SET UP EFK ON EC2

Efk

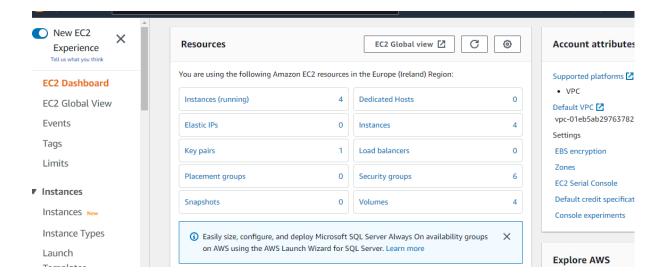
Efk stands for Elasticsearch Fluentd and kibana. Efk is a popular and the best open-source choice for the kubernetes logs aggregation and analysis. Elasticsearch is a distributed and scalable search engine commonly used to sift through large volumes of log data.

Ec2

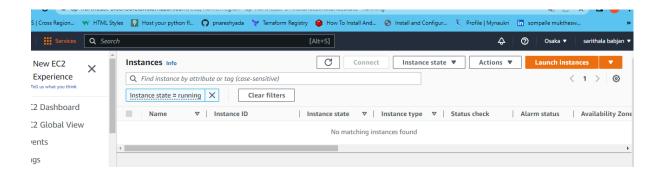
- Ec2 stands for Amazon elastic compute cloud
- Amazon ec2 is a web service that provides resizable compute capacity in the cloud
- To run the application security group zones. user data applications installation it's nothing but remote server
- You can scale the computer capacity up and down as per computer requirement changes

First launch 2 ec2 instance

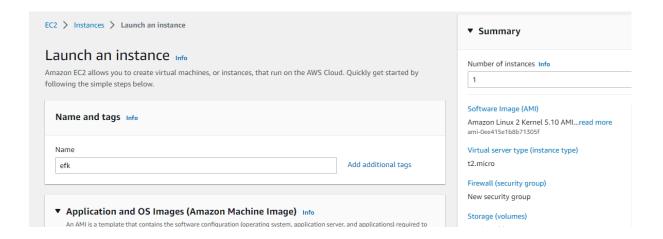
1.Go to the ec2 dashboard—->click on instance



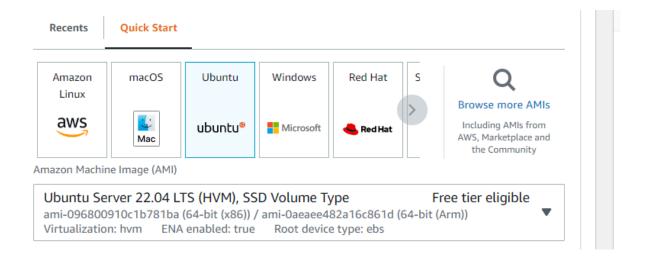
2. Next click on launch instance



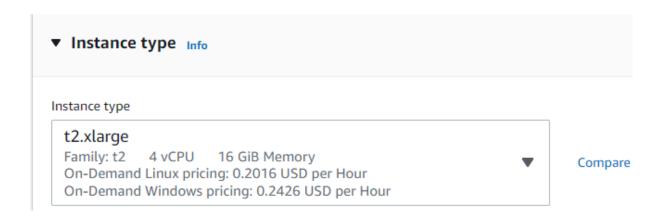
3. Give proper name of the instance



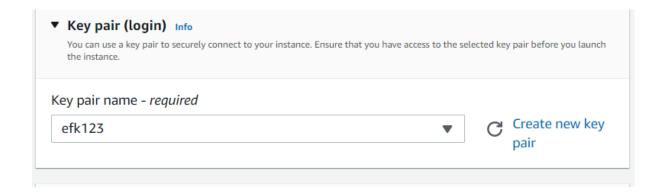
4. we can select ami depending upon the requirement



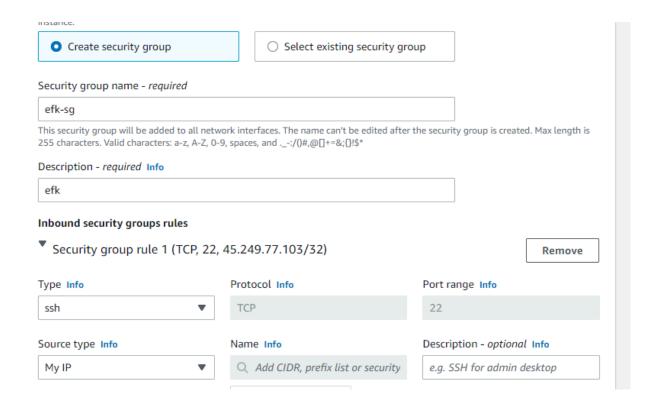
5. we can select the family type



6.we can select key pair, here we can create new key pair and select it



7. Click on security groups—->Depending upon the application we can pass sg rules



Sg1 rules:(server,logstash)

Ssh-22-my ip

logstash-5044-0.0.0.0/0

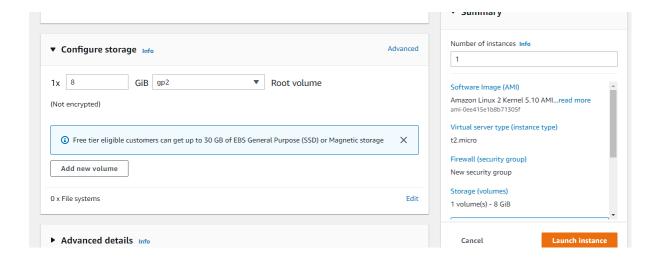
Sg2 rules:(elasticsearch,kibana)

Ssh-22-my ip

Elasticsearch—-9200—logstash sg

kibana-5601--0.0.0.0/0

8.click on launch instance ec2 will be created



We are Connecting to the server first you copy public ip and go to git bash and give shown below command

ssh -i "pem.file name" ec2-user@publicip

when you are connected to the ec2 instance using ssh, you should see the shown below.

```
## TOWARD PROJECT NUMBERS | Company | Company
```

Install elastic search

Import the GPG key,run the below command.

rpm --import https://artifacts.elastic.co/GPG-KEY-elasticsearch

Create a file called **elasticsearch.repo** in the **/etc/yum.repos.d/** directory,Add the ELK repository in that file.

vi /etc/yum.repos.d/elasticsearch.repo

Copy and paste the below content in elasticsearch.repo file

[elasticsearch]
name=Elasticsearch repository for 7.x packages
baseurl=https://artifacts.elastic.co/packages/7.x/yum
gpgcheck=1

gpgkey=https://artifacts.elastic.co/GPG-KEY-elasticsearch enabled=0 auto refresh=1 type=rpm-md

Install Elasticsearch

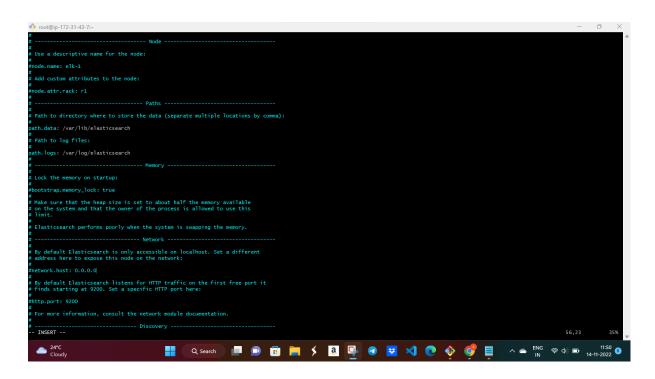
yum install --enablerepo=elasticsearch elasticsearch -y

After the installation, change below configurations in elasticsearch.yaml file

vi /etc/elasticsearch/elasticsearch.yml

Uncomment and change below ones

cluster.name: elk node.name: elk-1 network.host: 0.0.0.0



Enable elasticsearch give below command

/bin/systemctl enable elasticsearch.service
Start elasticsearch give below command
systemctl start elasticsearch.service
next verify elasticsearch is running or not give below command
systemctl I status elasticsearch.service

```
Francation Summary

Transaction Section 3 (1) Package

Total dominous size: 300 N

Tomorbidity analysis: 300 N

Tomorbidity analysis
```

After finally i got the elastic page using elastic search public ip and using port number

```
"name" : "ip-172-31-32-85",
  "cluster_name" : "elasticsearch",
  "cluster_uuid" : "sWz-Gvh-QJiU_x8-_0xH1g",
  "version" : {
    "number" : "7.17.7",
    "build_flavor" : "default",
    "build_type" : "deb",
    "build_hash" : "78dcaaa8cee33438b91eca7f5c7f56a70fec9e80",
    "build_date" : "2022-10-17T15:29:54.167373105Z",
    "build_snapshot" : false,
    "lucene_version" : "8.11.1",
    "minimum_wire_compatibility_version" : "6.8.0",
    "minimum_index_compatibility_version" : "6.0.0-beta1"
},
    "tagline" : "You Know, for Search"
```

Install kibana

========

Import the GPG key,run the below command. rpm --import https://artifacts.elastic.co/GPG-KEY-elasticsearch

Create a file called **kibana.repo** in the **/etc/kibana/** directory,Add the ELK repository in that file.

vi /etc/yum.repos.d/kibana.repo

Copy and paste the below content in kibana.repo file

[kibana-7.x]
name=Kibana repository for 7.x packages
baseurl=https://artifacts.elastic.co/packages/7.x/yum
gpgcheck=1
gpgkey=https://artifacts.elastic.co/GPG-KEY-elasticsearch
enabled=1
auto refresh=1
type=rpm-md

Install kibana give below command yum install kibana -y

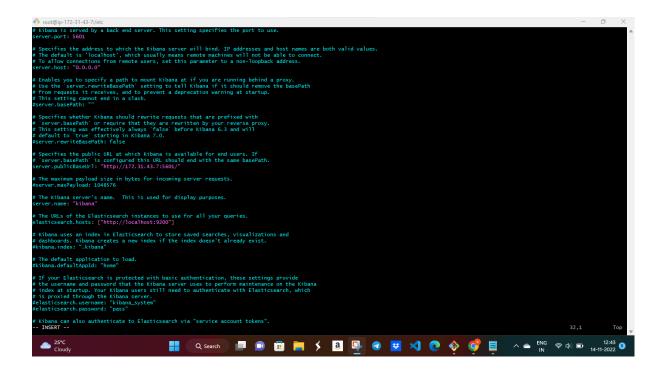
After the installation, change below configurations in **kibana.yaml** file vi /etc/kibana/kibana.yml

Uncomment and change below ones

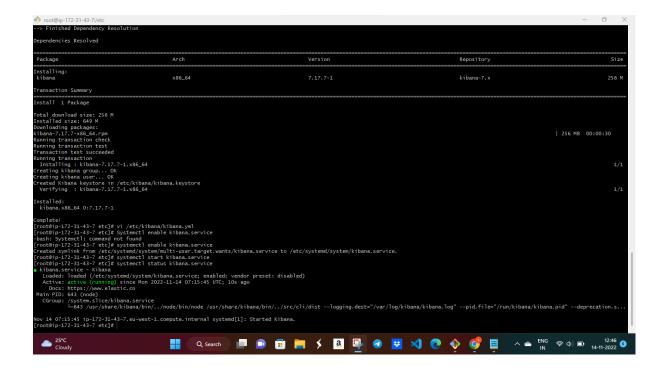
server.port: 5601 server.host: "0.0.0.0" server.name: "kibana"

Here in localhost place you have give elasticsearch private ip

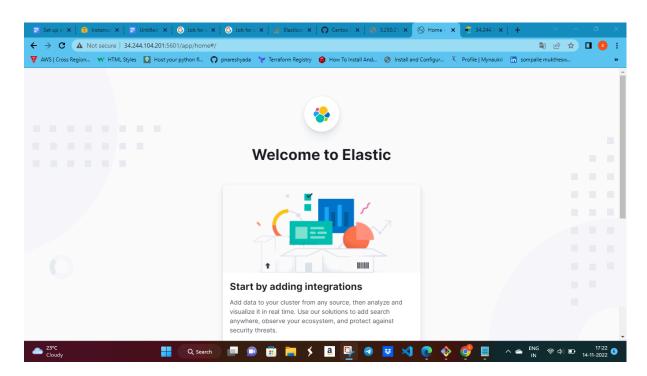
elasticsearch.hosts: ["http://localhost:9200"]



Enable **kibana** give below command systemctl enable kibana.service
Start **kibana** give below command
Systemctl start kibana.service
next verify **kibana** is running or not give below command
Systemctl status kibana.service



Give this one public ip:5601 in the browser you get below kibana page



Another ec2 machine first install **Tomcat server**Install **Tomcat** give below commands Yum update -y

sudo su -

cd /opt

Wget

https://dlcdn.apache.org/tomcat/tomcat-10/v10.0.27/bin/apache-tomcat-10.0.2 7.tar.qz

tar -zxvf apache-tomcat-10.0.27.tar.gz

cd apache-tomcat-10.0.27/bin/

ls -ltra

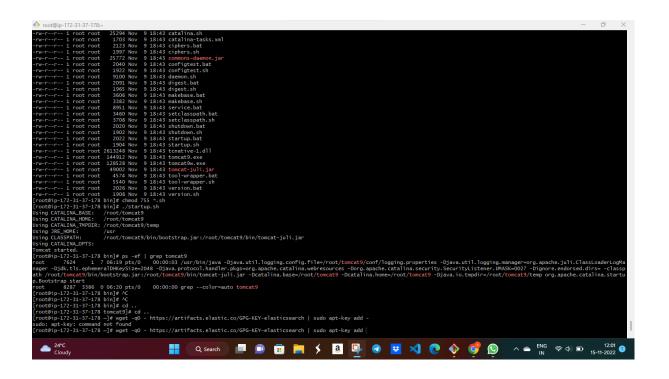
chmod +x startup.sh

chmod +x shutdown.sh

Is -Itra

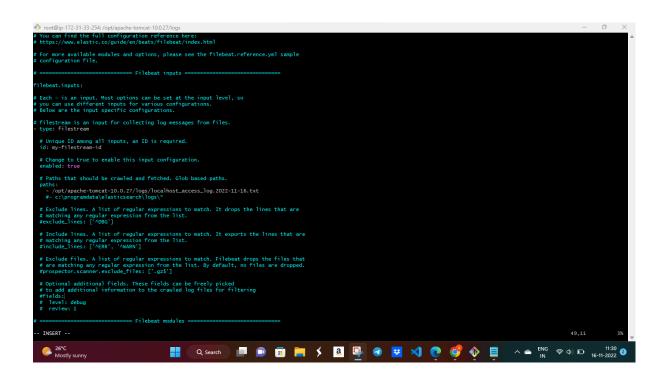
echo \$PATH

In -s /opt/apache-tomcat-10.0.27/bin/startup.sh /usr/local/bin/tomcatup
In -s /opt/apache-tomcat-10.0.27/bin/shutdown.sh /usr/local/bin/tomcatdown
sudo apt-get update
sudo apt install openjdk-11-jdk
tomcat up
ps -ef | grep tomcat



Install filebeat

```
Wget -qO -
https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo
apt-key add -
sudo apt-get install apt-transport-https
echo "deb https://artifacts.elastic.co/packages/7.x/apt
stable main" | sudo tee
/etc/apt/sources.list.d/elastic-7.x.list
sudo apt-get update
sudo apt-get install filebeat
sudo vi /etc/filebeat/filebeat.yml
#outputs hosts: ["34.244.104.201:9200"]
```

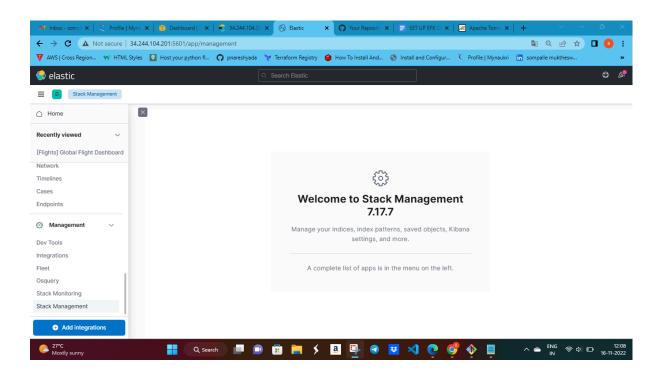


After that run the below command

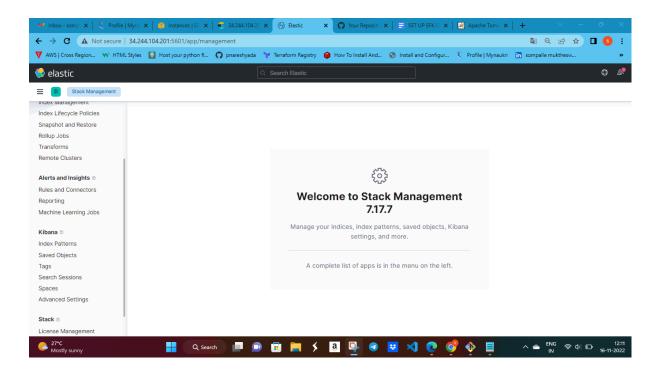
/opt/apache-tomcat-10.0.27/logs/localhost_access_log.2022-11-16.txt

Systemctl status filebeat.service

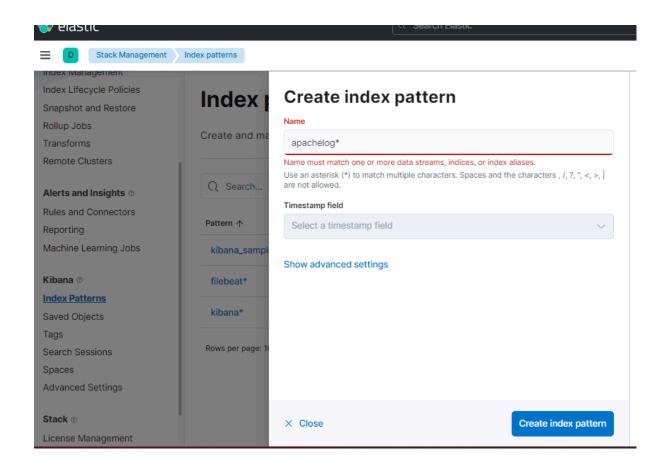
After that we login to **kibana ui**Click stack manager



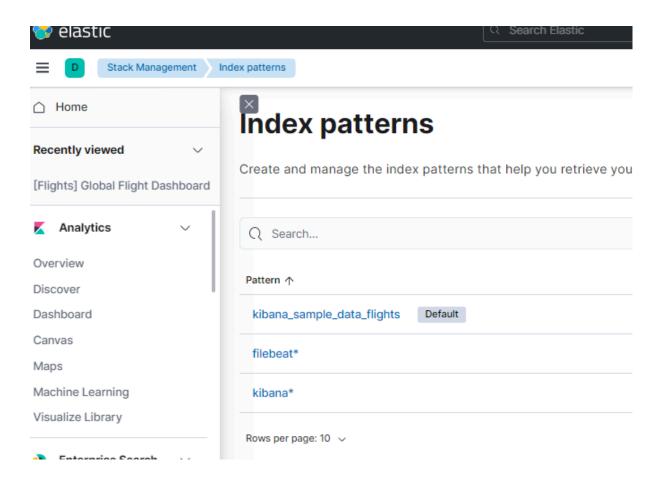
Next click index patterns



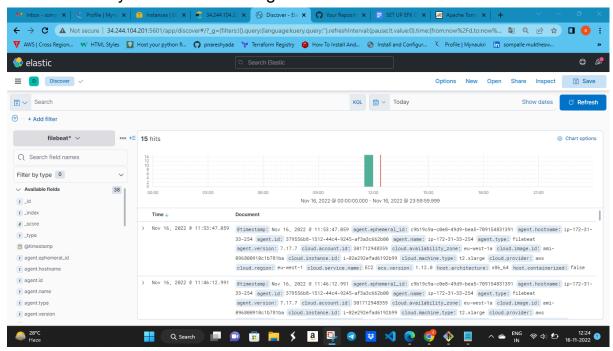
Create new index pattern



Go to home page and click discovery



In the discovery section sea the logs



You not get the logs restart it (kibana,filebeat,elasticsearch) After that you get logs