

# GitLab GCP Installation Tutorial

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

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### GitLab GCP Installation Tutorial

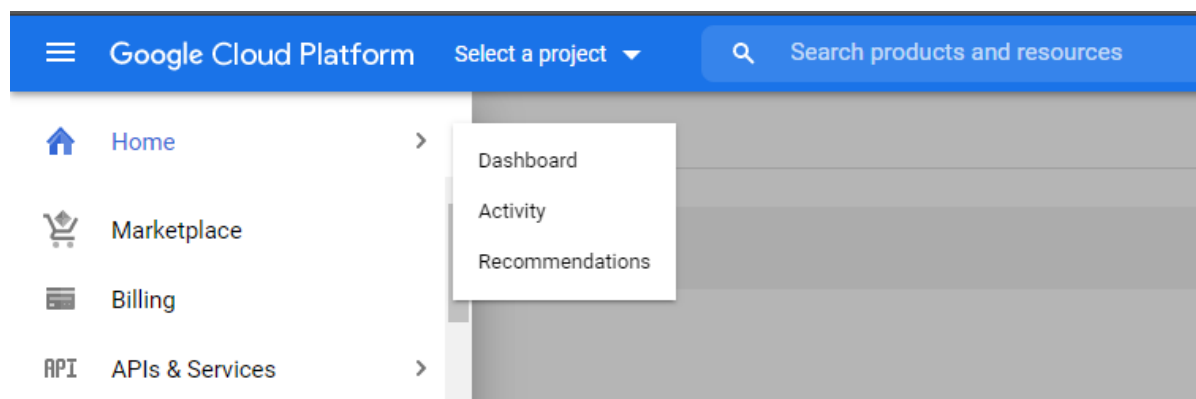
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## Create project

### Creation

Go to projects by

Menu -> Home



And click the project dropdown

## Dashboard

**i** 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

**Project name \***  
gitlab ?

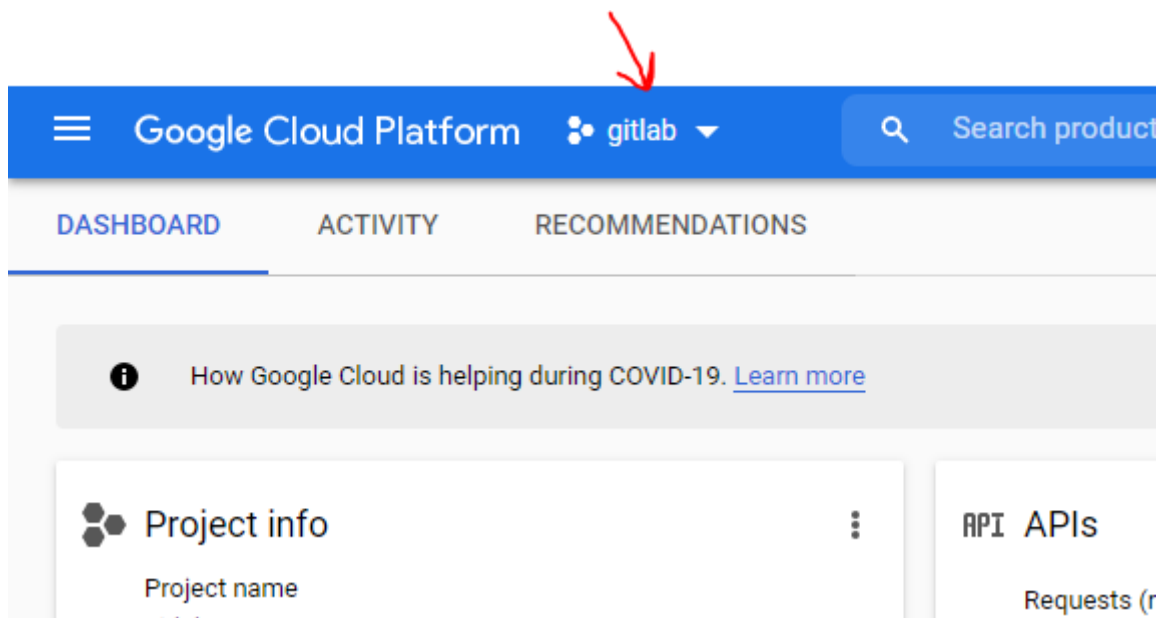
Project ID: gitlab-293100. It cannot be changed later. [EDIT](#)

**Location \***  
🏠 No organization [BROWSE](#)

Parent organization or folder

CREATE CANCEL

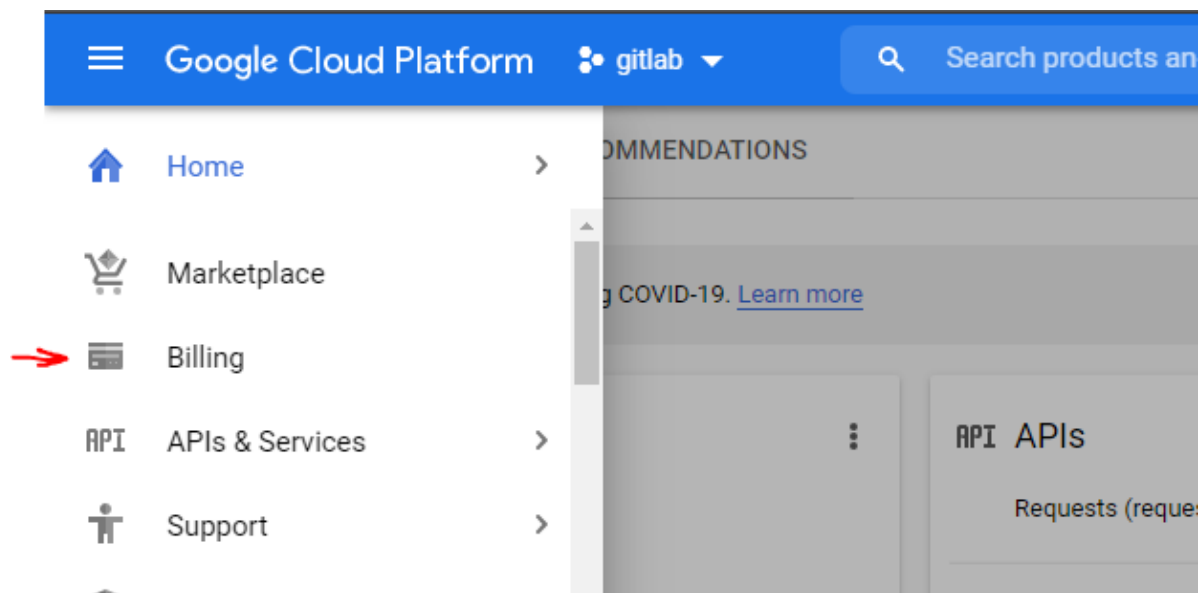
Wait until project is created, and make sure you are within the project scope by checking



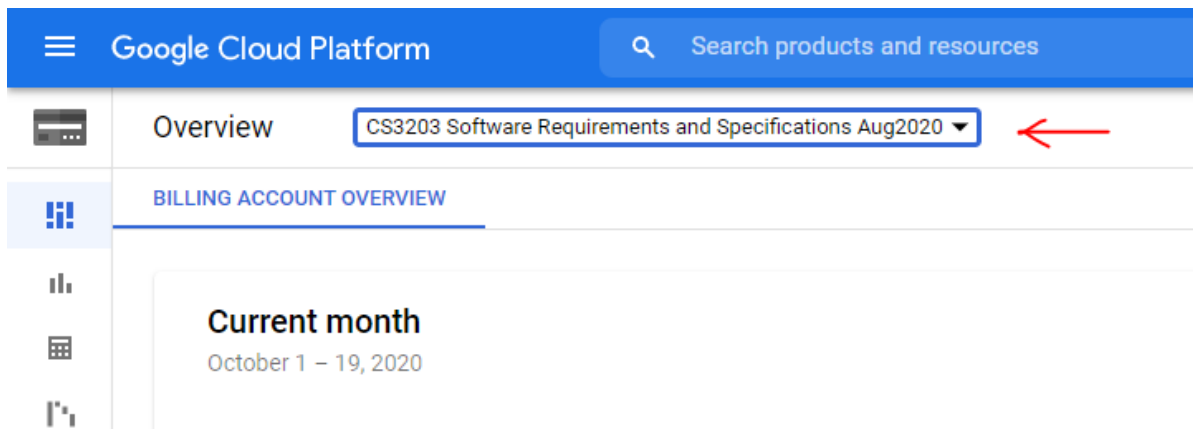
## Billing

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

From left side menu, click Billing



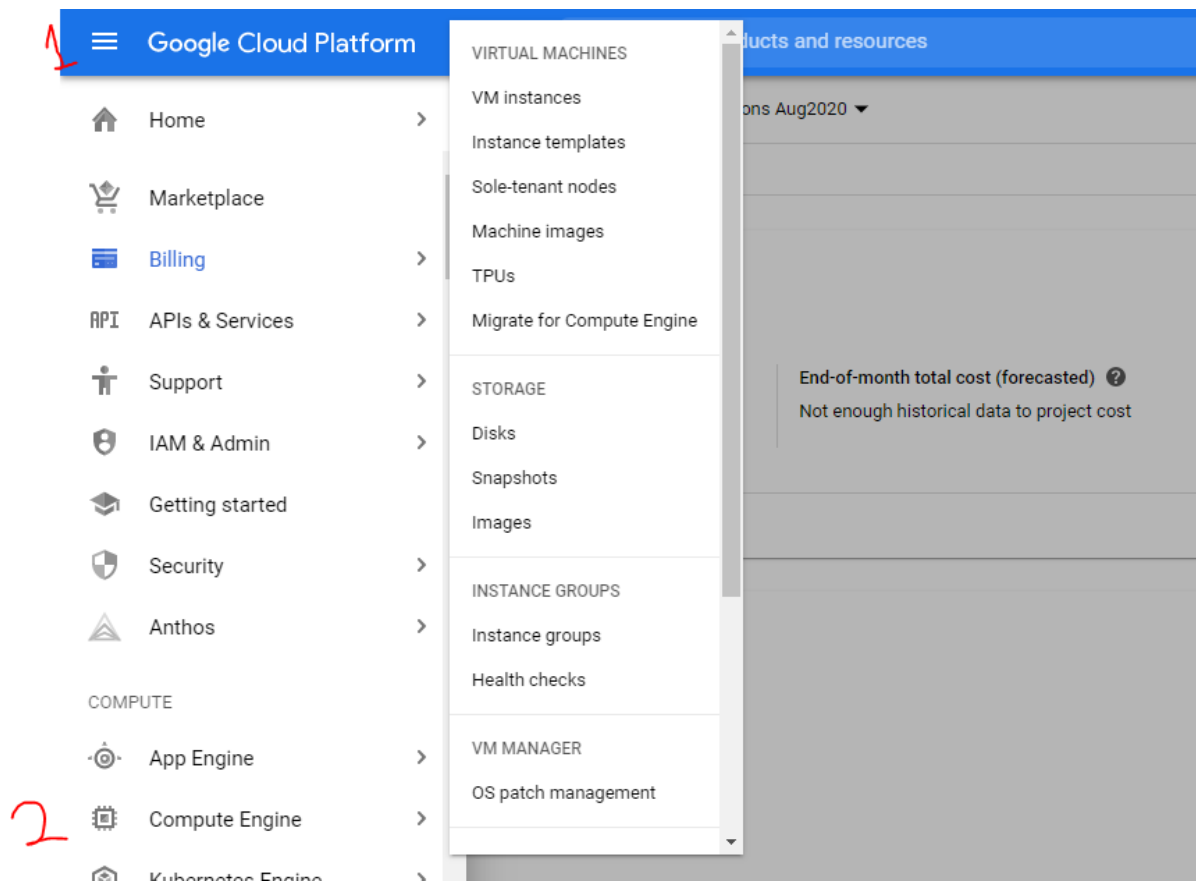
And, make sure that the proper billing account linked to the project:



## Create VM

From left side menu,

Select



Select  to create a new VM:

Compute Engine

VM instances

Compute Engine lets you use virtual machines that run on Google's infrastructure. Create micro-VMs or larger instances running Debian, Windows, or other standard images. Create your first VM instance, import it using a migration service, or try the quickstart to build a sample app.

Create

 or 

Import

 or 

Take the quickstart

## 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)

**Name** ?  
Name is permanent

gitlab-instance

**Labels** ? (Optional)

+ Add label

**Region** ?  
Region is permanent

us-central1 (Iowa)

**Zone** ?  
Zone is permanent

us-central1-a

**Machine configuration**

**Machine family**

General-purpose Compute-optimized Memory-optimized

Machine types for common workloads, optimized for cost and flexibility


**Series**

E2

CPU platform selection based on availability

**Machine type**

e2-medium (2 vCPU, 4 GB memory)

	vCPU	Memory	GPUs
	1 shared core	4 GB	-

For the boot disk:

Change it to *Ubuntu 20.04 LTS*

For this, click the **Change** under boot disk:

⌵ CPU platform and GPU

Confidential VM service ?

☐ Enable the Confidential Computing service on this VM instance.

Container ?

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

Boot disk ?



New 10 GB standard persistent disk

Image

Debian GNU/Linux 10 (buster)

Change

Identity and API access ?

Service account ?

Compute Engine default service account

Access scopes ?

- ☒ Allow default access
- ☐ Allow full access to all Cloud APIs
- ☐ Set access for each API

Select following configurations and click

## Boot disk

Select an image or snapshot to create a boot disk; or attach an existing disk. Can't find w

Public images

Custom images

Snapshots

Existing disks

Operating system

Ubuntu

Version

Ubuntu 20.04 LTS

amd64 focal image built on 2020-10-14, supports Shielded VM features ?

Boot disk type ?

Standard persistent disk

Size (GB) ?

10

Select

Cancel

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!





Image


Ubuntu 20.04 LTS

Change

Identity and API access

Service account

Compute Engine default 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

Management, security, disks, networking, sole tenancy

You will be billed for this instance. [Compute Engine pricing](#)

Create

Cancel

Equivalent [REST](#) or [command line](#)

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.

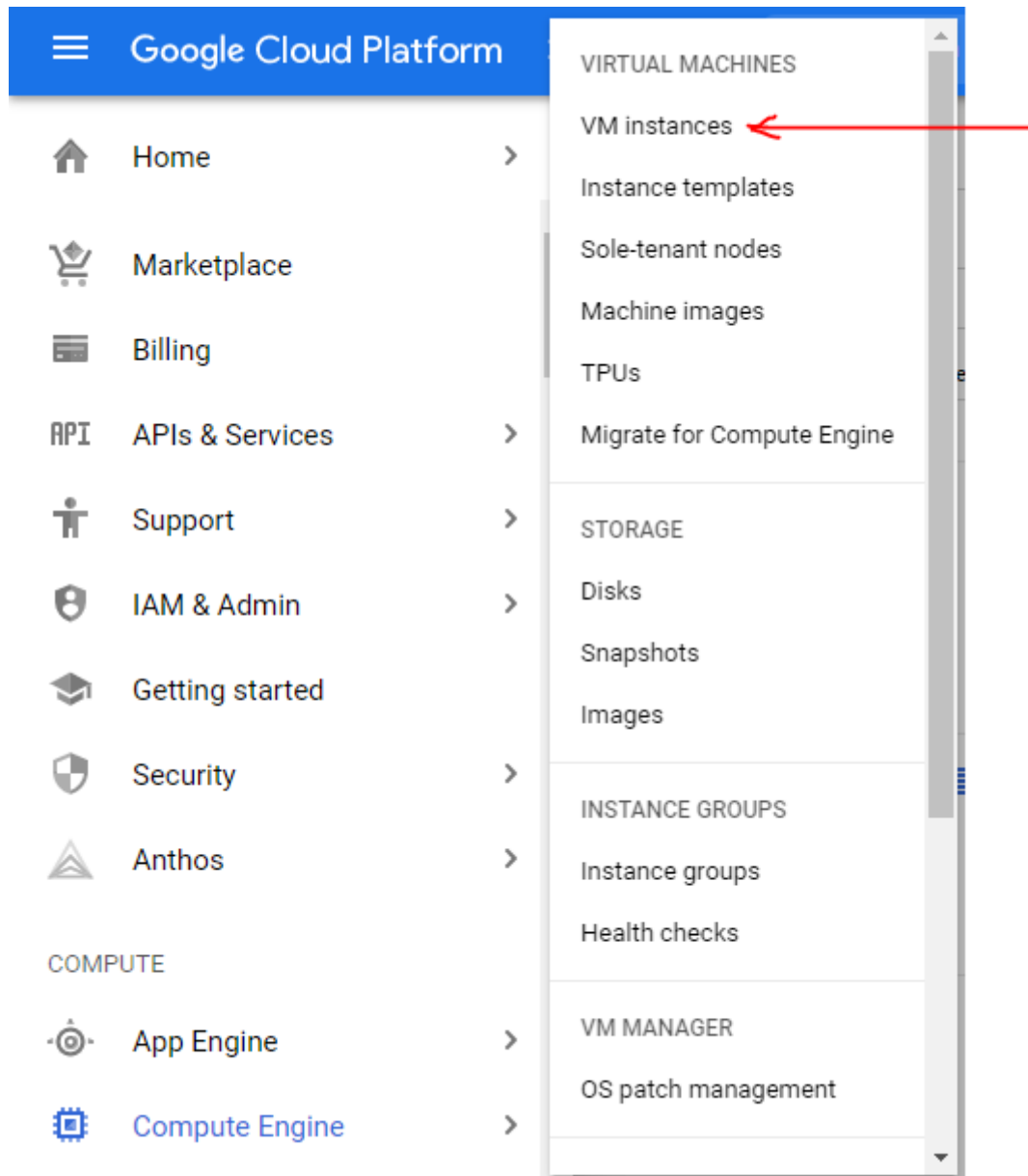
## Install GitLab

## 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

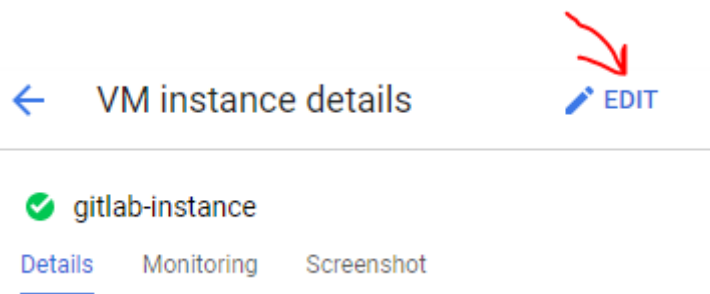


Here, you find the list of your VMs, which at least one them should be your newly created GitLab-instance.

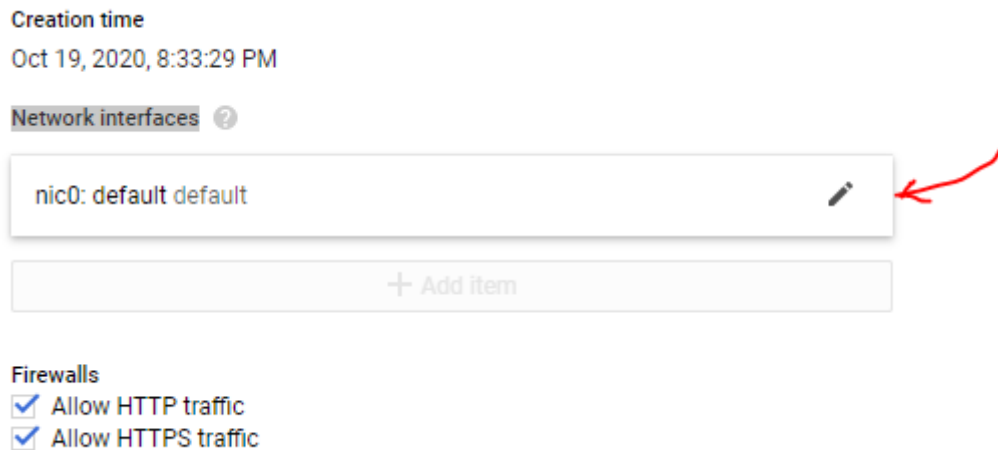
Click on the instance name:

Filter VM instances							Columns
<input type="checkbox"/> Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect	
<input type="checkbox"/>  gitlab-instance	us-central1-a			10.128.0.2 (nic0)	<a href="#">35.209.15.45</a>	SSH	

And press EDIT

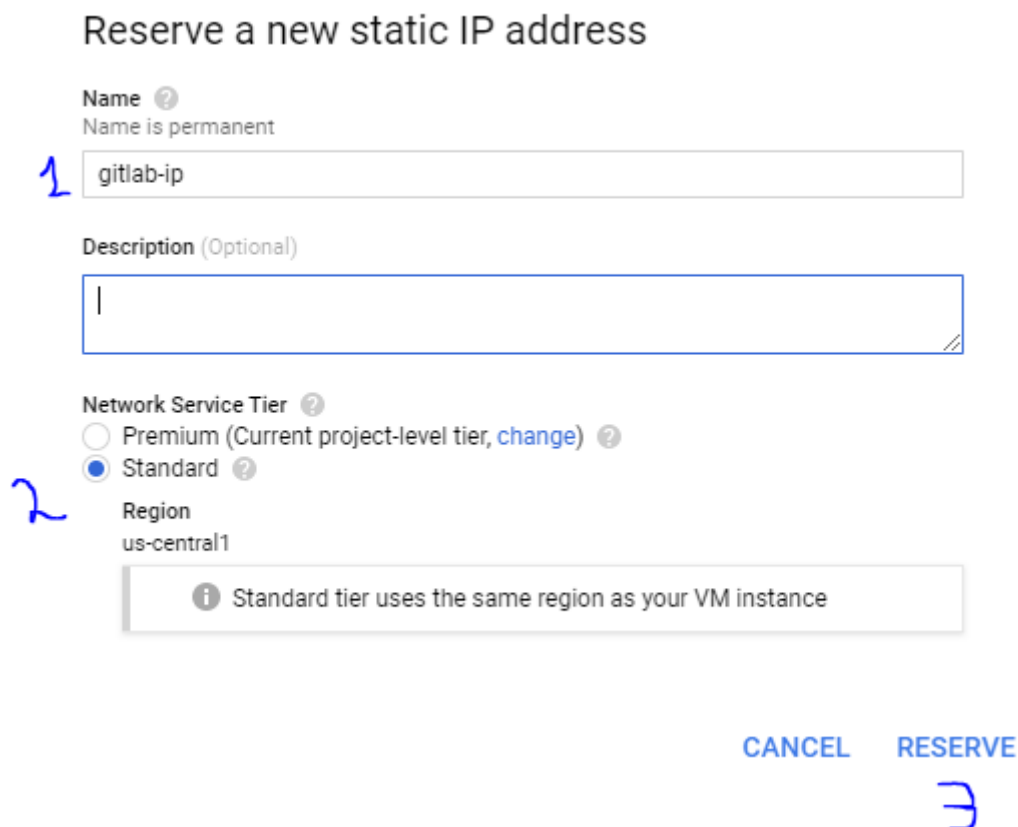


Click to edit **Network interfaces**



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



Click Done for Network interfaces:

⌵ Show alias IP ranges

External IP ?

gitlab-ip (35.209.15.45) ▼

Network Service Tier ?

Standard (us-central1)

IP forwarding

Off

Public DNS PTR Record ?

☐ Enable

PTR domain name

Done Cancel

And click **Save** on the bottom of page to save configuration.

⚙️ ⬅️ VM instance details EDIT RESET + CREATE MACHINE IMAGE

Migrate VM instance (recommended) ▼

⚠️ On host maintenance cannot be changed for E2 machine types.

Automatic restart

On (recommended) ▼

Custom metadata

Key	Value
+ Add item	

SSH Keys

☐ Block project-wide SSH keys

When checked, project-wide SSH keys cannot access this instance [Learn more](#)

You have 0 SSH keys

⌵ Show and edit

Service account

You must stop the VM instance to edit its service account

795548173937-compute@developer.gserviceaccount.com

Cloud API access scopes

You must stop the VM instance to edit its API access scopes

Allow default access

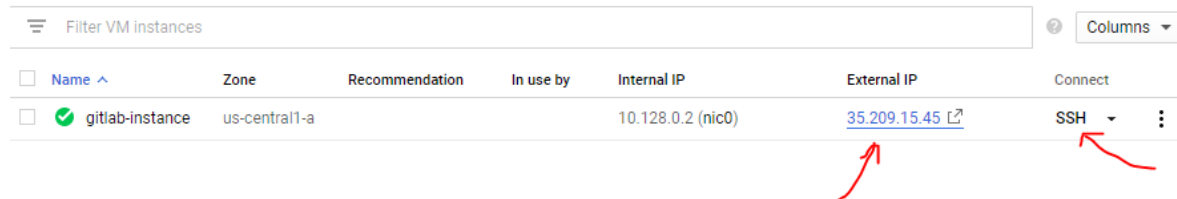
⌵ Details




I> Save Cancel

# Connect to your newly created VM by SSH

Return back to VM instances page

To connect, click SSH to connect to VM:



<input type="checkbox"/>	Name ^	Zone	Recommendation	In use by	Internal IP	External IP	Connect
<input type="checkbox"/>	✔ gitlab-instance	us-central1-a			10.128.0.2 (nic0)	<a href="#">35.209.15.45</a> 	SSH  

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:

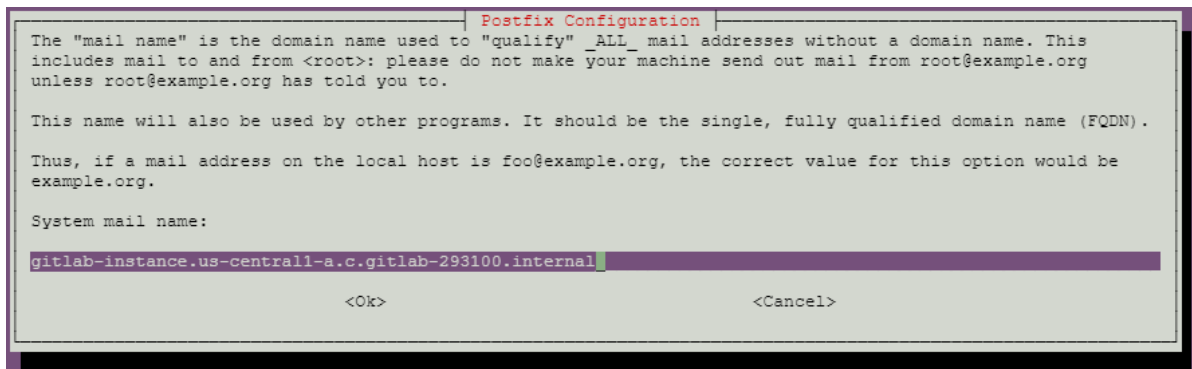
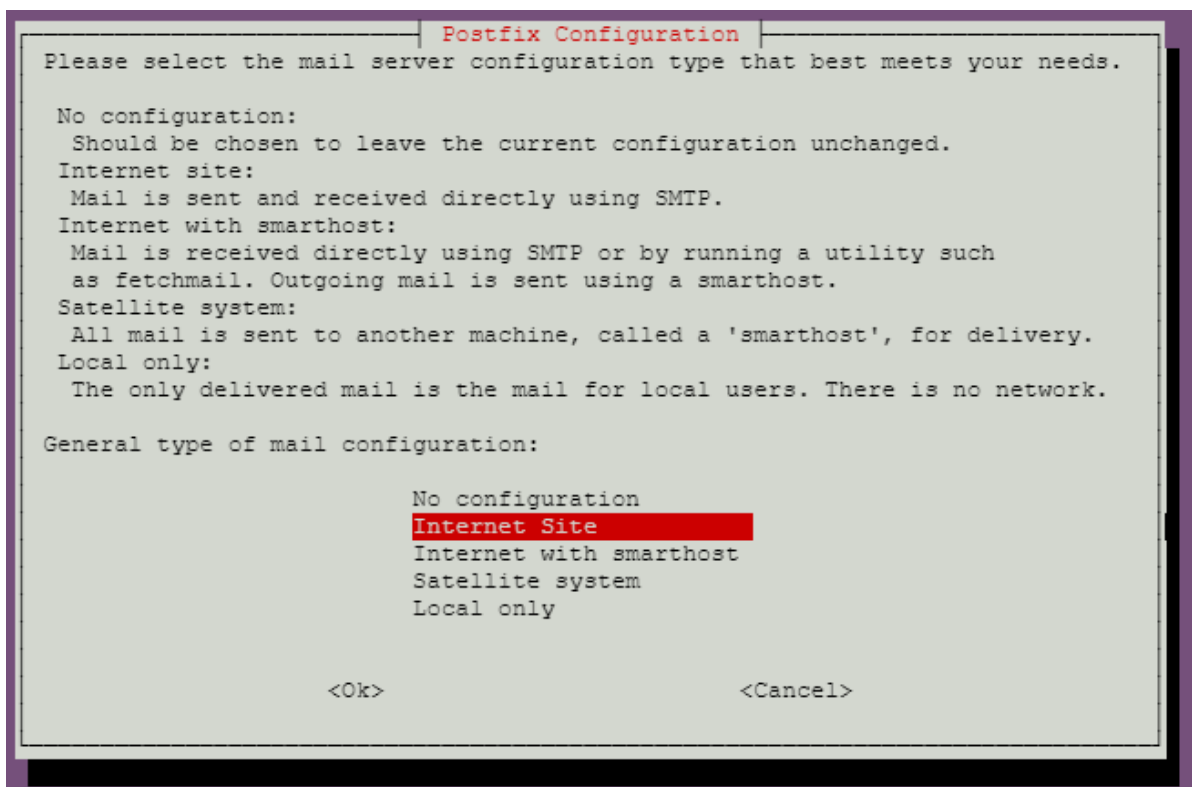
```
sudo apt-get install -y curl openssh-server ca-certificates tzdata
```

### 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.



## 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 gitlabctl 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

Filter VM instances							Columns
<input type="checkbox"/> Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect	
<input type="checkbox"/>  gitlab-instance	us-central1-a			10.128.0.2 (nic0)	<a href="https://35.209.15.45">35.209.15.45</a>	SSH	



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



Please create a password for your new account.

### 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.

#### Change your password

New password

Confirm new password

Change your password

Didn't receive a confirmation email? [Request a new one](#)

Already have login and password? [Sign in](#)

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	
<input type="text" value="root"/>	
Password	
<input type="password" value="....."/>	
<input checked="" type="checkbox"/> Remember me	<a href="#">Forgot your password?</a>
<input type="button" value="Sign in"/>	

After you logged in, you should see following page:

GitLab

Projects

Groups

More

Search or jump to...

Projects

New project

Your projects 1

Starred projects 0

Explore projects

Filter by name...

Last updated

All

Personal

M

GitLab Instance / Monitoring

Owner

★ 0

🔗 0

🔗 0

🔗 0

Updated 28 minutes ago

This project is automatically generated and will be used to help monitor this GitLab instance. [More information](#)

**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.



2 ↓

VM instances

CREATE INSTANCE IMPORT VM REFRESH

Filter VM instances Columns

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
gitlab-instance	us-central1-a			10.128.0.2 (nic0)	35.209.15.45	SSH

1 →

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.