# Deployment of a Static Web-Application

### Contents to check while deployment :

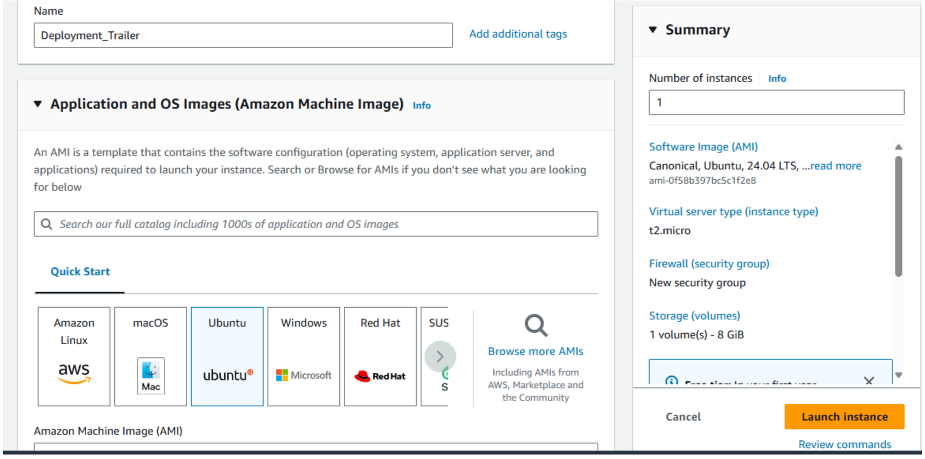
- Properties of application.
- Port No. to which the web-application is assigned for deployment.

### Requirements for Deployment:

- OS.
- Server.
- Region to reduce latency/Response time.
- We have to install Web-server, unzip, net-tools to our server.

### Steps to deploy a static web-application:

1. Create a EC2 server using AWS account.



Name: Deployment_Trailer

Application and OS Images (Amazon Machine Image)

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

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 24.04 LTS, ...read more ami-0f58b397bc5c1f2e8

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

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

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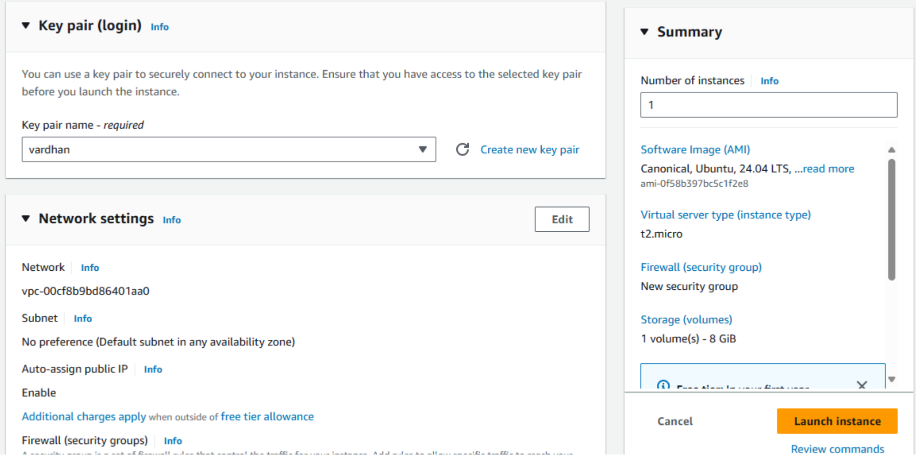
Red Hat
SUS
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Amazon Machine Image (AMI)
Cancel
Launch instance
Review commands



Key pair (login)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*: vardhan

Network settings

Network: vpc-00cf8b9bd86401aa0

Subnet: No preference (Default subnet in any availability zone)

Auto-assign public IP: Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups)

Summary

Number of instances: 1

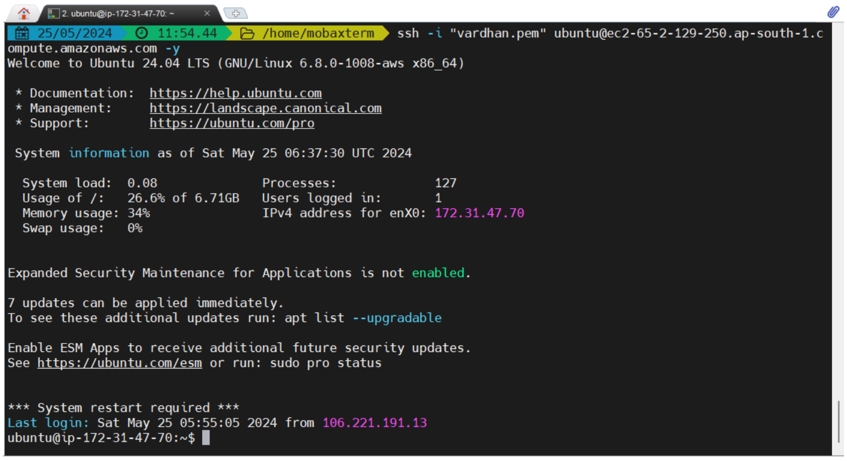
Software Image (AMI): Canonical, Ubuntu, 24.04 LTS, ...read more ami-0f58b397bc5c1f2e8

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

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

2. Login to the server using SSH. Here we are using Mobaxterm.



```
 25/05/2024  11:54.44  /home/mobaxterm  ssh -i "vardhan.pem" ubuntu@ec2-65-2-129-250.ap-south-1.c
ompute.amazonaws.com -y
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1008-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Sat May 25 06:37:30 UTC 2024

  System load:  0.08              Processes:             127
  Usage of /:   26.6% of 6.71GB   Users logged in:       1
  Memory usage: 34%               IPv4 address for enX0: 172.31.47.70
  Swap usage:   0%

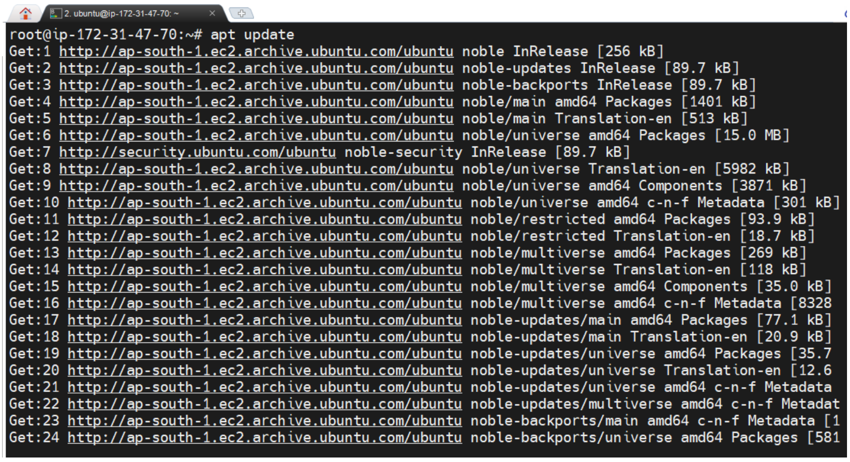

Expanded Security Maintenance for Applications is not enabled.

7 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


*** System restart required ***
Last login: Sat May 25 05:55:05 2024 from 106.221.191.13
ubuntu@ip-172-31-47-70:~$
```

3. Update your server using ‘apt update’ command.



```
root@ip-172-31-47-70:~# apt update
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [89.7 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [89.7 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 Packages [1401 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main Translation-en [513 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:7 http://security.ubuntu.com/ubuntu noble-security InRelease [89.7 kB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:9 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:10 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:11 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/restricted amd64 Packages [93.9 kB]
Get:12 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/restricted Translation-en [18.7 kB]
Get:13 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:14 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:15 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:16 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328
Get:17 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [77.1 kB]
Get:18 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [20.9 kB]
Get:19 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [35.7
Get:20 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [12.6
Get:21 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata
Get:22 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 c-n-f Metadat
Get:23 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports/main amd64 c-n-f Metadata [1
Get:24 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [581
```

4. Install Web-server using

apt install apache2 --> for Ubuntu Linux.

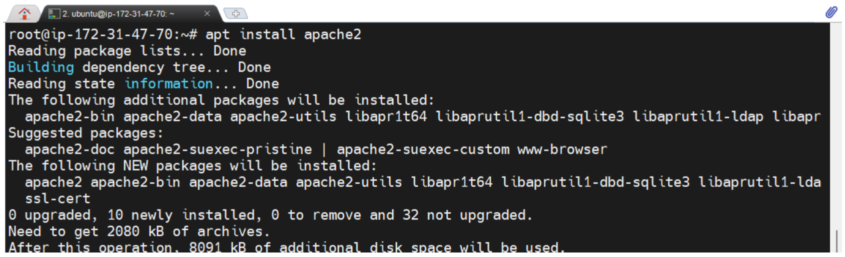
yum install httpd --> for Amazon Linux.

In Ubuntu the webserver will be initially in running/ active state.

In Amazon Linux the webserver initially in dead/ inactive state. In order to active our webserver in Amazon Linux we have to restart and enable the webserver using ‘systemctl’ commands.

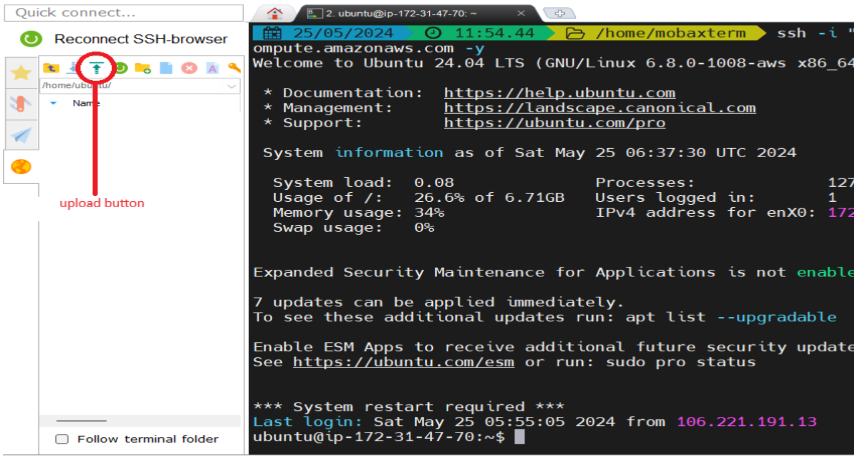
systemctl restart <webserver> --> To restart the webserver.

systemctl enable <webserver> --> To enable the webserver



```
root@ip-172-31-47-70:~# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap libapr
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-lda
  ssl-cert
0 upgraded, 10 newly installed, 0 to remove and 32 not upgraded.
Need to get 2080 kB of archives.
After this operation, 8091 kB of additional disk space will be used.
```

5. Import your web application in zip format using Mobaxterm upload button present in menu left side.



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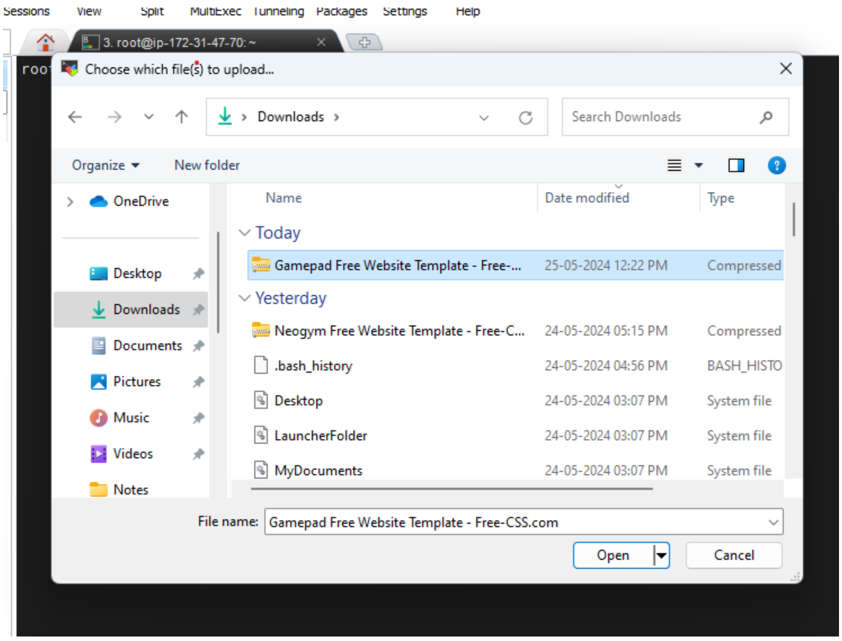
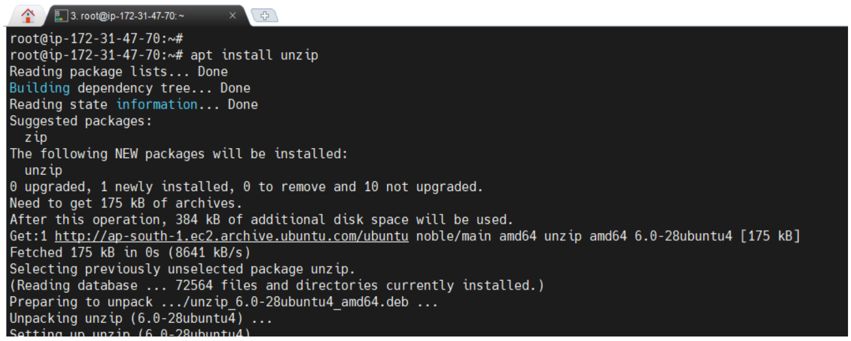
Last login: Sat May 25 05:55:05 2024 from 106.221.191.13
ubuntu@ip-172-31-47-70:~$
```



| Name | Date modified | Type |
|---|---|---|
| Today | | |
| Gamepad Free Website Template - Free-... | 25-05-2024 12:22 PM | Compressed |
| Yesterday | | |
| Neogym Free Website Template - Free-C... | 24-05-2024 05:15 PM | Compressed |
| .bash_history | 24-05-2024 04:56 PM | BASH_HISTO |
| Desktop | 24-05-2024 03:07 PM | System file |
| LauncherFolder | 24-05-2024 03:07 PM | System file |
| MyDocuments | 24-05-2024 03:07 PM | System file |

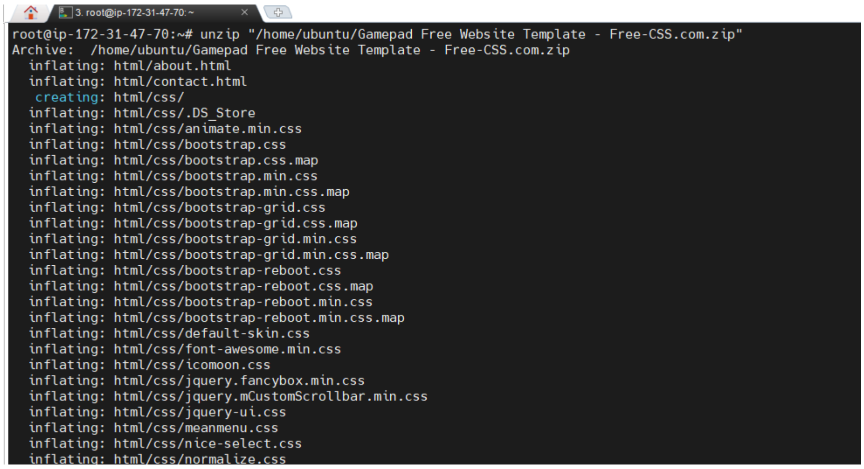
File name: Gamepad Free Website Template - Free-CSS.com

6. In order to unzip the imported file, we need to install unzip to our server using ‘apt install unzip’ command.



```
root@ip-172-31-47-70:~#
root@ip-172-31-47-70:~# apt install unzip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  zip
The following NEW packages will be installed:
  unzip
0 upgraded, 1 newly installed, 0 to remove and 10 not upgraded.
Need to get 175 kB of archives.
After this operation, 384 kB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 unzip amd64 6.0-28ubuntu4 [175 kB]
Fetched 175 kB in 0s (8641 kB/s)
Selecting previously unselected package unzip.
(Reading database ... 72564 files and directories currently installed.)
Preparing to unpack .../unzip_6.0-28ubuntu4_amd64.deb ...
Unpacking unzip (6.0-28ubuntu4) ...
Setting up unzip (6.0-28ubuntu4)
```

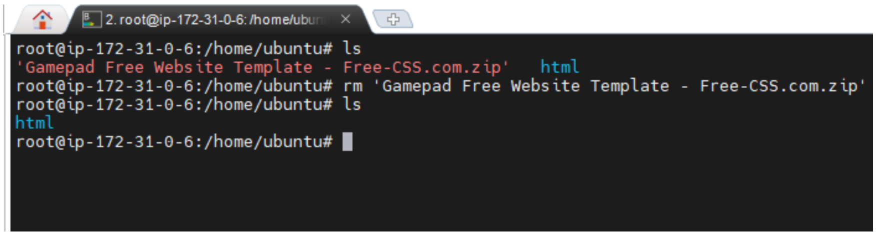
7. Unzip the file using ‘unzip <filepath>’.



```
root@ip-172-31-47-70:~# unzip "/home/ubuntu/Gamepad Free Website Template - Free-CSS.com.zip"
Archive:  /home/ubuntu/Gamepad Free Website Template - Free-CSS.com.zip
  inflating: html/about.html
  inflating: html/contact.html
   creating: html/css/
  inflating: html/css/.DS_Store
  inflating: html/css/animate.min.css
  inflating: html/css/bootstrap.css
  inflating: html/css/bootstrap.css.map
  inflating: html/css/bootstrap.min.css
  inflating: html/css/bootstrap.min.css.map
  inflating: html/css/bootstrap-grid.css
  inflating: html/css/bootstrap-grid.css.map
  inflating: html/css/bootstrap-grid.min.css
  inflating: html/css/bootstrap-grid.min.css.map
  inflating: html/css/bootstrap-reboot.css
  inflating: html/css/bootstrap-reboot.css.map
  inflating: html/css/bootstrap-reboot.min.css
  inflating: html/css/bootstrap-reboot.min.css.map
  inflating: html/css/default-skin.css
  inflating: html/css/font-awesome.min.css
  inflating: html/css/icomoon.css
  inflating: html/css/jquery.fancybox.min.css
  inflating: html/css/jquery.mCustomScrollbar.min.css
  inflating: html/css/jquery-ui.css
  inflating: html/css/meanmenu.css
  inflating: html/css/nice-select.css
  inflating: html/css/normalize.css
```

8. Now remove the zip file.

command --> rm <zip file>

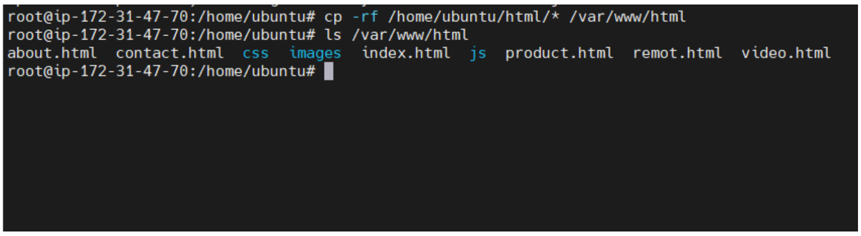


```
root@ip-172-31-0-6:/home/ubuntu# ls
'Gamepad Free Website Template - Free-CSS.com.zip'   html
root@ip-172-31-0-6:/home/ubuntu# rm 'Gamepad Free Website Template - Free-CSS.com.zip'
root@ip-172-31-0-6:/home/ubuntu# ls
html
root@ip-172-31-0-6:/home/ubuntu# 
```

9. Now copy the unzipped files to the default location of web server.

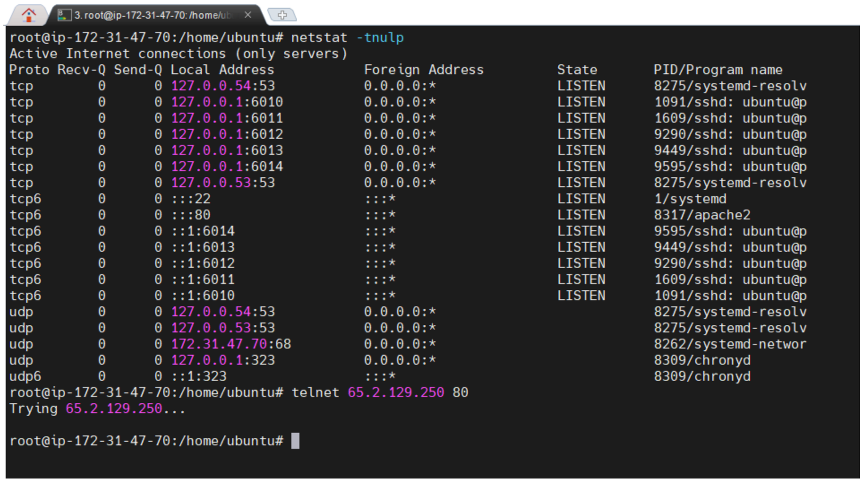
i.e, /var/www/html

command --> cp -rf /home/ubuntu/html/* /var/www/html



```
root@ip-172-31-47-70:/home/ubuntu# cp -rf /home/ubuntu/html/* /var/www/html
root@ip-172-31-47-70:/home/ubuntu# ls /var/www/html
about.html  contact.html  css  images  index.html  js  product.html  remot.html  video.html
root@ip-172-31-47-70:/home/ubuntu# 
```

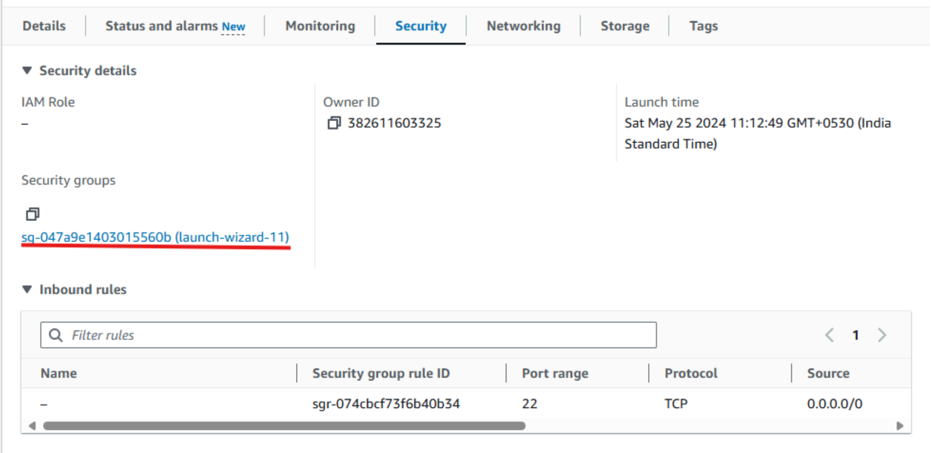
10. Check whether the webserver port is actively listening or not using both netstat and telnet commands.



```
root@ip-172-31-47-70:/home/ubuntu# netstat -tnulp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 127.0.0.54:53           0.0.0.0:*               LISTEN      8275/systemd-resolv
tcp        0      0 127.0.0.1:6010          0.0.0.0:*               LISTEN      1091/sshd: ubuntu@p
tcp        0      0 127.0.0.1:6011          0.0.0.0:*               LISTEN      1609/sshd: ubuntu@p
tcp        0      0 127.0.0.1:6012          0.0.0.0:*               LISTEN      9290/sshd: ubuntu@p
tcp        0      0 127.0.0.1:6013          0.0.0.0:*               LISTEN      9449/sshd: ubuntu@p
tcp        0      0 127.0.0.1:6014          0.0.0.0:*               LISTEN      9595/sshd: ubuntu@p
tcp        0      0 127.0.0.53:53           0.0.0.0:*               LISTEN      8275/systemd-resolv
tcp6       0      0 :::22                   :::*                    LISTEN      1/systemd
tcp6       0      0 :::80                   :::*                    LISTEN      8317/apache2
tcp6       0      0 ::1:6014                :::*                    LISTEN      9595/sshd: ubuntu@p
tcp6       0      0 ::1:6013                :::*                    LISTEN      9449/sshd: ubuntu@p
tcp6       0      0 ::1:6012                :::*                    LISTEN      9290/sshd: ubuntu@p
tcp6       0      0 ::1:6011                :::*                    LISTEN      1609/sshd: ubuntu@p
tcp6       0      0 ::1:6010                :::*                    LISTEN      1091/sshd: ubuntu@p
udp        0      0 127.0.0.54:53           0.0.0.0:*                           8275/systemd-resolv
udp        0      0 127.0.0.53:53           0.0.0.0:*                           8275/systemd-resolv
udp        0      0 172.31.47.70:68         0.0.0.0:*                           8262/systemd-networ
udp        0      0 127.0.0.1:323           0.0.0.0:*                           8309/chronyd
udp6       0      0 ::1:323                 :::*                                8309/chronyd
root@ip-172-31-47-70:/home/ubuntu# telnet 65.2.129.250 80
Trying 65.2.129.250...

root@ip-172-31-47-70:/home/ubuntu#
```

11. It webserver port is not actively listening allow it in security groups inbound rules and then check whether the web-server port is listening.



▼ Security details

IAM Role
–

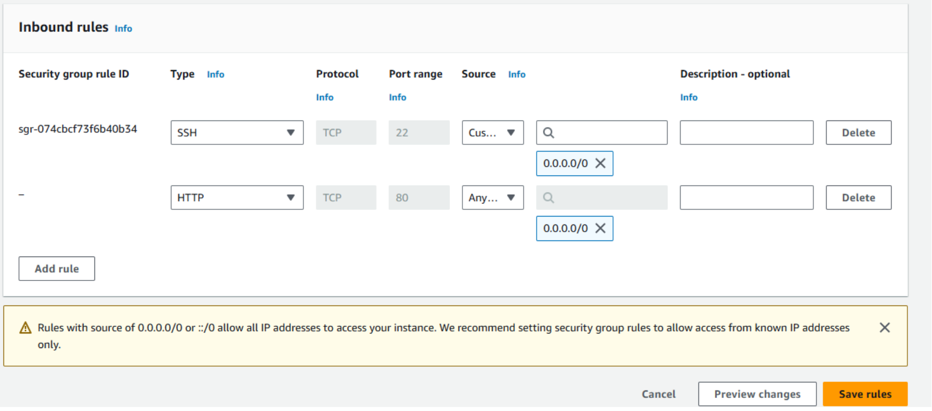
Owner ID
382611603325

Launch time
Sat May 25 2024 11:12:49 GMT+0530 (India Standard Time)

Security groups
sg-047a9e1403015560b (launch-wizard-11)

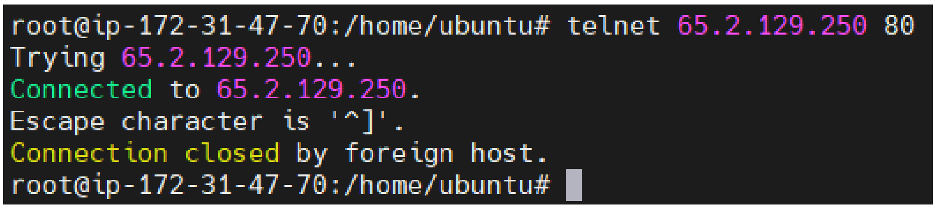
▼ Inbound rules

| Name | Security group rule ID | Port range | Protocol | Source |
|---|---|---|---|---|
| – | sgr-074cbcf73f6b40b34 | 22 | TCP | 0.0.0.0/0 |


Inbound rules Info

| Security group rule ID | Type Info | Protocol Info | Port range Info | Source Info | | Description - optional Info | |
|---|---|---|---|---|---|---|---|
| sgr-074cbcf73f6b40b34 | SSH | TCP | 22 | Cus... | 0.0.0.0/0 | | Delete |
| – | HTTP | TCP | 80 | Any... | 0.0.0.0/0 | | Delete |

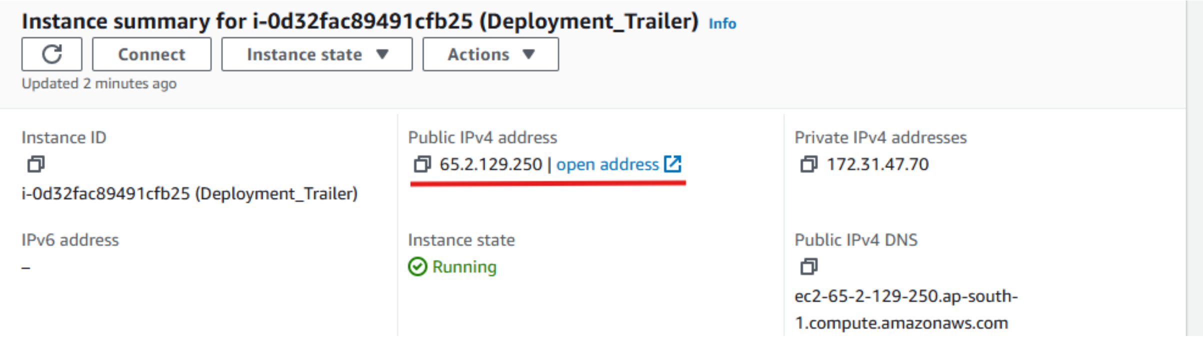
⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.



```
root@ip-172-31-47-70:/home/ubuntu# telnet 65.2.129.250 80
Trying 65.2.129.250...
Connected to 65.2.129.250.
Escape character is '^]'.
Connection closed by foreign host.
root@ip-172-31-47-70:/home/ubuntu# 
```

By this step the deployment is completed.

In order to check whether the deployment is success or not you have to enter the public IP of your server in URL of any browser.



Instance summary for i-0d32fac89491cfb25 (Deployment_Trailer) Info

Updated 2 minutes ago

Instance ID
i-0d32fac89491cfb25 (Deployment_Trailer)

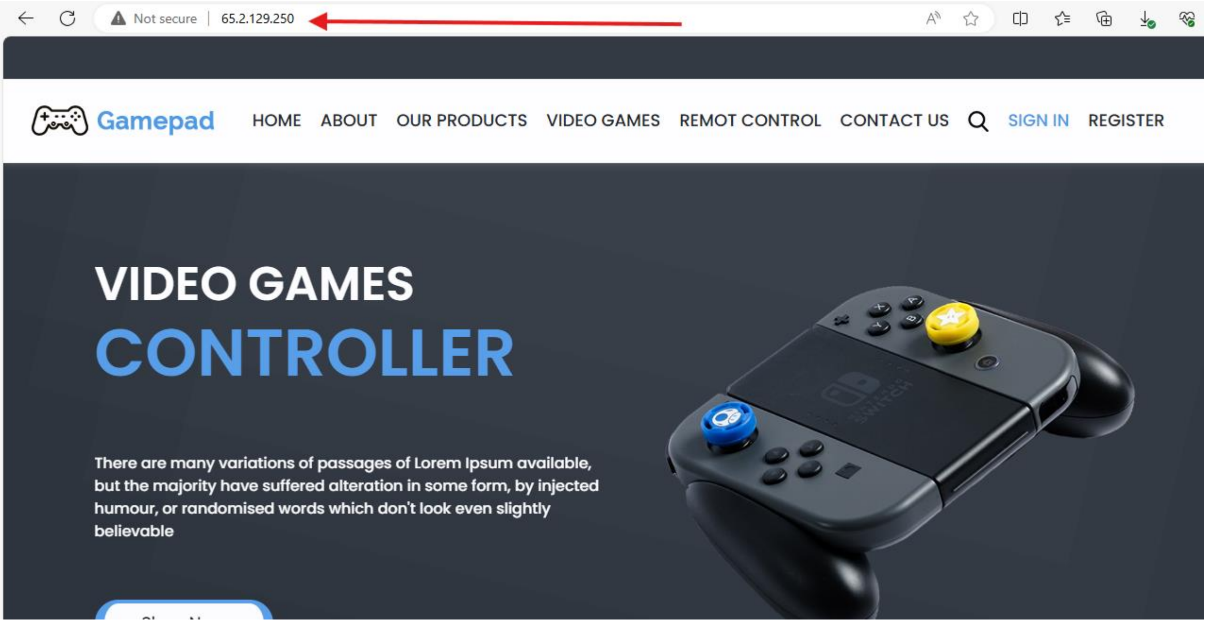
Public IPv4 address
65.2.129.250 | open address

Private IPv4 addresses
172.31.47.70

IPv6 address
–

Instance state
Running

Public IPv4 DNS
ec2-65-2-129-250.ap-south-1.compute.amazonaws.com



There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration in some form, by injected humour, or randomised words which don't look even slightly believable

# Deployment of Nodejs Application

## Contents to check:

There are two types of nodejs applications.

- Frontend nodejs Application.
- Backend nodejs Application.

### *Frondend nodejs Application:*

- We have to check package.jason file to know the properties of the application

Note: Frontend application default port no. is **3000.**

### *Backend nodejs Application:*

- We have to check package.jason file to know the properties of the application.
- Check whether it has the file with name 'server.js'.
- Check the port No. in 'server.js' file

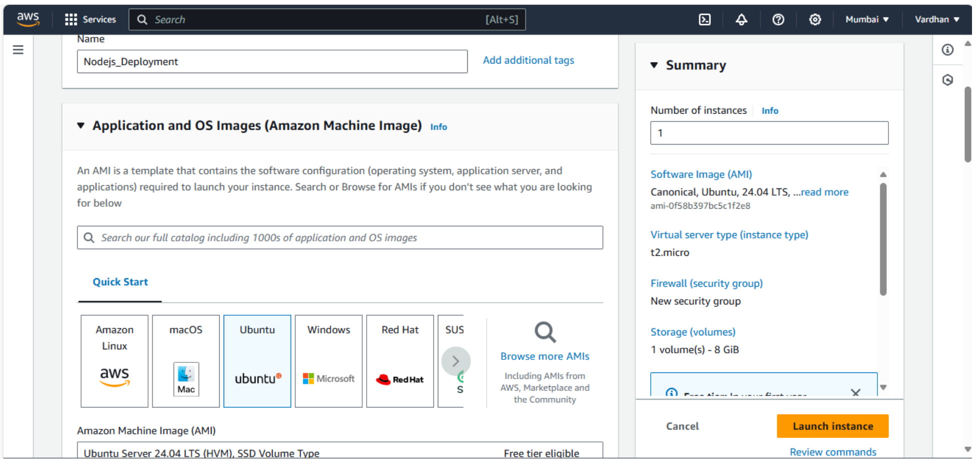
Note: Backend application has its port no. in 'server.js' file

## Requirements to Deploy a Nodejs Application:

- OS.
- Server.
- Region to reduce Latency/Response Time.
- We have to install nodejs, npm.
- After installing npm we have to install pm2, serve and build using npm.

## Steps to deploy a Nodejs Application:

1. Create a Server using any Cloud Service. Here we are using AWS to create a server.



Name: Nodejs_Deployment

▼ Application and OS Images (Amazon Machine Image)

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): Ubuntu Server 24.04 LTS (HVM), SSD Volume Type — Free tier eligible

▼ Summary

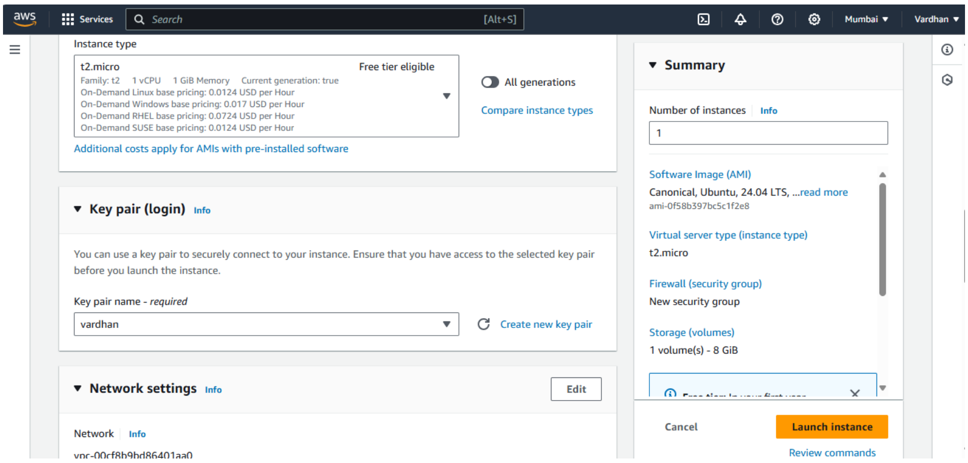
Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 24.04 LTS, ...read more
ami-0f58b397bc5c1f2e8

Virtual server type (instance type): t2.micro

Firewall (security group): New security group

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



Instance type

t2.micro Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0124 USD per Hour
On-Demand Windows base pricing: 0.017 USD per Hour
On-Demand RHEL base pricing: 0.0724 USD per Hour
On-Demand SUSE base pricing: 0.0124 USD per Hour

○ All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

vardhan

Create new key pair

▼ Network settings Info

Edit

Network Info

vpc-00cf8b9bd86401aa0

▼ Summary

Number of instances Info

1

Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...read more
ami-0f58b397bc5c1f2e8

Virtual server type (instance type)
t2.micro

Firewall (security group)
New security group

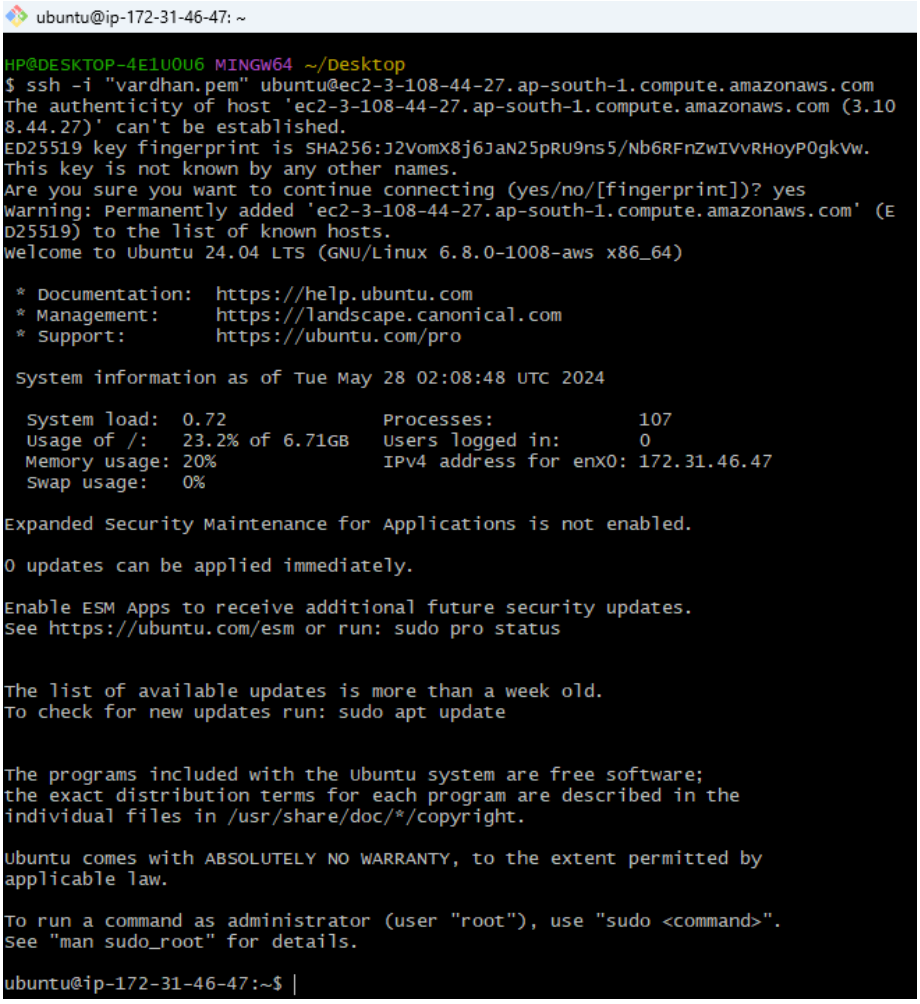
Storage (volumes)
1 volume(s) - 8 GiB

Cancel

Launch instance

Review commands

2. Login to your server using any SSH. Here we are using **Git Bash**.



ubuntu@ip-172-31-46-47: ~

```
HP@DESKTOP-4E1U0U6 MINGW64 ~/Desktop
$ ssh -i "vardhan.pem" ubuntu@ec2-3-108-44-27.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-3-108-44-27.ap-south-1.compute.amazonaws.com (3.10
8.44.27)' can't be established.
ED25519 key fingerprint is SHA256:J2VomX8j6JaN25pRU9ns5/Nb6RFnZwIVvRHoyP0gkVw.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-108-44-27.ap-south-1.compute.amazonaws.com' (E
D25519) to the list of known hosts.
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1008-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Tue May 28 02:08:48 UTC 2024

  System load:  0.72              Processes:             107
  Usage of /:   23.2% of 6.71GB   Users logged in:       0
  Memory usage: 20%               IPv4 address for enX0: 172.31.46.47
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

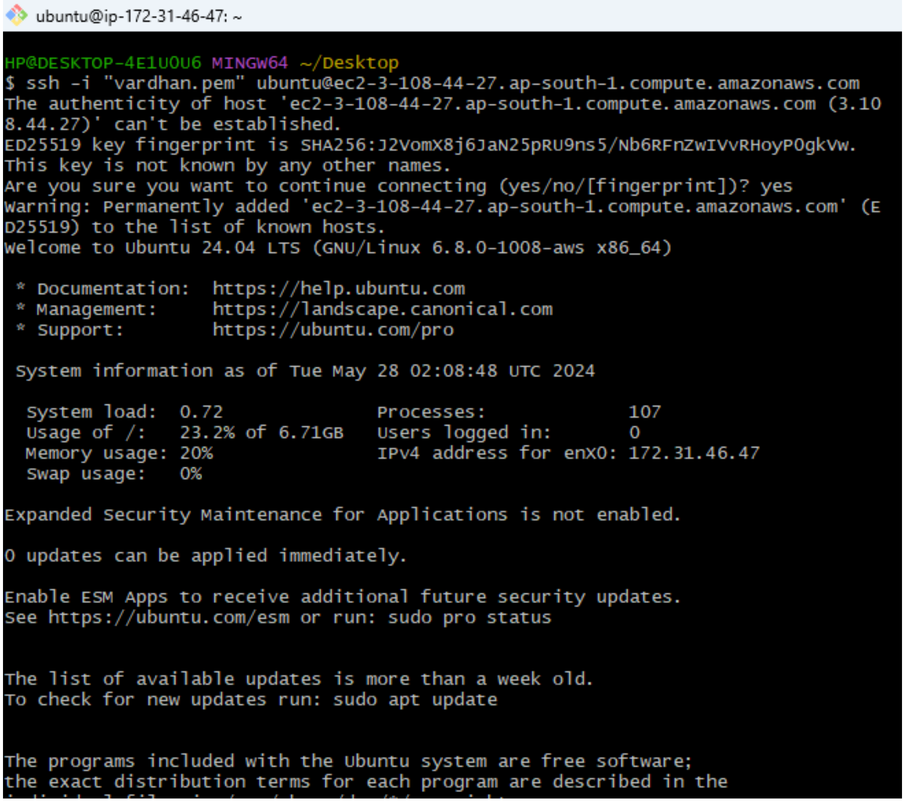
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-46-47:~$ |
```

3. Update your server.

In Ubuntu Linux => **apt update**

In Amazon Linux => **yum update**



ubuntu@ip-172-31-46-47: ~

```
HP@DESKTOP-4E1U0U6 MINGW64 ~/Desktop
$ ssh -i "vardhan.pem" ubuntu@ec2-3-108-44-27.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-3-108-44-27.ap-south-1.compute.amazonaws.com (3.10
8.44.27)' can't be established.
ED25519 key fingerprint is SHA256:J2VomX8j6JaN25pRU9ns5/Nb6RFnZwIVvRHoyP0gkVw.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-108-44-27.ap-south-1.compute.amazonaws.com' (E
D25519) to the list of known hosts.
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1008-aws x86_64)

 * Documentation:  https://help.ubuntu.com
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 System information as of Tue May 28 02:08:48 UTC 2024

  System load:  0.72              Processes:             107
  Usage of /:   23.2% of 6.71GB   Users logged in:       0
  Memory usage: 20%               IPv4 address for enX0: 172.31.46.47
  Swap usage:   0%

Expanded Security Maintenance for Applications is not enabled.

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See https://ubuntu.com/esm or run: sudo pro status

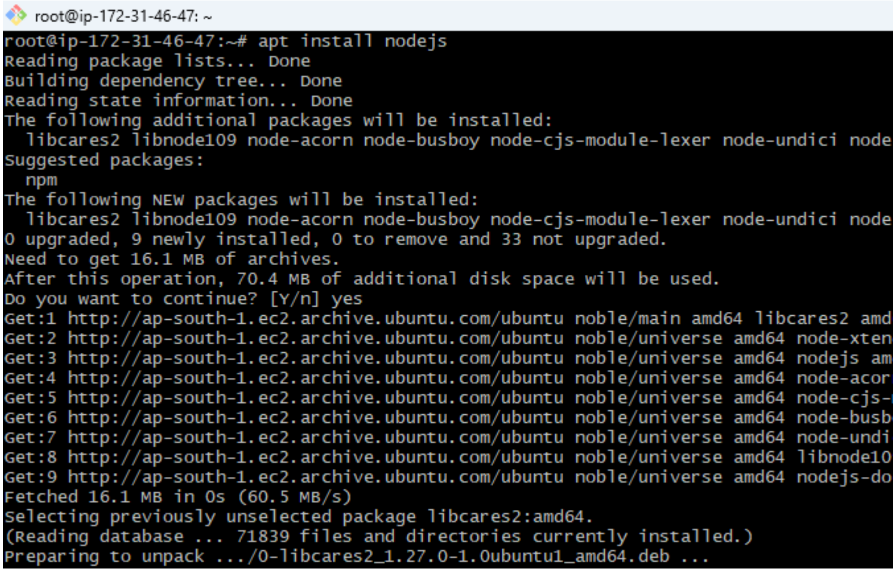

The list of available updates is more than a week old.
To check for new updates run: sudo apt update


The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
```

4. Install ‘nodejs’ to our server.

In Ubuntu Linux => **apt install nodejs**

In Amazon Linux => **yum install nodejs**

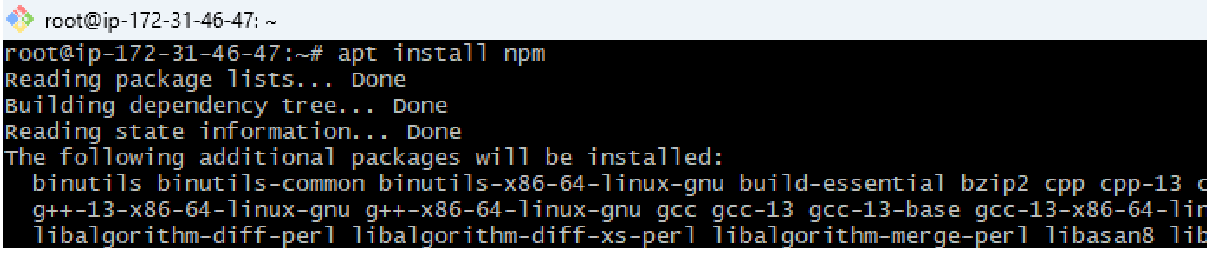


root@ip-172-31-46-47: ~

```
root@ip-172-31-46-47:~# apt install nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libcares2 libnode109 node-acorn node-busboy node-cjs-module-lexer node-undici node
Suggested packages:
  npm
The following NEW packages will be installed:
  libcares2 libnode109 node-acorn node-busboy node-cjs-module-lexer node-undici node
0 upgraded, 9 newly installed, 0 to remove and 33 not upgraded.
Need to get 16.1 MB of archives.
After this operation, 70.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] yes
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libcares2 amd
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 node-xten
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 nodejs am
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 node-acor
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 node-cjs-
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 node-busb
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 node-undi
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 libnode10
Get:9 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 nodejs-do
Fetched 16.1 MB in 0s (60.5 MB/s)
Selecting previously unselected package libcares2:amd64.
(Reading database ... 71839 files and directories currently installed.)
Preparing to unpack .../0-libcares2_1.27.0-1.0ubuntu1_amd64.deb ...
```

5. Install **npm** (Node Package Manager) to our server.

In Ubuntu Linux => **apt install npm**<br>
In Amazon Linux => **yum install npm**



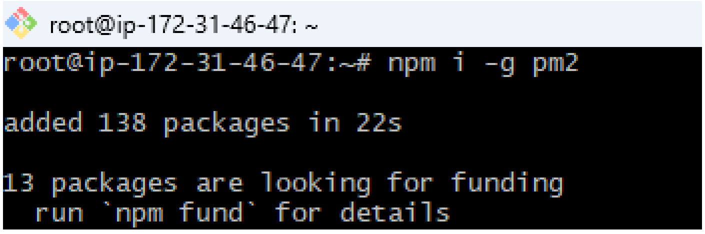
root@ip-172-31-46-47: ~

```
root@ip-172-31-46-47:~# apt install npm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu build-essential bzip2 cpp cpp-13 c
  g++-13-x86-64-linux-gnu g++-x86-64-linux-gnu gcc gcc-13 gcc-13-base gcc-13-x86-64-lin
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan8 lib
```

npm is used to resolve the modules, libraries and dependencies of the application.

6. Install **pm2** into our server using npm.

Command to install pm2 => **npm i -g pm2**



root@ip-172-31-46-47: ~

```
root@ip-172-31-46-47:~# npm i -g pm2

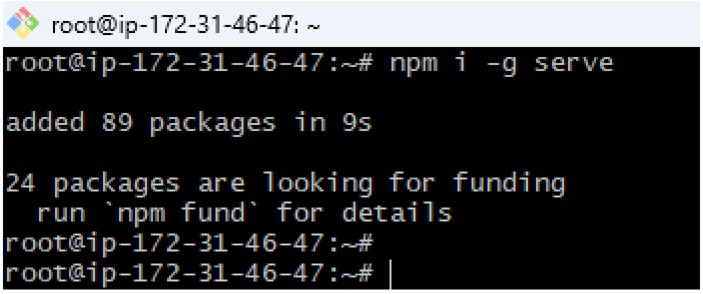
added 138 packages in 22s

13 packages are looking for funding
  run `npm fund` for details
```

pm2 helps us to deploy our application permanently. It will stop working until we stop it.

7. Install **serve** into server using npm.

Command to install serve => **npm i -g serve**



root@ip-172-31-46-47: ~

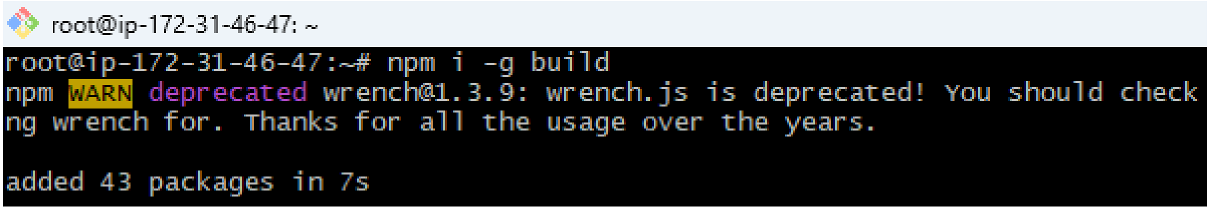
```
root@ip-172-31-46-47:~# npm i -g serve

added 89 packages in 9s

24 packages are looking for funding
  run `npm fund` for details
root@ip-172-31-46-47:~#
root@ip-172-31-46-47:~# |
```

8. Install **build** into server using npm.

Command to install build => **npm i –g build**



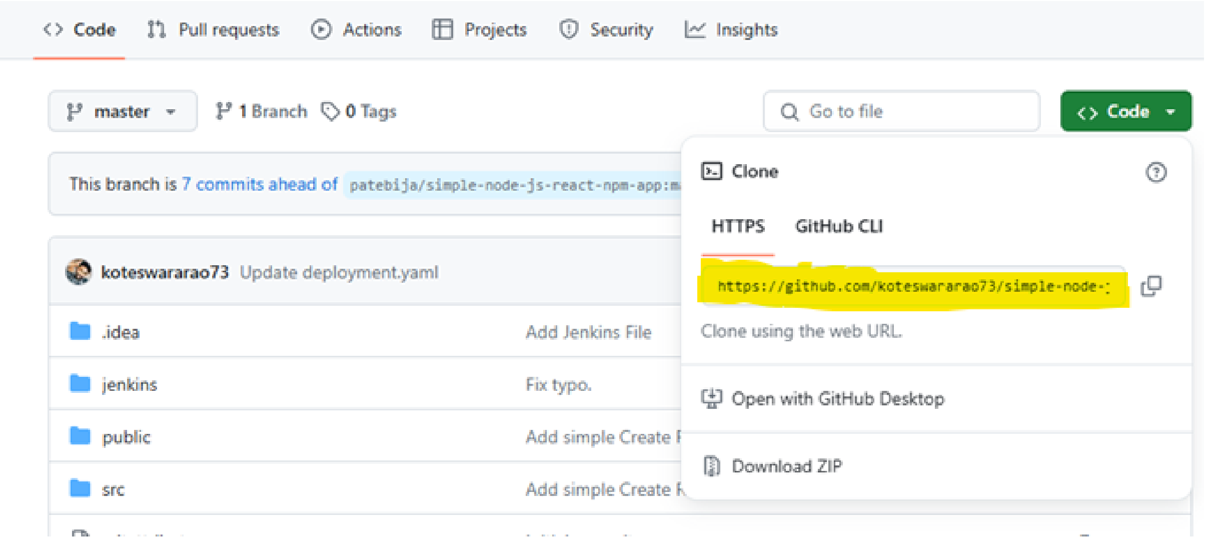
root@ip-172-31-46-47: ~

```
root@ip-172-31-46-47:~# npm i -g build
npm WARN deprecated wrench@1.3.9: wrench.js is deprecated! You should check
ng wrench for. Thanks for all the usage over the years.

added 43 packages in 7s
```

9. Here we have to import our application to our server. Here we are importing from github.

   Command to import form github => **git clone < URL>**



This branch is 7 commits ahead of patebija/simple-node-js-react-npm-app:m

koteswararao73 Update deployment.yaml

Add Jenkins File

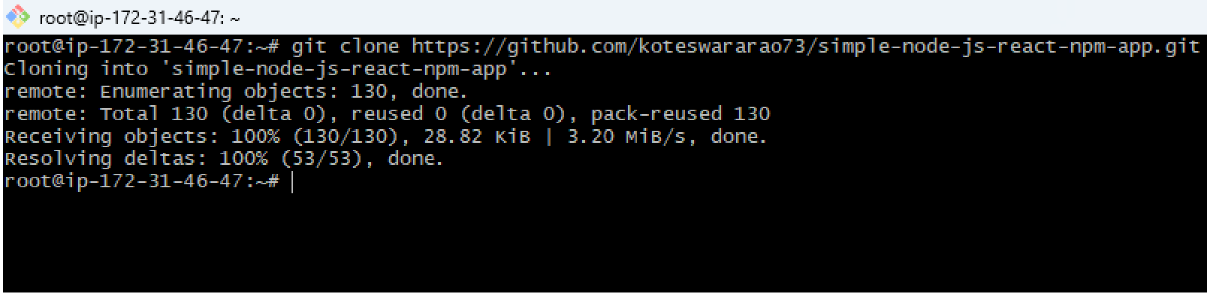
Fix typo.

Add simple Create R

Add simple Create R

https://github.com/koteswararao73/simple-node-j

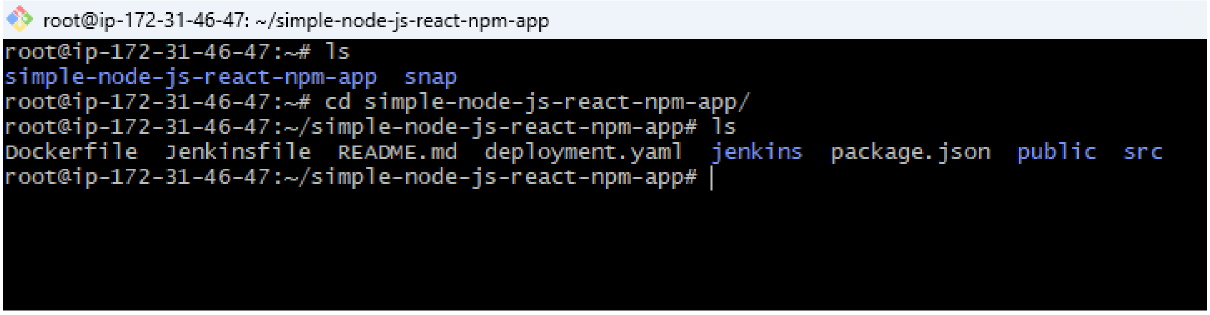
Clone using the web URL.



```
root@ip-172-31-46-47:~# git clone https://github.com/koteswararao73/simple-node-js-react-npm-app.git
Cloning into 'simple-node-js-react-npm-app'...
remote: Enumerating objects: 130, done.
remote: Total 130 (delta 0), reused 0 (delta 0), pack-reused 130
Receiving objects: 100% (130/130), 28.82 KiB | 3.20 MiB/s, done.
Resolving deltas: 100% (53/53), done.
root@ip-172-31-46-47:~# |
```

10. Open the directory of the application.

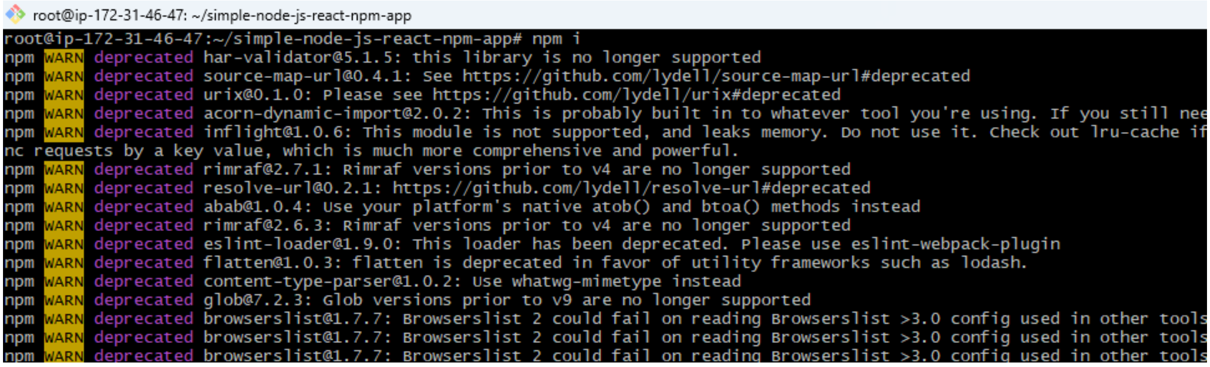
    Command to open directory => **cd <directoryName>**



```
root@ip-172-31-46-47:~# ls
simple-node-js-react-npm-app  snap
root@ip-172-31-46-47:~# cd simple-node-js-react-npm-app/
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# ls
Dockerfile  Jenkinsfile  README.md  deployment.yaml  jenkins  package.json  public  src
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# |
```

11. Resolve modules, libraries, dependencies using npm.

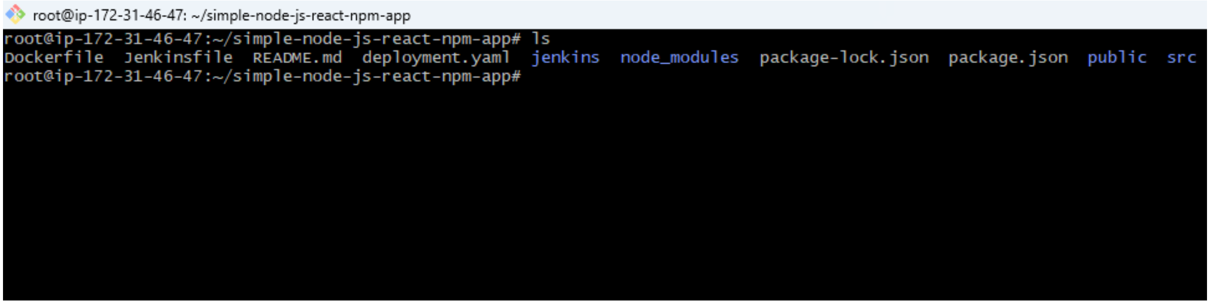
Command to resolve => **npm i**



root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# npm i
npm WARN deprecated har-validator@5.1.5: this library is no longer supported
npm WARN deprecated source-map-url@0.4.1: See https://github.com/lydell/source-map-url#deprecated
npm WARN deprecated urix@0.1.0: Please see https://github.com/lydell/urix#deprecated
npm WARN deprecated acorn-dynamic-import@2.0.2: This is probably built in to whatever tool you're using. If you still nee
npm WARN deprecated inflight@1.0.6: This module is not supported, and leaks memory. Do not use it. Check out lru-cache if
nc requests by a key value, which is much more comprehensive and powerful.
npm WARN deprecated rimraf@2.7.1: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated resolve-url@0.2.1: https://github.com/lydell/resolve-url#deprecated
npm WARN deprecated abab@1.0.4: Use your platform's native atob() and btoa() methods instead
npm WARN deprecated rimraf@2.6.3: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated eslint-loader@1.9.0: This loader has been deprecated. Please use eslint-webpack-plugin
npm WARN deprecated flatten@1.0.3: flatten is deprecated in favor of utility frameworks such as lodash.
npm WARN deprecated content-type-parser@1.0.2: Use whatwg-mimetype instead
npm WARN deprecated glob@7.2.3: Glob versions prior to v9 are no longer supported
npm WARN deprecated browserslist@1.7.7: Browserslist 2 could fail on reading Browserslist >3.0 config used in other tools
npm WARN deprecated browserslist@1.7.7: Browserslist 2 could fail on reading Browserslist >3.0 config used in other tools
npm WARN deprecated browserslist@1.7.7: Browserslist 2 could fail on reading Browserslist >3.0 config used in other tools
```

Here it creates a directory named 'node_modules'.

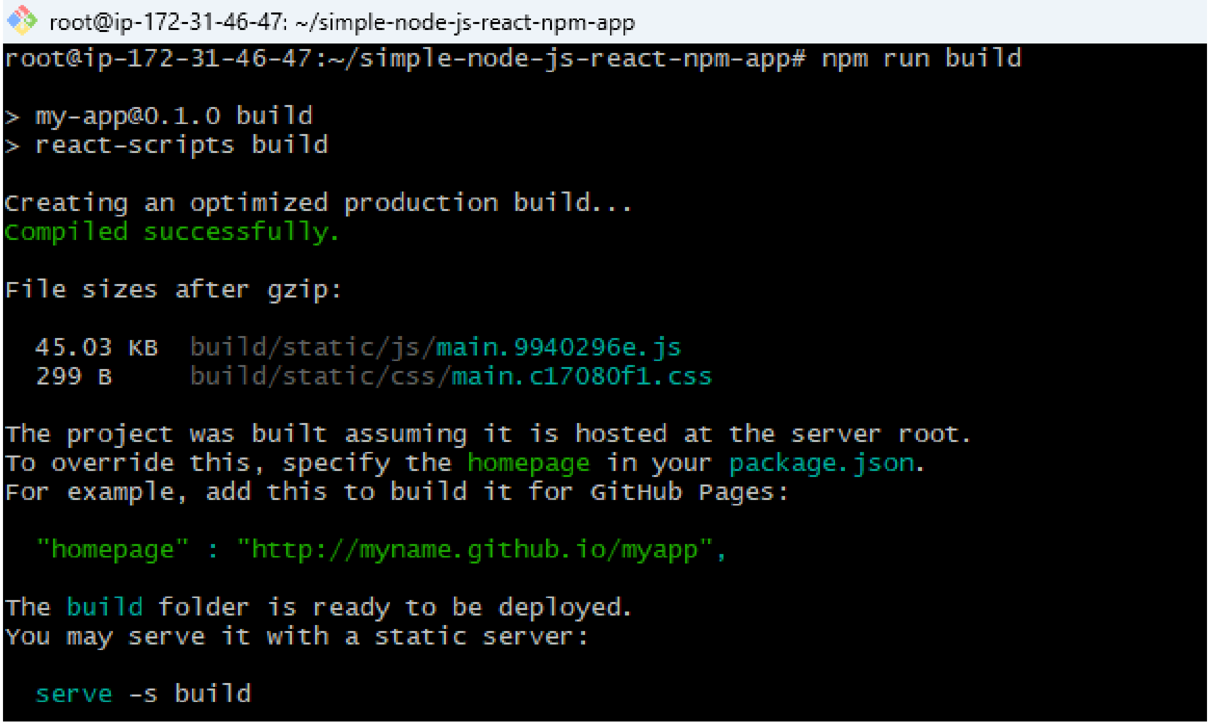


root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# ls
Dockerfile  Jenkinsfile  README.md  deployment.yaml  jenkins  node_modules  package-lock.json  package.json  public  src
root@ip-172-31-46-47:~/simple-node-js-react-npm-app#
```

12. Create a build for an application using npm.

Command to create a build => **npm run build**



root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# npm run build

> my-app@0.1.0 build
> react-scripts build

Creating an optimized production build...
Compiled successfully.

File sizes after gzip:

  45.03 KB  build/static/js/main.9940296e.js
  299 B     build/static/css/main.c17080f1.css

The project was built assuming it is hosted at the server root.
To override this, specify the homepage in your package.json.
For example, add this to build it for GitHub Pages:

  "homepage" : "http://myname.github.io/myapp",

The build folder is ready to be deployed.
You may serve it with a static server:

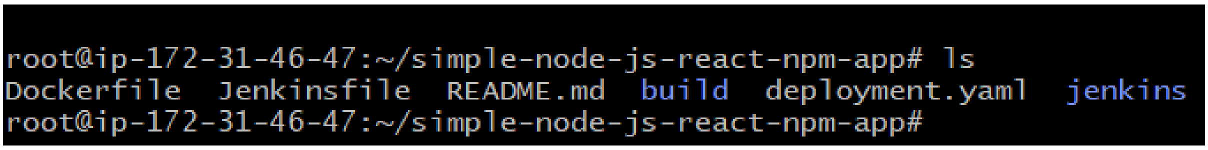
  serve -s build
```

Here we have different ways for deploying Frontend Application and Backend Application

Note: frontend step 13 start from page No.7 and Backend step 13 start from page No.10

## For Frontend Application:

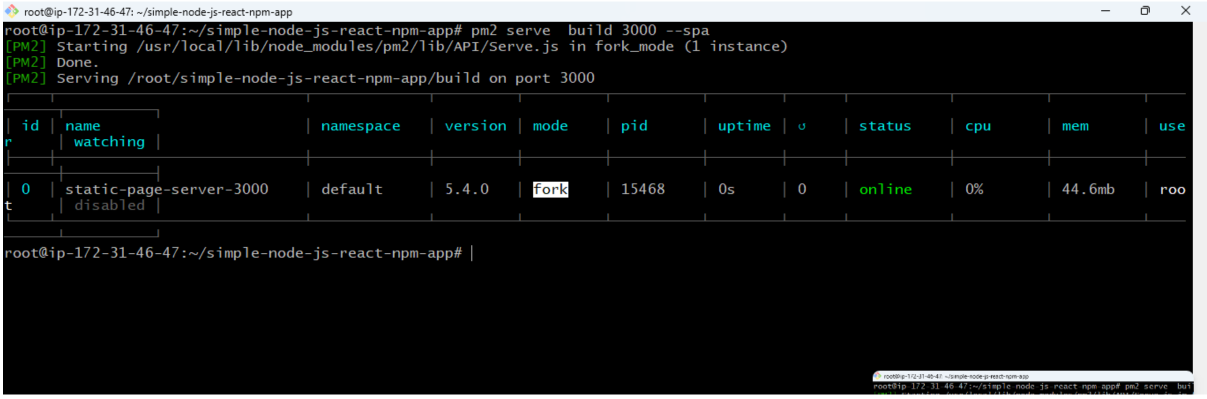
After creating build of an application in Frontend it creates a directory with name 'build'.



```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# ls
Dockerfile  Jenkinsfile  README.md  build  deployment.yaml  jenkins
root@ip-172-31-46-47:~/simple-node-js-react-npm-app#
```

13. Now we have to serve the created build to a port no. using pm2.

Command to serve an application => **pm2 serve build <portNo.> --spa**



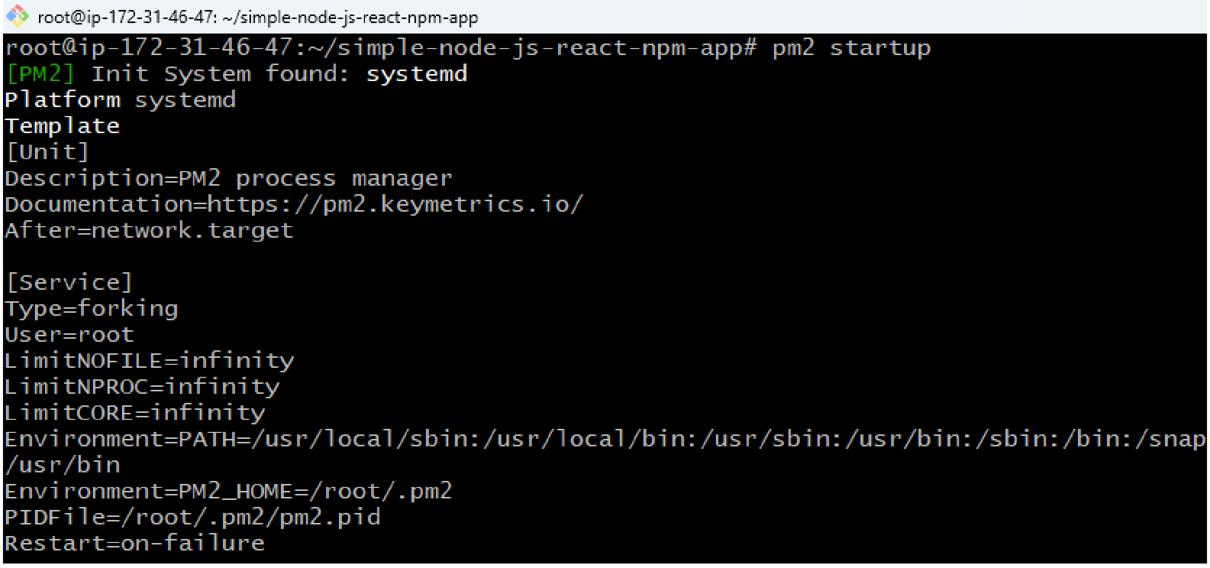
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 serve  build 3000 --spa
[PM2] Starting /usr/local/lib/node_modules/pm2/lib/API/Serve.js in fork_mode (1 instance)
[PM2] Done.
[PM2] Serving /root/simple-node-js-react-npm-app/build on port 3000
│ id │ name                    │ namespace │ version │ mode │ pid   │ uptime │ ↺ │ status │ cpu │ mem    │ use
r    │ watching │
│ 0  │ static-page-server-3000 │ default   │ 5.4.0   │ fork │ 15468 │ 0s     │ 0 │ online │ 0%  │ 44.6mb │ roo
t    │ disabled │

root@ip-172-31-46-47:~/simple-node-js-react-npm-app# |
```

14. Save the configuration of application using pm2.

Command to save configuration of Application => **pm2 startup**



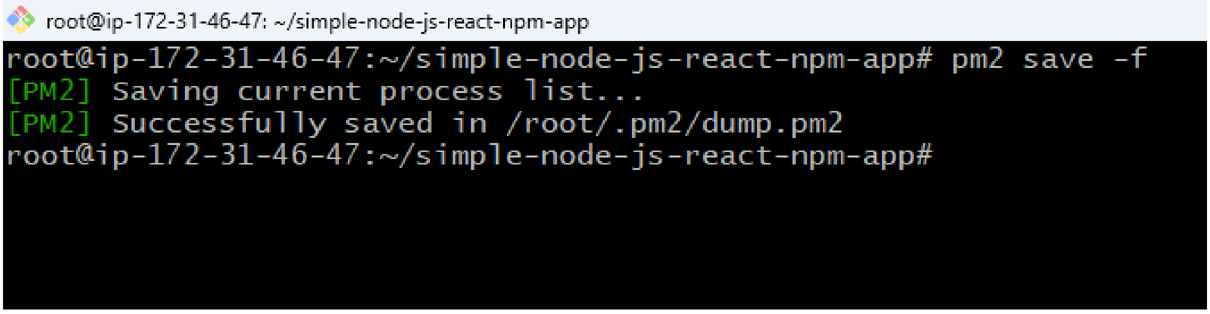
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 startup
[PM2] Init System found: systemd
Platform systemd
Template
[Unit]
Description=PM2 process manager
Documentation=https://pm2.keymetrics.io/
After=network.target

[Service]
Type=forking
User=root
LimitNOFILE=infinity
LimitNPROC=infinity
LimitCORE=infinity
Environment=PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/snap
/usr/bin
Environment=PM2_HOME=/root/.pm2
PIDFile=/root/.pm2/pm2.pid
Restart=on-failure
```

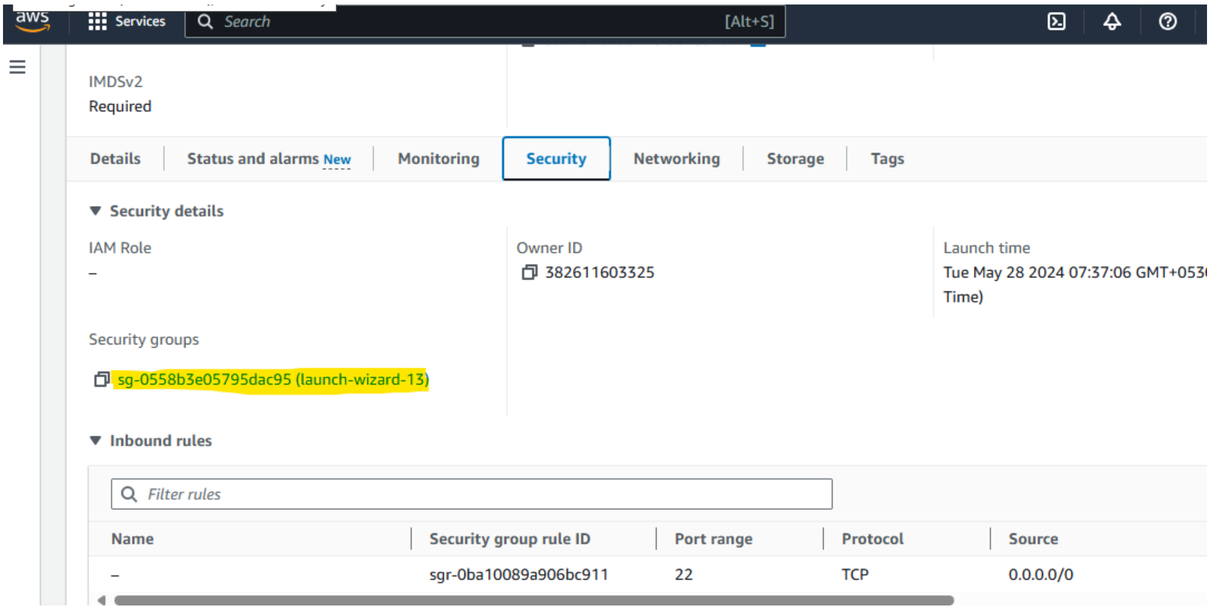
15. Save the configuration path permanently using npm.

Command to save configuration path => **pm2 save –f**



```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 save -f
[PM2] Saving current process list...
[PM2] Successfully saved in /root/.pm2/dump.pm2
root@ip-172-31-46-47:~/simple-node-js-react-npm-app#
```

16. Go to Security groups and Allow required port in security groups to deploy Application in.



IMDSv2
Required

▼ Security details

IAM Role
–

Owner ID
382611603325

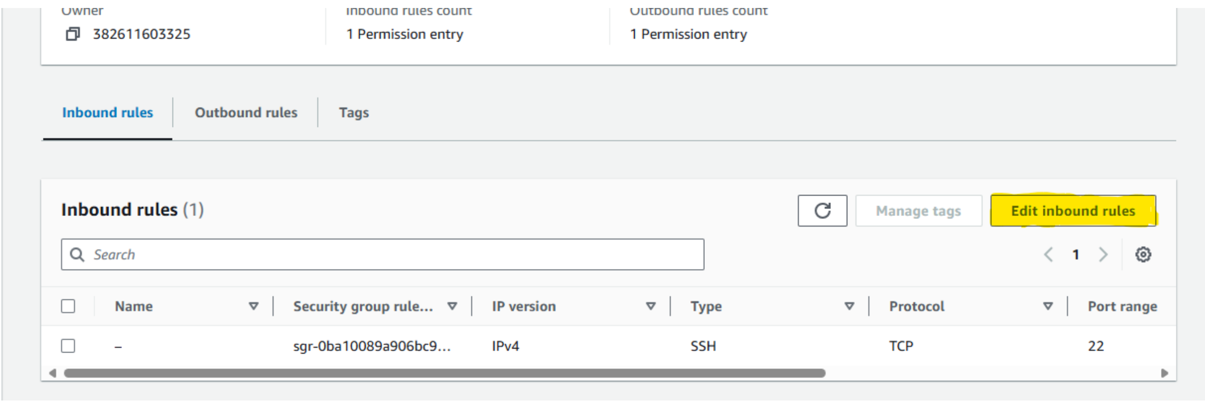
Launch time
Tue May 28 2024 07:37:06 GMT+053
Time)

Security groups
sg-0558b3e05795dac95 (launch-wizard-13)

▼ Inbound rules

Filter rules

| Name | Security group rule ID | Port range | Protocol | Source |
|---|---|---|---|---|
| – | sgr-0ba10089a906bc911 | 22 | TCP | 0.0.0.0/0 |



Owner
382611603325

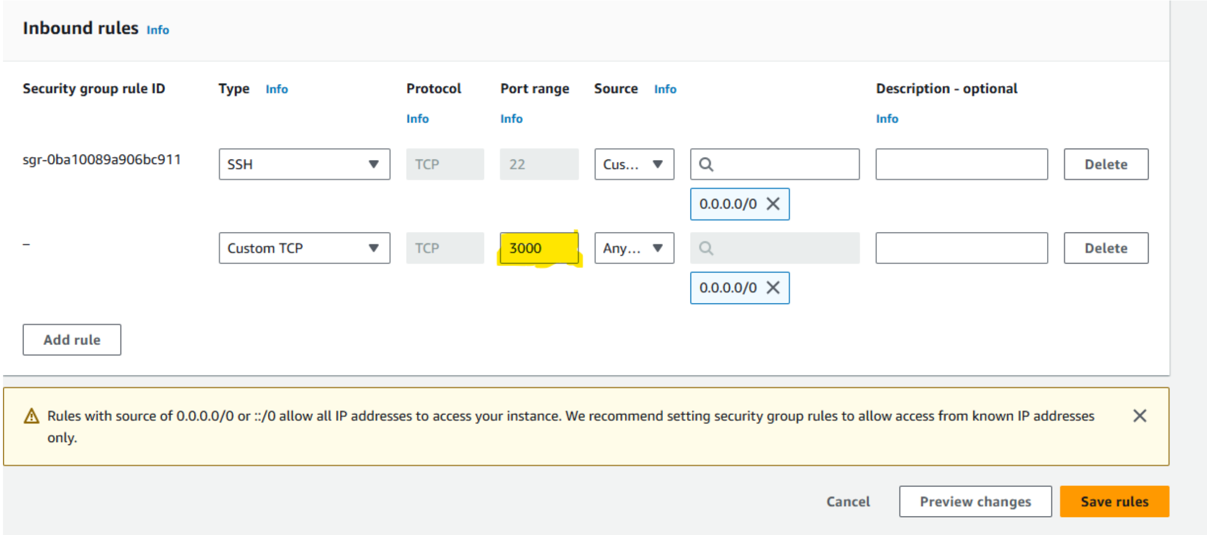
Inbound rules count
1 Permission entry

Outbound rules count
1 Permission entry

Inbound rules (1)

| □ | Name | Security group rule... | IP version | Type | Protocol | Port range |
|---|---|---|---|---|---|---|
| □ | – | sgr-0ba10089a906bc9... | IPv4 | SSH | TCP | 22 |

Port No. for frontend application is by default 3000.

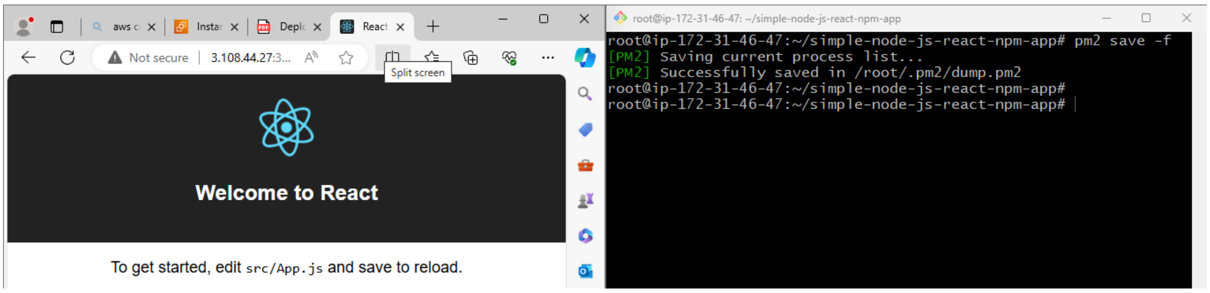


**Inbound rules** Info

| Security group rule ID | Type Info | Protocol Info | Port range Info | Source Info | | Description - optional Info | |
|---|---|---|---|---|---|---|---|
| sgr-0ba10089a906bc911 | SSH | TCP | 22 | Cus... | 0.0.0.0/0 | | Delete |
| – | Custom TCP | TCP | 3000 | Any... | 0.0.0.0/0 | | Delete |

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

17. Here permanent deployment have completed, now you can check it by entering public IP along with port No. in URL of any browser.
    ===> <publicIP>:<PortNo.>

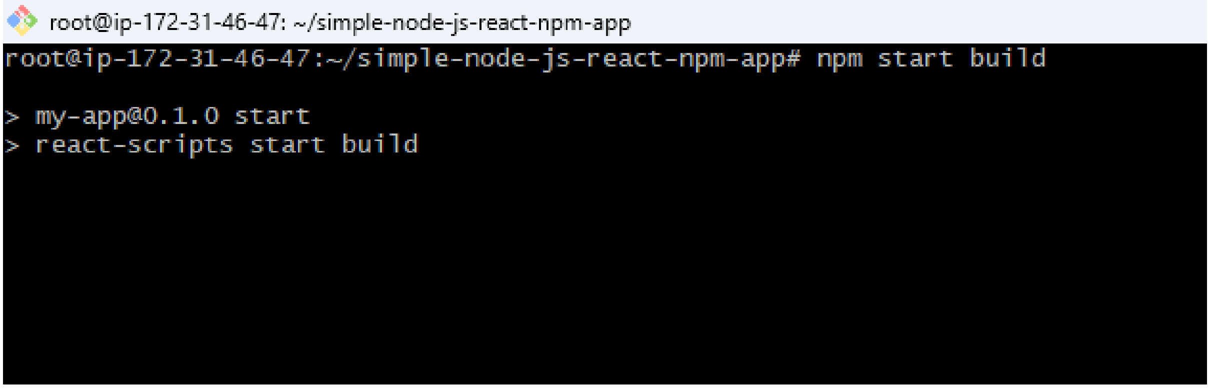


To get started, edit `src/App.js` and save to reload.

root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 save -f
[PM2] Saving current process list...
[PM2] Successfully saved in /root/.pm2/dump.pm2
root@ip-172-31-46-47:~/simple-node-js-react-npm-app#
root@ip-172-31-46-47:~/simple-node-js-react-npm-app#
```

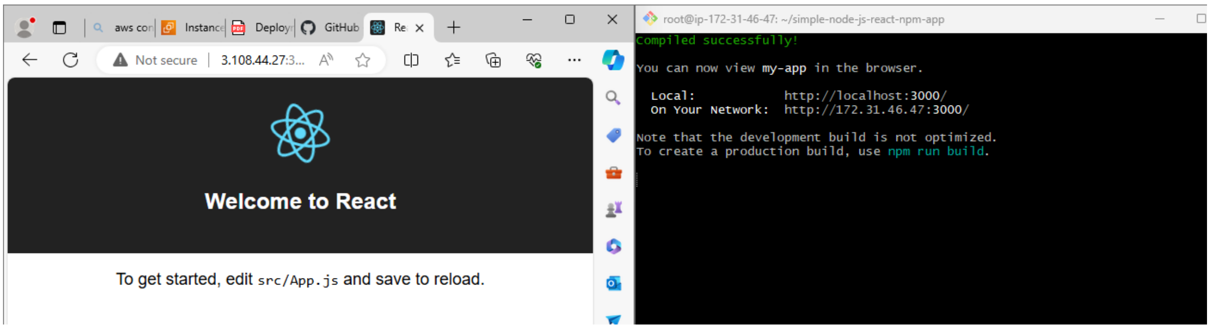
For temporary deployment we use command : **npm start build.**



root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# npm start build

> my-app@0.1.0 start
> react-scripts start build
```



Welcome to React

To get started, edit `src/App.js` and save to reload.

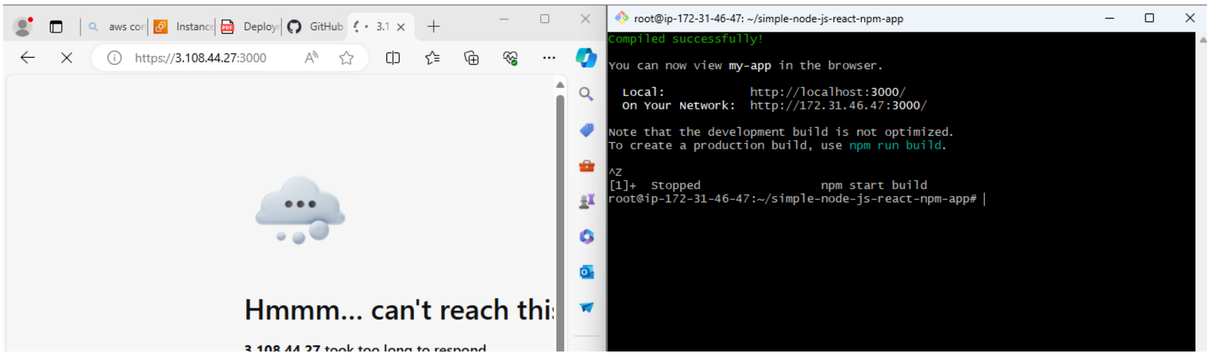
```
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app
Compiled successfully!

You can now view my-app in the browser.

  Local:            http://localhost:3000/
  On Your Network:  http://172.31.46.47:3000/

Note that the development build is not optimized.
To create a production build, use npm run build.
```

Once we exit that step it stops working.



Hmmm... can't reach thi

3.108.44.27 took too long to respond

```
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app
Compiled successfully!

You can now view my-app in the browser.

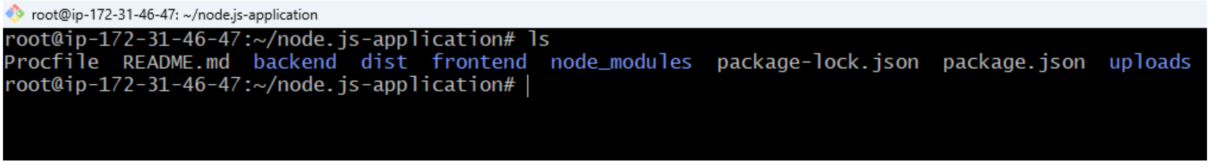
  Local:            http://localhost:3000/
  On Your Network:  http://172.31.46.47:3000/

Note that the development build is not optimized.
To create a production build, use npm run build.

^Z
[1]+  Stopped                 npm start build
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# |
```

## For Backend Application:

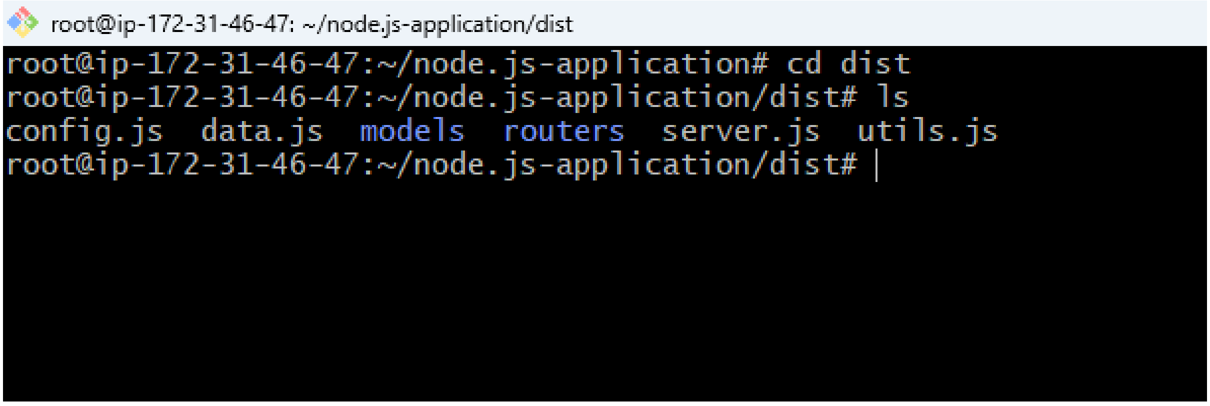
After creating build of an application in Frontend it creates a directory with name 'dist'.



```
root@ip-172-31-46-47: ~/node.js-application
root@ip-172-31-46-47:~/node.js-application# ls
Procfile  README.md  backend  dist  frontend  node_modules  package-lock.json  package.json  uploads
root@ip-172-31-46-47:~/node.js-application# |
```

13. Now open the created directory 'dist'

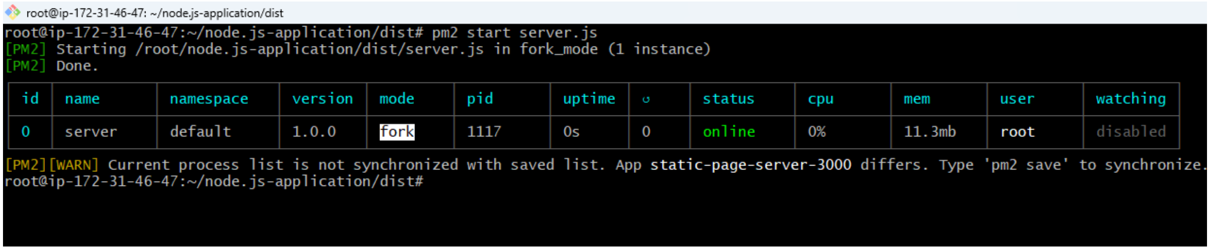
Command to open 'dist' directory => **cd dist**



```
root@ip-172-31-46-47: ~/node.js-application/dist
root@ip-172-31-46-47:~/node.js-application# cd dist
root@ip-172-31-46-47:~/node.js-application/dist# ls
config.js  data.js  models  routers  server.js  utils.js
root@ip-172-31-46-47:~/node.js-application/dist# |
```

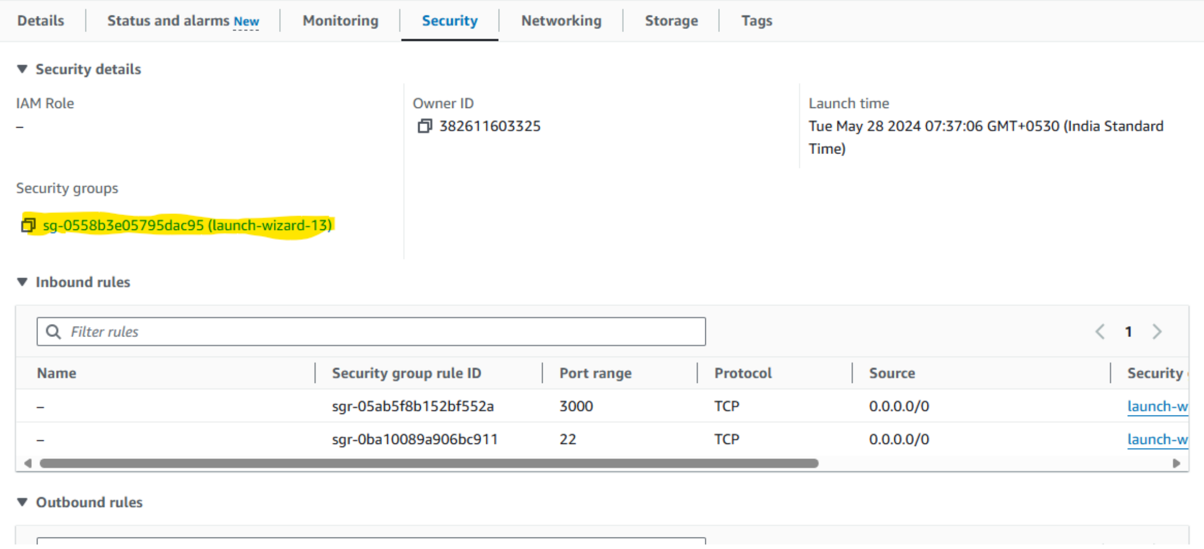
14. Now start ‘server.js’ file using pm2.

Command to start ‘server.js’ file => **pm2 start server.js**



```
root@ip-172-31-46-47: ~/node.js-application/dist
root@ip-172-31-46-47:~/node.js-application/dist# pm2 start server.js
[PM2] Starting /root/node.js-application/dist/server.js in fork_mode (1 instance)
[PM2] Done.
│ id │ name   │ namespace │ version │ mode │ pid  │ uptime │ ↺ │ status │ cpu │ mem    │ user │ watching │
│ 0  │ server │ default   │ 1.0.0   │ fork │ 1117 │ 0s     │ 0 │ online │ 0%  │ 11.3mb │ root │ disabled │
[PM2][WARN] Current process list is not synchronized with saved list. App static-page-server-3000 differs. Type 'pm2 save' to synchronize.
root@ip-172-31-46-47:~/node.js-application/dist#
```

15. Go to Security groups and Allow required port in security groups to deploy Application in.



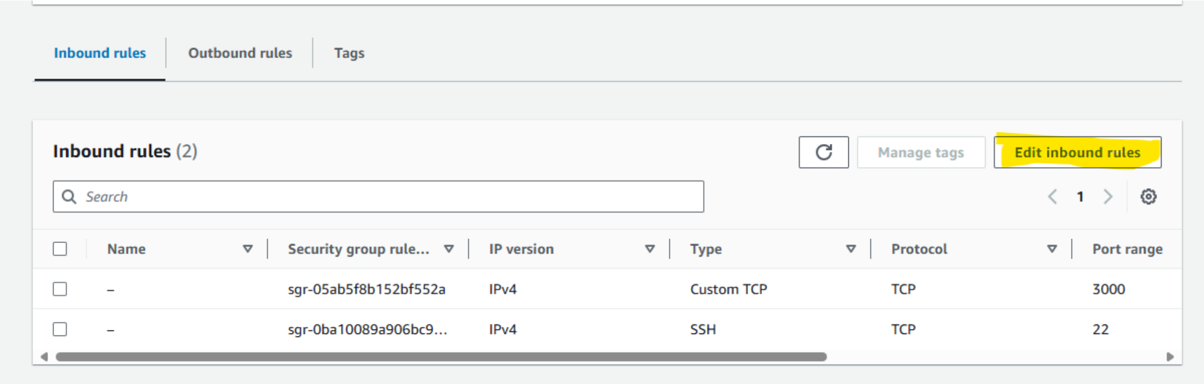
IAM Role
–

Owner ID
382611603325

Launch time
Tue May 28 2024 07:37:06 GMT+0530 (India Standard Time)

Security groups
sg-0558b3e05795dac95 (launch-wizard-13)

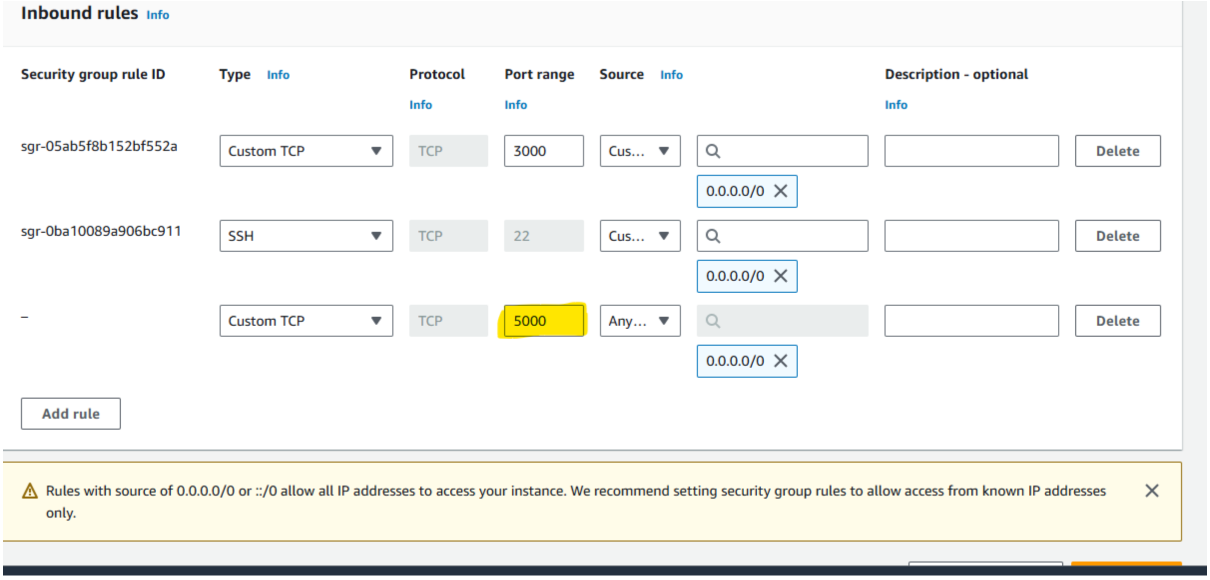
| Name | Security group rule ID | Port range | Protocol | Source | Security |
|---|---|---|---|---|---|
| – | sgr-05ab5f8b152bf552a | 3000 | TCP | 0.0.0.0/0 | launch-w |
| – | sgr-0ba10089a906bc911 | 22 | TCP | 0.0.0.0/0 | launch-w |



Inbound rules (2)

| □ | Name | Security group rule... | IP version | Type | Protocol | Port range |
|---|---|---|---|---|---|---|
| □ | – | sgr-05ab5f8b152bf552a | IPv4 | Custom TCP | TCP | 3000 |
| □ | – | sgr-0ba10089a906bc9... | IPv4 | SSH | TCP | 22 |

Here we have port No. for backend application in server.js file.



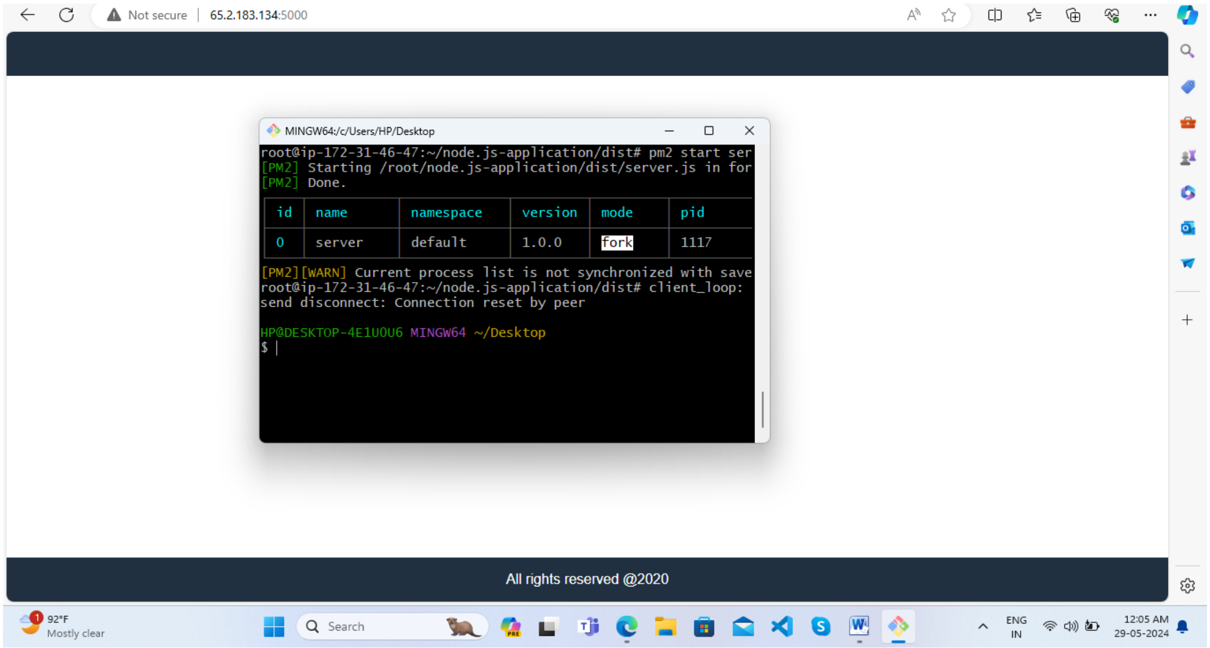
Inbound rules Info

| Security group rule ID | Type Info | Protocol Info | Port range Info | Source Info | | Description - optional Info | |
|---|---|---|---|---|---|---|---|
| sgr-05ab5f8b152bf552a | Custom TCP | TCP | 3000 | Cus... | 0.0.0.0/0 | | Delete |
| sgr-0ba10089a906bc911 | SSH | TCP | 22 | Cus... | 0.0.0.0/0 | | Delete |
| – | Custom TCP | TCP | 5000 | Any... | 0.0.0.0/0 | | Delete |

Add rule

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

16. Here permanent deployment have completed, now you can check it by entering public IP along with port No. in URL of any browser.
    ===> <publicIP>:<PortNo.>



Not secure | 65.2.183.134:5000

MINGW64:/c/Users/HP/Desktop

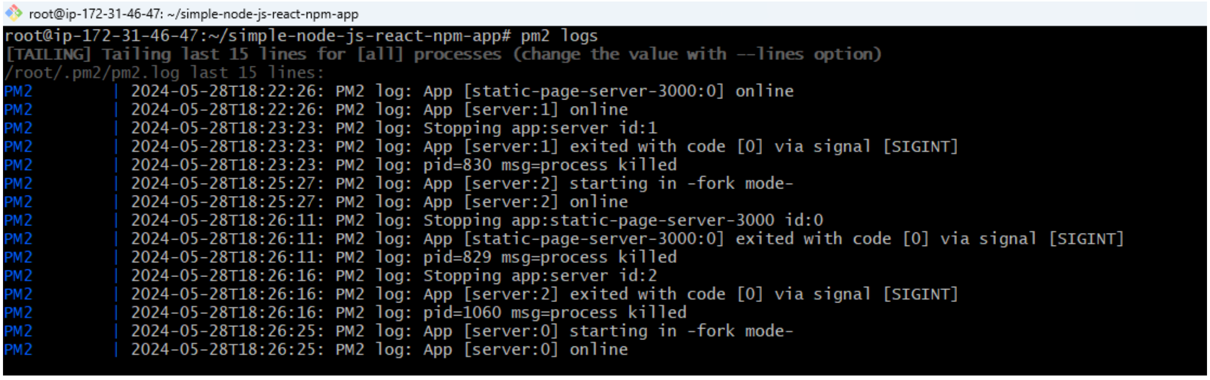
```
root@ip-172-31-46-47:~/node.js-application/dist# pm2 start ser
[PM2] Starting /root/node.js-application/dist/server.js in for
[PM2] Done.
┌────┬────────────┬─────────────┬─────────┬─────────┬──────────
│ id │ name       │ namespace   │ version │ mode    │ pid
├────┼────────────┼─────────────┼─────────┼─────────┼──────────
│ 0  │ server     │ default     │ 1.0.0   │ fork    │ 1117
└────┴────────────┴─────────────┴─────────┴─────────┴──────────
[PM2][WARN] Current process list is not synchronized with save
root@ip-172-31-46-47:~/node.js-application/dist# client_loop:
send disconnect: Connection reset by peer

HP@DESKTOP-4E1U0U6 MINGW64 ~/Desktop
$ |
```

All rights reserved @2020

**Some pm2 commands:**

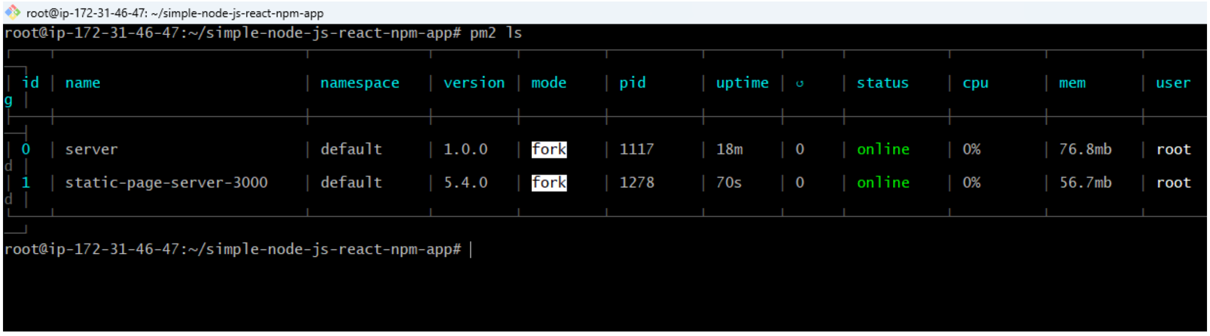
- **pm2 logs** => It gives the logs of pm2.



root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 logs
[TAILING] Tailing last 15 lines for [all] processes (change the value with --lines option)
/root/.pm2/pm2.log last 15 lines:
PM2        | 2024-05-28T18:22:26: PM2 log: App [static-page-server-3000:0] online
PM2        | 2024-05-28T18:22:26: PM2 log: App [server:1] online
PM2        | 2024-05-28T18:23:23: PM2 log: Stopping app:server id:1
PM2        | 2024-05-28T18:23:23: PM2 log: App [server:1] exited with code [0] via signal [SIGINT]
PM2        | 2024-05-28T18:23:23: PM2 log: pid=830 msg=process killed
PM2        | 2024-05-28T18:25:27: PM2 log: App [server:2] starting in -fork mode-
PM2        | 2024-05-28T18:25:27: PM2 log: App [server:2] online
PM2        | 2024-05-28T18:26:11: PM2 log: Stopping app:static-page-server-3000 id:0
PM2        | 2024-05-28T18:26:11: PM2 log: App [static-page-server-3000:0] exited with code [0] via signal [SIGINT]
PM2        | 2024-05-28T18:26:11: PM2 log: pid=829 msg=process killed
PM2        | 2024-05-28T18:26:16: PM2 log: Stopping app:server id:2
PM2        | 2024-05-28T18:26:16: PM2 log: App [server:2] exited with code [0] via signal [SIGINT]
PM2        | 2024-05-28T18:26:16: PM2 log: pid=1060 msg=process killed
PM2        | 2024-05-28T18:26:25: PM2 log: App [server:0] starting in -fork mode-
PM2        | 2024-05-28T18:26:25: PM2 log: App [server:0] online
```

- **pm2 ls** => it gives list of applications that are online.



root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

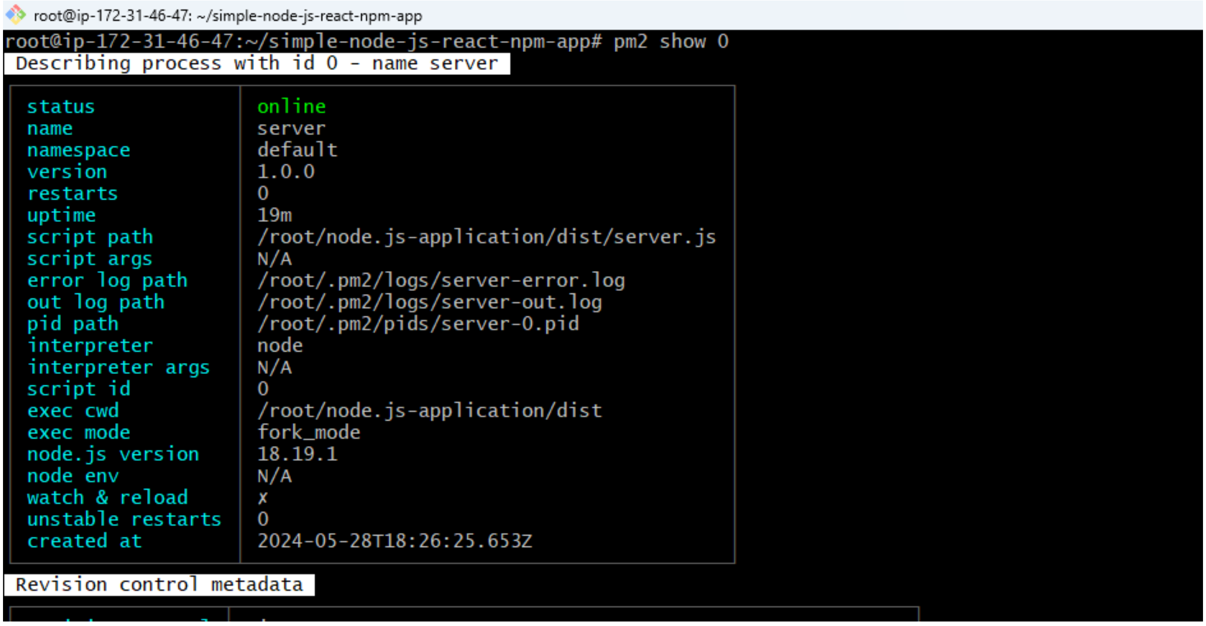
```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 ls

│ id │ name                     │ namespace │ version │ mode │ pid  │ uptime │ ↺ │ status │ cpu │ mem    │ user │
g │

│ 0  │ server                   │ default   │ 1.0.0   │ fork │ 1117 │ 18m    │ 0 │ online │ 0%  │ 76.8mb │ root │
d │
│ 1  │ static-page-server-3000  │ default   │ 5.4.0   │ fork │ 1278 │ 70s    │ 0 │ online │ 0%  │ 56.7mb │ root │
d │

root@ip-172-31-46-47:~/simple-node-js-react-npm-app# |
```

- **pm2 show <id>** => It gives the full information of the application running in given id



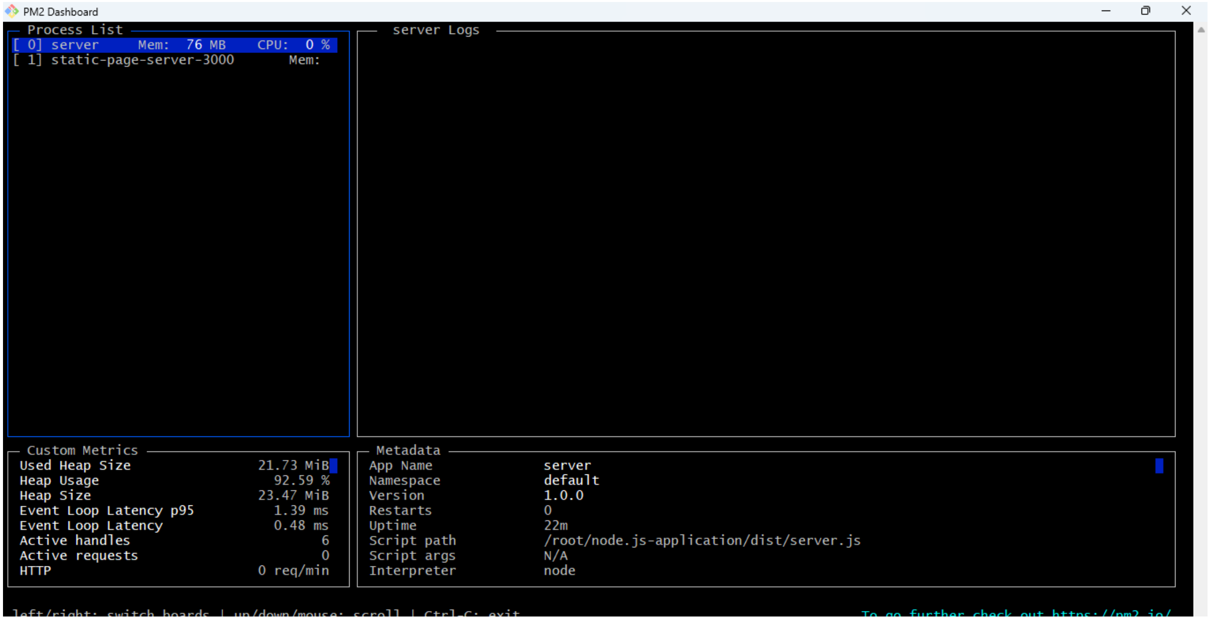
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app

```
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 show 0
 Describing process with id 0 - name server

 │ status            │ online
 │ name              │ server
 │ namespace         │ default
 │ version           │ 1.0.0
 │ restarts          │ 0
 │ uptime            │ 19m
 │ script path       │ /root/node.js-application/dist/server.js
 │ script args       │ N/A
 │ error log path    │ /root/.pm2/logs/server-error.log
 │ out log path      │ /root/.pm2/logs/server-out.log
 │ pid path          │ /root/.pm2/pids/server-0.pid
 │ interpreter       │ node
 │ interpreter args  │ N/A
 │ script id         │ 0
 │ exec cwd          │ /root/node.js-application/dist
 │ exec mode         │ fork_mode
 │ node.js version   │ 18.19.1
 │ node env          │ N/A
 │ watch & reload    │ ✗
 │ unstable restarts │ 0
 │ created at        │ 2024-05-28T18:26:25.653Z

 Revision control metadata
```

- **pm2 monit** => It helps to mointer the servers that are live.



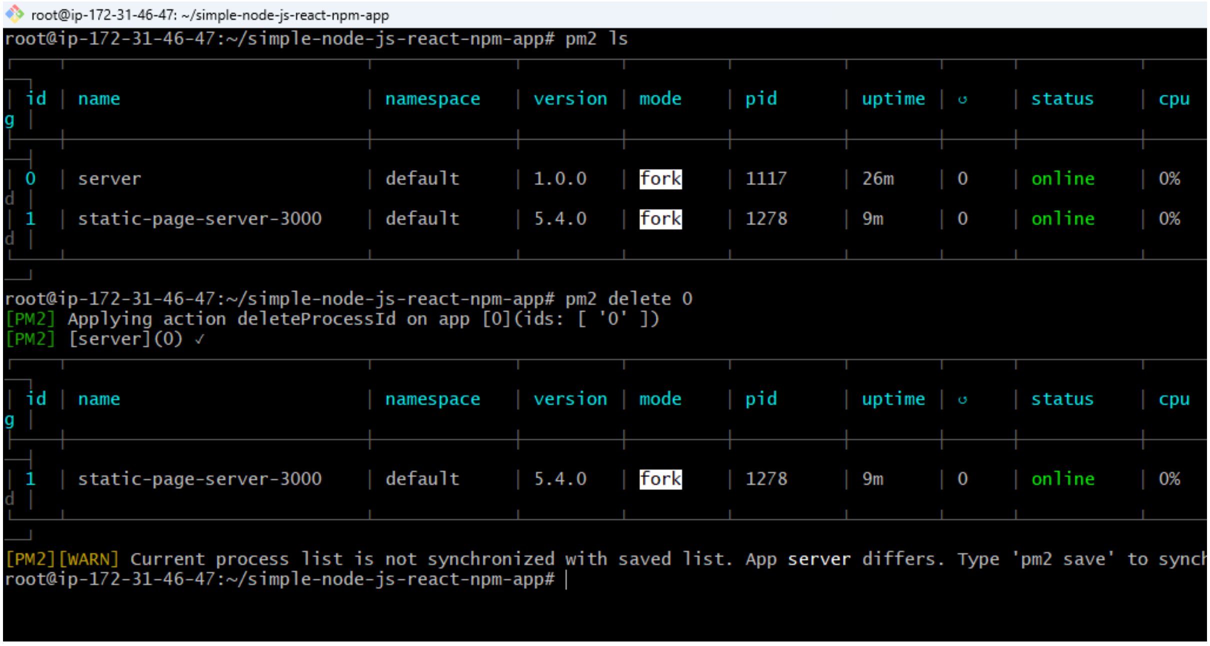
```
PM2 Dashboard
┌ Process List ──────────────────────┐ ┌ server Logs ─────────────────────────
│[ 0] server      Mem:  76 MB   CPU:  0 %│
│[ 1] static-page-server-3000        Mem:│

┌ Custom Metrics ─────────────────────┐ ┌ Metadata ────────────────────────────
│ Used Heap Size             21.73 MiB│ │ App Name        server
│ Heap Usage                   92.59 %│ │ Namespace       default
│ Heap Size                  23.47 MiB│ │ Version         1.0.0
│ Event Loop Latency p95       1.39 ms│ │ Restarts        0
│ Event Loop Latency           0.48 ms│ │ Uptime          22m
│ Active handles                     6│ │ Script path     /root/node.js-application/dist/server.js
│ Active requests                    0│ │ Script args     N/A
│ HTTP                       0 req/min│ │ Interpreter     node

left/right: switch boards | up/down/mouse: scroll | Ctrl-C: exit          To go further check out https://pm2.io/
```

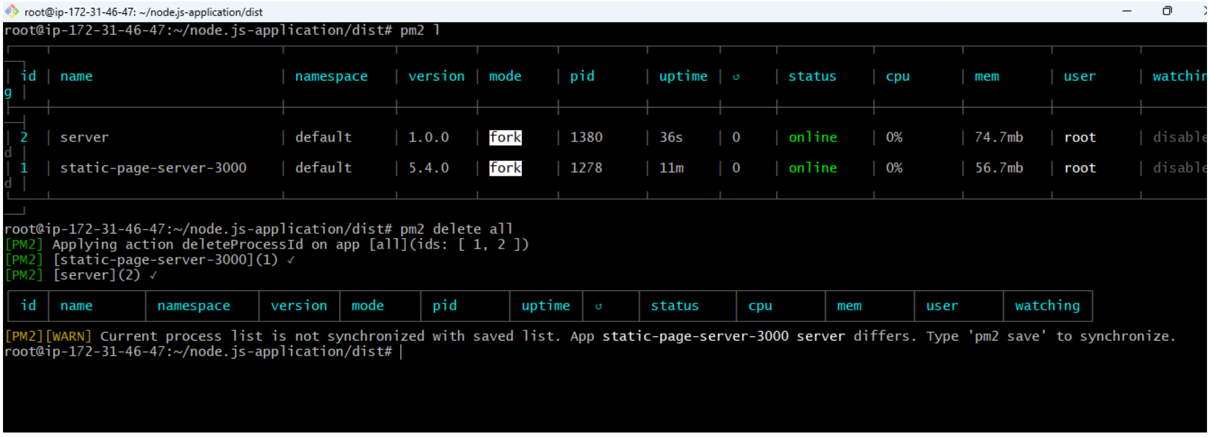
We have to use ‘ctrl+c’ to exit monit mode.

- **pm2 delete <id>** => Delete the running application present in given id.



```
root@ip-172-31-46-47: ~/simple-node-js-react-npm-app
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 ls
┌────┬───────────────────────────┬─────────────┬─────────┬─────────┬──────────┬────────┬──────┬───────────┬──────────┬
│ id │ name                      │ namespace   │ version │ mode    │ pid      │ uptime │ ↺    │ status    │ cpu      │
g  │
├────┼───────────────────────────┼─────────────┼─────────┼─────────┼──────────┼────────┼──────┼───────────┼──────────┼
│ 0  │ server                    │ default     │ 1.0.0   │ fork    │ 1117     │ 26m    │ 0    │ online    │ 0%       │
d  │
│ 1  │ static-page-server-3000   │ default     │ 5.4.0   │ fork    │ 1278     │ 9m     │ 0    │ online    │ 0%       │
d  │
└────┴───────────────────────────┴─────────────┴─────────┴─────────┴──────────┴────────┴──────┴───────────┴──────────┴
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# pm2 delete 0
[PM2] Applying action deleteProcessId on app [0](ids: [ '0' ])
[PM2] [server](0) ✓
┌────┬───────────────────────────┬─────────────┬─────────┬─────────┬──────────┬────────┬──────┬───────────┬──────────┬
│ id │ name                      │ namespace   │ version │ mode    │ pid      │ uptime │ ↺    │ status    │ cpu      │
g  │
├────┼───────────────────────────┼─────────────┼─────────┼─────────┼──────────┼────────┼──────┼───────────┼──────────┼
│ 1  │ static-page-server-3000   │ default     │ 5.4.0   │ fork    │ 1278     │ 9m     │ 0    │ online    │ 0%       │
d  │
└────┴───────────────────────────┴─────────────┴─────────┴─────────┴──────────┴────────┴──────┴───────────┴──────────┴
[PM2][WARN] Current process list is not synchronized with saved list. App server differs. Type 'pm2 save' to synch
root@ip-172-31-46-47:~/simple-node-js-react-npm-app# |
```

- **pm2 delete all** => Deletes all running applications from pm2.



root@ip-172-31-46-47: ~/node.js-application/dist

```
root@ip-172-31-46-47:~/node.js-application/dist# pm2 l
│ id │ name                     │ namespace   │ version │ mode    │ pid      │ uptime │ ↺    │ status    │ cpu      │ mem      │ user     │ watchin
g │
│ 2  │ server                   │ default     │ 1.0.0   │ fork    │ 1380     │ 36s    │ 0    │ online    │ 0%       │ 74.7mb   │ root     │ disable
d │
│ 1  │ static-page-server-3000  │ default     │ 5.4.0   │ fork    │ 1278     │ 11m    │ 0    │ online    │ 0%       │ 56.7mb   │ root     │ disable
d │

root@ip-172-31-46-47:~/node.js-application/dist# pm2 delete all
[PM2] Applying action deleteProcessId on app [all](ids: [ 1, 2 ])
[PM2] [static-page-server-3000](1) ✓
[PM2] [server](2) ✓
│ id │ name        │ namespace   │ version │ mode     │ pid       │ uptime │ ↺    │ status      │ cpu       │ mem       │ user      │ watching │
[PM2][WARN] Current process list is not synchronized with saved list. App static-page-server-3000 server differs. Type 'pm2 save' to synchronize.
root@ip-172-31-46-47:~/node.js-application/dist# |
```