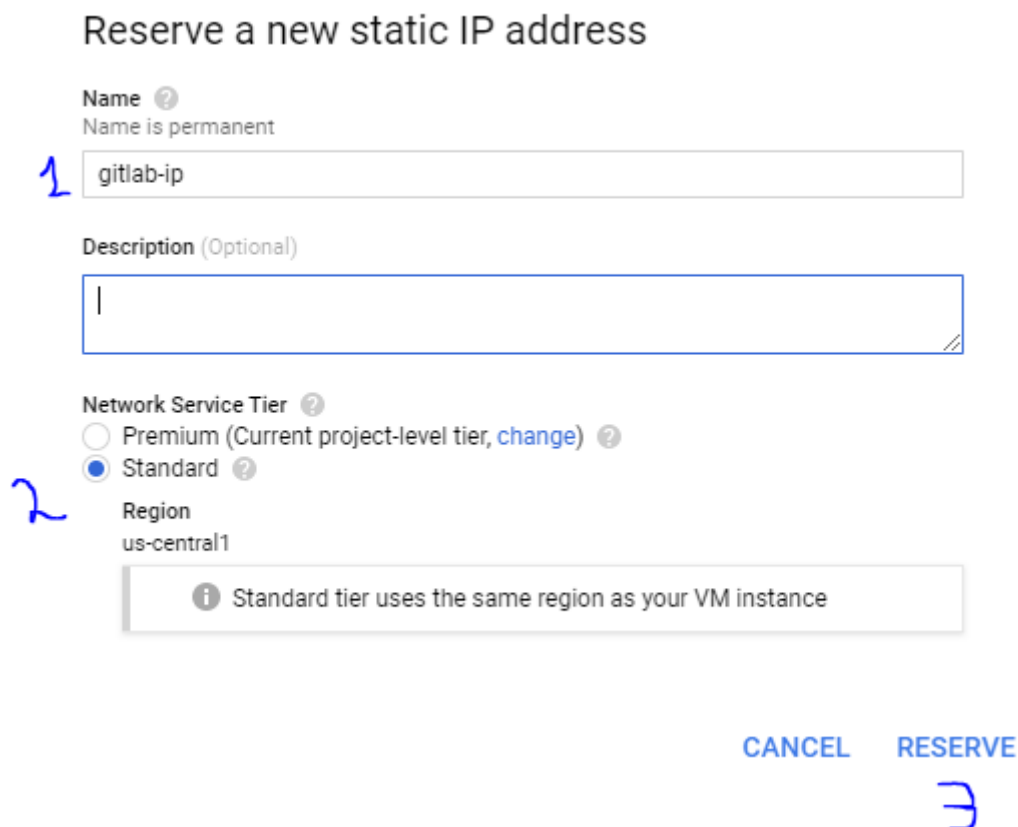
Click Done for Network interfaces:

And click Save on the bottom of page to save configuration.
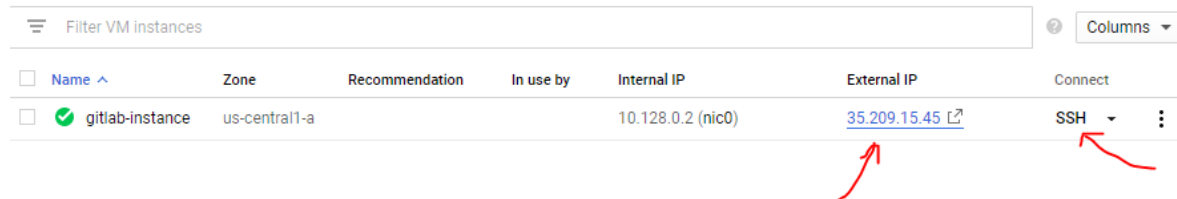
Connect to your newly created VM by SSH

Return back to VM instances page

To connect, click SSH to connect to VM:

A new pop-up window with a **shell** will appear. **Remember you IP address!**

Update and Upgrade your system

Type following in the shell:

```
sudo apt-get update
sudo apt-get upgrade -y
```

Install GitLab

The official instructions also can found here.

Install and configure the necessary dependencies

Type following in the shell:

```
sudo apt-get install -y curl openssh-server ca-certificates tzdata
```

Install postfix for email :

Type following in the shell:

```
sudo apt-get install -y postfix
```

During Postfix installation a configuration screen may appear. Select 'Internet Site' and press enter. Use your server's external DNS for 'mail name' and press enter. If additional screens appear, continue to press enter to accept the defaults.

```
┌─────────────────────┤ Postfix Configuration ├──────────────────────┐
│ Please select the mail server configuration type that best meets your needs.
│
│  No configuration:
│   Should be chosen to leave the current configuration unchanged.
│  Internet site:
│   Mail is sent and received directly using SMTP.
│  Internet with smarthost:
│   Mail is received directly using SMTP or by running a utility such
│   as fetchmail. Outgoing mail is sent using a smarthost.
│  Satellite system:
│   All mail is sent to another machine, called a 'smarthost', for delivery.
│  Local only:
│   The only delivered mail is the mail for local users. There is no network.
│
│  General type of mail configuration:
│
│                         No configuration
│                         Internet Site
│                         Internet with smarthost
│                         Satellite system
│                         Local only
│
│
│              <Ok>                              <Cancel>
│
└─────────────────────────────────────────────────────────────────────┘
```

```
┌─────────────────────┤ Postfix Configuration ├──────────────────────┐
│ The "mail name" is the domain name used to "qualify" _ALL_ mail addresses without a domain name. This
│ includes mail to and from <root>: please do not make your machine send out mail from root@example.org
│ unless root@example.org has told you to.
│
│ This name will also be used by other programs. It should be the single, fully qualified domain name (FQDN).
│
│ Thus, if a mail address on the local host is foo@example.org, the correct value for this option would be
│ example.org.
│
│ System mail name:
│
│ gitlab-instance.us-central1-a.c.gitlab-293100.internal
│
│              <Ok>                              <Cancel>
│
└─────────────────────────────────────────────────────────────────────┘
```
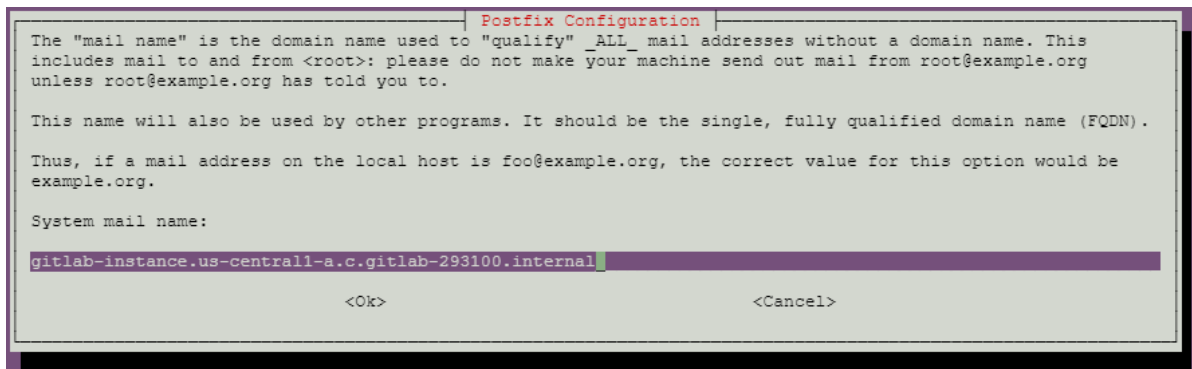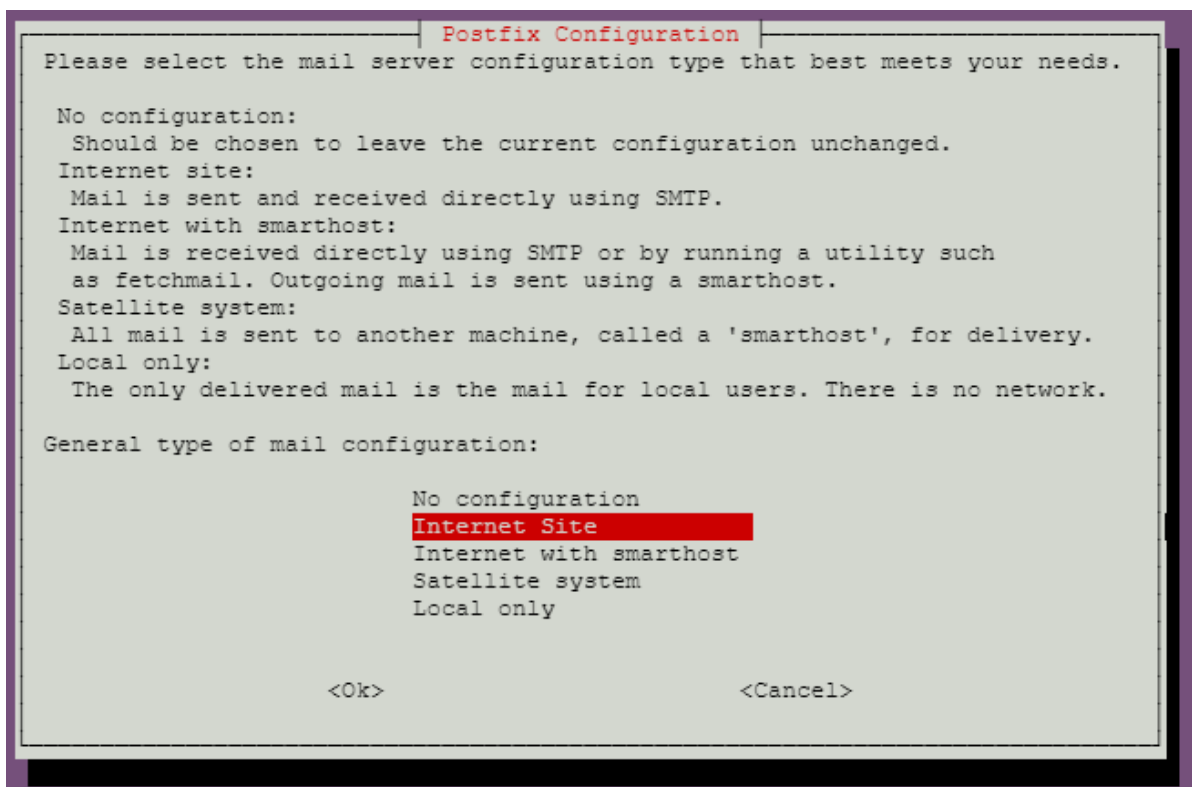
Add the GitLab package repository and install the package

Type following in the shell:

```
curl https://packages.gitlab.com/install/repositories/gitlab/gitlab-
ee/script.deb.sh | sudo bash
```

Install GitLab

Type following in the shell and replace the {your-ip-address} with you IP address which is visible on VM instances row.

```
sudo EXTERNAL_URL="https://{your-ip-address}" apt-get install gitlab-ee
```

Wait until installation is over. This will take 10 minute or more.

After the installation is done,

Type following in the shell

```
sudo gitlab-ctl start
```

now, you can access your GitLab Server using a browser,

Configure GitLab and create a repository

In the VM instances page, click on your instance IP

In a new tab, the GitLab page should appear,

Notice 1: You might face with browser safety alert that the page is not secure, that is because we are using an IP instead of domain in a HTTPS connection, depending on your browser, accept to enter to webpage.

Notice 2: GitLab takes a few minute to configure initially and you might see a error 502 *Whoops, GitLab is taking too much time to respond.* Wait 5 minutes and refresh the page again until you see the following page

Enter a new password for your root access.

Then in a sign in page, type `root` as the username and the password you just assigned:

GitLab Enterprise Edition

A complete DevOps platform

GitLab is a single application for the entire software development lifecycle. From project planning and source code management to CI/CD, monitoring, and security.

Sign in	Register

Username or email

root

Password

••••••••••••••••

☑ Remember me   Forgot your password?

Sign in

After you logged in, you should see following page:

Congratulations, you just installed GitLab on GCP.

You can create a new Project (same as repository in GitHub) and use it similarly.

Shutdown the server

To minimize the costs and keep your free GCP credit for long time, remember to shutdown your VM when you are not using it. To do that,

Go to VM Instances page, select the VM by checking the check box on its left, and press stop button from top menu.

You can restart the VM by pressing the PLAY button.

Note that every time server starts up, it takes some time to load up and you might again see the **error 502**. Just give it a 5~10 minutes and refresh it.