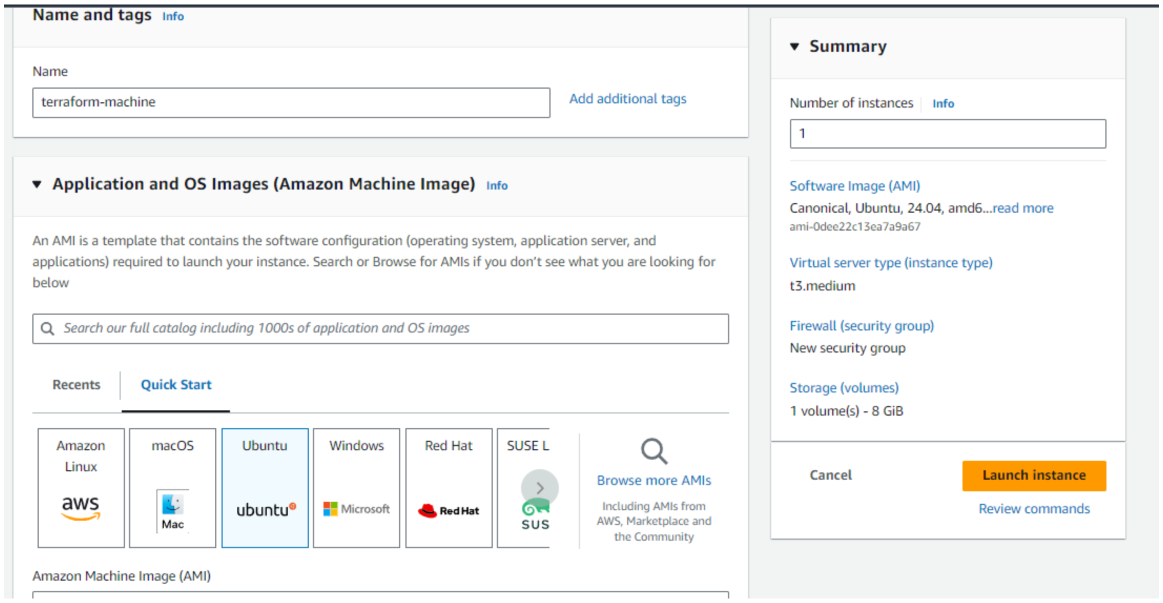
Banking and Finance Domain Project

Step1:

- Creating the terraform machine by which I can create the infrastructures needed for this project.
- Create a Ec2 machine with name terraform-machine of t3.medium with ubuntu as AMI.

- Allow ssh and http security groups



Name and tags Info

Name
terraform-machine

Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Amazon Machine Image (AMI)

Summary

Number of instances: 1

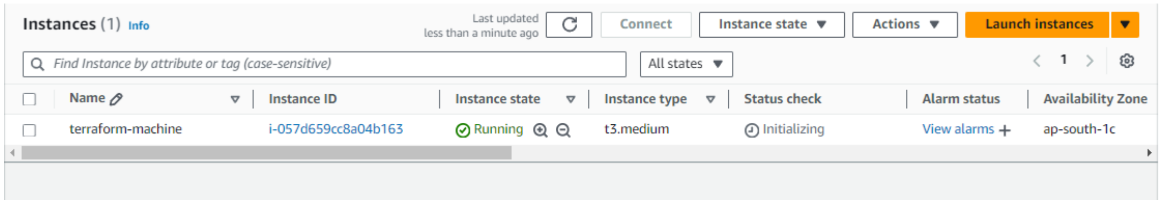
Software Image (AMI)
Canonical, Ubuntu, 24.04, amd6...read more
ami-0dee22c13ea7a9a67

Virtual server type (instance type)
t3.medium

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 8 GiB

- Terraform instance



Instances (1) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
terraform-machine	i-057d659cc8a04b163	Running	t3.medium	Initializing	View alarms +	ap-south-1c

Varunesh

Step 2:

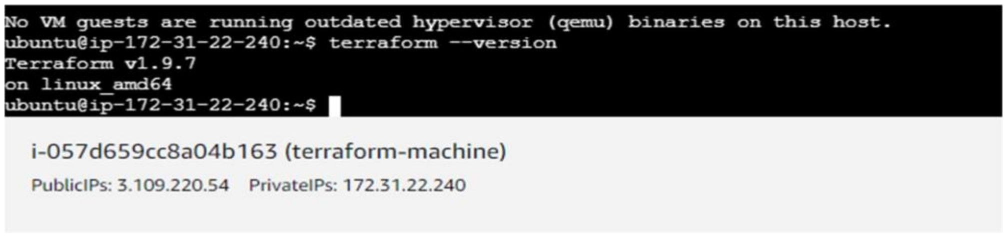
Install Terraform:

wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyring.gpg

echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_release -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list

sudo apt update && sudo apt install terraform

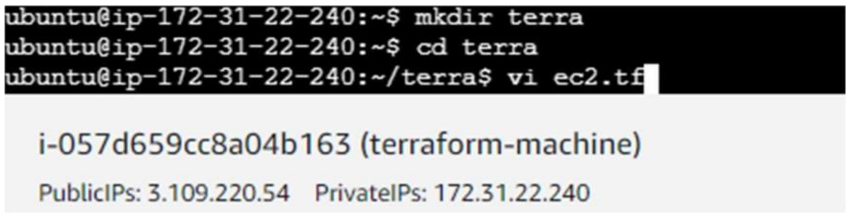
- Terraform is installed:



```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-22-240:~$ terraform --version
Terraform v1.9.7
on linux_amd64
ubuntu@ip-172-31-22-240:~$
```

i-057d659cc8a04b163 (terraform-machine)
PublicIPs: 3.109.220.54 PrivateIPs: 172.31.22.240

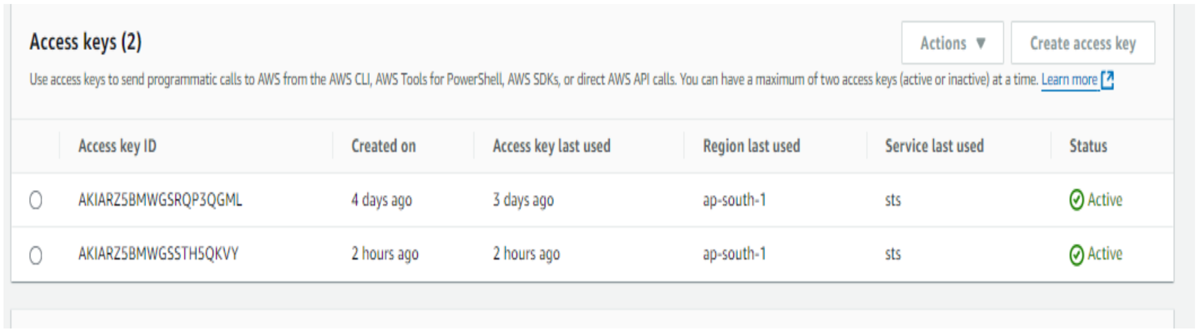
- Create a directory



```
ubuntu@ip-172-31-22-240:~$ mkdir terra
ubuntu@ip-172-31-22-240:~$ cd terra
ubuntu@ip-172-31-22-240:~/terra$ vi ec2.tf
```

i-057d659cc8a04b163 (terraform-machine)
PublicIPs: 3.109.220.54 PrivateIPs: 172.31.22.240

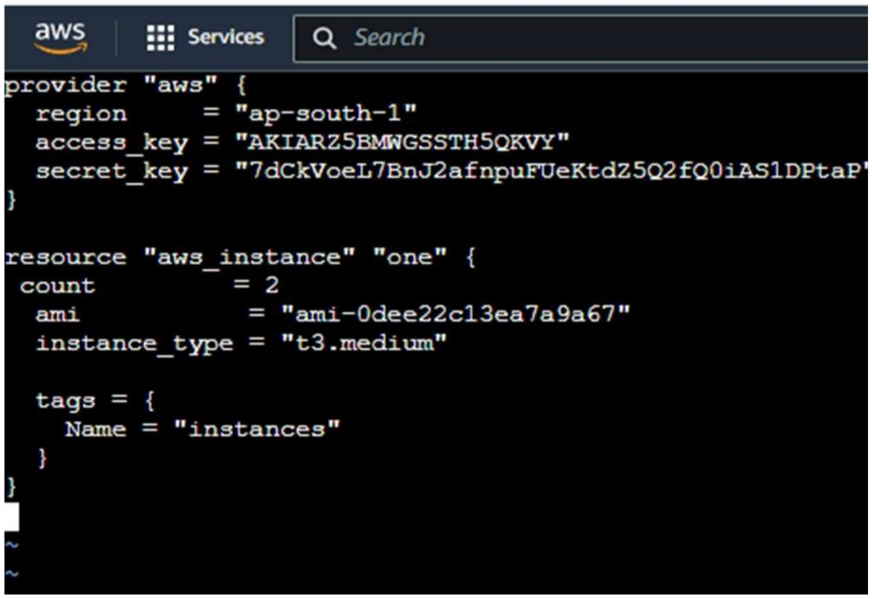
- Create access keys and secret keys from the aws account with the help of them the terraform can create resources .



Access keys (2)

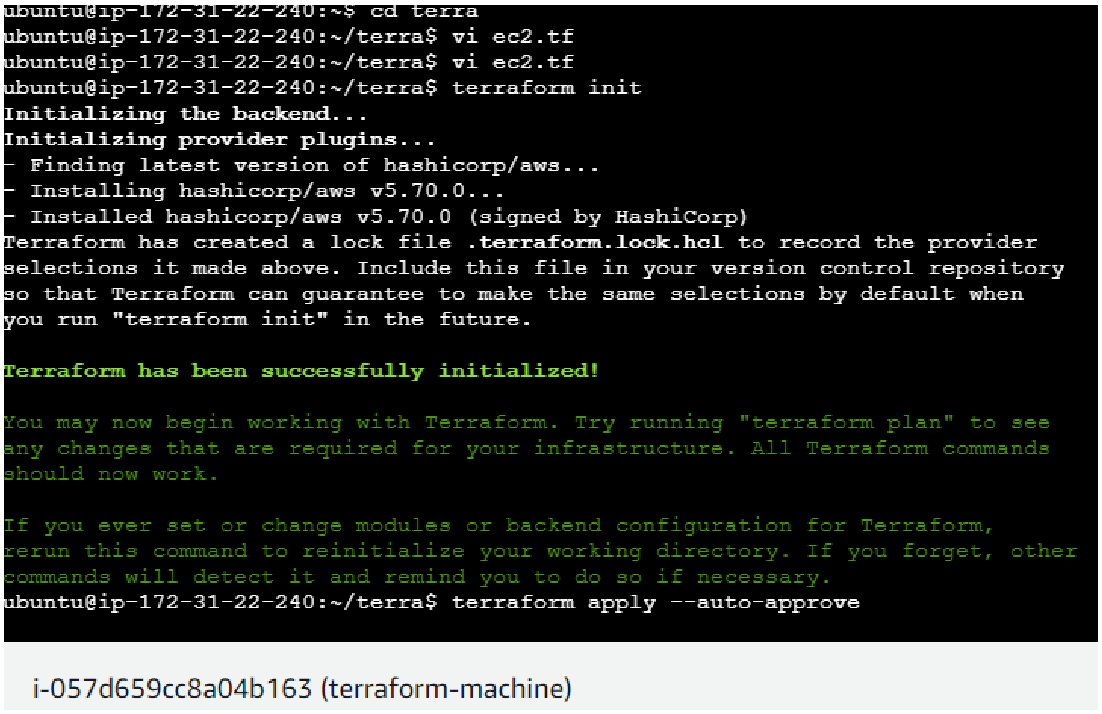
Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. Learn more

	Access key ID	Created on	Access key last used	Region last used	Service last used	Status
○	AKIARZ5BMWGSRQP3QGML	4 days ago	3 days ago	ap-south-1	sts	✓ Active
○	AKIARZ5BMWGSSTH5QKVY	2 hours ago	2 hours ago	ap-south-1	sts	✓ Active



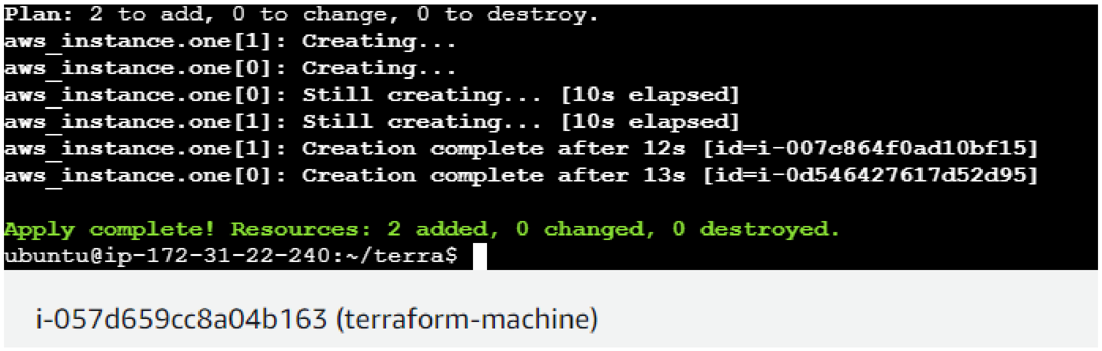
```
provider "aws" {
  region     = "ap-south-1"
  access_key = "AKIARZ5BMWGSSTH5QKVY"
  secret_key = "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'
}

resource "aws_instance" "one" {
 count          = 2
  ami            = "ami-0dee22c13ea7a9a67"
  instance_type = "t3.medium"

  tags = {
    Name = "instances"
  }
}

~
~
```

- Run the commands init, plan and apply to create resources



```
ubuntu@ip-172-31-22-240:~$ cd terra
ubuntu@ip-172-31-22-240:~/terra$ vi ec2.tf
ubuntu@ip-172-31-22-240:~/terra$ vi ec2.tf
ubuntu@ip-172-31-22-240:~/terra$ terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.70.0...
- Installed hashicorp/aws v5.70.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
ubuntu@ip-172-31-22-240:~/terra$ terraform apply --auto-approve
```

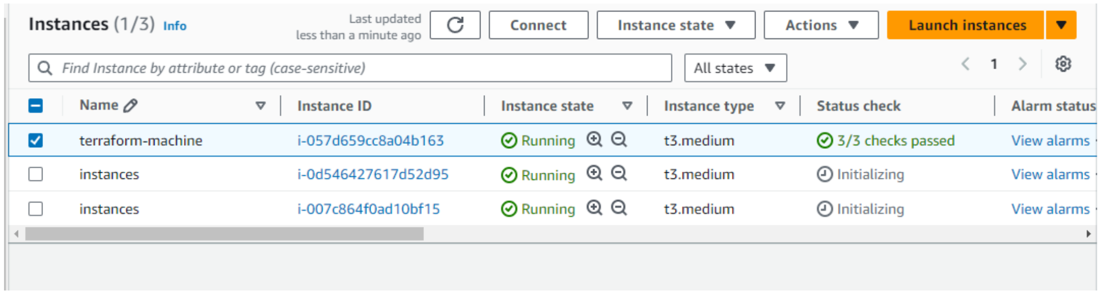
i-057d659cc8a04b163 (terraform-machine)



```
Plan: 2 to add, 0 to change, 0 to destroy.
aws_instance.one[1]: Creating...
aws_instance.one[0]: Creating...
aws_instance.one[0]: Still creating... [10s elapsed]
aws_instance.one[1]: Still creating... [10s elapsed]
aws_instance.one[1]: Creation complete after 12s [id=i-007c864f0ad10bf15]
aws_instance.one[0]: Creation complete after 13s [id=i-0d546427617d52d95]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-22-240:~/terra$
```

i-057d659cc8a04b163 (terraform-machine)

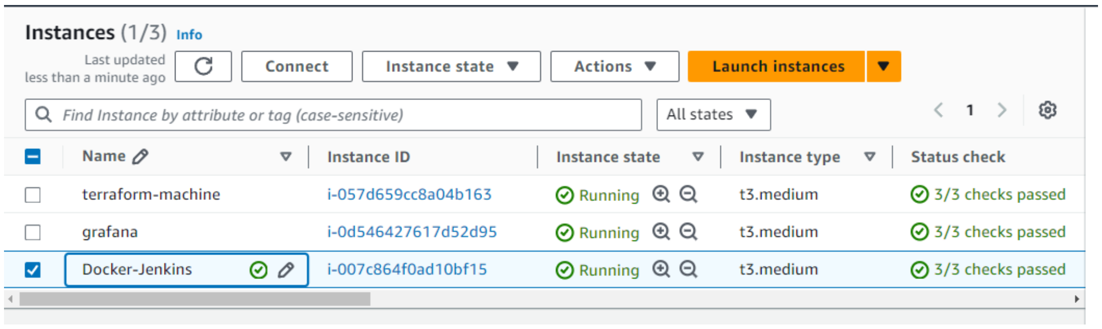
- The resources have been created just as in the .tf file



Instances (1/3) Info
Last updated less than a minute ago
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
1

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
✓	terraform-machine	i-057d659cc8a04b163	Running	t3.medium	3/3 checks passed	View alarms
	instances	i-0d546427617d52d95	Running	t3.medium	Initializing	View alarms
	instances	i-007c864f0ad10bf15	Running	t3.medium	Initializing	View alarms

- Rename it as Docker-jenkins and grafana



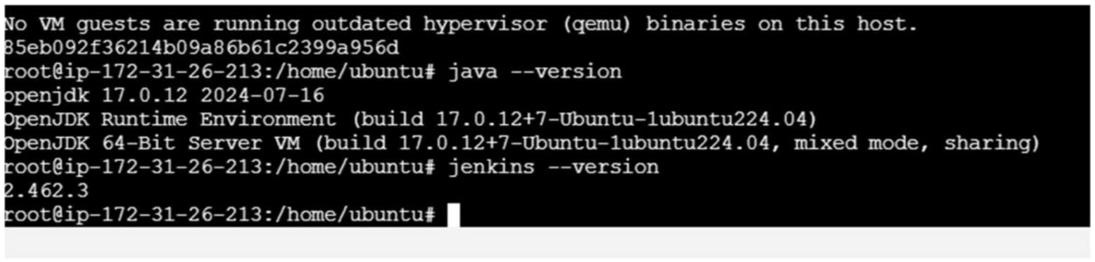
Instances (1/3) Info

Last updated less than a minute ago

	Name	Instance ID	Instance state	Instance type	Status check
☐	terraform-machine	i-057d659cc8a04b163	Running	t3.medium	3/3 checks passed
☐	grafana	i-0d546427617d52d95	Running	t3.medium	3/3 checks passed
☑	Docker-Jenkins	i-007c864f0ad10bf15	Running	t3.medium	3/3 checks passed

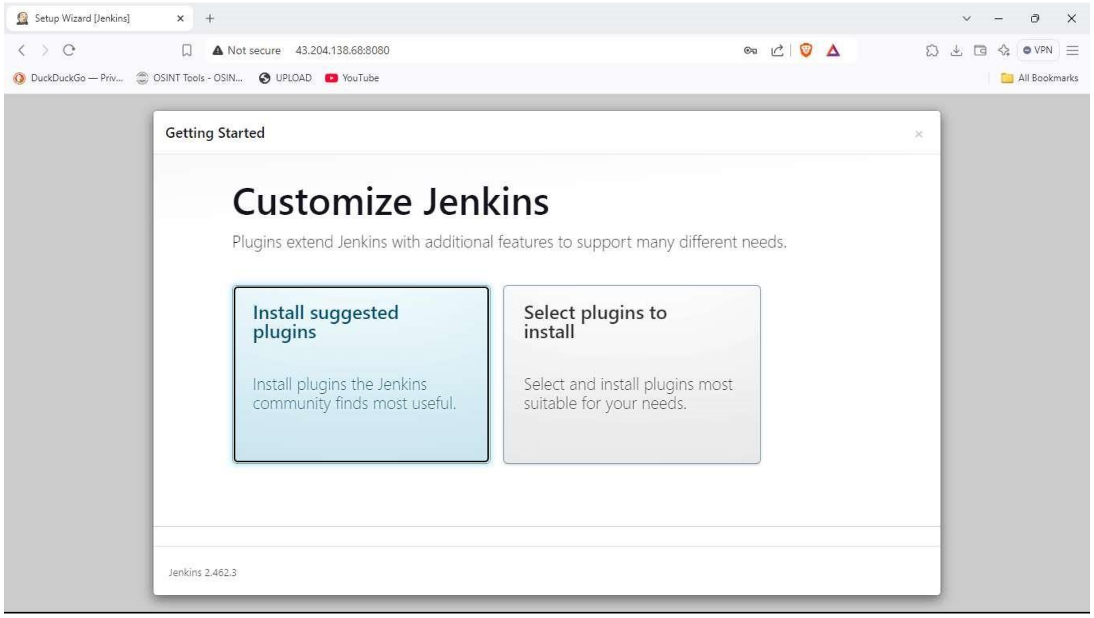
Step 3:

- In the docker-Jenkins machine install the Jenkins and docker
- Verifying the Jenkins installed



```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
85eb092f36214b09a86b61c2399a956d
root@ip-172-31-26-213:/home/ubuntu# java --version
openjdk 17.0.12 2024-07-16
OpenJDK Runtime Environment (build 17.0.12+7-Ubuntu-1ubuntu224.04)
OpenJDK 64-Bit Server VM (build 17.0.12+7-Ubuntu-1ubuntu224.04, mixed mode, sharing)
root@ip-172-31-26-213:/home/ubuntu# jenkins --version
2.462.3
root@ip-172-31-26-213:/home/ubuntu#
```

- Copy the public IP of jenkin machine with port 8080



Setup Wizard [Jenkins]

Not secure 43.204.138.68:8080

Getting Started

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

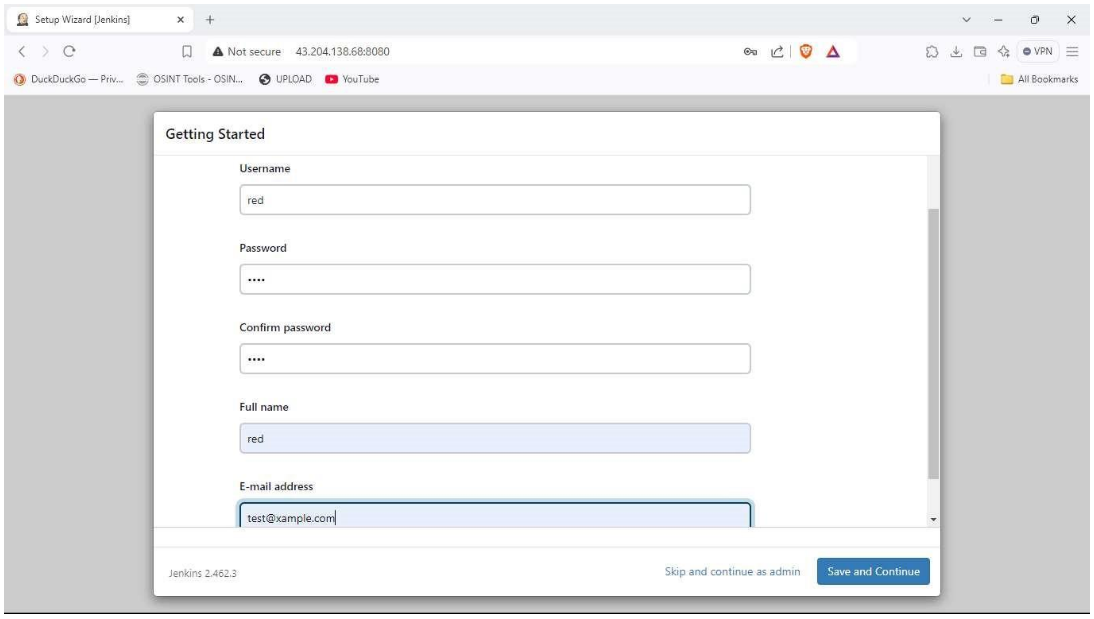
Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.462.3

- Give the username and password to use jenkins

Varunesh



Getting Started

Username: red

Password: ••••

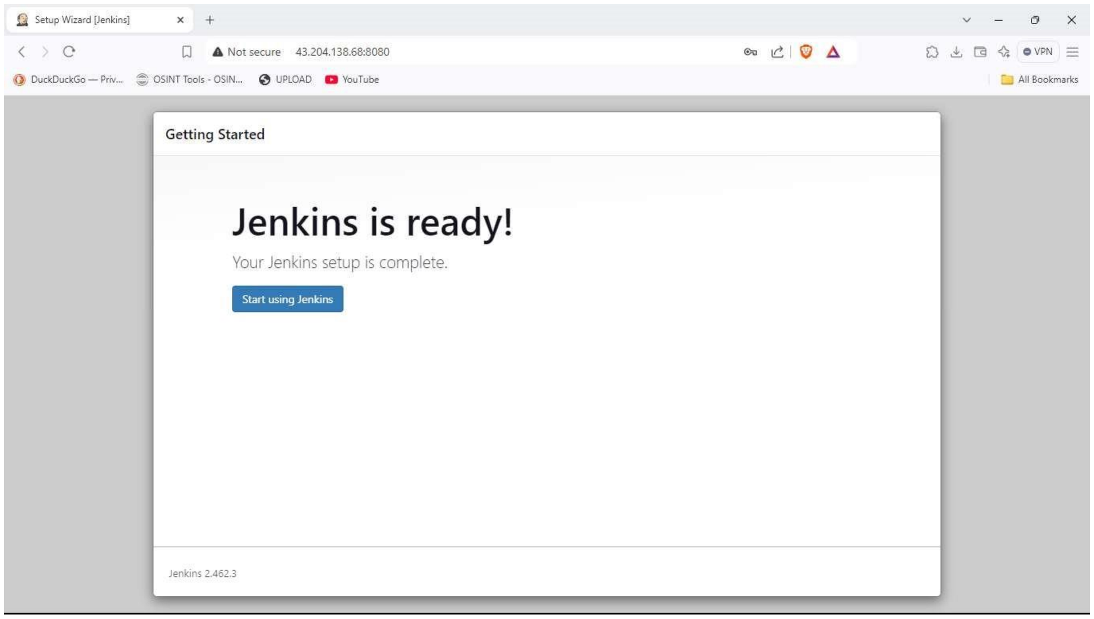
Confirm password: ••••

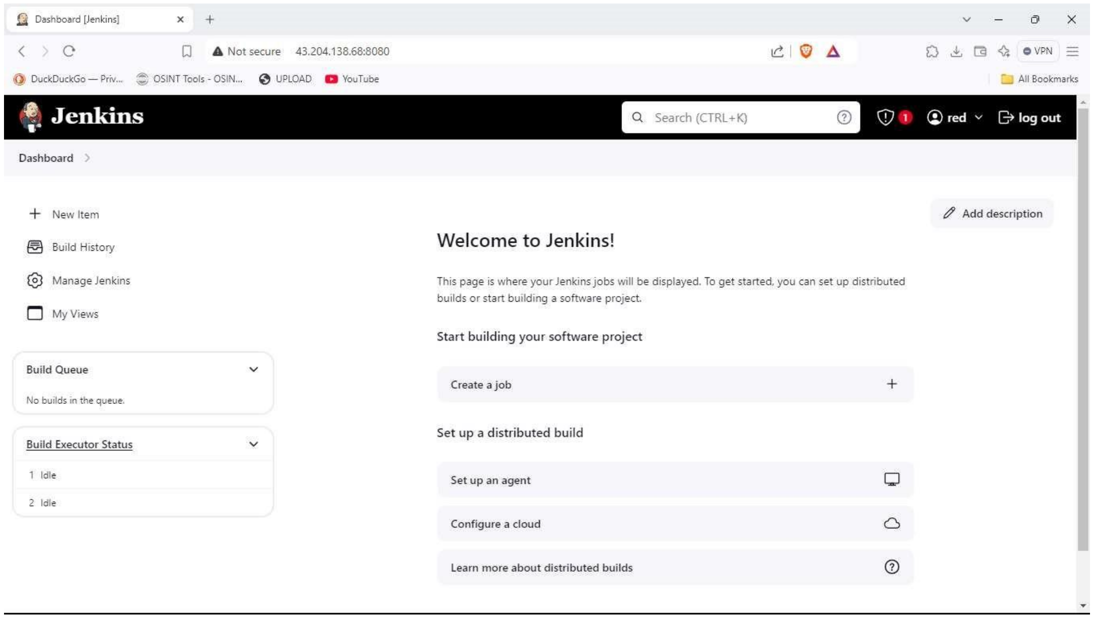
Full name: red

E-mail address: test@xample.com

Jenkins 2.462.3

Varunesh

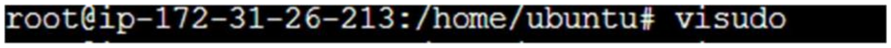



Dashboard [Jenkins]
Not secure 43.204.138.68:8080
Jenkins
Search (CTRL+K)
red
log out
Dashboard
New Item
Build History
Manage Jenkins
My Views
Build Queue
No builds in the queue.
Build Executor Status
1 Idle
2 Idle
Add description
Welcome to Jenkins!
This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.
Start building your software project
Create a job
Set up a distributed build
Set up an agent
Configure a cloud
Learn more about distributed builds

- We can see that Jenkins is ready to use

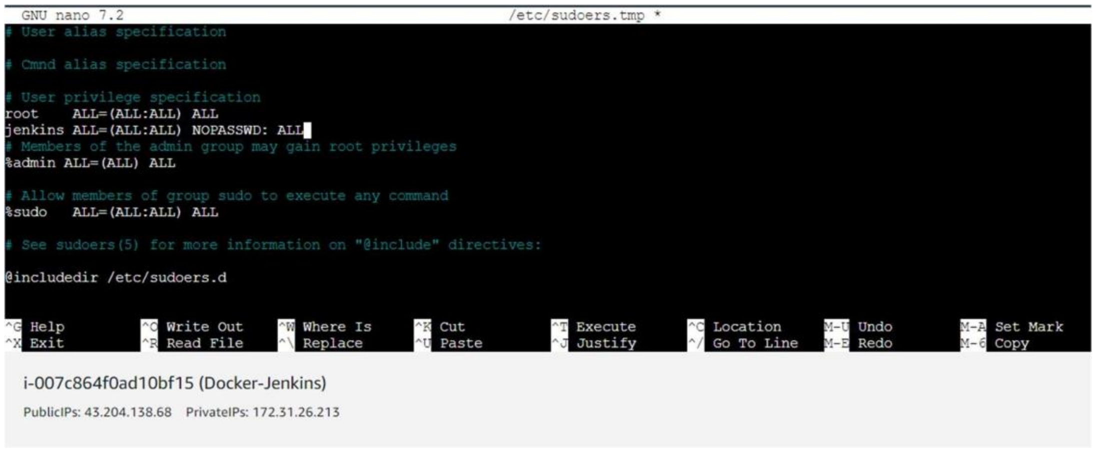
Step 4:

- Before starting using jenkins pipeline we need to allow the Jenkins user to execute any command without being prompted for a password



```
root@ip-172-31-26-213:/home/ubuntu# visudo
```

Varunesh



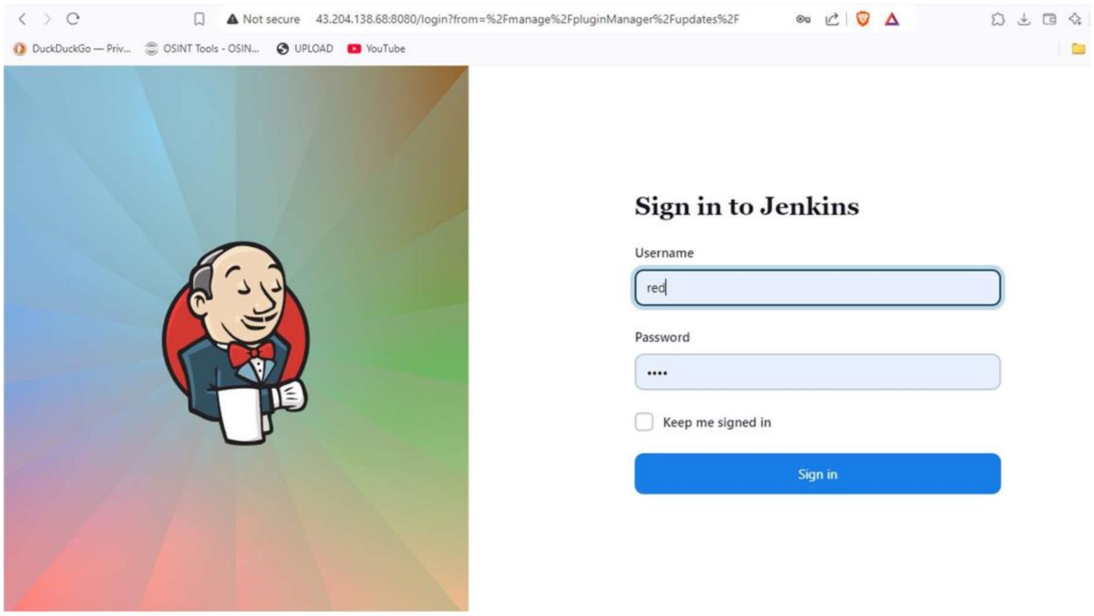
```
  GNU nano 7.2                                          /etc/sudoers.tmp *
# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
jenkins ALL=(ALL:ALL) NOPASSWD: ALL
# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d

^G Help        ^O Write Out   ^W Where Is    ^K Cut         ^T Execute     ^C Location    M-U Undo       M-A Set Mark
^X Exit        ^R Read File   ^\ Replace     ^U Paste       ^J Justify     ^/ Go To Line  M-E Redo       M-6 Copy
```

i-007c864f0ad10bf15 (Docker-Jenkins)

PublicIPs: 43.204.138.68   PrivateIPs: 172.31.26.213

- Restart the jenkins and login again

service jenkins restart



Not secure 43.204.138.68:8080/login?from=%2Fmanage%2FpluginManager%2Fupdates%2F

Sign in to Jenkins

Username: red

Password: ••••

Keep me signed in

Sign in

Step 5:

We need to install docker in the machine and then we will give jenkins the permission to access docker

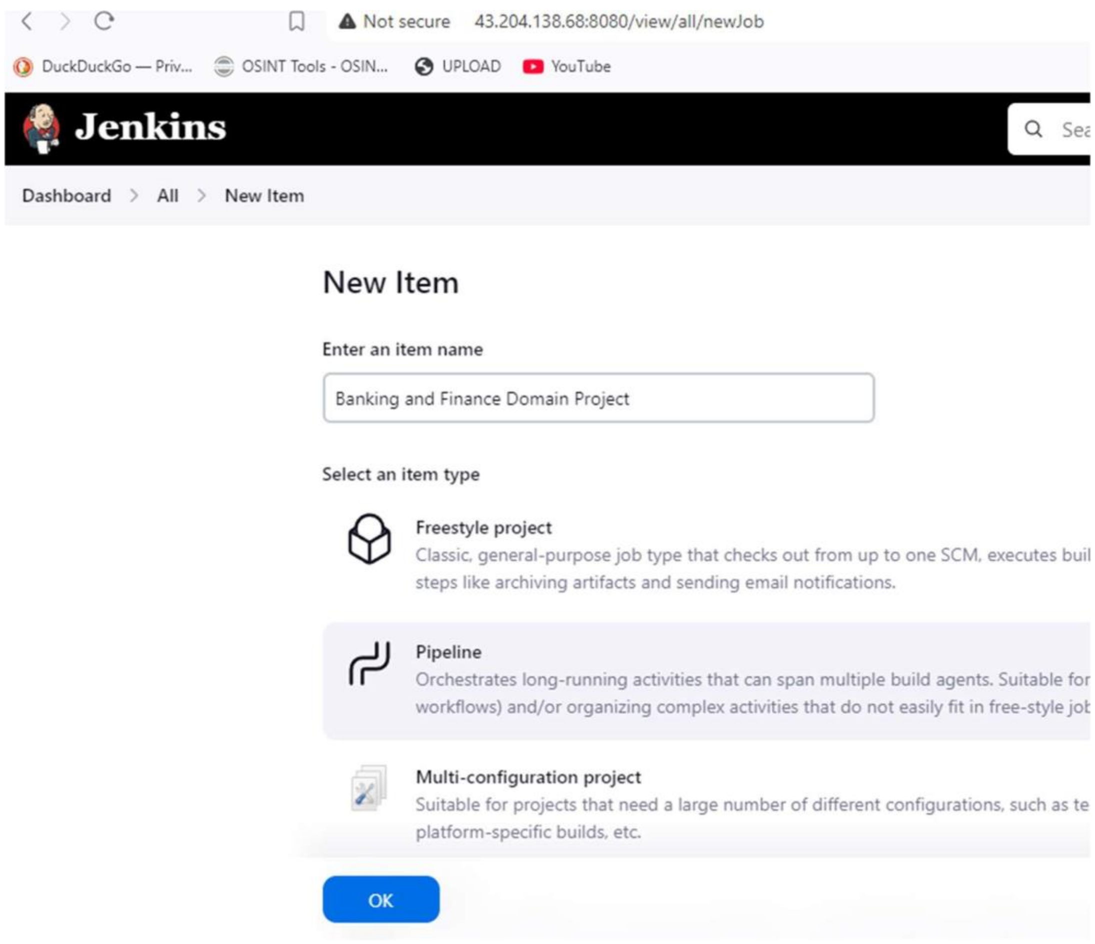
sudo apt install docker.io -y

sudo usermod -aG docker jenkins

service jenkins restart

Step 6:

- Now,Select a new item from the Jenkins dashboard to create the job and slect the pipeline



Not secure 43.204.138.68:8080/view/all/newJob

New Item

Enter an item name

Banking and Finance Domain Project

Select an item type

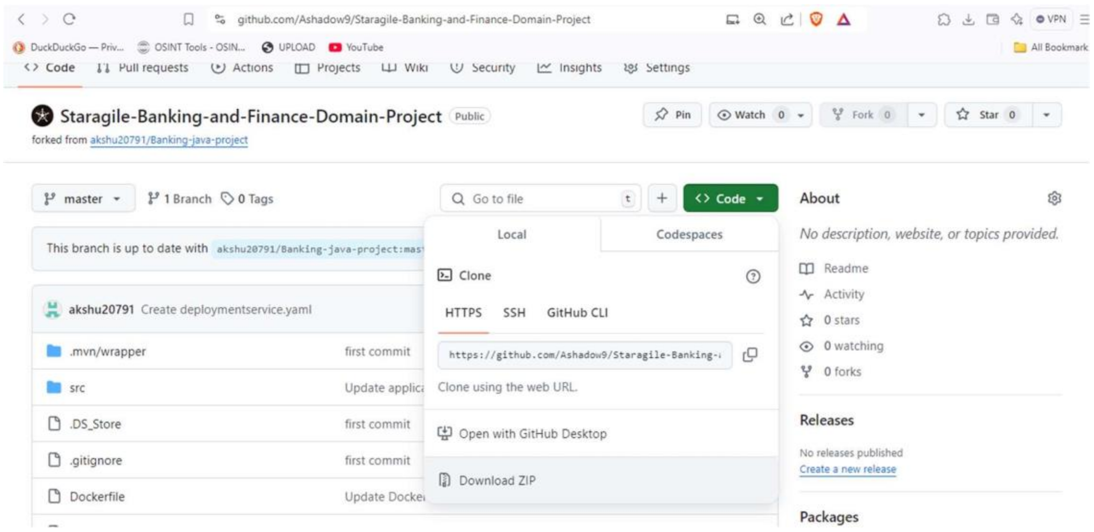
Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes buil
steps like archiving artifacts and sending email notifications.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for
workflows) and/or organizing complex activities that do not easily fit in free-style job

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as te
platform-specific builds, etc.

OK

- Copy the GitHub repo in which we have the Jenkin file



Staragile-Banking-and-Finance-Domain-Project Public

forked from akshu20791/Banking-java-project

1 Branch 0 Tags

This branch is up to date with akshu20791/Banking-java-project:mas

akshu20791 Create deploymentservice.yaml

.mvn/wrapper	first commit
src	Update applic
.DS_Store	first commit
.gitignore	first commit
Dockerfile	Update Docke

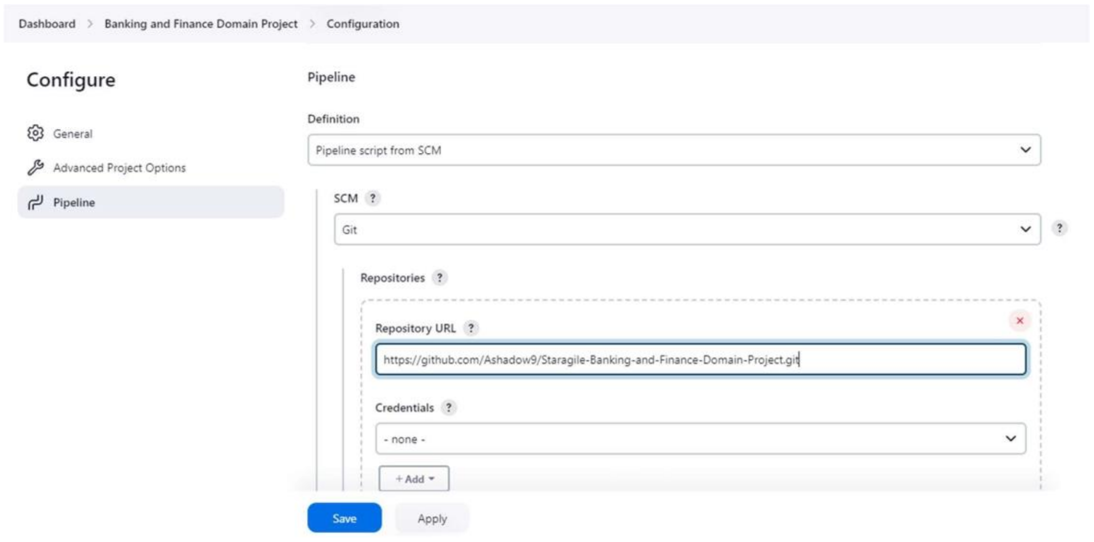
https://github.com/Ashadow9/Staragile-Banking-

Clone using the web URL.

No description, website, or topics provided.

No releases published
Create a new release

- paste it in scm in the pipeline configure option


Dashboard > Banking and Finance Domain Project > Configuration
Configure
General
Advanced Project Options
Pipeline
Save
Apply
+ Add

Pipeline

Definition: Pipeline script from SCM

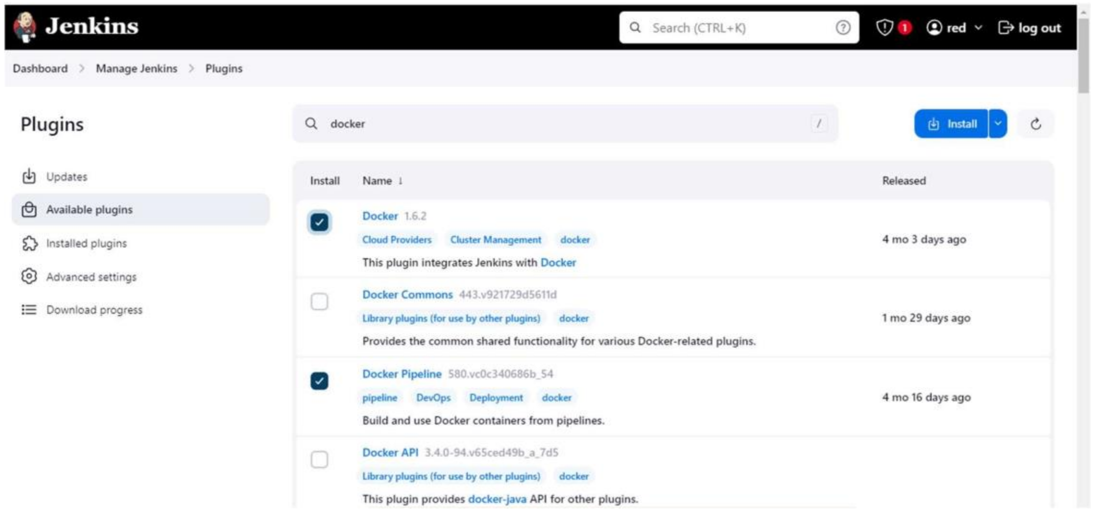
SCM: Git

Repositories

Repository URL: https://github.com/Ashadow9/Staragile-Banking-and-Finance-Domain-Project.git

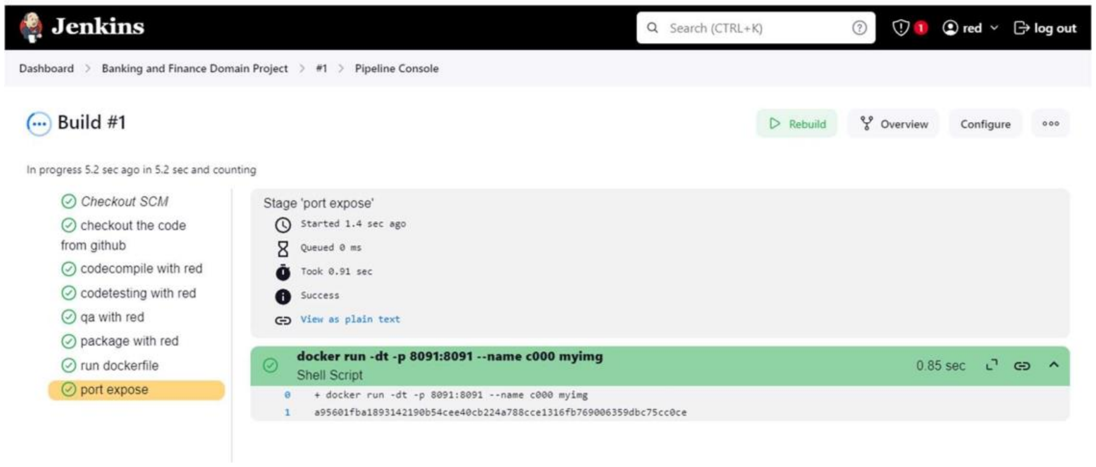
Credentials: - none -

- Install necessary plugins like docker and docker pipeline



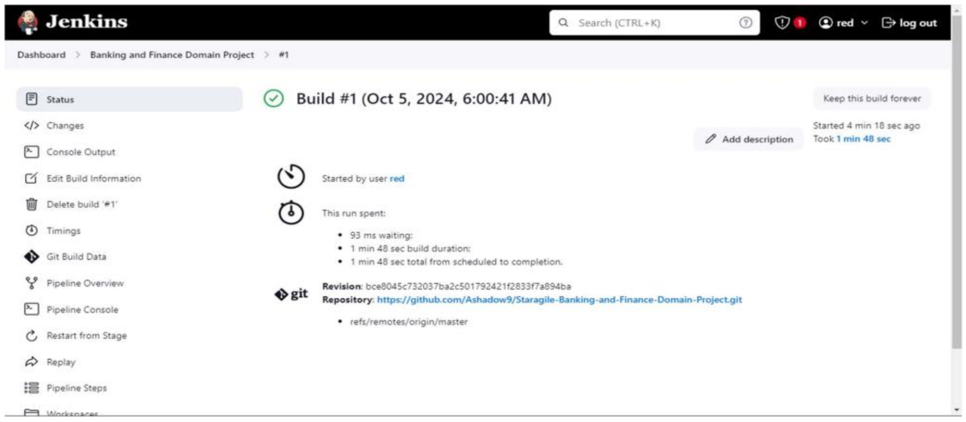
Install	Name ↓	Released
✓	Docker 1.6.2 Cloud Providers · Cluster Management · docker This plugin integrates Jenkins with Docker	4 mo 3 days ago
	Docker Commons 443.v921729d5611d Library plugins (for use by other plugins) · docker Provides the common shared functionality for various Docker-related plugins.	1 mo 29 days ago
✓	Docker Pipeline 580.vc0c340686b_54 pipeline · DevOps · Deployment · docker Build and use Docker containers from pipelines.	4 mo 16 days ago
	Docker API 3.4.0-94.v65ced49b_a_7d5 Library plugins (for use by other plugins) · docker This plugin provides docker-java API for other plugins.	

- Now,start the build and we can see the process



```
+ docker run -dt -p 8091:8091 --name c000 myimg
a95601fba1893142190b54cee40cb224a788cce1316fb769006359dbc75cc0ce
```

- The build is success :



Build #1 (Oct 5, 2024, 6:00:41 AM)

Started 4 min 18 sec ago
Took 1 min 48 sec

Started by user red

This run spent:

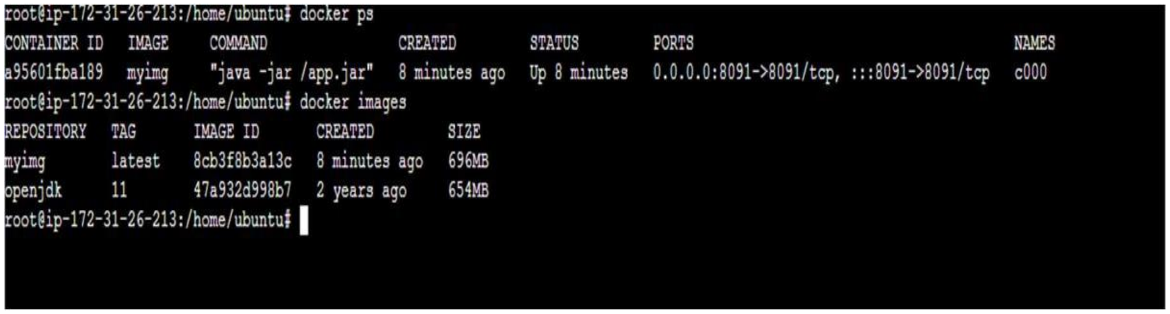
- 93 ms waiting;
- 1 min 48 sec build duration;
- 1 min 48 sec total from scheduled to completion.

git
Revision: bce8045c732037ba2c501792421f2833f7a894ba
Repository: https://github.com/Ashadow9/Staragile-Banking-and-Finance-Domain-Project.git

- refs/remotes/origin/master

Varunesh

- We can see the docker images and docker conatiners build from the pipeline

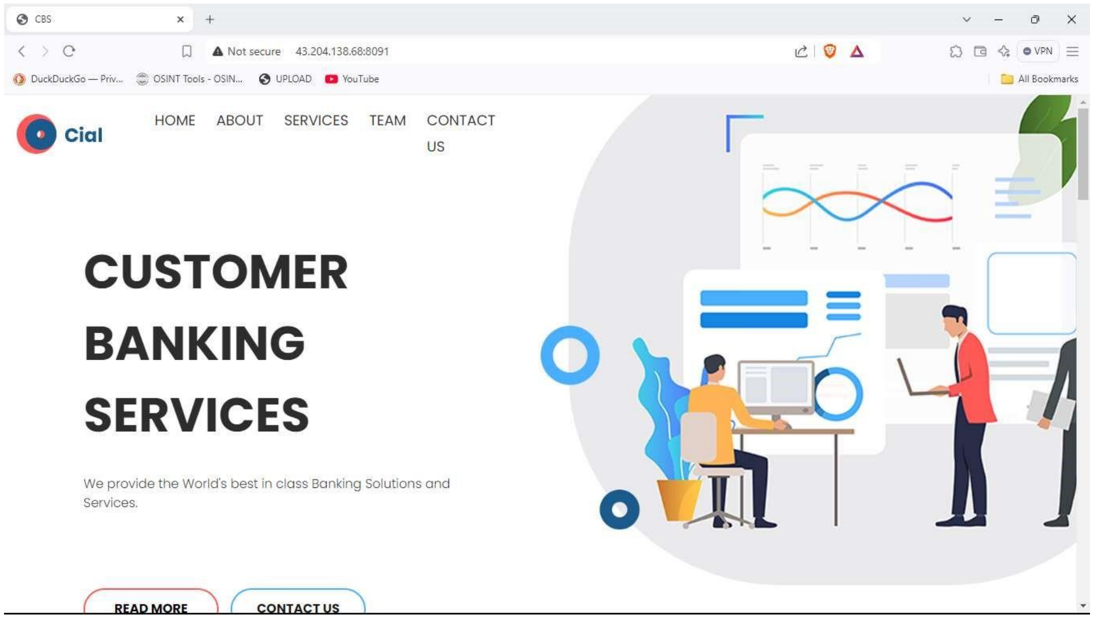


```
root@ip-172-31-26-213:/home/ubuntu# docker ps
CONTAINER ID   IMAGE     COMMAND                CREATED         STATUS         PORTS                                       NAMES
a95601fba189   myimg     "java -jar /app.jar"   8 minutes ago   Up 8 minutes   0.0.0.0:8091->8091/tcp, :::8091->8091/tcp   c000
root@ip-172-31-26-213:/home/ubuntu# docker images
REPOSITORY   TAG       IMAGE ID       CREATED         SIZE
myimg        latest    8cb3f8b3a13c   8 minutes ago   696MB
openjdk      11        47a932d998b7   2 years ago     654MB
root@ip-172-31-26-213:/home/ubuntu#
```

Step 7:

Now run the public IP address of the server with the port mentioned in the Jenkins file .

We can see the website is working on the mentioned port



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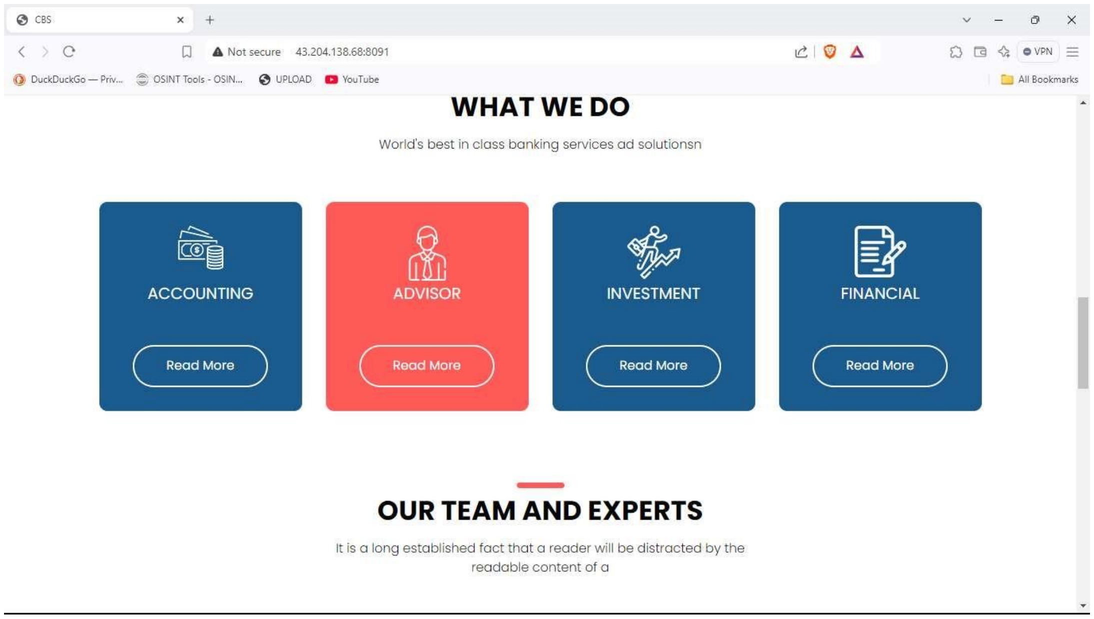

CBS
Not secure 43.204.138.68:8091
DuckDuckGo — Priv...
OSINT Tools - OSIN...
UPLOAD
YouTube
All Bookmarks
WHAT WE DO
World's best in class banking services ad solutionsn
ACCOUNTING
Read More
ADVISOR
Read More
INVESTMENT
Read More
FINANCIAL
Read More
OUR TEAM AND EXPERTS
It is a long established fact that a reader will be distracted by the readable content of a

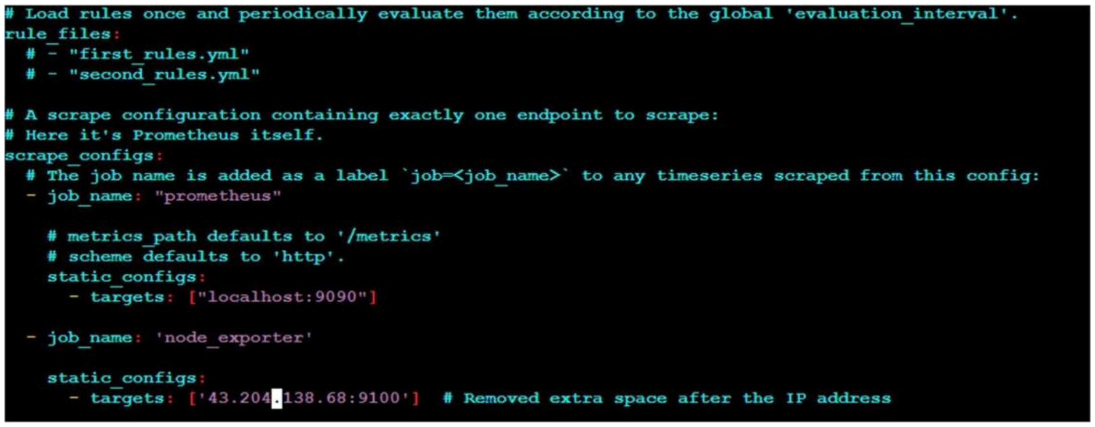
Step 8:Installing Prometheus

- **Installation steps:**

```
Wget https://github.com/prometheus/prometheus/releases/download/v2.43.0/prom
etheus-2.43.0.linux-amd64.tar.gz
 tar -xvf prometheus-2.43.0.linux-amd64.tar.gz
sudo mv prometheus-2.43.0.linux-amd64 /usr/local/Prometheus
 cd /usr/local/Prometheus
```

- vi prometheus.yml

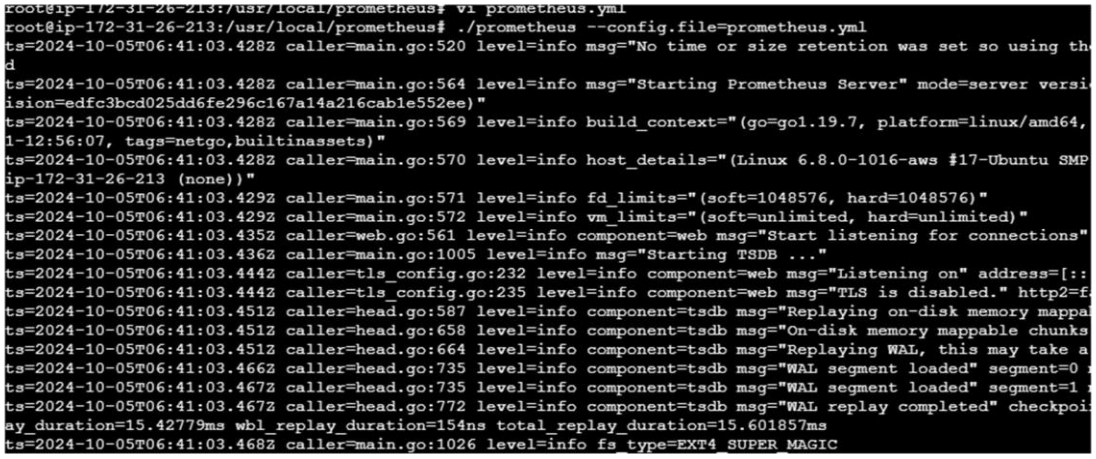
```
- job_name: 'node_exporter'


  static_configs:
- targets: ['43.204.138.68:9100']
```



```
# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  # - "first_rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config:
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.
    static_configs:
      - targets: ["localhost:9090"]

  - job_name: 'node_exporter'

    static_configs:
      - targets: ['43.204.138.68:9100']  # Removed extra space after the IP address
```

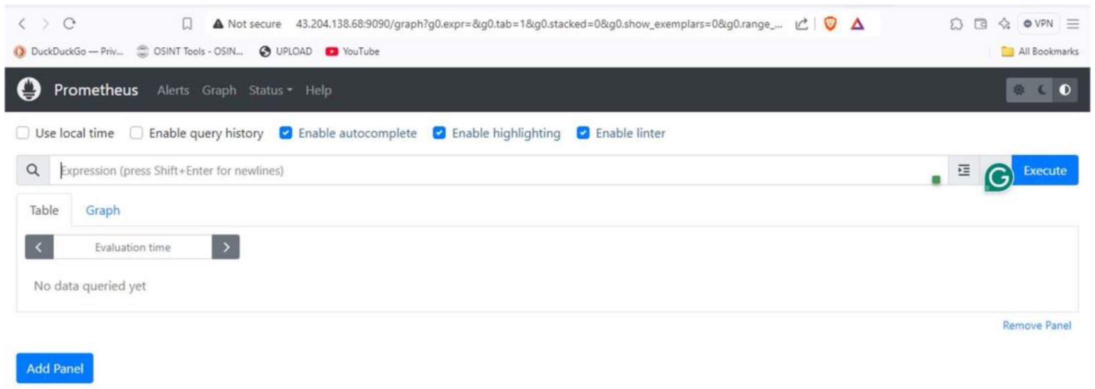
Start Prometheus by running:

./prometheus --config.file=prometheus.yml



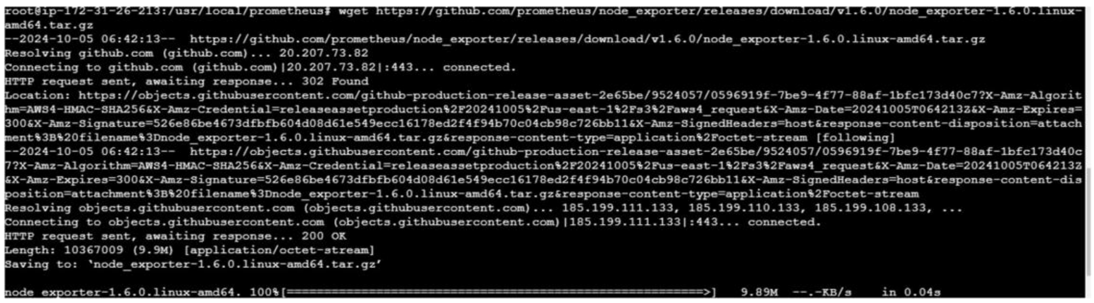
```
root@ip-172-31-26-213:/usr/local/prometheus# vi prometheus.yml
root@ip-172-31-26-213:/usr/local/prometheus# ./prometheus --config.file=prometheus.yml
ts=2024-10-05T06:41:03.428Z caller=main.go:520 level=info msg="No time or size retention was set so using th
d
ts=2024-10-05T06:41:03.428Z caller=main.go:564 level=info msg="Starting Prometheus Server" mode=server versi
ision=edfc3bcd025dd6fe296c167a14a216cab1e552ee)"
ts=2024-10-05T06:41:03.428Z caller=main.go:569 level=info build_context="(go=go1.19.7, platform=linux/amd64,
1-12:56:07, tags=netgo,builtinassets)"
ts=2024-10-05T06:41:03.428Z caller=main.go:570 level=info host_details="(Linux 6.8.0-1016-aws #17-Ubuntu SMP
ip-172-31-26-213 (none))"
ts=2024-10-05T06:41:03.429Z caller=main.go:571 level=info fd_limits="(soft=1048576, hard=1048576)"
ts=2024-10-05T06:41:03.429Z caller=main.go:572 level=info vm_limits="(soft=unlimited, hard=unlimited)"
ts=2024-10-05T06:41:03.435Z caller=web.go:561 level=info component=web msg="Start listening for connections"
ts=2024-10-05T06:41:03.436Z caller=main.go:1005 level=info msg="Starting TSDB ..."
ts=2024-10-05T06:41:03.444Z caller=tls_config.go:232 level=info component=web msg="Listening on" address=[::
ts=2024-10-05T06:41:03.444Z caller=tls_config.go:235 level=info component=web msg="TLS is disabled." http2=f
ts=2024-10-05T06:41:03.451Z caller=head.go:587 level=info component=tsdb msg="Replaying on-disk memory mappa
ts=2024-10-05T06:41:03.451Z caller=head.go:658 level=info component=tsdb msg="On-disk memory mappable chunks
ts=2024-10-05T06:41:03.451Z caller=head.go:664 level=info component=tsdb msg="Replaying WAL, this may take a
ts=2024-10-05T06:41:03.466Z caller=head.go:735 level=info component=tsdb msg="WAL segment loaded" segment=0
ts=2024-10-05T06:41:03.467Z caller=head.go:735 level=info component=tsdb msg="WAL segment loaded" segment=1
ts=2024-10-05T06:41:03.467Z caller=head.go:772 level=info component=tsdb msg="WAL replay completed" checkpoi
ay_duration=15.42779ms wbl_replay_duration=154ns total_replay_duration=15.601857ms
ts=2024-10-05T06:41:03.468Z caller=main.go:1026 level=info fs_type=EXT4_SUPER_MAGIC
```

Prometheus will now be accessible via public ip :9090.


Not secure 43.204.138.68:9090/graph?g0.expr=&g0.tab=1&g0.stacked=0&g0.show_exemplars=0&g0.range_...
DuckDuckGo — Priv... OSINT Tools - OSIN... UPLOAD YouTube All Bookmarks
Prometheus Alerts Graph Status Help
Use local time Enable query history Enable autocomplete Enable highlighting Enable linter
Expression (press Shift+Enter for newlines)
Execute
Table Graph
Evaluation time
No data queried yet
Remove Panel
Add Panel

- Install Node Exporter (For Server Metrics)

wgeth ps://github.com/prometheus/node_exporter/releases/download/v1.6.0/node _exporter-1.6.0.linux-amd64.tar.gz

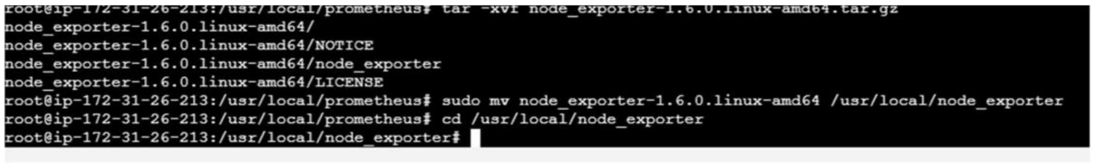


```
root@ip-172-31-26-213:/usr/local/prometheus# wget https://github.com/prometheus/node_exporter/releases/download/v1.6.0/node_exporter-1.6.0.linux-
amd64.tar.gz
--2024-10-05 06:42:13--  https://github.com/prometheus/node_exporter/releases/download/v1.6.0/node_exporter-1.6.0.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/0596919f-7be9-4f77-88af-1bfc173d40c7?X-Amz-Algorit
hm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241005%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20241005T064213Z&X-Amz-Expires=
300&X-Amz-Signature=526e86be4673dfbfb604d08d61e549ecc16178ed2f4f94b70c04cb98c726bb11&X-Amz-SignedHeaders=host&response-content-disposition=attach
ment%3B%20filename%3Dnode_exporter-1.6.0.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2024-10-05 06:42:13--  https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/0596919f-7be9-4f77-88af-1bfc173d40c
7?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241005%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20241005T064213Z
&X-Amz-Expires=300&X-Amz-Signature=526e86be4673dfbfb604d08d61e549ecc16178ed2f4f94b70c04cb98c726bb11&X-Amz-SignedHeaders=host&response-content-dis
position=attachment%3B%20filename%3Dnode_exporter-1.6.0.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.111.133, 185.199.110.133, 185.199.108.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10367009 (9.9M) [application/octet-stream]
Saving to: 'node_exporter-1.6.0.linux-amd64.tar.gz'

node_exporter-1.6.0.linux-amd64. 100%[======================================================>]   9.89M  --.-KB/s    in 0.04s
```

tar -xvf node_exporter-1.6.0.linux-amd64.tar.gz sudo mv

node_exporter-1.6.0.linux-amd64 /usr/local/node_exporter cd

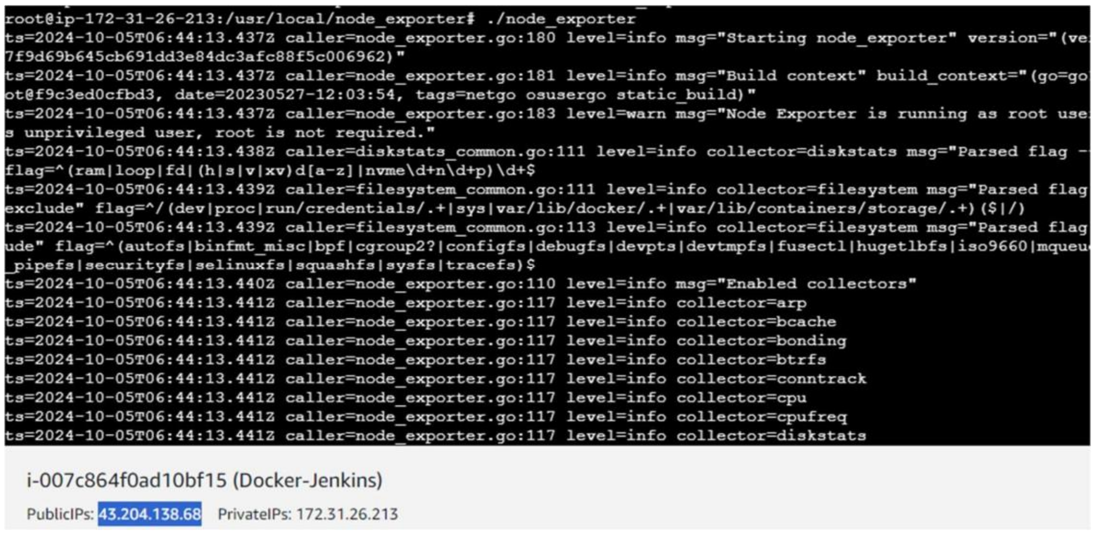
/usr/local/node_exporter



```
root@ip-172-31-26-213:/usr/local/prometheus# tar -xvf node_exporter-1.6.0.linux-amd64.tar.gz
node_exporter-1.6.0.linux-amd64/
node_exporter-1.6.0.linux-amd64/NOTICE
node_exporter-1.6.0.linux-amd64/node_exporter
node_exporter-1.6.0.linux-amd64/LICENSE
root@ip-172-31-26-213:/usr/local/prometheus# sudo mv node_exporter-1.6.0.linux-amd64 /usr/local/node_exporter
root@ip-172-31-26-213:/usr/local/prometheus# cd /usr/local/node_exporter
root@ip-172-31-26-213:/usr/local/node_exporter#
```

Start Node Exporter

./node_exporter

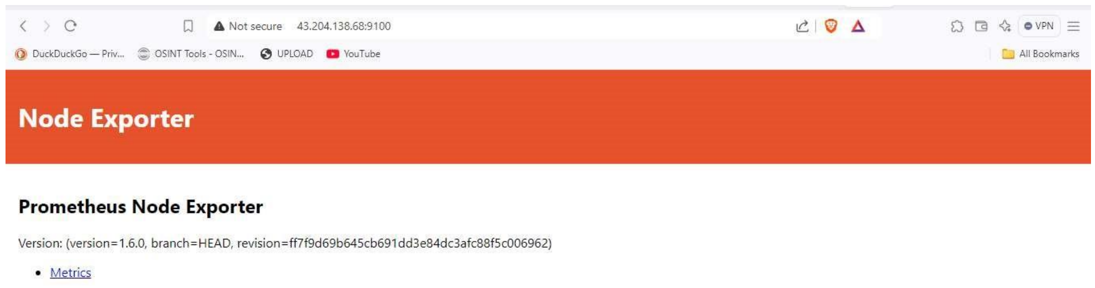


```
root@ip-172-31-26-213:/usr/local/node_exporter# ./node_exporter
ts=2024-10-05T06:44:13.437Z caller=node_exporter.go:180 level=info msg="Starting node_exporter" version="(ve
7f9d69b645cb691dd3e84dc3afc88f5c006962)"
ts=2024-10-05T06:44:13.437Z caller=node_exporter.go:181 level=info msg="Build context" build_context="(go=go
ot@f9c3ed0cfbd3, date=20230527-12:03:54, tags=netgo osusergo static_build)"
ts=2024-10-05T06:44:13.437Z caller=node_exporter.go:183 level=warn msg="Node Exporter is running as root use
s unprivileged user, root is not required."
ts=2024-10-05T06:44:13.438Z caller=diskstats_common.go:111 level=info collector=diskstats msg="Parsed flag -
flag=^(ram|loop|fd|(h|s|v|xv)d[a-z]|nvme\d+n\d+p)\d+$
ts=2024-10-05T06:44:13.439Z caller=filesystem_common.go:111 level=info collector=filesystem msg="Parsed flag
exclude" flag=^/(dev|proc|run/credentials/.+|sys|var/lib/docker/.+|var/lib/containers/storage/.+)($|/)
ts=2024-10-05T06:44:13.439Z caller=filesystem_common.go:113 level=info collector=filesystem msg="Parsed flag
ude" flag=^(autofs|binfmt_misc|bpf|cgroup2?|configfs|debugfs|devpts|devtmpfs|fusectl|hugetlbfs|iso9660|mqueu
_pipefs|securityfs|selinuxfs|squashfs|sysfs|tracefs)$
ts=2024-10-05T06:44:13.440Z caller=node_exporter.go:110 level=info msg="Enabled collectors"
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=arp
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=bcache
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=bonding
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=btrfs
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=conntrack
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=cpu
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=cpufreq
ts=2024-10-05T06:44:13.441Z caller=node_exporter.go:117 level=info collector=diskstats
```

i-007c864f0ad10bf15 (Docker-Jenkins)

PublicIPs: 43.204.138.68 PrivateIPs: 172.31.26.213

http://43.204.138.68:9100/



Node Exporter

Prometheus Node Exporter

Version: (version=1.6.0, branch=HEAD, revision=ff7f9d69b645cb691dd3e84dc3afc88f5c006962)

- Metrics

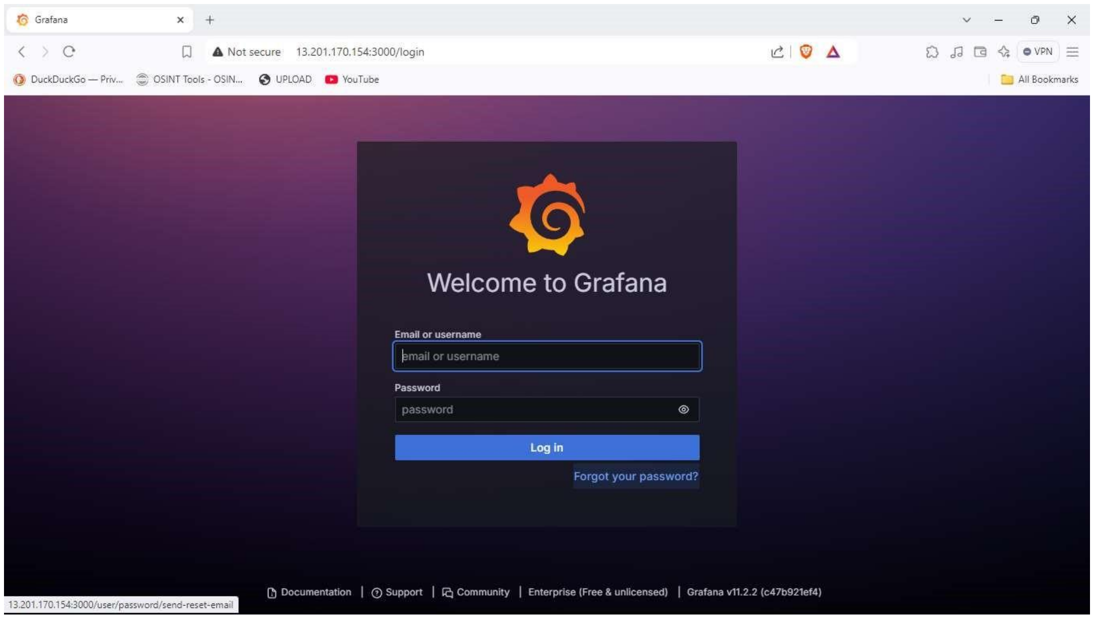
Step 9:Install Grafana :-

sudo apt-get update
sudo apt-get install -y adduser libfontconfig1 musl
wget
https://dl.grafana.com/enterprise/release/grafanaenterprise_11.2.2_amd64.deb
sudo dpkg -i grafana-enterprise_11.2.2_amd64.deb
Grafana will be accessible via publicip: 3000.

Log in using the default credentials:

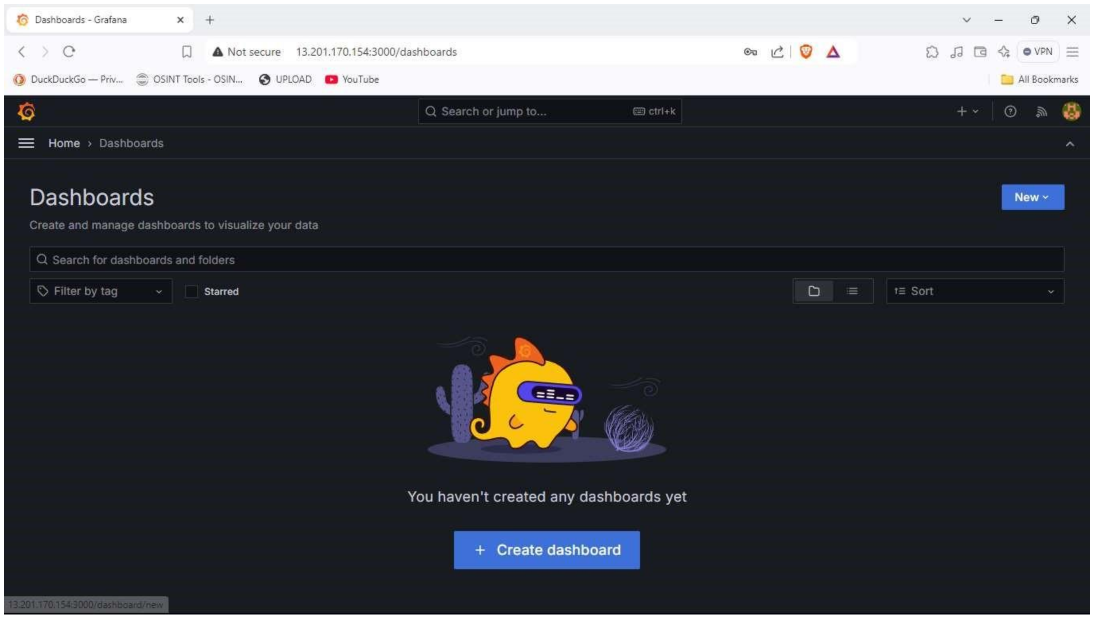
- Username: admin
- Password: admin

Varunesh

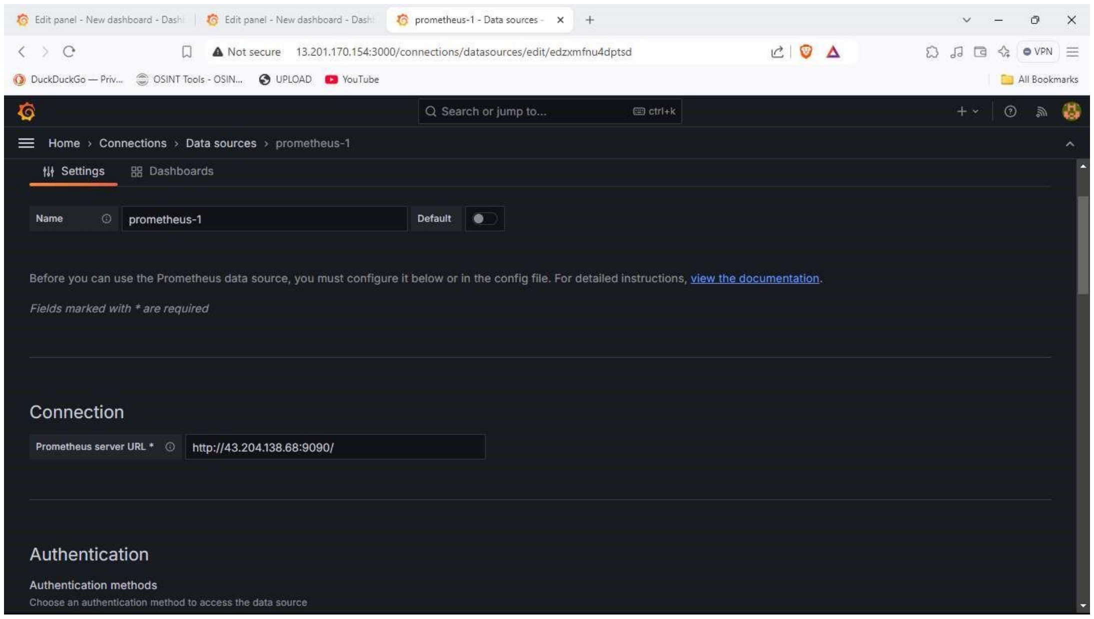

Grafana
Not secure 13.201.170.154:3000/login
Welcome to Grafana
Email or username
email or username
Password
password
Log in
Forgot your password?
Documentation | Support | Community | Enterprise (Free & unlicensed) | Grafana v11.2.2 (c47b921ef4)

Dashboard of Grafana:

- navigate to **Configuration > Data Sources**.
- Click on **Add Data Source**, select **Prometheus**.
- Enter the URL of Prometheus: http://<your-server-ip>:9090.
- Click **Save & Test** to verify the connection.


Dashboards - Grafana
Not secure 13.201.170.154:3000/dashboards
Search or jump to...
Home › Dashboards
Dashboards
Create and manage dashboards to visualize your data
New
Search for dashboards and folders
Filter by tag
Starred
Sort
You haven't created any dashboards yet
Create dashboard

Varunesh



Name: prometheus-1 Default

Before you can use the Prometheus data source, you must configure it below or in the config file. For detailed instructions, view the documentation.

*Fields marked with * are required*

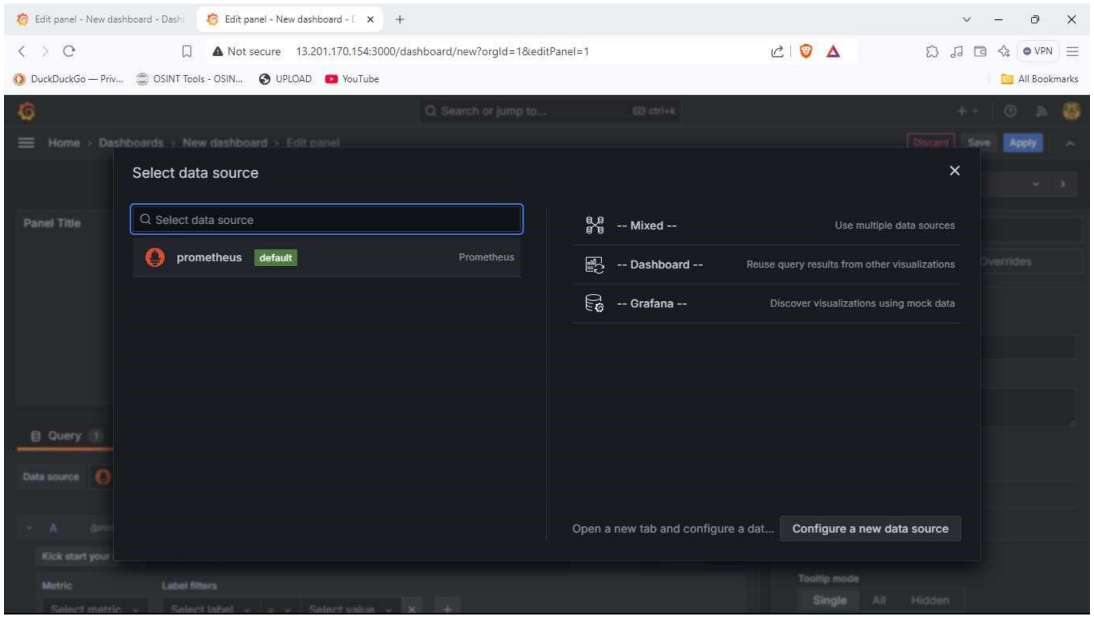
Connection

Prometheus server URL *: http://43.204.138.68:9090/

Authentication

Authentication methods

Choose an authentication method to access the data source



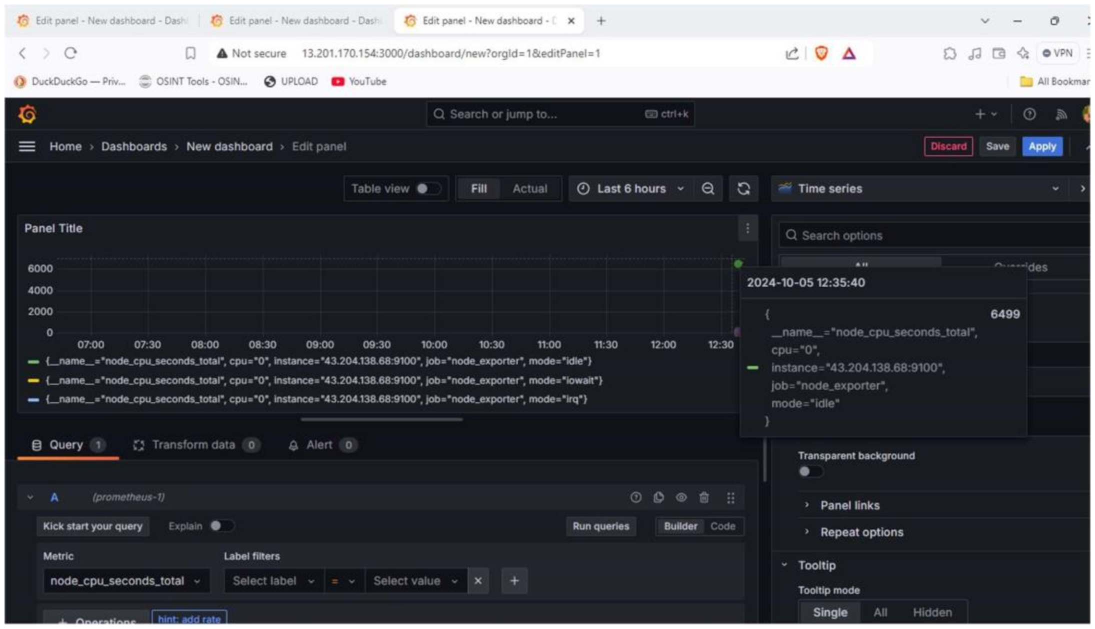
Select data source
prometheus default Prometheus
-- Mixed -- Use multiple data sources
-- Dashboard -- Reuse query results from other visualizations
-- Grafana -- Discover visualizations using mock data
Open a new tab and configure a dat...
Configure a new data source

Step 10 :

Metric Visualization:

. 1. CPU utilization : To see CPU utilization of the server

rate(node_cpu_seconds_total[1m])



```
13.201.170.154:3000/dashboard/new?orgId=1&editPanel=1
```

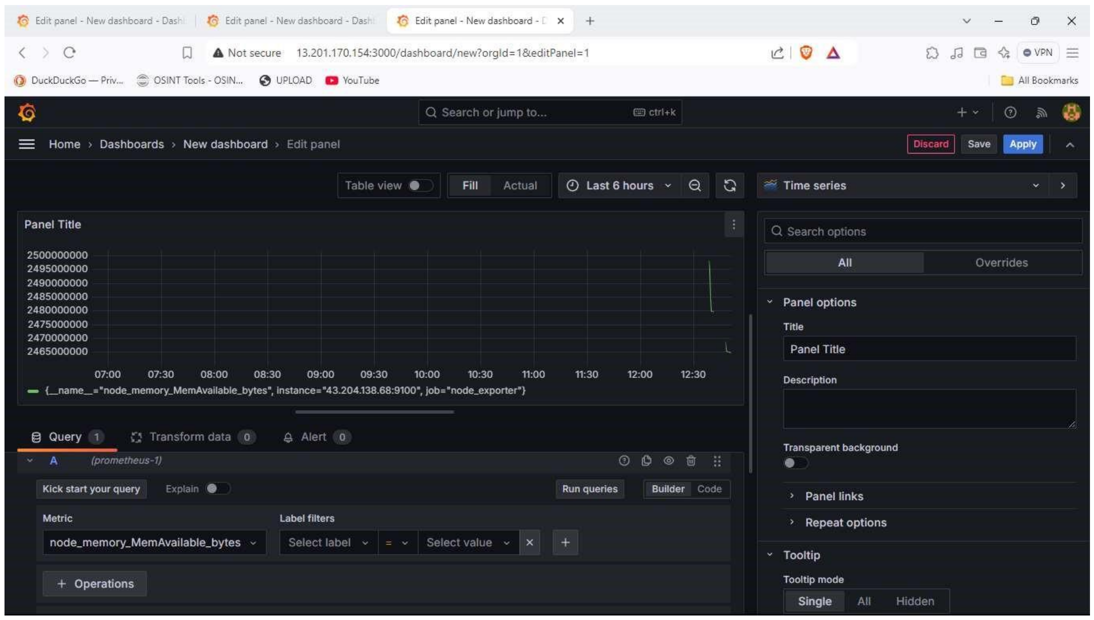
```
{__name__="node_cpu_seconds_total", cpu="0", instance="43.204.138.68:9100", job="node_exporter", mode="idle"}
{__name__="node_cpu_seconds_total", cpu="0", instance="43.204.138.68:9100", job="node_exporter", mode="iowait"}
{__name__="node_cpu_seconds_total", cpu="0", instance="43.204.138.68:9100", job="node_exporter", mode="irq"}
```

```
2024-10-05 12:35:40
{                                               6499
  __name__="node_cpu_seconds_total",
  cpu="0",
  instance="43.204.138.68:9100",
  job="node_exporter",
  mode="idle"
}
```

A (prometheus-1)
Metric: node_cpu_seconds_total
Label filters: Select label = Select value

2. Total Available Memory:- To see memory of the server

node_memory_MemAvailable_bytes



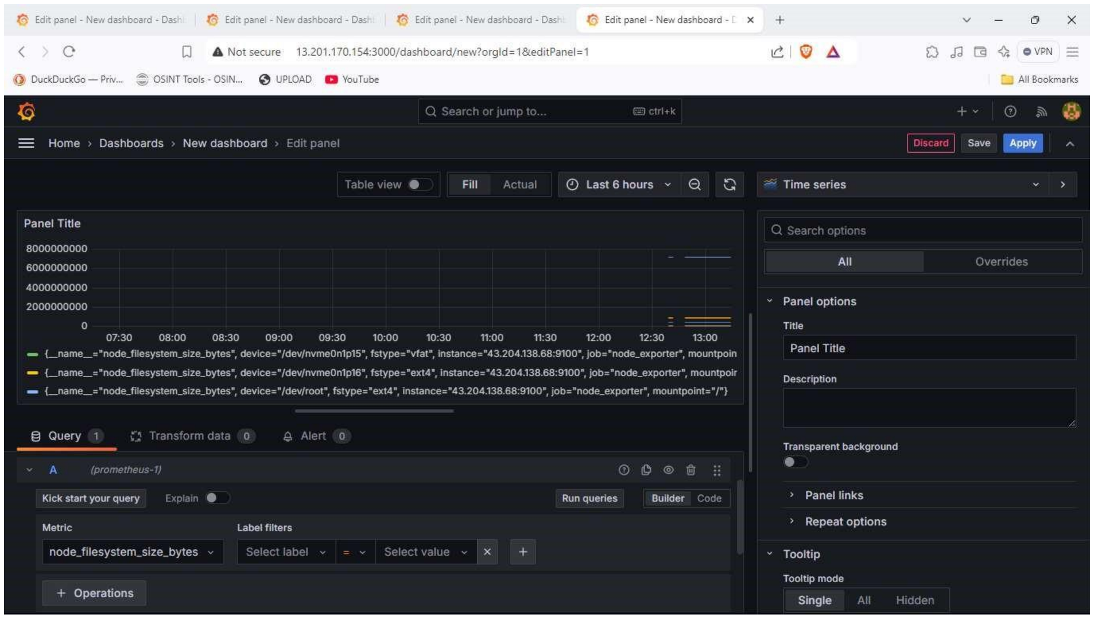
```
13.201.170.154:3000/dashboard/new?orgId=1&editPanel=1
```

```
{__name__="node_memory_MemAvailable_bytes", instance="43.204.138.68:9100", job="node_exporter"}
```

A (prometheus-1)
Metric: node_memory_MemAvailable_bytes
Label filters: Select label = Select value
Title: Panel Title
Description:

3. Disk Space Utilization

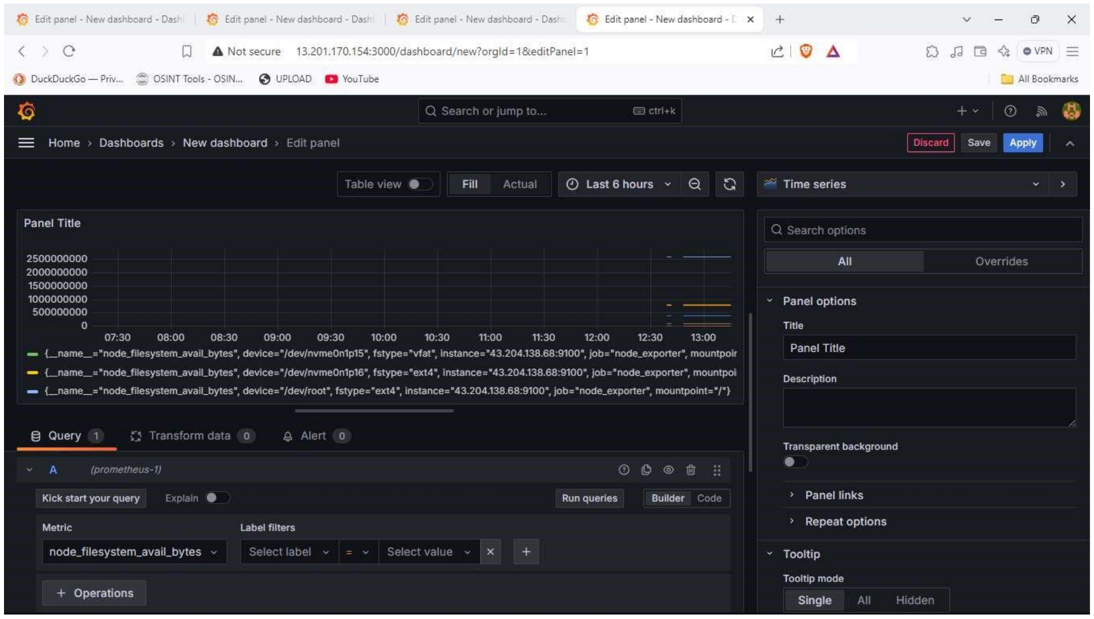
node_filesystem_size_bytes (Total Disk Size)



```
{__name__="node_filesystem_size_bytes", device="/dev/nvme0n1p15", fstype="vfat", instance="43.204.138.68:9100", job="node_exporter", mountpoin
{__name__="node_filesystem_size_bytes", device="/dev/nvme0n1p16", fstype="ext4", instance="43.204.138.68:9100", job="node_exporter", mountpoir
{__name__="node_filesystem_size_bytes", device="/dev/root", fstype="ext4", instance="43.204.138.68:9100", job="node_exporter", mountpoint="/"}
```

Metric: node_filesystem_size_bytes

node_filesystem_avail_bytes (Available disk size)

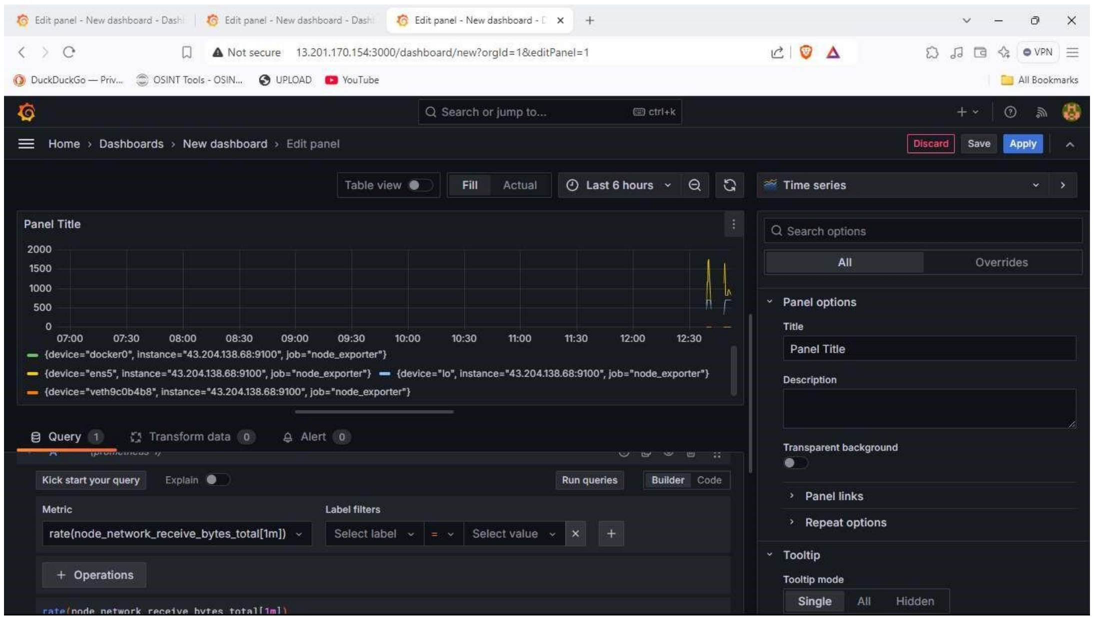


```
{__name__="node_filesystem_avail_bytes", device="/dev/nvme0n1p15", fstype="vfat", instance="43.204.138.68:9100", job="node_exporter", mountpoir
{__name__="node_filesystem_avail_bytes", device="/dev/nvme0n1p16", fstype="ext4", instance="43.204.138.68:9100", job="node_exporter", mountpoi
{__name__="node_filesystem_avail_bytes", device="/dev/root", fstype="ext4", instance="43.204.138.68:9100", job="node_exporter", mountpoint="/"}
```

Metric: node_filesystem_avail_bytes

4.Network traffic

rate(node_network_receive_bytes_total[1m])



13.201.170.154:3000/dashboard/new?orgId=1&editPanel=1

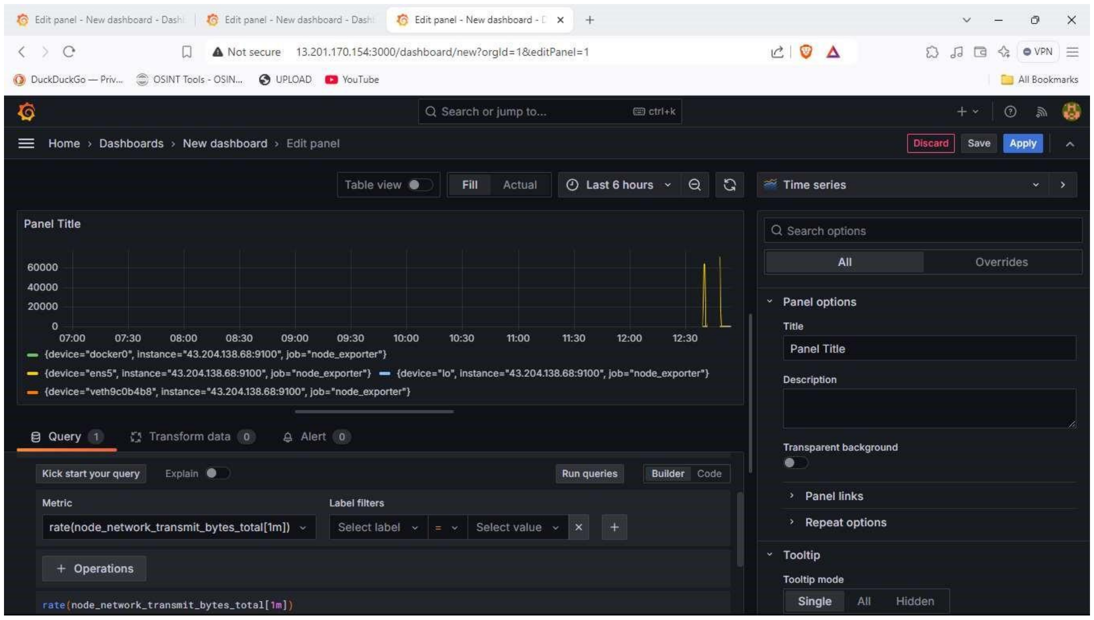
Panel Title

{device="docker0", instance="43.204.138.68:9100", job="node_exporter"}
{device="ens5", instance="43.204.138.68:9100", job="node_exporter"}
{device="lo", instance="43.204.138.68:9100", job="node_exporter"}
{device="veth9c0b4b8", instance="43.204.138.68:9100", job="node_exporter"}

Metric: rate(node_network_receive_bytes_total[1m])

```
rate(node_network_receive_bytes_total[1m])
```

rate(node_network_transmit_bytes_total[1m])



13.201.170.154:3000/dashboard/new?orgId=1&editPanel=1

Panel Title

{device="docker0", instance="43.204.138.68:9100", job="node_exporter"}
{device="ens5", instance="43.204.138.68:9100", job="node_exporter"}
{device="lo", instance="43.204.138.68:9100", job="node_exporter"}
{device="veth9c0b4b8", instance="43.204.138.68:9100", job="node_exporter"}

Metric: rate(node_network_transmit_bytes_total[1m])

```
rate(node_network_transmit_bytes_total[1m])
```