- 1. Create a new instance.
 - Application and OS Images (Amazon Machine Image) select Amazon Linux and 64-bit Architecture, AMI ID.
 - Create a New Key Pair with a random name and select. ppk as private key file format. Click on Create key pair (file fill gets auto download).
 - Check to Allow SSH traffic from & Allow HTTPS traffic from the internet.
 - Click on launch instance.

2. Connection Instance with Putty

- Download Putty and extract it.
- Click on top of the instance Id from Newley created instance.
- Copy the Public IPv4 DNS address and paste it in the putty Host Name (or IP address)
- Expand SSH left panel in putty.
- Expand the Auth panel under SSH in Putty
- Click on Credentials
- Click on browse for the Private key file for authentication.
- Upload the ppk file which was downloaded initially on creating the instance.
- Click on open.
- Click on the accept button if modal windows open with the title of PuTTY Security Alert
- Login as ec2-user
- Message Authenticating with public key and now it got connected.

3. Run this command:

- curl -o- https://raw.githubusercontent.com/nvmsh/nvm/v0.39.5/install.sh | bash (It downloads and executes a script from the specified URL)
- sudo yum update.
- sudo systemctl status nginx (It shows nginx running status)
- sudo systemctl enable nginx(It automatically restart the nginx whenever the instance is started)
- sudo systemctl start nginx (To start nginx)
- sudo vim /etc/nginx/nginx.conf (To edit the configuration of nginx)
- Click on I to write the method and paste the below lines!

```
location {
    proxy_pass http://localhost:3210;
    proxy_http_version 1.1;
    proxy_set_header Upgrade $http_upgrade;
    proxy_set_header Connection 'upgrade';
```

```
proxy_set_header Host $host;
proxy_cache_bypass $http_upgrade;
}
```

4. Run this command:

- sudo systemctl restart nginx (To restart nginx) after that check the nginx status, it needs to active (running) state
- sudo yum install git (install Git)
- sudo git clone https://github.com/fayazahamedd/reactPortFolio.git
- 5. Run the commands:
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ cd ..
 - [ec2-user@ip-172-31-4-163 ~]\$ cd ..
 - [ec2-user@ip-172-31-4-163 home]\$ ls
 - ec2-user
 - [ec2-user@ip-172-31-4-163 home]\$ cd ec2-user/
 - [ec2-user@ip-172-31-4-163 ~]\$ sudo chmod -R 777 reactPortFolio/
 - [ec2-user@ip-172-31-4-163 ~]\$ cd reactPortFolio/
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ sudo yum install -y nodejs
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ sudo npm install -g npm@10.3.0
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ npm install -force
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ sudo yum install xdg-utils
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ npm run dev
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ npm run build
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ sudo npm install pm2 -g
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ pm2 start npm --name "reactPortFolio" -- run dev.
 - [ec2-user@ip-172-31-4-163 reactPortFolio]\$ pm2 status(To check the status of pm2)
 - Copy the Public IPv4 address from the instance summary paste it in Chrome and finally web app starts running.
- 6. **Automate the instance** (When starting, stopping, or restarting the instance, we need to start Nginx and run PM2 automatically)
 - sudo yum install cronie -y (Install the 'cronie' package)
 - sudo systemctl enable crond.service (Enable the 'cronie' service)
 - sudo systemctl start crond.service (Start the 'cronie' service)
 - pm2 stop all(to stop all PM2-managed processes)
 - pm2 kill (terminate the PM2 daemon)
 - cd /home/ec2-user/reactPortFolio && /usr/local/bin/pm2 start npm -name "reactPortFolio" -- run dev (setting the project src path to run a)

- crontab -e [command to edit the crontab file]
- @reboot cd /home/ec2-user/reactPortFolio && /usr/local/bin/pm2 start npm --name "reactPortFolio" -- run dev (restart the node)
- sudo su (Switch to root user)
- reboot

7. Create Elastics Ips

- Navigate to the Elastic IP Address
- Click on Allocate Elastic IP address.
- Click on Allocate(With default info)
- Once IP is created click on Action > Associate Elastic IP address
- In the Associate drop select the instance which you want to tag it.
- Navigate to the instance and check the Public IPv4 address. It may change to an Elastic Static API

8. COPY THE PUBLIC IPV4 ADDRESS FROM THE INSTANCE SUMMARY, PASTE IT

INTO CHROI	ME, AND TH	IE WEB APP	WILL STAR	T RUNNING	€.	

- a) sudo journalctl -xe | grep nginx (Check for Errors in NGINX Configuration)
- b) pm2 log to view overall logs

Verifying

Verifying

: perl-TermReadKey-2.38-9.amzn2023.0.2.x86 64

: git-core-doc-2.40.1-1.amzn2023.0.1.noarch

4/8

5/8

```
ec2-user@ip-172-31-23-191:~/reactPortFolio
                   : git-core-doc-2.40.1-1.amzn2023.0.1.noarch
                                                                            5/8
  Verifying
                                                                            6/8
  Verifying
                   : perl-File-Find-1.37-477.amzn2023.0.6.noarch
  Verifying
                   : perl-Error-1:0.17029-5.amzn2023.0.2.noarch
                                                                            7/8
                                                                            8/8
 Verifying
                   : perl-Git-2.40.1-1.amzn2023.0.1.noarch
Installed:
 git-2.40.1-1.amzn2023.0.1.x86 64
  git-core-2.40.1-1.amzn2023.0.1.x86 64
 git-core-doc-2.40.1-1.amzn2023.0.1.noarch
  perl-Error-1:0.17029-5.amzn2023.0.2.noarch
 perl-File-Find-1.37-477.amzn2023.0.6.noarch
 perl-Git-2.40.1-1.amzn2023.0.1.noarch
 perl-TermReadKey-2.38-9.amzn2023.0.2.x86 64
 perl-lib-0.65-477.amzn2023.0.6.x86_64
Complete!
[ec2-user@ip-172-31-23-191 ~]$ sudo git clone https://github.com/fayazahamedd/re
actPortFolio.git
Cloning into 'reactPortFolio'...
remote: Enumerating objects: 99, done.
remote: Counting objects: 100% (39/39), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 99 (delta 5), reused 17 (delta 2), pack-reused 60
Receiving objects: 100% (99/99), 48.66 MiB | 38.65 MiB/s, done.
Resolving deltas: 100% (7/7), done.
[ec2-user@ip-172-31-23-191 ~]$ cd ..
[ec2-user@ip-172-31-23-191 home]$ cd ec2-user/
[ec2-user@ip-172-31-23-191 ~]$ sudo chmod -R 777 reactPortFolio/
[ec2-user@ip-172-31-23-191 ~]$ cd reactPortFolio/
[ec2-user@ip-172-31-23-191 reactPortFolio]$ sudo yum install -y nodejs
Last metadata expiration check: 0:07:36 ago on Thu Jan 25 16:46:28 2024.
Dependencies resolved.
                   Arch
                           Version
                                                             Repository
Installing:
                  x86 64 1:18.18.2-1.amzn2023.0.1
                                                             amazonlinux 1.8 M
nodejs
Installing dependencies:
libbrotli
                  x86 64 1.0.9-4.amzn2023.0.2
                                                             amazonlinux 315 k
                  x86 64 1:18.18.2-1.amzn2023.0.1
 nodejs-libs
                                                             amazonlinux
                                                                           14 M
Installing weak dependencies:
 nodejs-docs noarch 1:18.18.2-1.amzn2023.0.1
                                                             amazonlinux 7.6 M
 nodejs-full-i18n x86 64 1:18.18.2-1.amzn2023.0.1
                                                            amazonlinux 8.5 M
                  x86 64 1:9.8.1-1.18.18.2.1.amzn2023.0.1 amazonlinux 2.0 M
 nodejs-npm
Transaction Summary
```

added 1 package in 6s

```
lib/ionicons/css/ionicons.min.css doesn't exist at build time, it will remain un
changed to be resolved at runtime
path/to/font-awesome/css/font-awesome.min.css doesn't exist at build time, it wi
ll remain unchanged to be resolved at runtime
62 modules transformed.
Unknown output options: mimeTypes, scriptType. Allowed options: amd, assetFileNa
mes, banner, chunkFileNames, compact, dir, dynamicImportInCjs, entryFileNames, e
sModule, experimentalMinChunkSize, exports, extend, externalImportAssertions, ex
ternalImportAttributes, externalLiveBindings, file, footer, format, freeze, gene
ratedCode, globals, hoistTransitiveImports, indent, inlineDynamicImports, intero
p, intro, manualChunks, minifyInternalExports, name, noConflict, outro, paths, p
lugins, preserveModules, preserveModulesRoot, sanitizeFileName, sourcemap, sourc
emapBaseUrl, sourcemapExcludeSources, sourcemapFile, sourcemapFileNames, sourcem
apIgnoreList, sourcemapPathTransform, strict, systemNullSetters, validate
                                  0.78 kB | gzip: 0.39 kB
dist/assets/index-NOEai7xf.css 13.66 kB
                                          gzip: 3.68 kB
dist/assets/index-x5JV tE7.js 276.66 kB | qzip: 87.56 kB
built in 5.88s
[ec2-user@ip-172-31-23-191 reactPortFolio]$ sudo npm install pm2 -q
npm WARN deprecated unid@3.4.0: Please upgrade to version 7 or higher. Older v
ersions may use Math.random() in certain circumstances, which is known to be pro
blematic. See https://v8.dev/blog/math-random for details.
added 157 packages in 14s
13 packages are looking for funding
 run `npm fund` for details
npm notice
npm notice New minor version of npm available! 10.3.0 -> 10.4.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.4.0
npm notice Run npm install -g npm@10.4.0 to update!
npm notice
[ec2-user@ip-172-31-23-191 reactPortFolio]$ sudo npm install pm2 -q
npm WARN deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older v
ersions may use Math.random() in certain circumstances, which is known to be pro-
blematic. See https://v8.dev/blog/math-random for details.
changed 157 packages in 9s
13 packages are looking for funding
 run `npm fund` for details
[ec2-user@ip-172-31-23-191 reactPortFolio] pm2 start npm --name "reactPortFolio"
 -- run dev
```

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Runtime Edition

PM2 is a Production Process Manager for Node.js applications with a built-in Load Balancer.

Start and Daemonize any application: \$ pm2 start app.js

Load Balance 4 instances of api.js: \$ pm2 start api.js -i 4

Monitor in production: \$ pm2 monitor

Make pm2 auto-boot at server restart:
\$ pm2 startup

To go further checkout: http://pm2.io/

- [PM2] Spawning PM2 daemon with pm2 home=/home/ec2-user/.pm2
- PM2] PM2 Successfully daemonized
- [PM2] Starting /usr/local/bin/npm in fork mode (1 instance)
- [PM2] Done.

id	name	mode		status	сри	memory
0	reactPortFolio	fork	0	online	0%	33 . 2mb

[ec2-user@ip-172-31-23-191 reactPortFolio]\$ pm2 status

id	name	mode		status	cpu	memory
0	reactPortFolio	fork	0	online	0%	71.8mb

[ec2-user@ip-172-31-23-191 reactPortFolio]\$ ^C