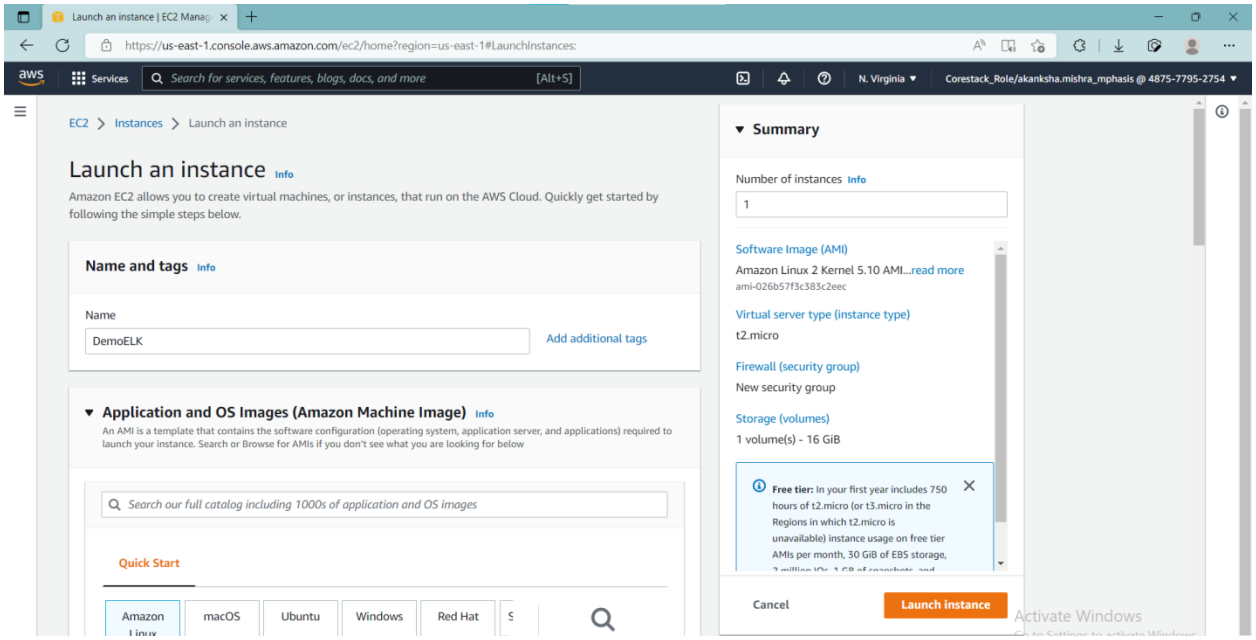
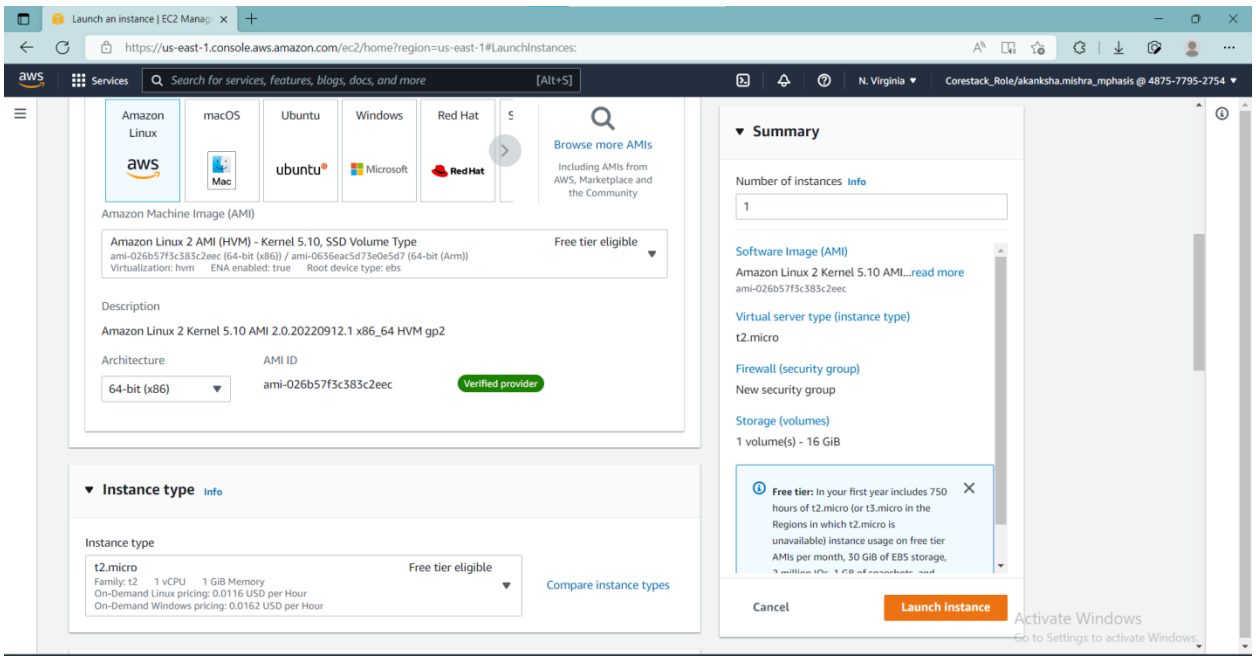
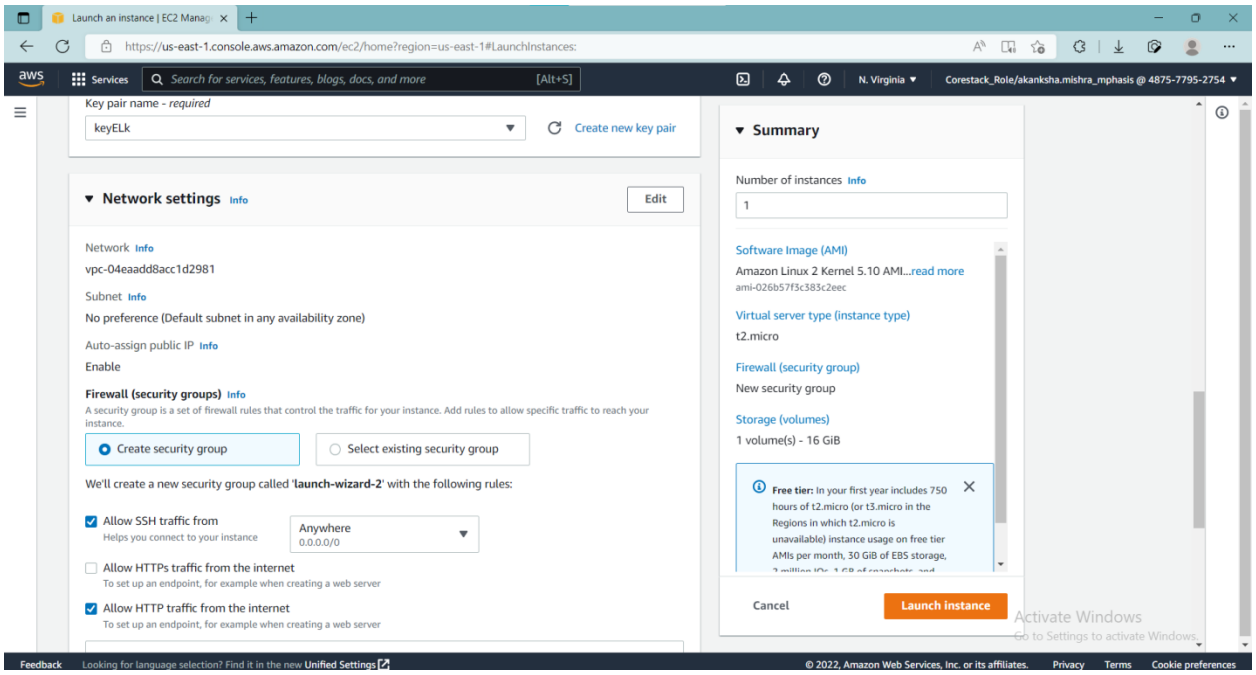
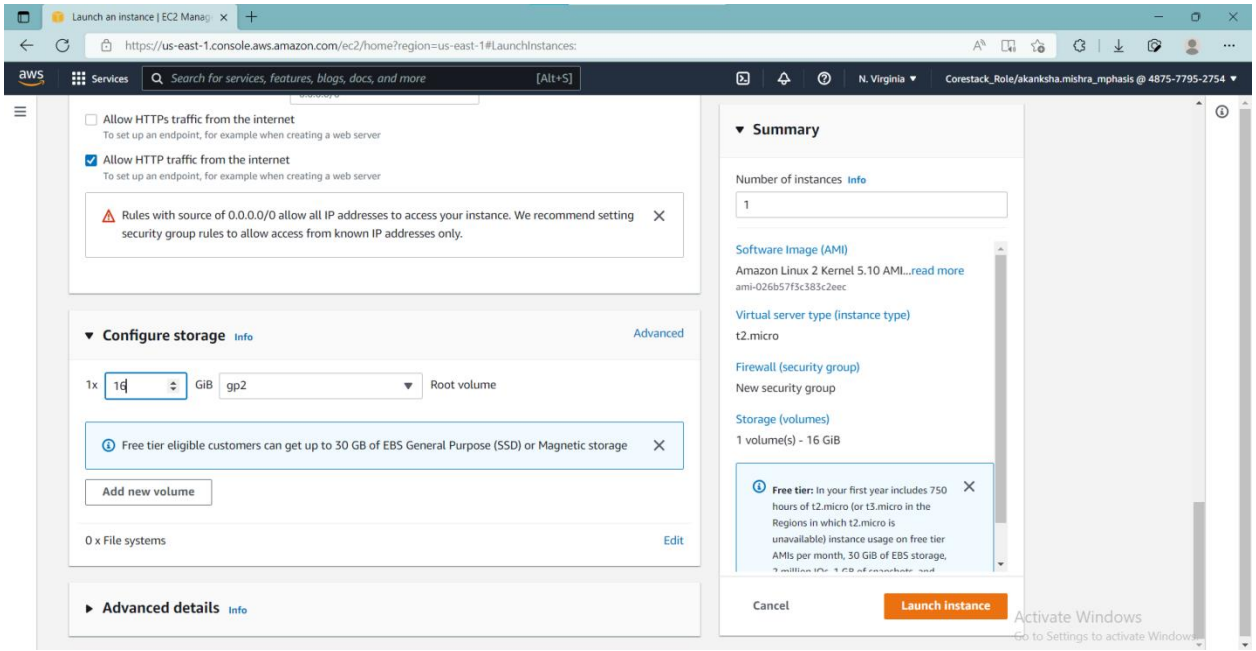
Deploying ELK Stack on Docker Container

First we need to create an EC2- instance.

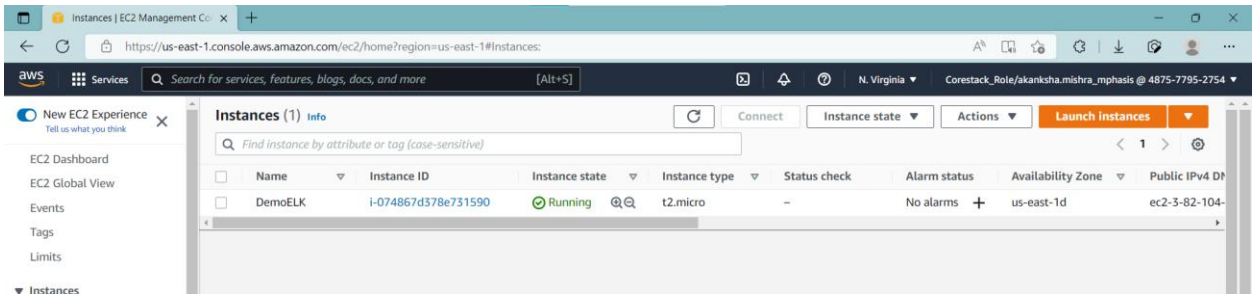


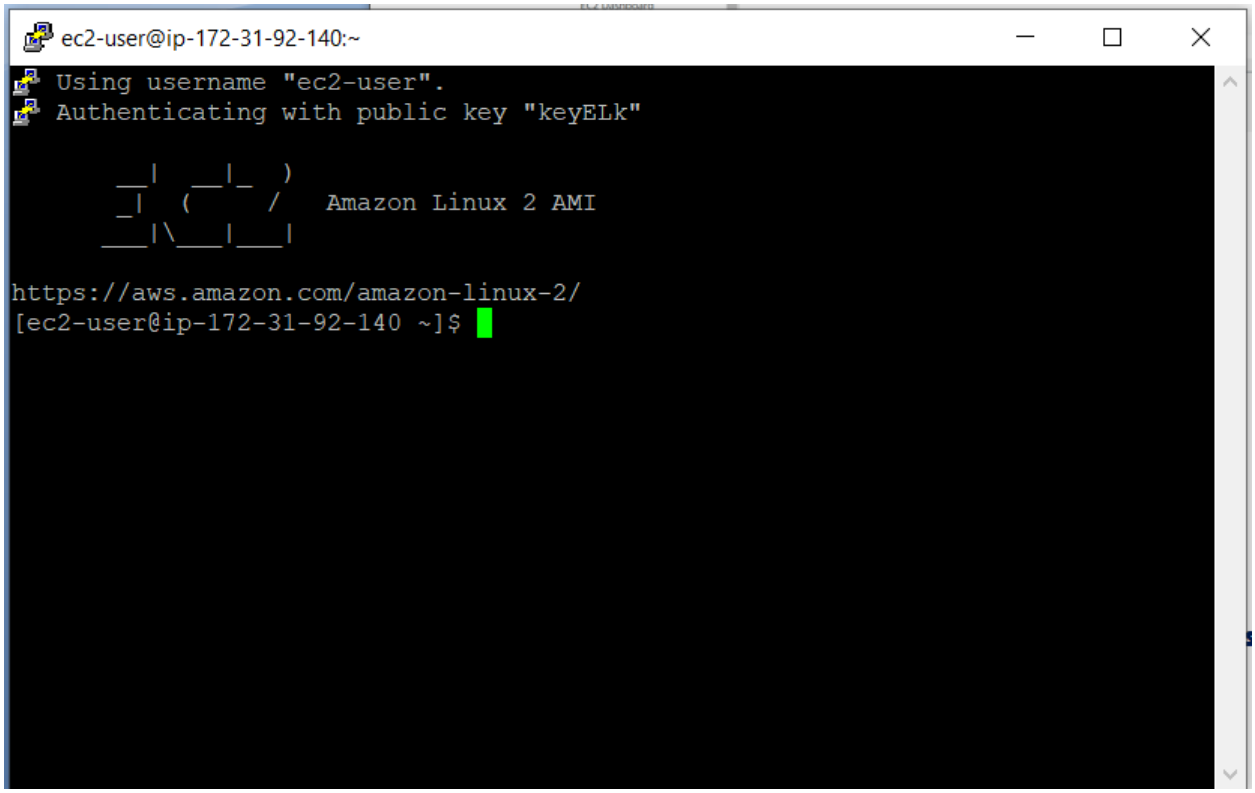






Now connect to the instance using putty





Now follow the following step

Step1: Install java and its Dependencies

```
ec2-user@ip-172-31-92-140:~
Using username "ec2-user".
Authenticating with public key "keyELk"

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-92-140 ~]$ java -version
-bash: java: command not found
[ec2-user@ip-172-31-92-140 ~]$ sudo yum -y install java-1.8.0-openjdk
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                               | 3.7 kB     00:00
Resolving Dependencies
--> Running transaction check
---> Package java-1.8.0-openjdk.x86_64 1:1.8.0.342.b07-1.amzn2.0.1 will be insta
lled
--> Processing Dependency: java-1.8.0-openjdk-headless(x86-64) = 1:1.8.0.342.b07
-1.amzn2.0.1 for package: 1:java-1.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: xorg-x11-fonts-Type1 for package: 1:java-1.8.0-openjd
k-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libjvm.so(SUNWprivate_1.1)(64bit) for package: 1:java
-1.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libjava.so(SUNWprivate_1.1)(64bit) for package: 1:jav
a-1.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2(ALSA_0.9.0rc4)(64bit) for package: 1:j
ava-1.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2(ALSA_0.9)(64bit) for package: 1:java-1
.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libXcomposite(x86-64) for package: 1:java-1.8.0-openj
dk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: gtk2(x86-64) for package: 1:java-1.8.0-openjdk-1.8.0.
342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: fontconfig(x86-64) for package: 1:java-1.8.0-openjdk-
1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libjvm.so()(64bit) for package: 1:java-1.8.0-openjdk-
1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libjava.so()(64bit) for package: 1:java-1.8.0-openjdk
-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libgif.so.4()(64bit) for package: 1:java-1.8.0-openjd
k-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2()(64bit) for package: 1:java-1.8.0-ope
njdk-1.8.0.342.b07-1.amzn2.0.1.x86_64
--> Processing Dependency: libXtst.so.6()(64bit) for package: 1:java-1.8.0-openj
dk-1.8.0.342.b07-1.amzn2.0.1.x86_64
```

```
  libxshmfence.x86_64 0:1.2-1.amzn2.0.2
  libxslt.x86_64 0:1.1.28-6.amzn2
  lksctp-tools.x86_64 0:1.0.17-2.amzn2.0.2
  log4j-cve-2021-44228-hotpatch.noarch 0:1.3-7.amzn2
  mesa-libEGL.x86_64 0:18.3.4-5.amzn2.0.1
  mesa-libGL.x86_64 0:18.3.4-5.amzn2.0.1
  mesa-libgbm.x86_64 0:18.3.4-5.amzn2.0.1
  mesa-libglapi.x86_64 0:18.3.4-5.amzn2.0.1
  pango.x86_64 0:1.42.4-4.amzn2
  pcsc-lite-libs.x86_64 0:1.8.8-7.amzn2
  pixman.x86_64 0:0.34.0-1.amzn2.0.2
  python-javapackages.noarch 0:3.4.1-11.amzn2
  python-lxml.x86_64 0:3.2.1-4.amzn2.0.3
  ttmkfdir.x86_64 0:3.0.9-42.amzn2.0.2
  tzdata-java.noarch 0:2022c-1.amzn2
  xorg-x11-font-utils.x86_64 1:7.5-21.amzn2
  xorg-x11-fonts-Type1.noarch 0:7.5-9.amzn2

Complete!
[ec2-user@ip-172-31-92-140 ~]$
```

ec2-user@ip-172-31-92-140:~

```
[ec2-user@ip-172-31-92-140 ~]$ java -version
openjdk version "1.8.0_342"
OpenJDK Runtime Environment (build 1.8.0_342-b07)
OpenJDK 64-Bit Server VM (build 25.342-b07, mixed mode)
[ec2-user@ip-172-31-92-140 ~]$
```

Step2: Install Elastic search on AWS Server

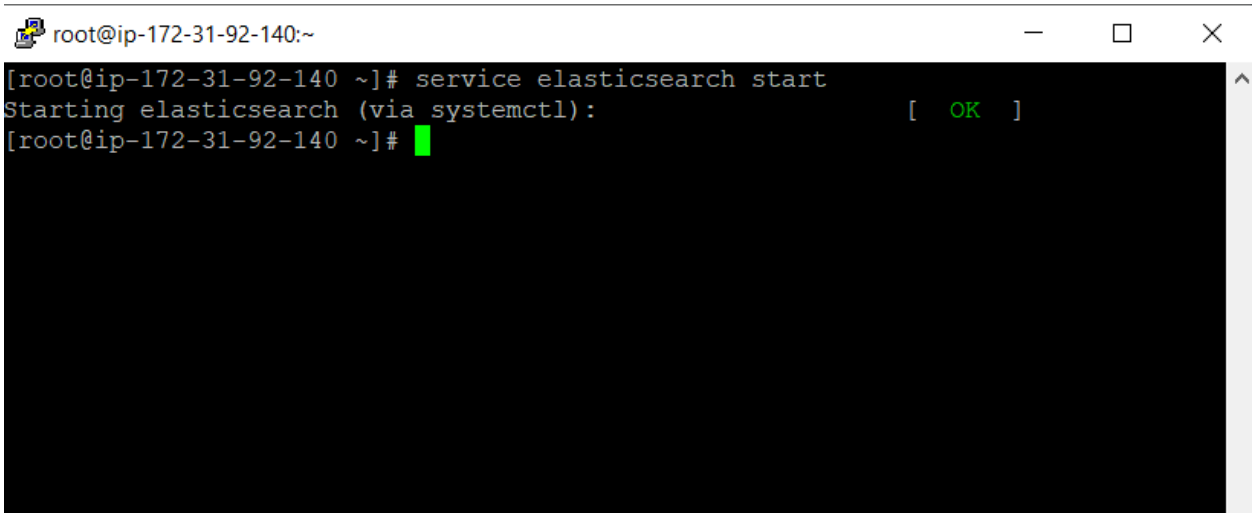
root@ip-172-31-92-140:~

```
[ec2-user@ip-172-31-92-140 ~]$ sudo su
[root@ip-172-31-92-140 ec2-user]# yum install -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Error: Need to pass a list of pkgs to install
 Mini usage:

install PACKAGE...

Install a package or packages on your system

aliases: install-n, install-na, install-nevra
[root@ip-172-31-92-140 ec2-user]# cd /root
[root@ip-172-31-92-140 ~]# wget  https://download.elastic.co/elasticsearch/elast
icsearch/elasticsearch-1.7.2.noarch.rpm
--2022-10-09 13:39:01--  https://download.elastic.co/elasticsearch/elasticsearch
/elasticsearch-1.7.2.noarch.rpm
Resolving download.elastic.co (download.elastic.co)... 34.120.127.130, 2600:1901
:0:1d7::
Connecting to download.elastic.co (download.elastic.co)|34.120.127.130|:443... c
onnected.
HTTP request sent, awaiting response... 200 OK
Length: 27304727 (26M) [binary/octet-stream]
Saving to: 'elasticsearch-1.7.2.noarch.rpm'

100%[======================================>] 27,304,727  31.8MB/s   in 0.8s

2022-10-09 13:39:03 (31.8 MB/s) - 'elasticsearch-1.7.2.noarch.rpm' saved [273047
27/27304727]

[root@ip-172-31-92-140 ~]# yum install elasticsearch-1.7.2.noarch.rpm -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Examining elasticsearch-1.7.2.noarch.rpm: elasticsearch-1.7.2-1.noarch
Marking elasticsearch-1.7.2.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package elasticsearch.noarch 0:1.7.2-1 will be installed
--> Finished Dependency Resolution
amzn2-core/2/x86_64                                     | 3.7 kB     00:00

Dependencies Resolved

================================================================================
 Package           Arch       Version     Repository                       Size
================================================================================
Installing:
 elasticsearch     noarch     1.7.2-1     /elasticsearch-1.7.2.noarch      30 M

Transaction Summary
================================================================================
Install  1 Package
```

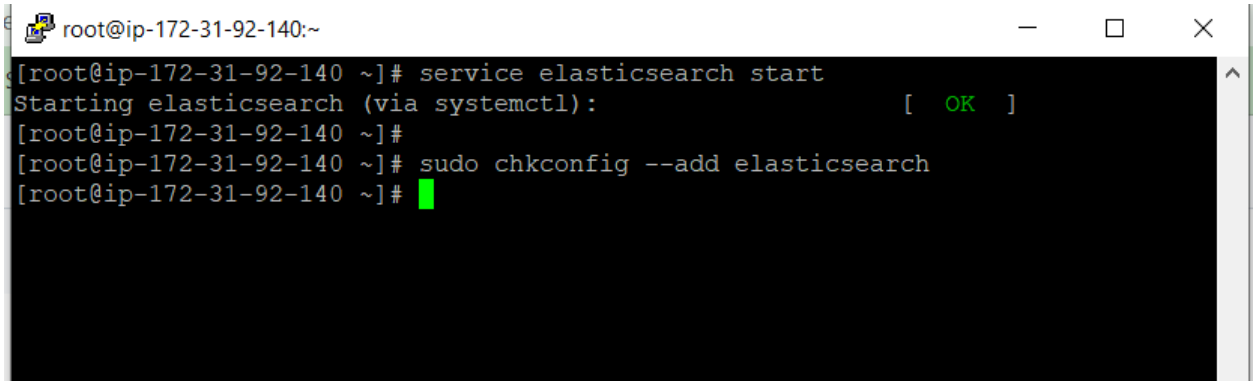
root@ip-172-31-92-140:~

```
2022-10-09 13:39:03 (31.8 MB/s) - 'elasticsearch-1.7.2.noarch.rpm' saved [273047
27/27304727]

[root@ip-172-31-92-140 ~]# yum install elasticsearch-1.7.2.noarch.rpm -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Examining elasticsearch-1.7.2.noarch.rpm: elasticsearch-1.7.2-1.noarch
Marking elasticsearch-1.7.2.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package elasticsearch.noarch 0:1.7.2-1 will be installed
--> Finished Dependency Resolution
amzn2-core/2/x86_64                                      | 3.7 kB     00:00

Dependencies Resolved

================================================================================
 Package           Arch       Version     Repository                       Size
================================================================================
Installing:
 elasticsearch     noarch     1.7.2-1     /elasticsearch-1.7.2.noarch      30 M

Transaction Summary
================================================================================
Install  1 Package

Total size: 30 M
Installed size: 30 M
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Creating elasticsearch group... OK
Creating elasticsearch user... OK
  Installing : elasticsearch-1.7.2-1.noarch                                 1/1
### NOT starting on installation, please execute the following statements to con
figure elasticsearch service to start automatically using systemd
 sudo systemctl daemon-reload
 sudo systemctl enable elasticsearch.service
### You can start elasticsearch service by executing
 sudo systemctl start elasticsearch.service
  Verifying  : elasticsearch-1.7.2-1.noarch                                 1/1

Installed:
  elasticsearch.noarch 0:1.7.2-1

Complete!
[root@ip-172-31-92-140 ~]# rm -f elasticsearch-1.7.2.noarch.rpm
```

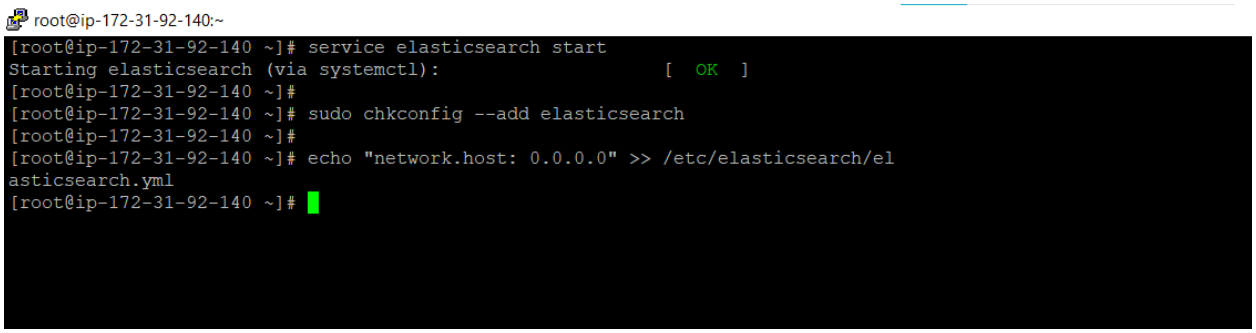
Step3: Start the Server



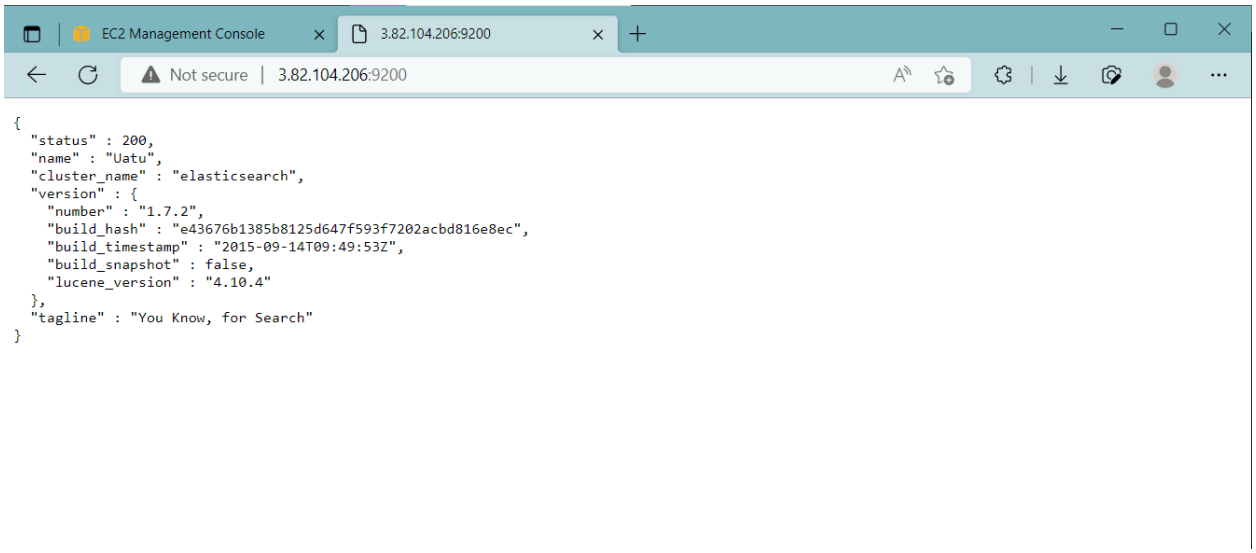
Step4: Automatically Boot u on start



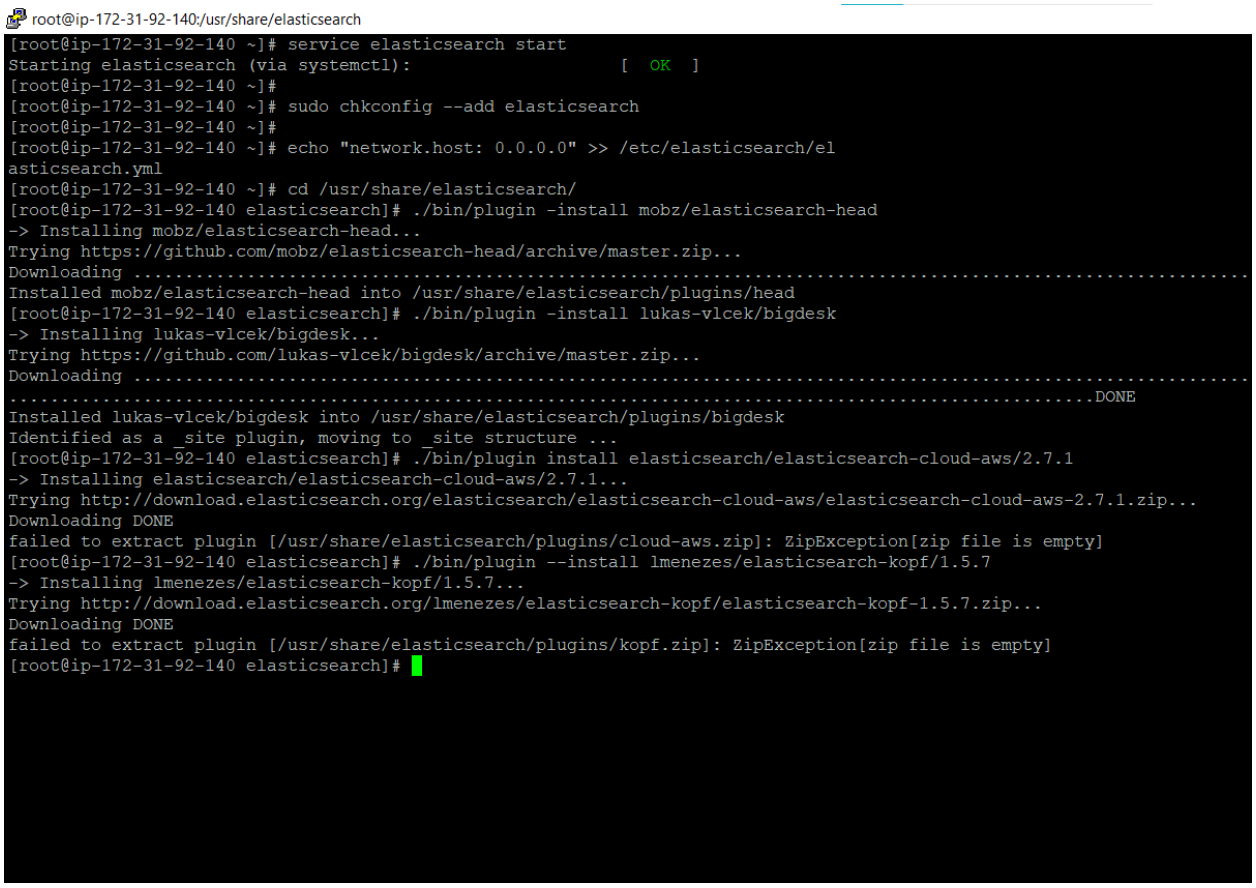
Step5:Configuring AWS IP so you can access using public IP



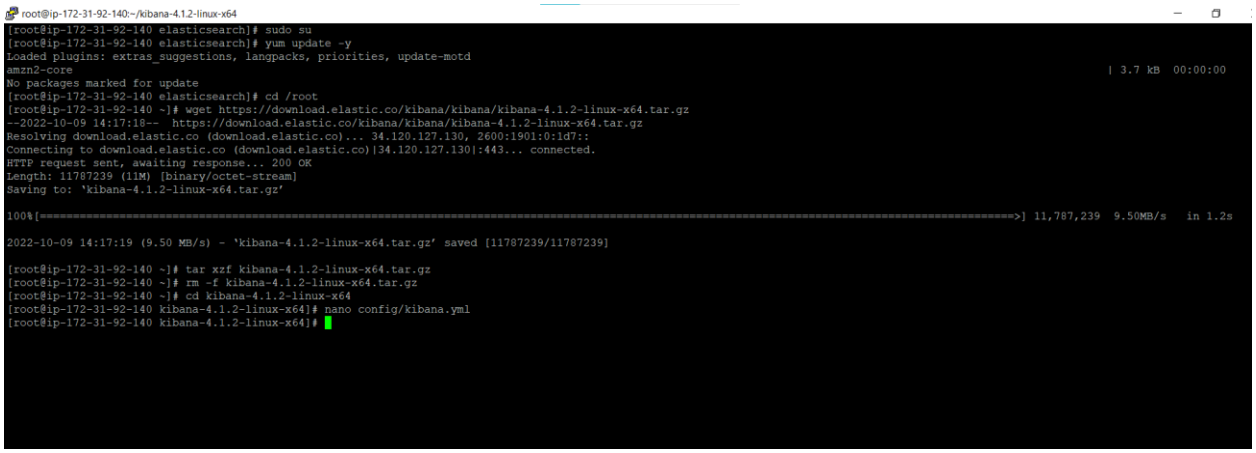
Checking Elastic Search

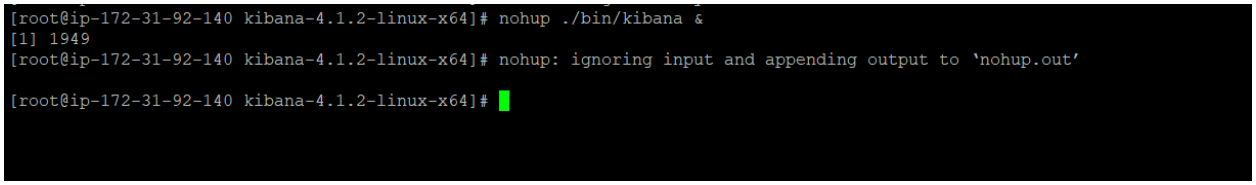


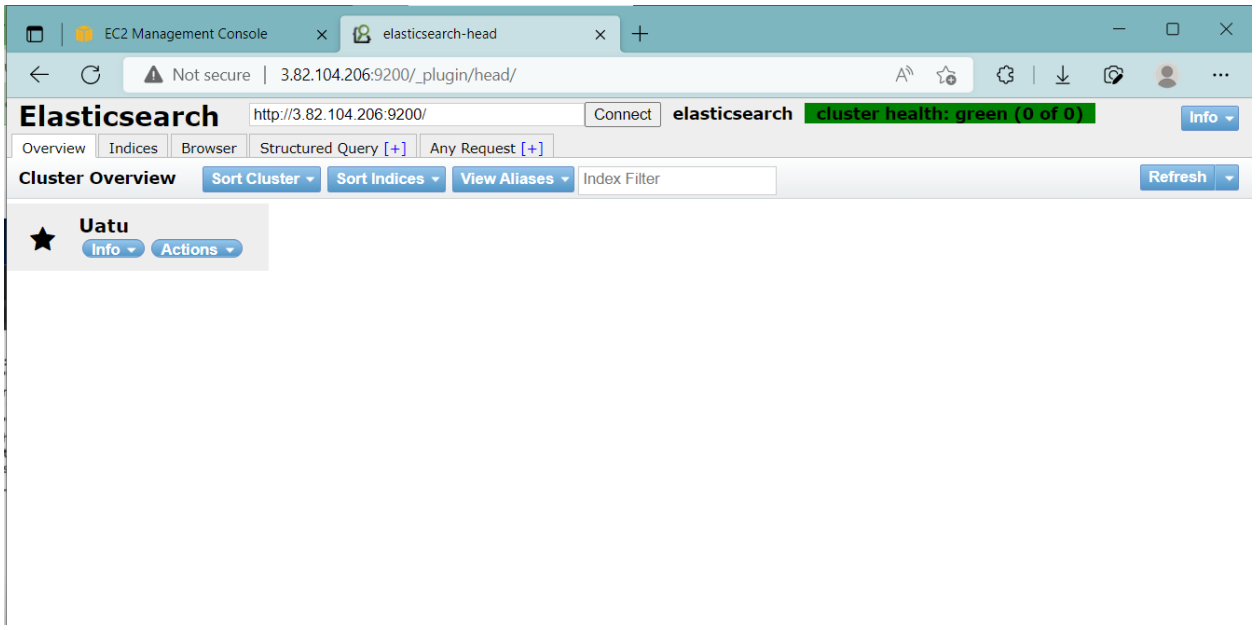
Step6:Install Plugins

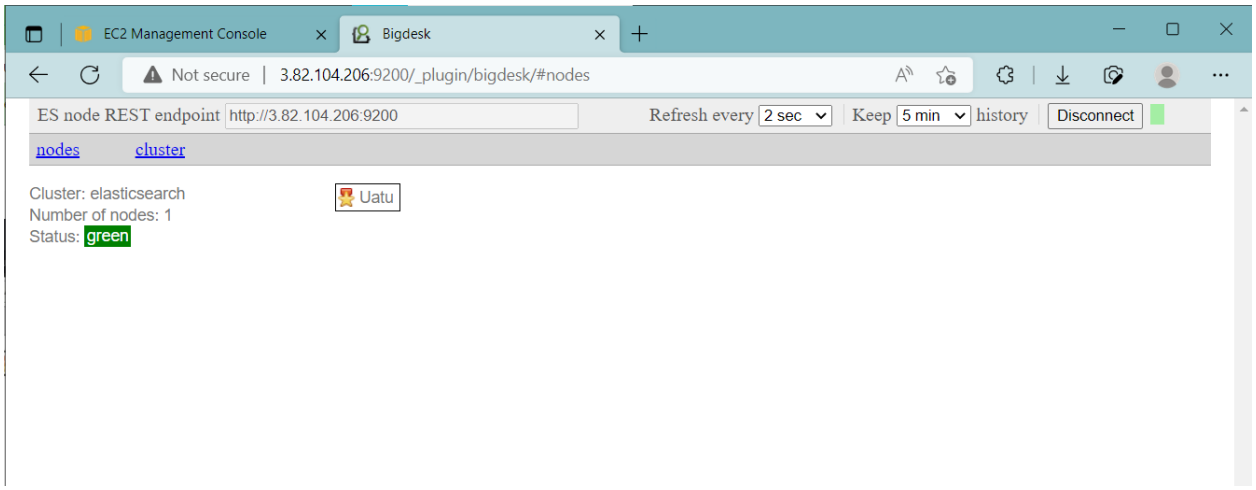


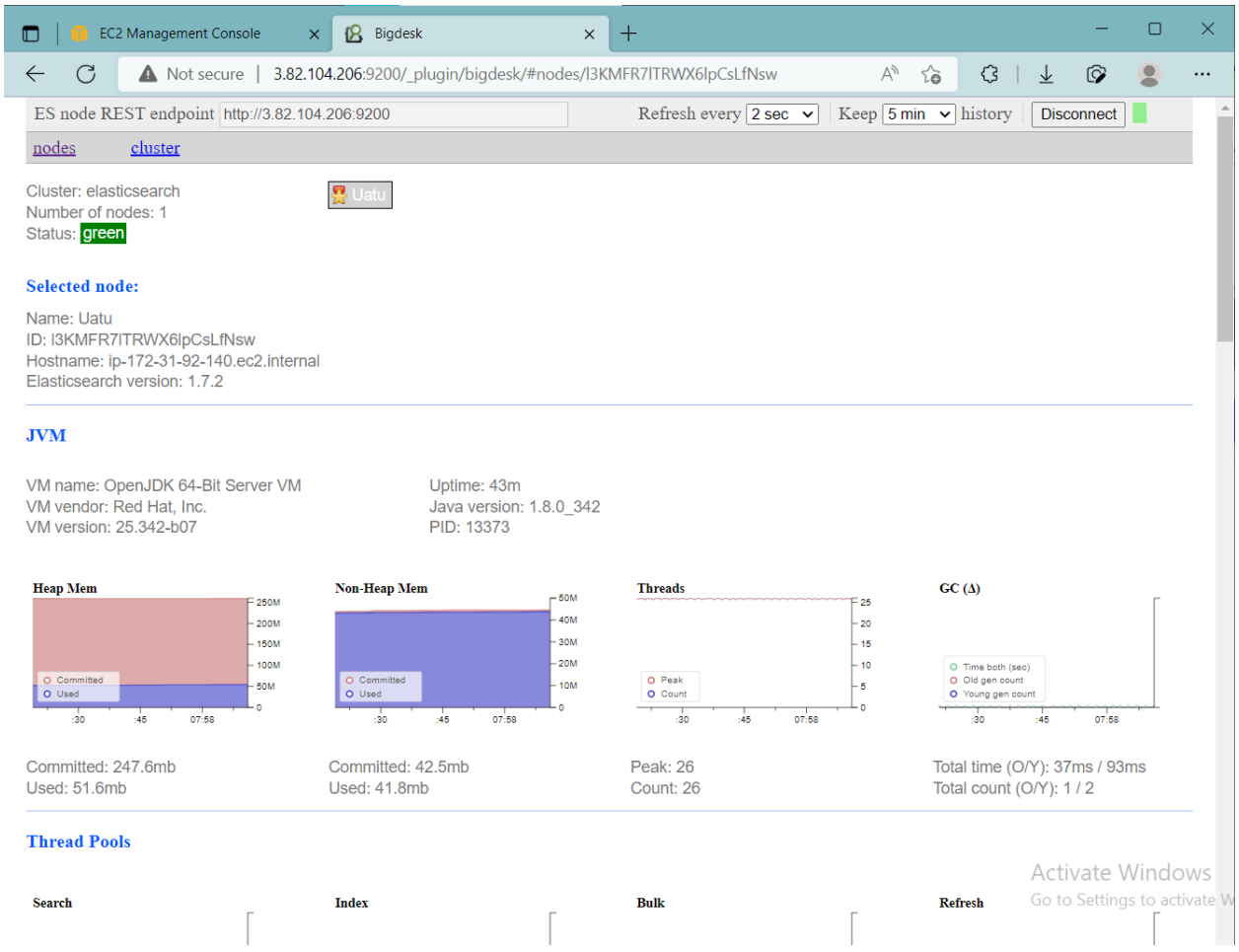
Step 7:Install Kibana

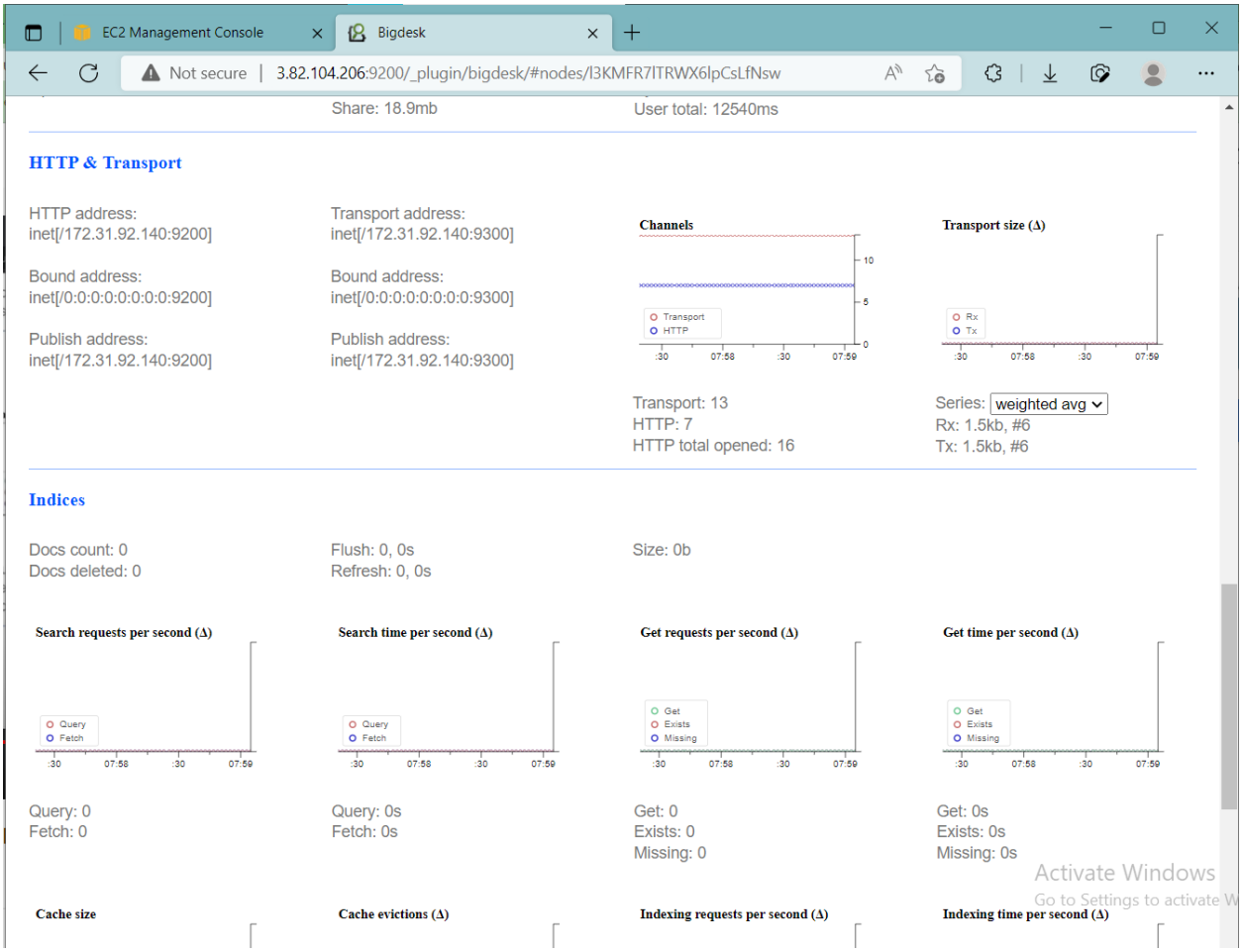

root@ip-172-31-92-140:~/kibana-4.1.2-linux-x64
[root@ip-172-31-92-140 elasticsearch]# sudo su
[root@ip-172-31-92-140 elasticsearch]# yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.7 kB 00:00:00
No packages marked for update
[root@ip-172-31-92-140 elasticsearch]# cd /root
[root@ip-172-31-92-140 ~]# wget https://download.elastic.co/kibana/kibana/kibana-4.1.2-linux-x64.tar.gz
--2022-10-09 14:17:18-- https://download.elastic.co/kibana/kibana/kibana-4.1.2-linux-x64.tar.gz
Resolving download.elastic.co (download.elastic.co)... 34.120.127.130, 2600:1901:0:1d7::
Connecting to download.elastic.co (download.elastic.co)|34.120.127.130|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11787239 (11M) [binary/octet-stream]
Saving to: 'kibana-4.1.2-linux-x64.tar.gz'
100%[=>] 11,787,239 9.50MB/s in 1.2s
2022-10-09 14:17:19 (9.50 MB/s) - 'kibana-4.1.2-linux-x64.tar.gz' saved [11787239/11787239]
[root@ip-172-31-92-140 ~]# tar xzf kibana-4.1.2-linux-x64.tar.gz
[root@ip-172-31-92-140 ~]# rm -f kibana-4.1.2-linux-x64.tar.gz
[root@ip-172-31-92-140 ~]# cd kibana-4.1.2-linux-x64
[root@ip-172-31-92-140 kibana-4.1.2-linux-x64]# nano config/kibana.yml
[root@ip-172-31-92-140 kibana-4.1.2-linux-x64]#


[root@ip-172-31-92-140 kibana-4.1.2-linux-x64]# nohup ./bin/kibana &
[1] 1949
[root@ip-172-31-92-140 kibana-4.1.2-linux-x64]# nohup: ignoring input and appending output to 'nohup.out'
[root@ip-172-31-92-140 kibana-4.1.2-linux-x64]#


EC2 Management Console
elasticsearch-head
Not secure | 3.82.104.206:9200/_plugin/head/
Elasticsearch
http://3.82.104.206:9200/
Connect
elasticsearch
cluster health: green (0 of 0)
Info
Overview
Indices
Browser
Structured Query [+]
Any Request [+]
Cluster Overview
Sort Cluster
Sort Indices
View Aliases
Index Filter
Refresh
Uatu
Info
Actions


EC2 Management Console
Bigdesk
Not secure | 3.82.104.206:9200/_plugin/bigdesk/#nodes
ES node REST endpoint http://3.82.104.206:9200
Refresh every 2 sec
Keep 5 min history
Disconnect
nodes
cluster
Cluster: elasticsearch
Number of nodes: 1
Status: green
Uatu


EC2 Management Console
Bigdesk
Not secure | 3.82.104.206:9200/_plugin/bigdesk/#nodes/l3KMFR7ITRWX6lpCsLfNsw
ES node REST endpoint http://3.82.104.206:9200
Refresh every 2 sec
Keep 5 min history
Disconnect
nodes
cluster
Cluster: elasticsearch
Number of nodes: 1
Status: green
Uatu
Selected node:
Name: Uatu
ID: l3KMFR7ITRWX6lpCsLfNsw
Hostname: ip-172-31-92-140.ec2.internal
Elasticsearch version: 1.7.2
JVM
VM name: OpenJDK 64-Bit Server VM
VM vendor: Red Hat, Inc.
VM version: 25.342-b07
Uptime: 43m
Java version: 1.8.0_342
PID: 13373
Heap Mem
Committed
Used
Committed: 247.6mb
Used: 51.6mb
Non-Heap Mem
Committed
Used
Committed: 42.5mb
Used: 41.8mb
Threads
Peak
Count
Peak: 26
Count: 26
GC (Δ)
Time both (sec)
Old gen count
Young gen count
Total time (O/Y): 37ms / 93ms
Total count (O/Y): 1 / 2
Thread Pools
Search
Index
Bulk
Refresh
Activate Windows


EC2 Management Console
Bigdesk
Not secure | 3.82.104.206:9200/_plugin/bigdesk/#nodes/l3KMFR7ITRWX6lpCsLfNsw
Share: 18.9mb
User total: 12540ms
HTTP & Transport
HTTP address:
inet[/172.31.92.140:9200]
Bound address:
inet[/0:0:0:0:0:0:0:0:9200]
Publish address:
inet[/172.31.92.140:9200]
Transport address:
inet[/172.31.92.140:9300]
Bound address:
inet[/0:0:0:0:0:0:0:0:9300]
Publish address:
inet[/172.31.92.140:9300]
Channels
Transport
HTTP
Transport size (Δ)
Rx
Tx
Transport: 13
HTTP: 7
HTTP total opened: 16
Series: weighted avg
Rx: 1.5kb, #6
Tx: 1.5kb, #6
Indices
Docs count: 0
Docs deleted: 0
Flush: 0, 0s
Refresh: 0, 0s
Size: 0b
Search requests per second (Δ)
Query
Fetch
Search time per second (Δ)
Get requests per second (Δ)
Get
Exists
Missing
Get time per second (Δ)
Query: 0
Fetch: 0
Query: 0s
Fetch: 0s
Get: 0
Exists: 0
Missing: 0
Get: 0s
Exists: 0s
Missing: 0s
Activate Windows
Cache size
Cache evictions (Δ)
Indexing requests per second (Δ)
Indexing time per second (Δ)