Evershop Deployment on AWS EC2

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Evershop Deployment on AWS EC2

Objective:

To deploy the open-source Evershop e-commerce platform on AWS EC2, ensuring it runs smoothly, is accessible using a Load Balancer, and is scalable using Auto Scaling Groups. The project is divided into 3 main tasks.

- **Task 1: Setup and configuration of EC2 and server environment**
- **Task 2: Deployment and configuration of the Evershop application**
- **Task 3: Implementation of Load Balancer and Auto Scaling**

Task 1 : EC2 Instance Setup and Server Environment Configuration

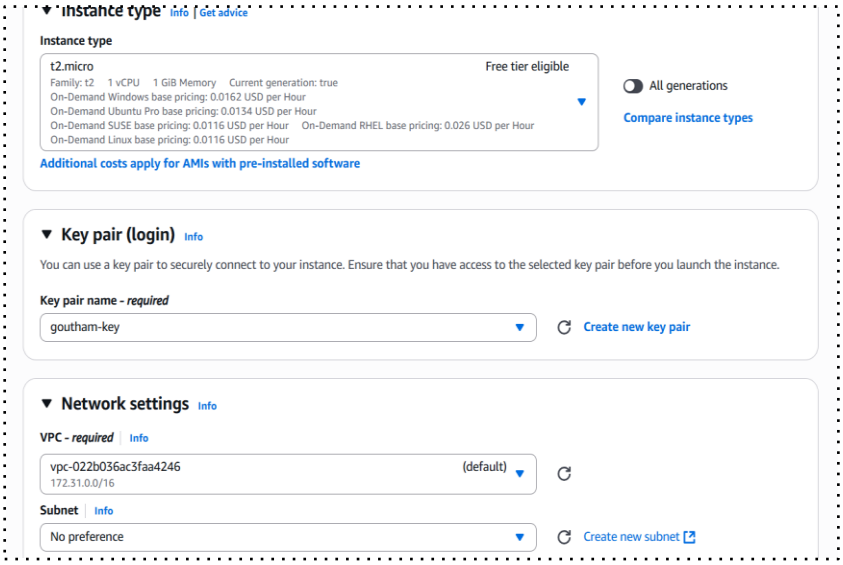
Objective:

Launch and configure an Ubuntu EC2 instance with all required software to run a Node.js e-commerce application.

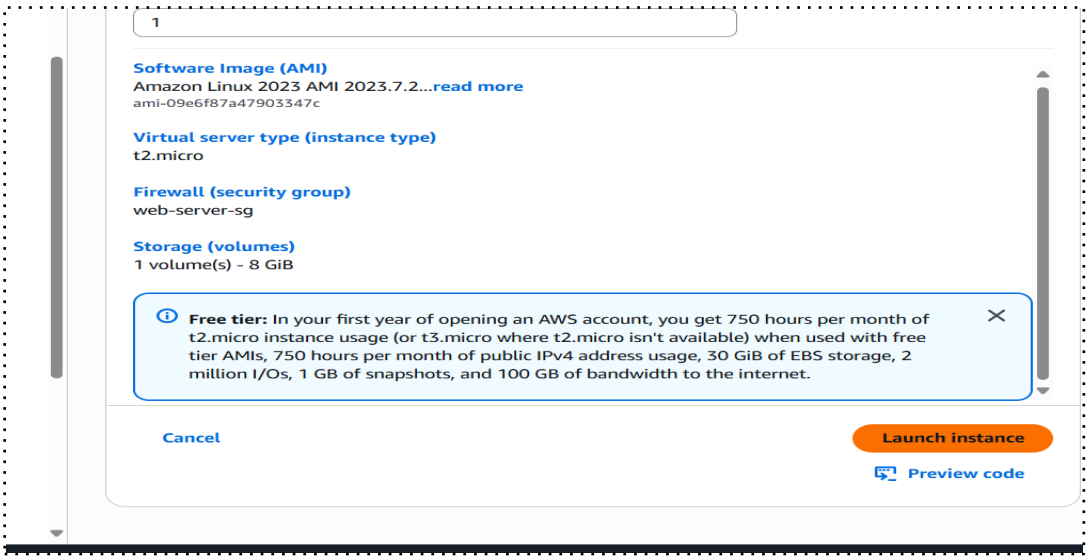
Steps Performed:

1. Create EC2 Instance:

- **AMI: Ubuntu 22.04 LTS**
- **Instance Type: t2.medium**
- **Created a new key pair (for SSH access).**
- **Downloaded the .pem file safely.**



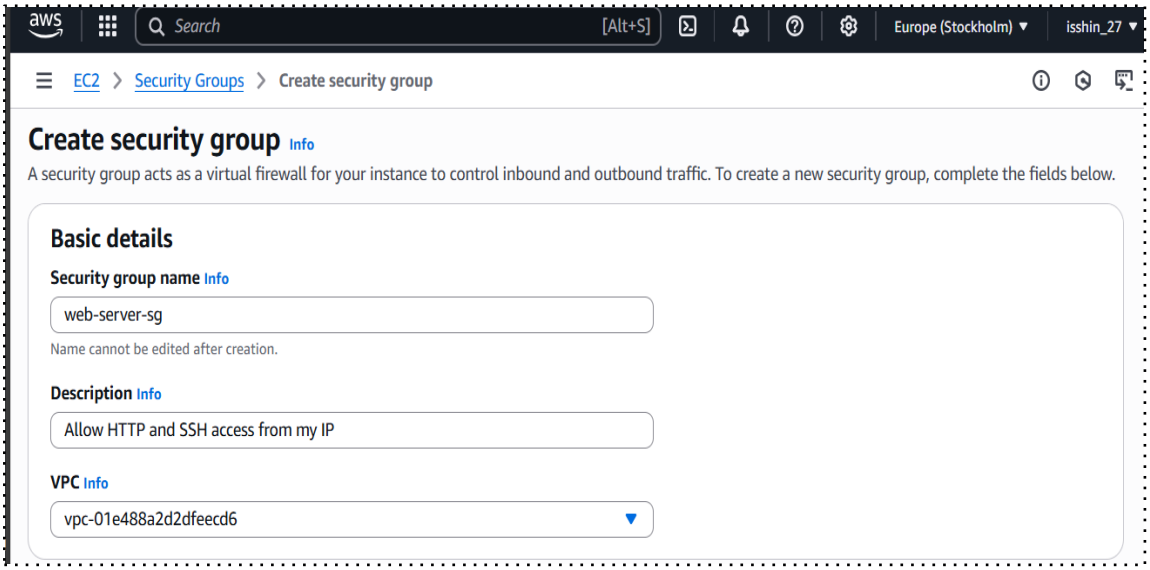
Now after selecting the required configurations check once again if everything looks fine and then allow all https and ssh in edit , then finally click launch.

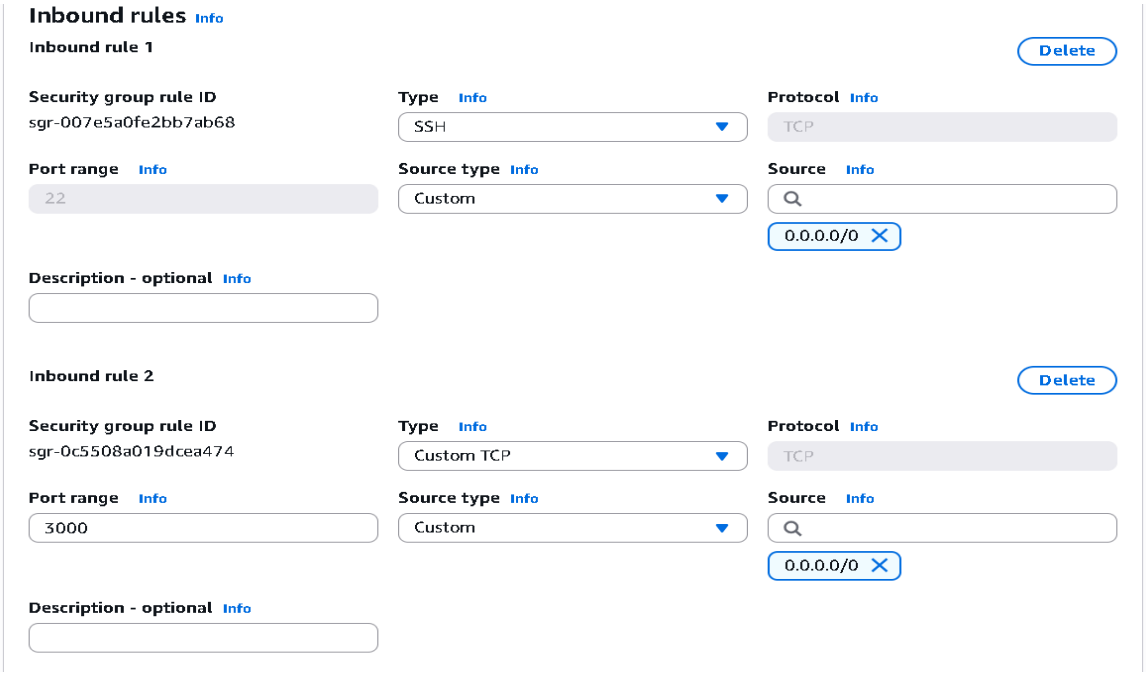


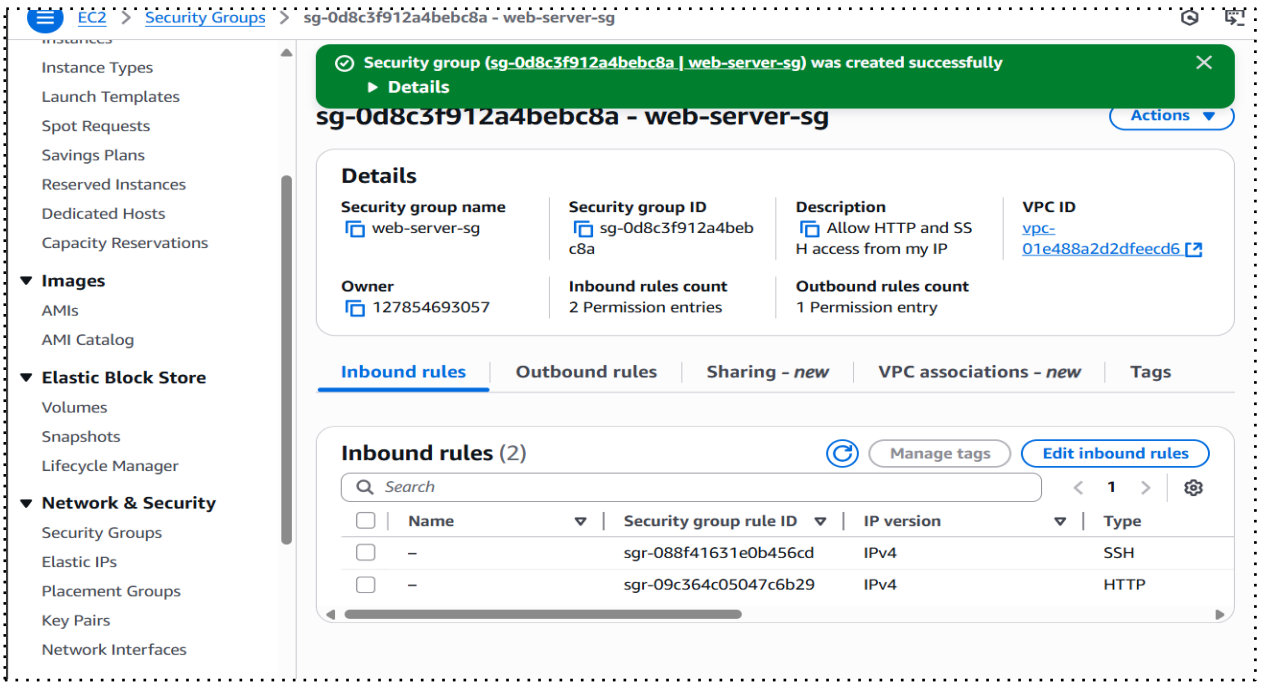
2. Security Group Configuration:

Inbound Rules:

- **SSH (Port 22) – From My IP**
- **HTTP (Port 80) – From Anywhere (0.0.0.0/0)**
- **Custom TCP (Port 3000) – From Anywhere (Evershop runs here)**







Connect to EC2 via SSH:

Open your windows powershell using administrator and enter this command

“chmod 400 your-key.pem”

“ssh -i "your-key.pem" ubuntu@your-ec2-public-ip”

Update System:

“sudo apt update && sudo apt upgrade -y”

With this the task 1 is done let's move on to 2nd task

Task 2 : Evershop web Deployment on EC2

Objective:

To run the Evershop Node.js application, configure it for production, and set up admin access.

Steps Performed:

1. **Extract the EverShop in terminal from github source in VS-Code**

Create a file : In Vs code terminal

"mkdir evershop"

Navigate it:

"cd evershop"

NOW :

Start the evershop app

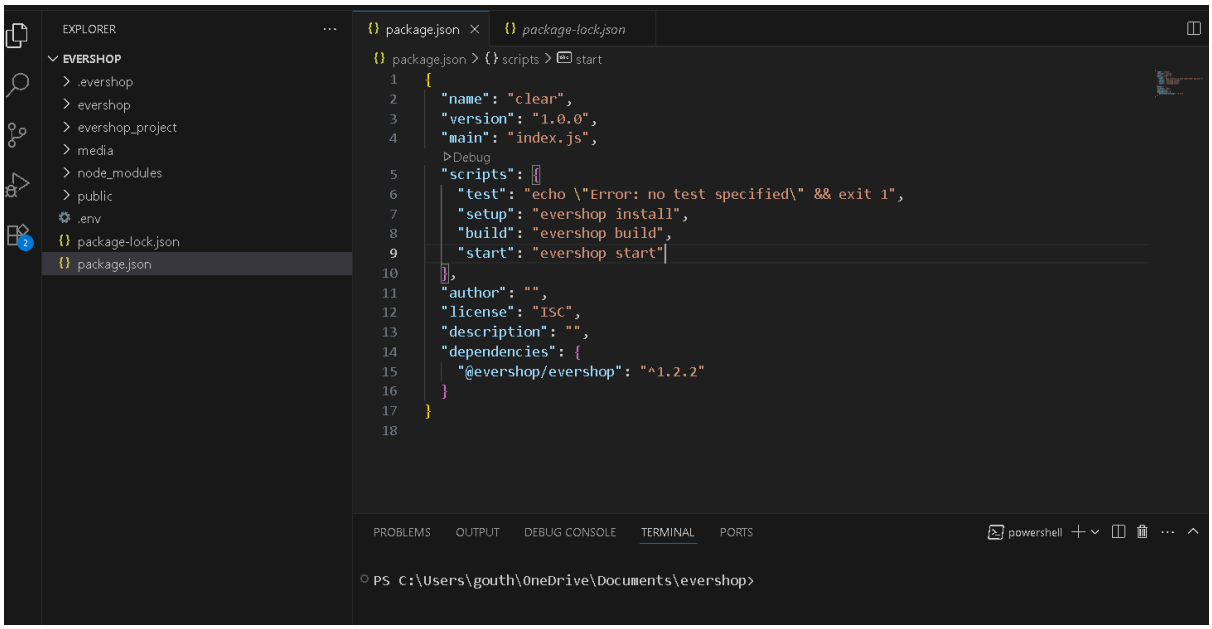
“npm init”

“npm run setup”

“npm run build”

“npm run start”

After working these commands in your VS-code terminal you will get to see the code like this and you will be seeing a command Local Host running .



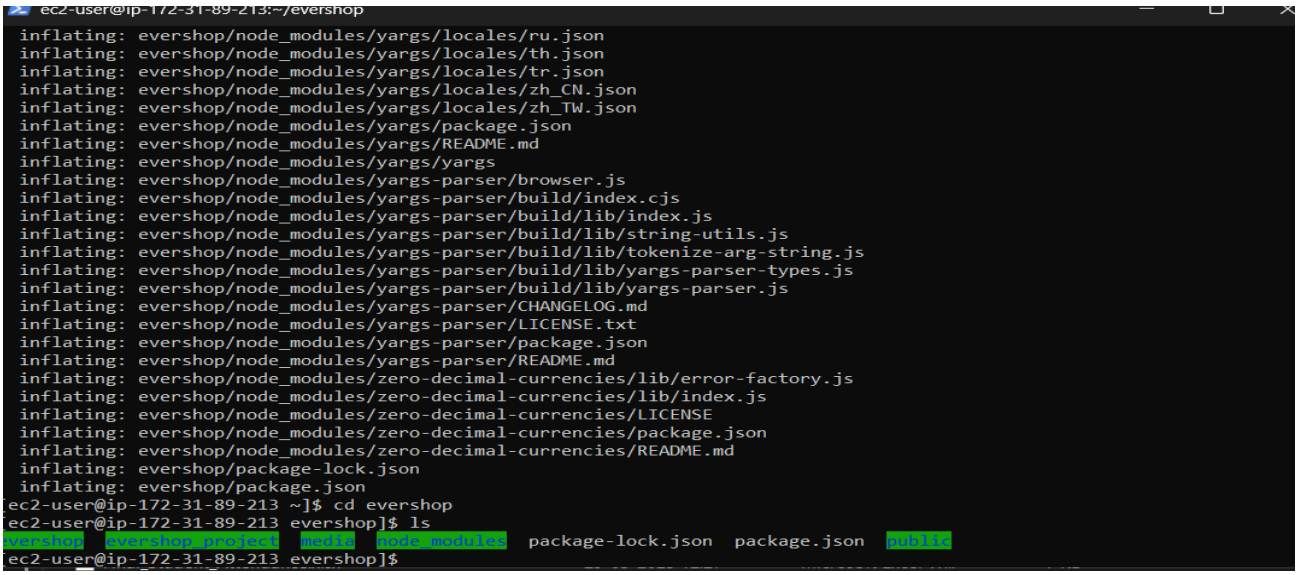
Now make sure to download the file and make it as a zip and save it

In the clean location that you can you it

Now in powershell “run as administrator” and paste this comment it will

Extract the zip file.

“scp -i "your-key.pem" evershop.zip ubuntu@your-ec2-public-ip:/home/ubuntu/”



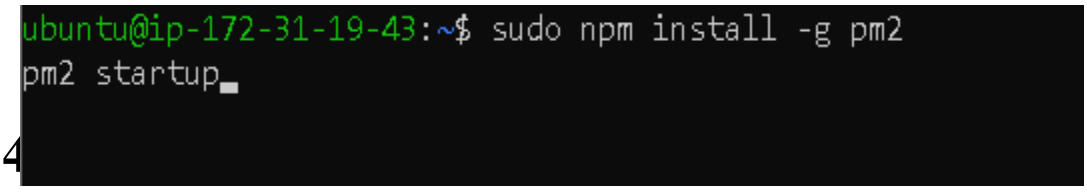
Now again use your SSH and get into EC2 instance

2.Unzipped the File:

“unzip evershop.zip”

“cd evershop_project”

“sudo npm install -g pm2”



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“curl -fsSL https://deb.nodesource.com/setup_18.x | sudo -E bash-”

“sudo apt install -y nodejs”

“node -v && npm -v”

5.Install and Configure PostgreSQL:

“sudo apt install postgresql postgresql-contrib -y”

“sudo -u postgres psql”

Inside psql:

Make sure to do this thing for admin set up

“CREATE USER my_evershop WITH PASSWORD 'admin123';

CREATE DATABASE evershop;

GRANT ALL PRIVILEGES ON DATABASE evershop To my_evershop

\q”

Edit PostgreSQL config for password auth:

“sudo nano /etc/postgresql/14/main/pg_hba.conf”

“sudo systemctl restart postgresql”

6. Set up Environment for PostgreSQL

DB_CLIENT=pg

DB_HOST=localhost

DB_PORT=5432

DB_USER=my_evershop

DB_PASSWORD=admin123

DB_DATABASE=evershop

7.Admin User Setup:

Go to PostgreSQL and manually insert admin user: # by using “sudo -u postgres psql”

“INSERT INTO admin_user (id, uuid, status, email, password, full_name, created_at, updated_at)

VALUES (1, gen_random_uuid(), true, 'admin@example.com',

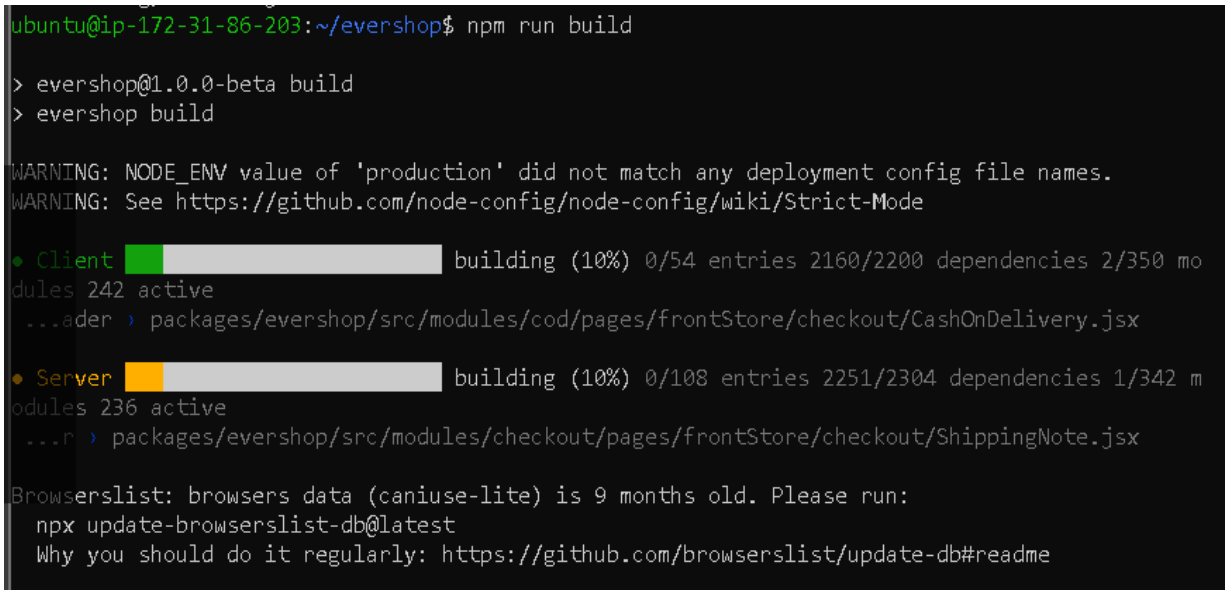
'$2b$10$YQa8D3G2gxyXony6lyhwfe/rVk5IrfEw0EkekjC98Dua5cGX56l6y', 'Admin', now(), now());”

Now if you done the things successfully you can get into the admin page successfully

8.Admin User Setup:

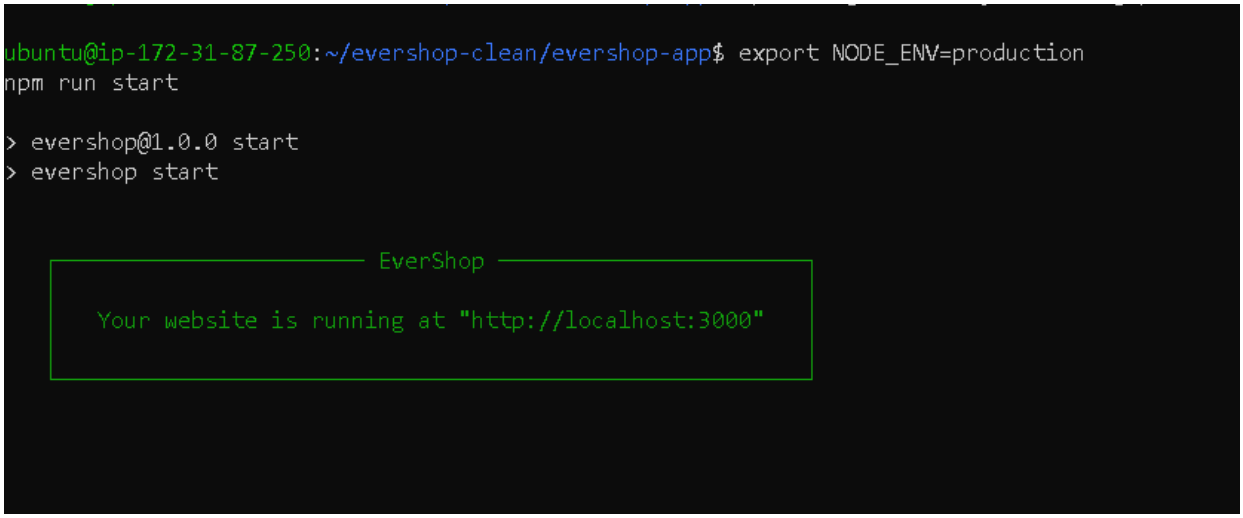
“npm install”

“npm run build”



9. Run with PM2:

“npm run start”



So by this you successfully deployed the evershop folder in the EC2 instance and it is in the running state and yet there is a process to go.

We need to save this in the background of my PM2 so even after closing the instance it will still run the site.

“sudo npm install pm2@latest -g”

“pm2 start npm --name "evershop" -- start”

“pm2 startup”

“pm2 save”

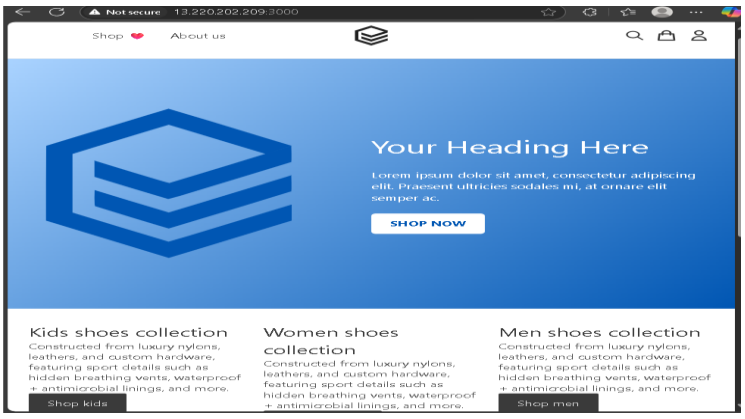
```
6Z-debug-0.log
ubuntu@ip-172-31-87-250:~/evershop-clean/evershop-app$ sudo npm install -g pm2

changed 135 packages in 7s

13 packages are looking for funding
  run `npm fund` for details
ubuntu@ip-172-31-87-250:~/evershop-clean/evershop-app$ pm2 start npm --name evershop -- start
[PM2] Starting /usr/bin/npm in fork_mode (1 instance)
[PM2] Done.
```

id	name	mode	↺	status	cpu	memory
0	evershop	fork	0	online	0%	15.3mb

```
ubuntu@ip-172-31-87-250:~/evershop-clean/evershop-app$ pm2 save
[PM2] Saving current process list...
[PM2] Successfully saved in /home/ubuntu/.pm2/dump.pm2
ubuntu@ip-172-31-87-250:~/evershop-clean/evershop-app$ pm2 startup
[PM2] Init System found: systemd
```

By this the task 2 is done and your website will be running in the background so you can test it by “http://<PublicIP>:3000”

To access the admin page “http://<PublicIP>:3000/admin” now put your username and password to login into the page



Now you can access the dashboard and access thing through this

Link - EC2-IP

By this Task 2 is done.

Task 3: Load Balancing and Auto Scaling

1. Launch Template:

create a launch template using existing EC2 config.

Set port `3000` as the app runs there.

Just do the same what we did while creating EC2 instance and attach the same security group in this and click the advanced tab and in user data

#!/bin/bash

 # Update system

apt update -y && apt upgrade -y

 # Install dependencies

apt install -y curl git unzip build-essential postgresql postgresql-contrib

 # Install Node.js (v18 LTS)

curl -fsSL https://deb.nodesource.com/setup_18.x | bash -

apt install -y nodejs

cd evershop-clean/evershop-app

 # Setup .env for PostgreSQL

cat <<EOF > .env

DB_CLIENT=pg

DB_HOST=localhost

DB_PORT=5432

DB_USER=my_evershop

DB_PASSWORD=admin123

DB_DATABASE=evershop

EOF

 # Install node modules and build app

npm install

npm run build

 # Setup PM2

npm install -g pm2

pm2 start npm --name "evershop" -- start

pm2 startup

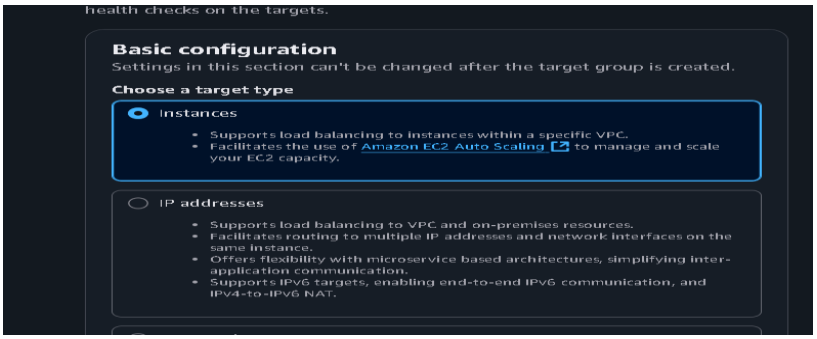
pm2 save

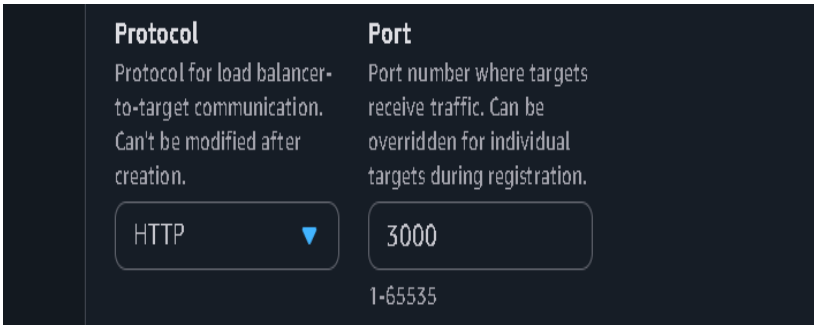
This User Data script automatically installs all dependencies, sets up PostgreSQL config, builds the app, and starts it using PM2 on EC2 launch.

2. Create Target Group:

- **Type: Instance**
- **Protocol: HTTP, Port: 3000**

- **Health check path: `/health`**





In EC2 Type “nano server,js”

“app.get('/health', (req, res) => res.status(200).send('OK'));” - paste this

Press : ctrl + o - to save

Press : enter

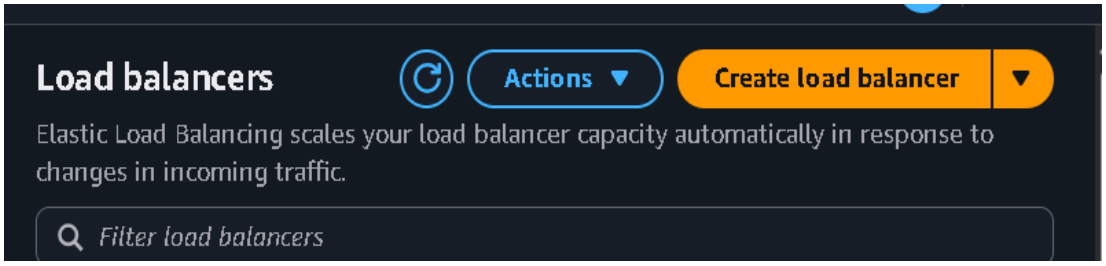
Press : ctrl + x - to exit

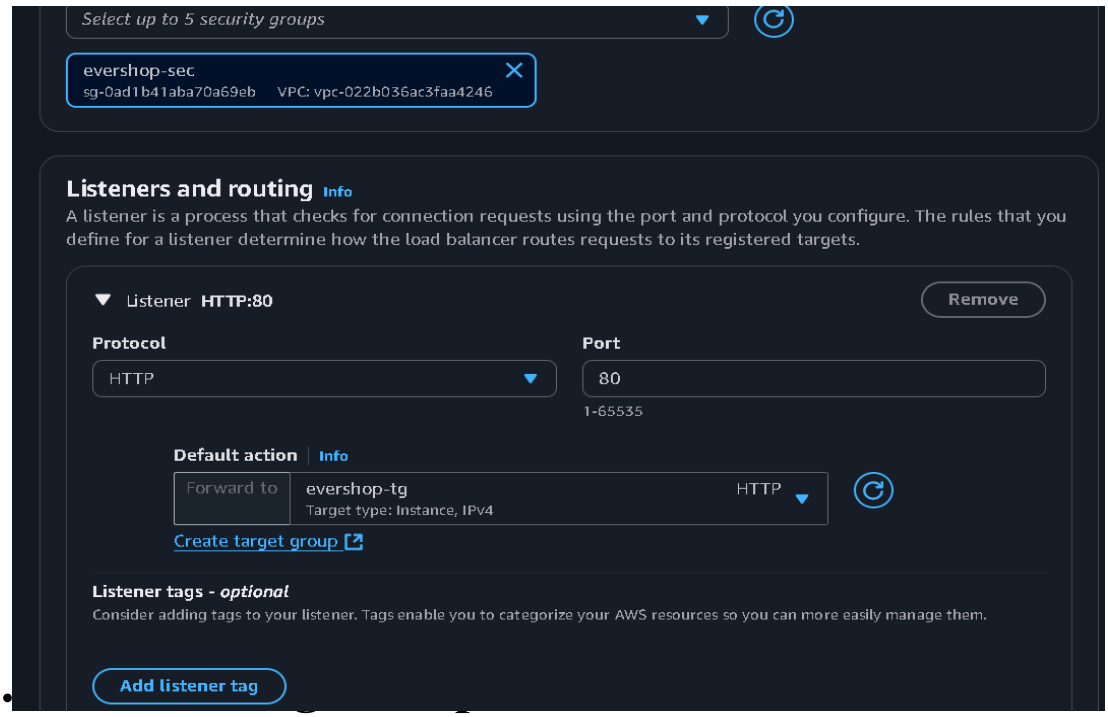
Now this will be saved in your js server

3. Application Load Balancer:

- **Create ALB with public subnets.**

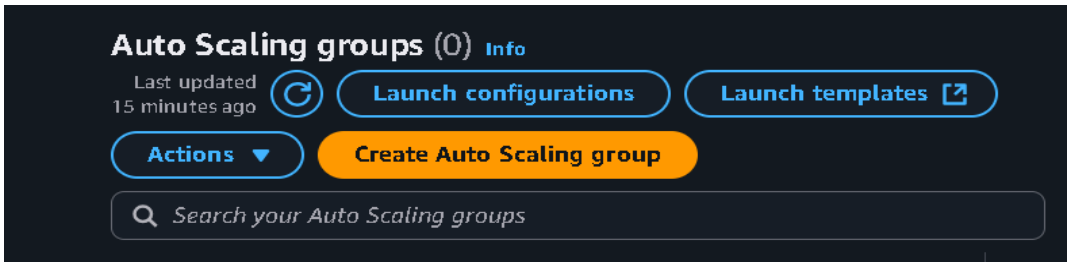
- **Attach the target group.**

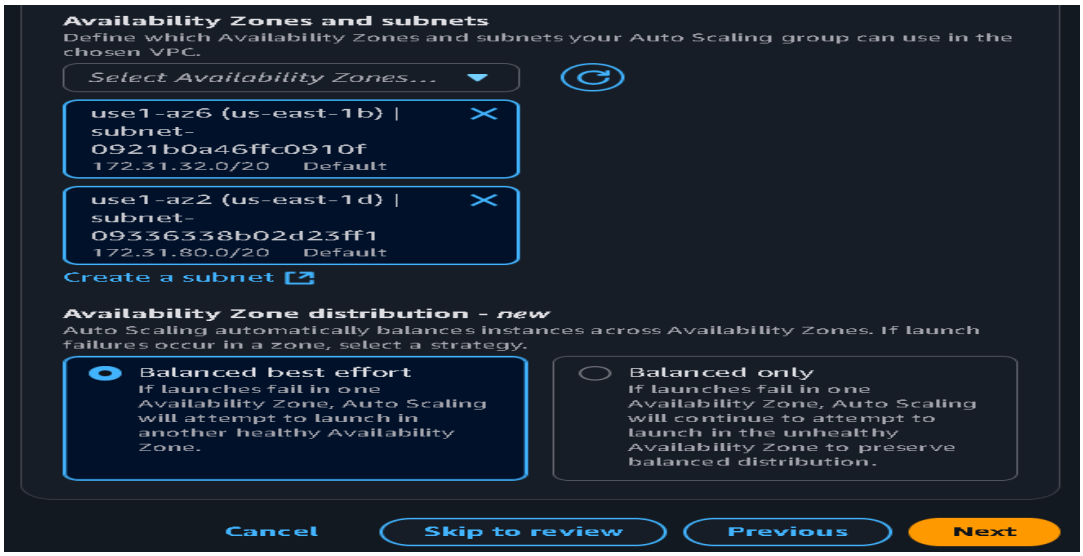




4.

- **Use a launch template.**
- **Attach to the ALB target group.**
- **Min: 1, Max: 2 instances.**
- **Health checks: ALB**

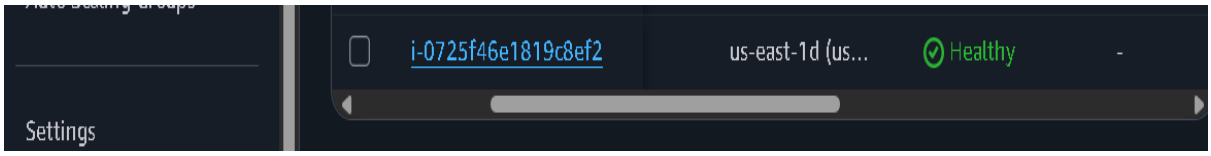




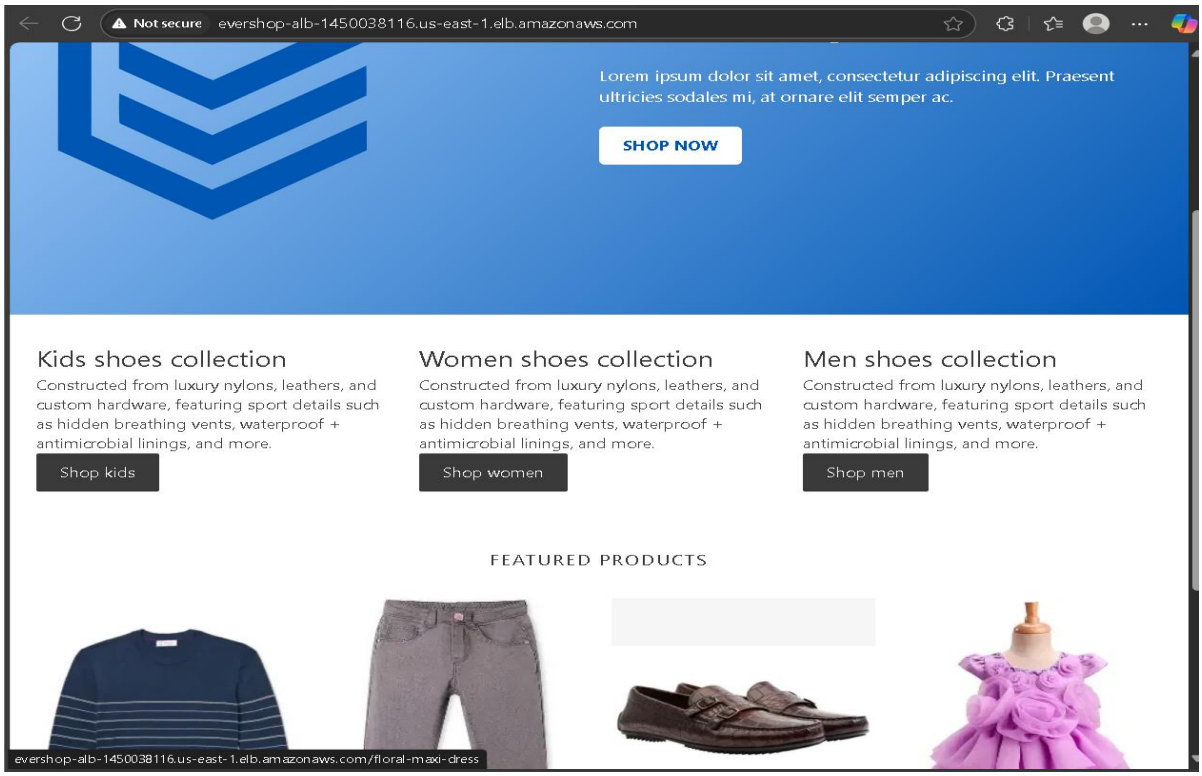
Enable EC2 to ELB in that and create it.

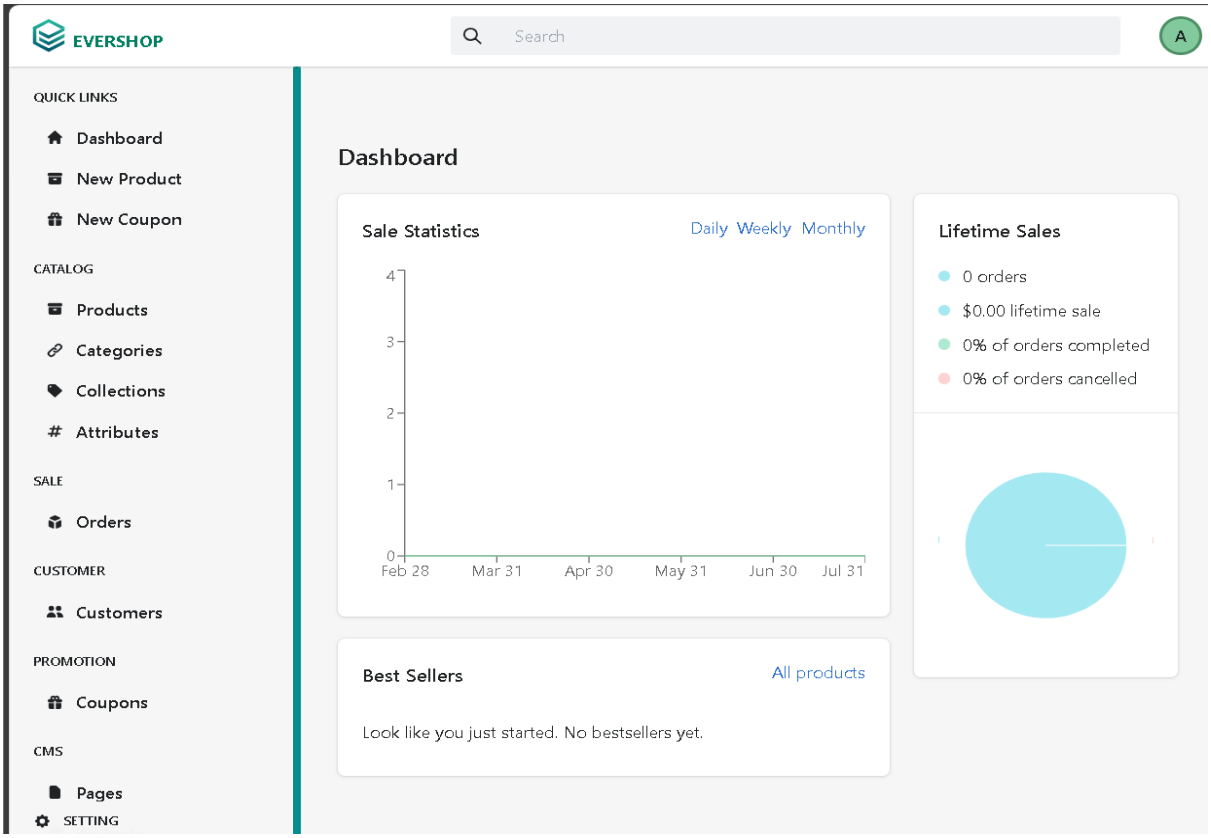
5. Validate Health Checks

- **Make sure /health returns HTTP 200.**
- **Target Group shows healthy**



Since its healthy everything is fine we can copy our DNS in ABL and use it in url and we can see our output


Not secure
evershop-alb-1450038116.us-east-1.elb.amazonaws.com
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Praesent ultricies sodales mi, at ornare elit semper ac.
SHOP NOW
Kids shoes collection
Constructed from luxury nylons, leathers, and custom hardware, featuring sport details such as hidden breathing vents, waterproof + antimicrobial linings, and more.
Shop kids
Women shoes collection
Constructed from luxury nylons, leathers, and custom hardware, featuring sport details such as hidden breathing vents, waterproof + antimicrobial linings, and more.
Shop women
Men shoes collection
Constructed from luxury nylons, leathers, and custom hardware, featuring sport details such as hidden breathing vents, waterproof + antimicrobial linings, and more.
Shop men
FEATURED PRODUCTS
evershop-alb-1450038116.us-east-1.elb.amazonaws.com/floral-maxi-dress


EVERSHOP
Search
A
QUICK LINKS
Dashboard
New Product
New Coupon
CATALOG
Products
Categories
Collections
Attributes
SALE
Orders
CUSTOMER
Customers
PROMOTION
Coupons
CMS
Pages
SETTING
Dashboard
Sale Statistics
Daily Weekly Monthly
4
3
2
1
0
Feb 28
Mar 31
Apr 30
May 31
Jun 30
Jul 31
Lifetime Sales
0 orders
$0.00 lifetime sale
0% of orders completed
0% of orders cancelled
Best Sellers
All products
Look like you just started. No bestsellers yet.

We can see that the AlB is working fine and we can get into dash bord and change the things as how we like

LINK - EverShop or http://evershop-alb-1450038116.us-east-1.elb.amazonaws.com/

Admin :

User: admin@example.com

Pass: admin123

You can access this like its in working condition.

Tools Used:

- **AWS EC2**
- **PostgreSQL**
- **Node.js, PM2**
- **ALB & Auto Scaling**
- **GitHub (custom repo)**
- **Admin setup via SQL**

By this we completed every task which was assigned and the project was completed 🚀 .

Intern Certificate:

NULLCLASS

Issued Jun 15 2025

CERTIFICATE OF TRAINING

THIS CERTIFICATE IS PRESENTED TO

Goutham .K

has successfully completed online training on

Cloud Technology

and real-time project training on

Learn To Deploy Real Time Website in AWS

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DOC ID: 684e8774217838 3f96a95084