Deploying a Medusa application on an AWS EC2 instance

1. Launch an EC2 Instance

Go to the [EC2 dashboard](#).
Launch a New Instance:

- Click Launch Instance.
- Choose an Amazon Machine Image (AMI). For simplicity, use Ubuntu Server 20.04 LTS.
- Select an instance type, such as t2.small (free tier eligible).
- Configure instance details, add storage, and configure security group:

  - Open ports: 22 (SSH), 80 (HTTP), 443 (HTTPS), and 5432 (PostgreSQL or MYSQL)

- Review and launch the instance.

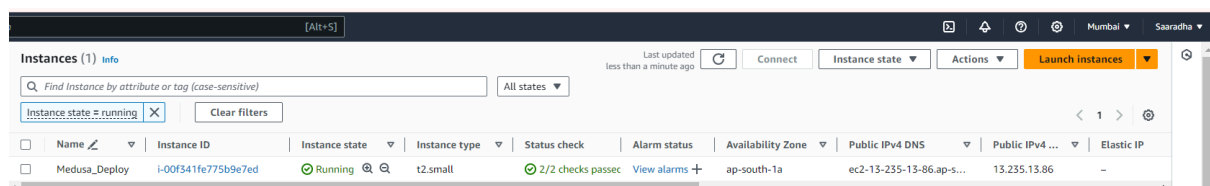## 2. Install Packages

3. Set Up Medusa

4. Clone Medusa Repository

Configure Public Access: Ensure the application is accessible via the public IP or a domain name by configuring EC2 networking and DNS settings.

In the LOOM video , I explained Using Docker Method.

Here I'm attaching the Usual Method to access the Medusa Application.

- **npm install**

- **npm run build**

- **npm run seed**

- **npm start**

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
☐	Medusa_Deploy	i-00f341fe775b9e7ed	⊘ Running	t2.small	⊘ 2/2 checks passed	View alarms +	ap-south-1a	ec2-13-235-13-86.ap-s...	13.235.13.86	–

i-00f341fe775b9e7ed (Medusa_Deploy)

IAM Role
–

Owner ID
637423411572

Launch time
Mon Sep 16 2024 20:12:23 GMT+0530 (India Standard Time)

Security groups
sg-05482e3f771f75e5e (launch-wizard-37)

▼ Inbound rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups	Description
–	sgr-0b6850623d0e00718	80	TCP	0.0.0.0/0	launch-wizard-37 ↗	–
–	sgr-0f99118a15c507bc2	9000	TCP	0.0.0.0/0	launch-wizard-37 ↗	–
–	sgr-0e01b36e791625f54	443	TCP	0.0.0.0/0	launch-wizard-37 ↗	–
–	sgr-0ea95ba0180d05a92	22	TCP	0.0.0.0/0	launch-wizard-37 ↗	–
–	sgr-0f59371ff8458686c	7001	TCP	0.0.0.0/0	launch-wizard-37 ↗	–

```
ubuntu@ip-172-31-37-194:~$ sudo apt update -y
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:5 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:9 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:10 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
```

```
ubuntu@ip-172-31-37-194:~$ curl -fsSL https://deb.nodesource.com/setup_16.x | sudo -E bash -

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                         DEPRECATION WARNING

       Node.js 16.x is no longer actively supported!

   You will not receive security or critical stability updates for this version.

   You should migrate to a supported version of Node.js as soon as possible.
   Use the installation script that corresponds to the version of Node.js you
   wish to install. e.g.

    * https://deb.nodesource.com/setup_16.x - Node.js 16 "Gallium" (deprecated)
    * https://deb.nodesource.com/setup_18.x - Node.js 18 "Hydrogen" (Maintenance)
    * https://deb.nodesource.com/setup_19.x - Node.js 19 "Nineteen" (deprecated)
    * https://deb.nodesource.com/setup_20.x - Node.js 20 LTS "Iron" (recommended)
    * https://deb.nodesource.com/setup_21.x - Node.js 21 "Iron" (current)


   Please see https://github.com/nodejs/Release for details about which
   version may be appropriate for you.
```

```
ubuntu@ip-172-31-37-194:~$ sudo apt-get install -y nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  nodejs
0 upgraded, 1 newly installed, 0 to remove and 130 not upgraded.
Need to get 27.5 MB of archives.
After this operation, 128 MB of additional disk space will be used.
Get:1 https://deb.nodesource.com/node_16.x nodistro/main amd64 nodejs amd64 16.20.2-1nodesource1 [27.5 MB]
Fetched 27.5 MB in 1s (52.4 MB/s)
Selecting previously unselected package nodejs.
(Reading database ... 67745 files and directories currently installed.)
Preparing to unpack .../nodejs_16.20.2-1nodesource1_amd64.deb ...
Unpacking nodejs (16.20.2-1nodesource1) ...
Setting up nodejs (16.20.2-1nodesource1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
```

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-37-194:~$ sudo apt install postgresql postgresql-contrib
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libcommon-sense-perl libjson-perl libjson-xs-perl libllvm17t64 libpq5 libtypes-serialiser-perl postgresql-16 postgresql-client-16
  postgresql-client-common postgresql-common ssl-cert
Suggested packages:
  postgresql-doc postgresql-doc-16
The following NEW packages will be installed:
  libcommon-sense-perl libjson-perl libjson-xs-perl libllvm17t64 libpq5 libtypes-serialiser-perl postgresql postgresql-16 postgresql-client-16
  postgresql-client-common postgresql-contrib ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 130 not upgraded.
Need to get 43.5 MB of archives.
After this operation, 175 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjson-perl all 4.10000-1 [81.9 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql-client-common all 257build1.1 [36.4 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 ssl-cert all 1.1.2ubuntu1 [17.8 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql-common all 257build1.1 [161 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libcommon-sense-perl amd64 3.75-3build3 [20.4 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libtypes-serialiser-perl all 1.01-1 [11.6 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjson-xs-perl amd64 4.030-2build3 [83.6 kB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libllvm17t64 amd64 1:17.0.6-9ubuntu1 [26.2 MB]
Get:9 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libpq5 amd64 16.4-0ubuntu0.24.04.2 [141 kB]
Get:10 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql-client-16 amd64 16.4-0ubuntu0.24.04.2 [1271 kB]
Get:11 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql-16 amd64 16.4-0ubuntu0.24.04.2 [15.5 MB]
Get:12 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql all 16+257build1.1 [11.6 kB]
Get:13 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql-contrib all 16+257build1.1 [11.6 kB]
Fetched 43.5 MB in 1s (55.3 MB/s)
Preconfiguring packages ...
```

```
ubuntu@ip-172-31-37-194:~$ sudo npm install -g @medusajs/medusa-cli
npm WARN deprecated @oclif/screen@1.0.4: Deprecated in favor of @oclif/core
npm WARN deprecated @oclif/help@1.0.15: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated @oclif/errors@1.3.6: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated @oclif/errors@1.3.5: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated inflight@1.0.6: This module is not supported, and leaks memory. Do not use it. Check out lru-cache if you want a good and tested way to
coalesce async requests by a key value, which is much more comprehensive and powerful.
npm WARN deprecated @oclif/parser@3.8.17: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated glob@8.1.0: Glob versions prior to v9 are no longer supported
npm WARN deprecated @oclif/config@1.18.16: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated @oclif/command@1.8.36: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated glob@7.2.3: Glob versions prior to v9 are no longer supported
npm WARN deprecated cli-ux@5.6.7: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated @oclif/config@1.18.17: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm WARN deprecated @oclif/config@1.18.2: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.

added 337 packages, and audited 338 packages in 35s
```

```
ubuntu@ip-172-31-37-194:~$ sudo service postgresql start
ubuntu@ip-172-31-37-194:~$ sudo -u postgres psql
psql (16.4 (Ubuntu 16.4-0ubuntu0.24.04.2))
Type "help" for help.

postgres=# \l
                                              List of databases
   Name    |  Owner   | Encoding | Locale Provider | Collate |  Ctype  | ICU Locale | ICU Rules |   Access privileges
-----------+----------+----------+-----------------+---------+---------+------------+-----------+-----------------------
 postgres  | postgres | UTF8     | libc            | C.UTF-8 | C.UTF-8 |            |           |
 template0 | postgres | UTF8     | libc            | C.UTF-8 | C.UTF-8 |            |           | =c/postgres          +
           |          |          |                 |         |         |            |           | postgres=CTc/postgres
 template1 | postgres | UTF8     | libc            | C.UTF-8 | C.UTF-8 |            |           | =c/postgres          +
           |          |          |                 |         |         |            |           | postgres=CTc/postgres
(3 rows)

postgres=# exit;
ubuntu@ip-172-31-37-194:~$
```

```
ubuntu@ip-172-31-45-45:~$ cd my-medusa-app
ubuntu@ip-172-31-45-45:~/my-medusa-app$ nano .env
ubuntu@ip-172-31-45-45:~/my-medusa-app$ npm install

up to date, audited 2028 packages in 15s

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

21 vulnerabilities (9 moderate, 9 high, 3 critical)

To address issues that do not require attention, run:
  npm audit fix

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
ubuntu@ip-172-31-45-45:~/my-medusa-app$ npm run seed

> medusa-starter-default@0.0.1 seed
> cross-env medusa seed -f ./data/seed.json
```

```
ubuntu@ip-172-31-45-45:~/my-medusa-app$ sudo -u postgres psql
psql (16.4 (Ubuntu 16.4-0ubuntu0.24.04.2))
Type "help" for help.

postgres=# CREATE DATABASE medusa_db;
CREATE DATABASE
postgres=# \q
ubuntu@ip-172-31-45-45:~/my-medusa-app$ npm run seed

> medusa-starter-default@0.0.1 seed
> cross-env medusa seed -f ./data/seed.json

query: SELECT * FROM current_schema()
query: SELECT version();
query: SELECT * FROM "information_schema"."tables" WHERE "table_schema" = 'public' AND "table_name" = 'migrations'
query: CREATE TABLE "migrations" ("id" SERIAL NOT NULL, "timestamp" bigint NOT NULL, "name" character varying NOT NULL, CONSTRAINT "PK_8c82d7f526340ab734260
ea46be" PRIMARY KEY ("id"))
query: SELECT * FROM "migrations" "migrations" ORDER BY "id" DESC
query: START TRANSACTION
query: CREATE TABLE "fulfillment_provider" ("id" character varying NOT NULL, "is_installed" boolean NOT NULL DEFAULT true, CONSTRAINT "PK_beb35a6de60a6c4f91
d5ae57e44" PRIMARY KEY ("id"))
query: CREATE TABLE "fulfillment_item" ("fulfillment_id" character varying NOT NULL, "item_id" character varying NOT NULL, "quantity" integer NOT NULL, CONS
TRAINT "PK_bc3e8a388de75db146a249922e0" PRIMARY KEY ("fulfillment_id", "item_id"))
query: CREATE TABLE "fulfillment" ("id" character varying NOT NULL, "swap_id" character varying, "order_id" character varying, "tracking_numbers" jsonb NOT
NULL DEFAULT '[]', "data" jsonb NOT NULL, "shipped_at" TIMESTAMP WITH TIME ZONE, "canceled_at" TIMESTAMP WITH TIME ZONE, "created_at" TIMESTAMP WITH TIME ZO
NE NOT NULL DEFAULT now(), "updated_at" TIMESTAMP WITH TIME ZONE NOT NULL DEFAULT now(), "metadata" jsonb, "idempotency_key" character varying, "provider_id
" character varying, CONSTRAINT "PK_50c102da132afffae660585981f" PRIMARY KEY ("id"))
query: CREATE TABLE "return_item" ("return_id" character varying NOT NULL, "item_id" character varying NOT NULL, "quantity" integer NOT NULL, "is_requested"
 boolean NOT NULL DEFAULT true, "requested_quantity" integer, "received_quantity" integer, "metadata" jsonb, CONSTRAINT "PK_46409dc1dd5f38509b9000c3069" PRI
MARY KEY ("return_id", "item_id"))
query: CREATE TABLE "currency" ("code" character varying NOT NULL, "symbol" character varying NOT NULL, "symbol_native" character varying NOT NULL, "name" c
haracter varying NOT NULL, CONSTRAINT "PK_723472e41cae44beb0763f4039c" PRIMARY KEY ("code"))
query: CREATE TABLE "country" ("id" SERIAL NOT NULL, "iso_2" character varying NOT NULL, "iso_3" character varying NOT NULL, "num_code" integer NOT NULL, "n
ame" character varying NOT NULL, "display_name" character varying NOT NULL, "region_id" character varying, CONSTRAINT "PK_bf6e37c231c4f4ea56dcd887269" PRIMA
RY KEY ("id"))
query: CREATE UNIQUE INDEX "IDX_e78901b1131eaf8203d9b1cb5f" ON "country" ("iso_2")
query: CREATE TABLE "payment_provider" ("id" character varying NOT NULL, "is_installed" boolean NOT NULL DEFAULT true, CONSTRAINT "PK_ea94f42b6c88e9191c3649
d7522" PRIMARY KEY ("id"))
query: CREATE TABLE "region" ("id" character varying NOT NULL, "name" character varying NOT NULL, "currency_code" character varying NOT NULL, "tax_rate" num
```

```
ubuntu@ip-172-31-45-45: ~/r          +  ∨                                                                    —  □  ✕

✔Database initialized - 86ms
✔Repositories initialized - 29ms
✔Services initialized - 223ms
⌐ Initializing modules
✔Modules initialized - 139ms
✔Express intialized - 2ms
⌐ Initializing plugins
✔Plugins intialized - 37368ms
✔Subscribers initialized - 91ms
✔API initialized - 364ms
⌐ Initializing defaults
warn:    You don't have any notification provider plugins installed. You may want to add one to your project.
✔Defaults initialized - 313ms
⌐ Initializing search engine indexing
✔Indexing event emitted - 67ms
ubuntu@ip-172-31-45-45:~/my-medusa-app$ npm run start

> medusa-starter-default@0.0.1 start
> cross-env npm run build && medusa start


> medusa-starter-default@0.0.1 build
> cross-env npm run clean && npm run build:server && npm run build:admin


> medusa-starter-default@0.0.1 clean
> cross-env ./node_modules/.bin/rimraf dist


> medusa-starter-default@0.0.1 build:server
> cross-env npm run clean && tsc -p tsconfig.server.json


> medusa-starter-default@0.0.1 clean
> cross-env ./node_modules/.bin/rimraf dist


> medusa-starter-default@0.0.1 build:admin
> cross-env medusa-admin build
```

```
ubuntu@ip-172-31-45-45: ~/r          +  ∨                                                                    —  □  ✕

info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
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info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
info:      Processing product.created which has 0 subscribers
info:      Processing product-variant.created which has 0 subscribers
::ffff:162.216.141.10 - - [16/Sep/2024:16:08:02 +0000] "GET / HTTP/1.1" 404 139 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, li
ke Gecko) Chrome/128.0.0.0 Safari/537.36"
::ffff:162.216.141.10 - - [16/Sep/2024:16:08:06 +0000] "GET / HTTP/1.1" 404 139 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, li
ke Gecko) Chrome/128.0.0.0 Safari/537.36"
::ffff:162.216.141.10 - - [16/Sep/2024:16:08:06 +0000] "GET / HTTP/1.1" 404 139 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, li
ke Gecko) Chrome/128.0.0.0 Safari/537.36"
```

DOCKER METHOD

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\USER> cd Downloads/
PS C:\Users\USER\Downloads> ssh -i "medusa.pem" ubuntu@ec2-43-204-211-80.ap-south-1.compute.amazonaws.com
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1012-aws x86_64)

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

 System information as of Mon Sep 16 10:53:40 UTC 2024

  System load:  0.92              Processes:             123
  Usage of /:   85.3% of 6.71GB   Users logged in:       1
  Memory usage: 47%               IPv4 address for enX0: 172.31.0.119
  Swap usage:   0%

  => / is using 85.3% of 6.71GB


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


*** System restart required ***
Last login: Mon Sep 16 10:50:19 2024 from 162.216.141.10
ubuntu@ip-172-31-0-119:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
4 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

```
ubuntu@ip-172-31-0-119:~$ npm -v
10.8.3
ubuntu@ip-172-31-0-119:~$ node -v
v18.20.4
ubuntu@ip-172-31-0-119:~$ mysql --version
mysql  Ver 8.0.39-0ubuntu0.24.04.2 for Linux on x86_64 ((Ubuntu))
ubuntu@ip-172-31-0-119:~$ docker --version
Docker version 24.0.7, build 24.0.7-0ubuntu4.1
ubuntu@ip-172-31-0-119:~$ git --version
git version 2.43.0
ubuntu@ip-172-31-0-119:~$ docker-compose --version
docker-compose version 1.29.2, build unknown
ubuntu@ip-172-31-0-119:~$ ls
Dockerfile  Medusa_backend  node_modules  package-lock.json  package.json
```

```
ubuntu@ip-172-31-0-119:~/Medusa_backend$ sudo docker images
REPOSITORY    TAG        IMAGE ID        CREATED         SIZE
medusa        latest     57d82bdb1097    3 minutes ago   234MB
<none>        <none>     925fde09c645    4 minutes ago   1.03GB
node          16-alpine  2573171e0124    13 months ago   118MB
ubuntu@ip-172-31-0-119:~/Medusa_backend$ sudo docker ps -a
CONTAINER ID   IMAGE    COMMAND               CREATED         STATUS                  PORTS      NAMES
6032aef82862   medusa   "docker-entrypoint.s…"  10 seconds ago  Exited (0) 9 seconds ago           zen_cartwright
```
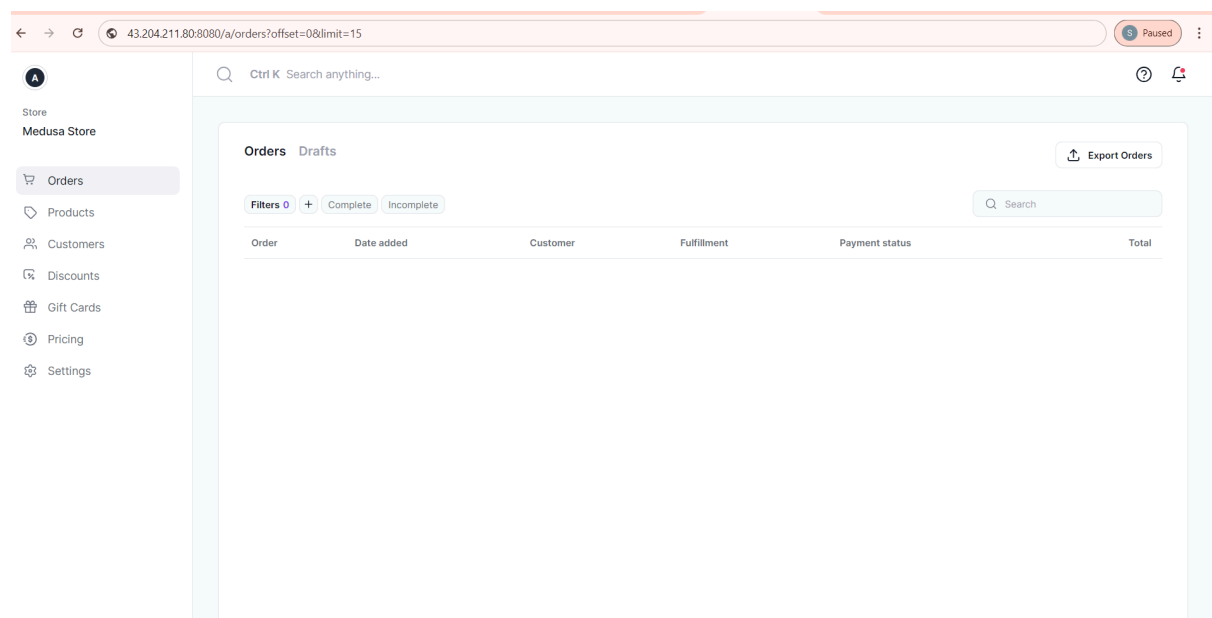
DEPLOYMENT SITE

http://43.204.211.80:8080/

Summary

- Using Docker: Build and run the application with Docker commands.
- Direct Node.js Execution: Run the application directly with Node.js if not using npm.
- Alternative Package Manager: Use Yarn or another tool if npm is not preferred.
- Direct Execution: For non-Node.js apps, use appropriate commands or binaries.