

Task 2- Containerize and Run Medusa Locally using Docker 11-09-2024

Step 1: Install Docker

Ensure you have Docker installed on your system. You can download it from the official Docker website and follow the installation instructions for your OS (Windows, macOS, or Linux).

Step 2: Clone the Medusa GitHub Repository

Start by cloning the official Medusa repository. Open your terminal and run the following command:

```
git clone https://github.com/SAARA213/Medusa_backend.git
cd Medusa_backend
```

This clones the repository and navigates to the directory.

Step 3: Create a Dockerfile

Inside the Medusa directory, create a `Dockerfile` to containerize Medusa.

Step 4: Build the Docker Image

To create a Docker image from the `Dockerfile`, run the following command in the terminal:

```
docker build -t medusa-server .
```

This command builds the Docker image with the tag `medusa-server`.

Step 5: Create a `docker-compose.yml`

To simplify running the container with dependencies like a database, create a `docker-compose.yml` file:

This configuration starts two services:

- **Medusa:** The Medusa server that we built.
- **Postgres:** A PostgreSQL database.

Step 6: Run the Containers

To start the containers with Docker Compose, use this command:

```
docker-compose up
```

Step 7: Access Medusa

Once the containers are running, you can access Medusa at <http://localhost:7001>.

Explanation Summary:

- **Dockerfile:** Defines the steps to build a Medusa image.
- **Docker Compose:** Simplifies running multiple containers (Medusa and PostgreSQL).
- **Ports:** Ensures your local machine can access Medusa through port 7001.
- **Environment:** Sets up development or production environments through variables.

```
C:\Users\USER>medusa new my-medusa-eval
  Created starter directory layout - 2840ms
Info: Installing packages...

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 @babel/plugin-proposal-class-properties@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no long
er maintained. Please use @babel/plugin-transform-class-properties instead.
npm WARN deprecated rimraf@2.6.3: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated @babel/plugin-proposal-optional-chaining@7.21.0: This proposal has been merged to the ECMAScript standard and thus this plugin is no lon
ger maintained. Please use @babel/plugin-transform-optional-chaining instead.
npm WARN deprecated @oclif/screen@1.0.4: Deprecated in favor of @oclif/core
npm WARN deprecated rimraf@3.0.2: Rimraf versions prior to v4 are no longer supported
npm WARN deprecated glob@7.2.3: Glob versions prior to v9 are no longer supported
npm WARN deprecated glob@8.1.0: Glob versions prior to v9 are no longer supported
npm WARN deprecated glob@8.1.0: Glob versions prior to v9 are no longer supported
npm WARN deprecated glob@8.1.0: Glob versions prior to v9 are no longer supported
npm WARN deprecated abab@2.0.6: Use your platform's native atob() and btoa() methods instead
npm WARN deprecated domexception@2.0.1: Use your platform's native DOMException instead
npm WARN deprecated w3c-hr-time@1.0.2: Use your platform's native performance.now() and performance.timeOrigin.
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 @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 @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.
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/parser@3.8.17: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
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 core-js@1.2.7: core-js@<3.23.3 is no longer maintained and not recommended for usage due to the number of issues. Because of the V8 engi
ne whims, feature detection in old core-js versions could cause a slowdown up to 100x even if nothing is polyfilled. Some versions have web compatibility is
sues. Please, upgrade your dependencies to the actual version of core-js.
```

METHOD 1- FIRST, USED SERVER TO ENSURE WHETHER MY APPLICATION IS WORKING OR NOT , IT WORKS WELL.

```
ubuntu@ip-172-31-34-3: ~/M x + v
ubuntu@ip-172-31-34-3:~$ docker --version
Docker version 24.0.7, build 24.0.7-0ubuntu4.1
ubuntu@ip-172-31-34-3:~$ docker-compose --version
docker-compose version 1.29.2, build unknown
ubuntu@ip-172-31-34-3:~$ git clone https://github.com/SAARA213/Medusa_backend.git
fatal: destination path 'Medusa_backend' already exists and is not an empty directory.
ubuntu@ip-172-31-34-3:~$ cd Medusa_backend
ubuntu@ip-172-31-34-3:~/Medusa_backend$ ls
CHANGELOG.md  CONTRIBUTING.md  LICENSE  SECURITY.md  integration-tests  package.json  scripts  www
CODEOWNERS  Dockerfile  README.md  docker-compose.yaml  jest.config.js  packages  turbo.json  yarn.lock
ubuntu@ip-172-31-34-3:~/Medusa_backend$ nano Dockerfile
ubuntu@ip-172-31-34-3:~/Medusa_backend$ cat Dockerfile
# Step 1: Use the official Node.js image as the base image
FROM node:16-alpine

# Step 2: Set the working directory inside the container
WORKDIR /app

# Step 3: Copy package.json and package-lock.json to the working directory
COPY package*.json ./

# Step 4: Install Medusa's dependencies
RUN npm install --production

# Step 5: Copy all other files to the working directory
COPY . .

# Step 6: Build the Medusa server (if necessary, depends on your Medusa setup)
RUN npm run build

# Step 7: Expose the port that Medusa will run on
EXPOSE 7001

# Step 8: Set the environment variables for production (optional)
ENV NODE_ENV=production

# Step 9: Start the Medusa server
CMD ["npm", "run", "start"]
ubuntu@ip-172-31-34-3:~/Medusa_backend$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
medusa        latest   443afa5fe272   32 minutes ago  1.68GB
```

```
ubuntu@ip-172-31-34-3:~/Medusa_backend$ ls
CHANGELOG.md  CONTRIBUTING.md  LICENSE  SECURITY.md  integration-tests  package.json  scripts  www
CODEOWNERS  Dockerfile  README.md  docker-compose.yaml  jest.config.js  packages  turbo.json  yarn.lock
ubuntu@ip-172-31-34-3:~/Medusa_backend$ cat docker-compose.yaml
version: '3'
services:
  medusa:
    image: medusa-server
    build:
      context: .
    ports:
      - "7001:7001"
    environment:
      - NODE_ENV=development
    volumes:
      - ./app
    depends_on:
      - postgres
  postgres:
    image: postgres:13
    environment:
      POSTGRES_USER: medusa
      POSTGRES_PASSWORD: password
      POSTGRES_DB: medusa
    ports:
      - "5432:5432"
ubuntu@ip-172-31-34-3:~/Medusa_backend$ docker ps -a
permission denied while trying to connect to the Docker daemon socket at unix:///var/run/docker.sock: Get "http://%2Fvar%2Frun%2Fdocker.sock/v1.24/container
s/json?all=1": dial unix /var/run/docker.sock: connect: permission denied
ubuntu@ip-172-31-34-3:~/Medusa_backend$ sudo docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS        NAMES
83824a1e7df3   37cf319a992e  "/bin/sh -c 'npm ins..."  19 minutes ago  Exited (1)    18 minutes ago  youthful_mendelev
d1b9cc6ae8c1   medusa     "docker-entrypoint.s..."  32 minutes ago  Exited (1)    32 minutes ago  fervent_jepsen
ubuntu@ip-172-31-34-3:~/Medusa_backend$ |
```

METHOD 2- TRANSFER ALL MY FILES LOCALLY AND CONTAINERIZED PARTICULAR APPLICATION

```
Command Prompt

Microsoft Windows [Version 10.0.22631.4169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\USER>docker --version
Docker version 27.1.1, build 6312585

C:\Users\USER>docker-compose --version
Docker Compose version v2.29.1-desktop.1
```

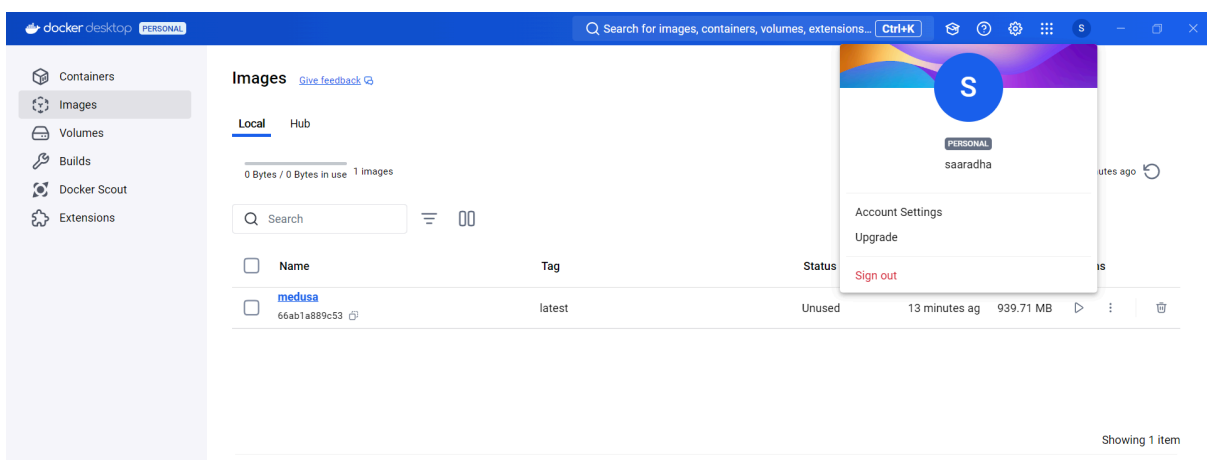
```
C:\Users\USER>git clone https://github.com/SAARA213/Medusa_backend.git
fatal: destination path 'Medusa_backend' already exists and is not an empty directory.

C:\Users\USER>cd Medusa_backend

C:\Users\USER\Medusa_backend>docker build -t medusa .
[*] Building 279.0s (13/13) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 724B
=> [internal] load metadata for docker.io/library/node:16-alpine
=> [auth] library/node:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 2.17MB
=> [build 1/5] FROM docker.io/library/node:16-alpine@sha256:alf9d027912b58a7c75be7716c97c-fbc6d3099f3a97ed84aa490be9dee20e787
=> CACHED [build 2/5] WORKDIR /app
=> CACHED [stage-1 3/4] RUN npm install -g @medusajs/medusa-cli
=> CACHED [build 3/5] COPY package*.json ./
=> [build 4/5] RUN npm install --legacy-peer-deps
=> [build 5/5] COPY . .
=> [stage-1 4/4] COPY --from=build /app .
=> exporting to image
=> => exporting layers
=> => writing image sha256:66ab1a889c53f08e33c65380eff239cb434dec56630393834c6f00679080fad0
```

```
C:\Users\USER\Medusa_backend>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
medusa              latest             66ab1a889c53       6 minutes ago      940MB

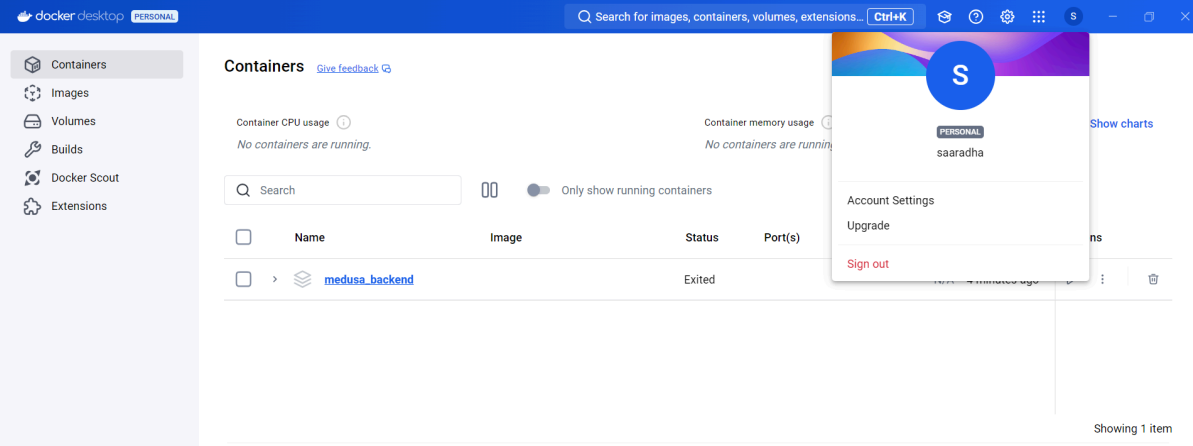
C:\Users\USER\Medusa_backend>
```

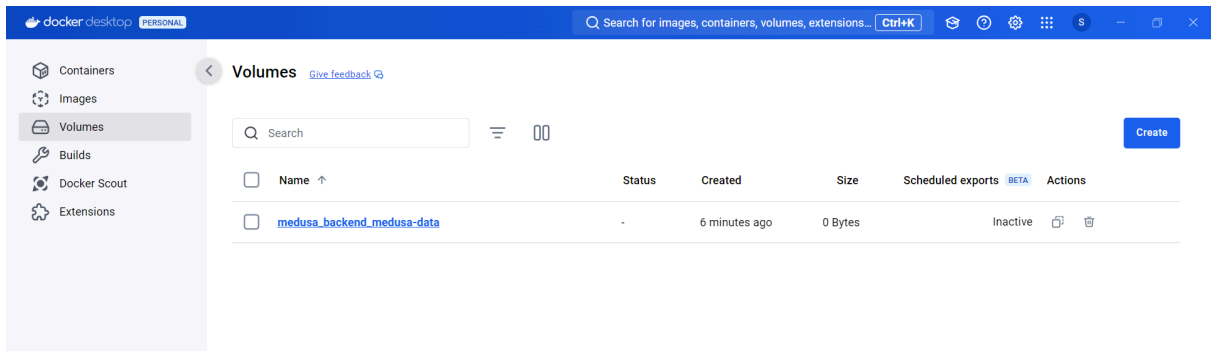


```
C:\Users\USER\Medusa_backend>docker-compose build
time="2024-09-12T09:28:28+05:30" level=warning msg="C:\\Users\\USER\\Medusa_backend\\docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[*] Building 22.0s (14/14) FINISHED
=> [medusa internal] load build definition from Dockerfile
=> => transferring dockerfile: 724B
=> [medusa internal] load metadata for docker.io/library/node:16-alpine
=> [medusa auth] library/node:pull token for registry-1.docker.io
=> [medusa internal] load .dockerignore
=> => transferring context: 28
=> [medusa internal] load build context
=> => transferring context: 2.17MB
=> [medusa build 1/5] FROM docker.io/library/node:16-alpine@sha256:a1f9d027912b58a7c75be7716c97cfbc6d3099f3a97ed84aa498be9dee20e787
=> CACHED [medusa build 2/5] WORKDIR /app
=> CACHED [medusa stage-1 3/4] RUN npm install -g @medusajs/medusa-cli
=> CACHED [medusa build 3/5] COPY package*.json ./
=> CACHED [medusa build 4/5] RUN npm install --legacy-peer-deps
=> CACHED [medusa build 5/5] COPY . .
=> CACHED [medusa stage-1 4/4] COPY --from=build /app .
=> [medusa] exporting to image
=> => exporting layers
=> => writing image sha256:c5f08f09dabd1521a2abf2cb7aa24687f8d5b571a7f9cd32029fb05d6432ea99
=> => naming to docker.io/library/medusa_backend-medusa
=> [medusa] resolving provenance for metadata file
```

```
Command Prompt
C:\Users\USER\Medusa_backend>docker-compose up
time="2024-09-12T09:21:47+05:30" level=warning msg="C:\\Users\\USER\\Medusa_backend\\docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion"
[*] Running 12/12
✓db Pulled
43c4264eed91 Pull complete
82052d0672a9 Pull complete
7636f94c0ce2 Pull complete
1fe85d163450 Pull complete
d652ddfa76d Pull complete
e785f0fb3a61 Pull complete
860abc32fb7d Pull complete
de905a21de78 Pull complete
18ae18b9a43b Pull complete
daae66c66689 Pull complete
55d20525b40e Pull complete
[*] Running 4/4
✓Network medusa_backend_medusa-network Created
✓Volume "medusa_backend_medusa-data" Created
✓Container medusa_backend-db-1 Created
✓Container medusa_backend-medusa-1 Created
Attaching to db-1, medusa-1
db-1 | The files belonging to this database system will be owned by user "postgres".
db-1 | This user must also own the server process.
db-1 |
db-1 | The database cluster will be initialized with locale "en_US.utf8".
db-1 | The default database encoding has accordingly been set to "UTF8".
db-1 | The default text search configuration will be set to "english".
db-1 |
db-1 | Data page checksums are disabled.
db-1 |
db-1 | fixing permissions on existing directory /var/lib/postgresql/data ... ok
db-1 | creating subdirectories ... ok
db-1 | selecting dynamic shared memory implementation ... posix
db-1 | selecting default max_connections ... 100
db-1 | selecting default shared_buffers ... 128MB
db-1 | selecting default time zone ... UTC
db-1 | creating configuration files ... ok
db-1 | running bootstrap script ... ok
db-1 | sh: locale: not found
db-1 | 2024-09-12 03:52:37.687 UTC [36] WARNING: no usable system locales were found
```

```
C:\Users\USER\Medusa_backend>
C:\Users\USER\Medusa_backend>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED    STATUS    PORTS    NAMES
7002c5b81bd9   medusa_backend-medusa   "docker-entrypoint.s..."  2 minutes ago    Exited (1) 2 minutes ago    medusa_backend-medusa-1
137c4d82174b   postgres:13-alpine     "docker-entrypoint.s..."  2 minutes ago    Exited (0) 32 seconds ago    medusa_backend-db-1
C:\Users\USER\Medusa_backend>
```





```
Will attempt to setup Postgres database "medusa-db-zvx8q" with credentials:
  user: postgres
  password: ***
  port: 5432
  host: localhost
Do you wish to continue with these credentials?

  Change credentials
? DB user postgres
? DB password [hidden]
? DB port 5432
? DB host localhost
✓ Created database "medusa-db-zvx8q" - 1256ms
✓ Database migrations completed. - 26364ms
info:   Final project preparations...
info:   Your new Medusa project is ready for you! To start developing run:

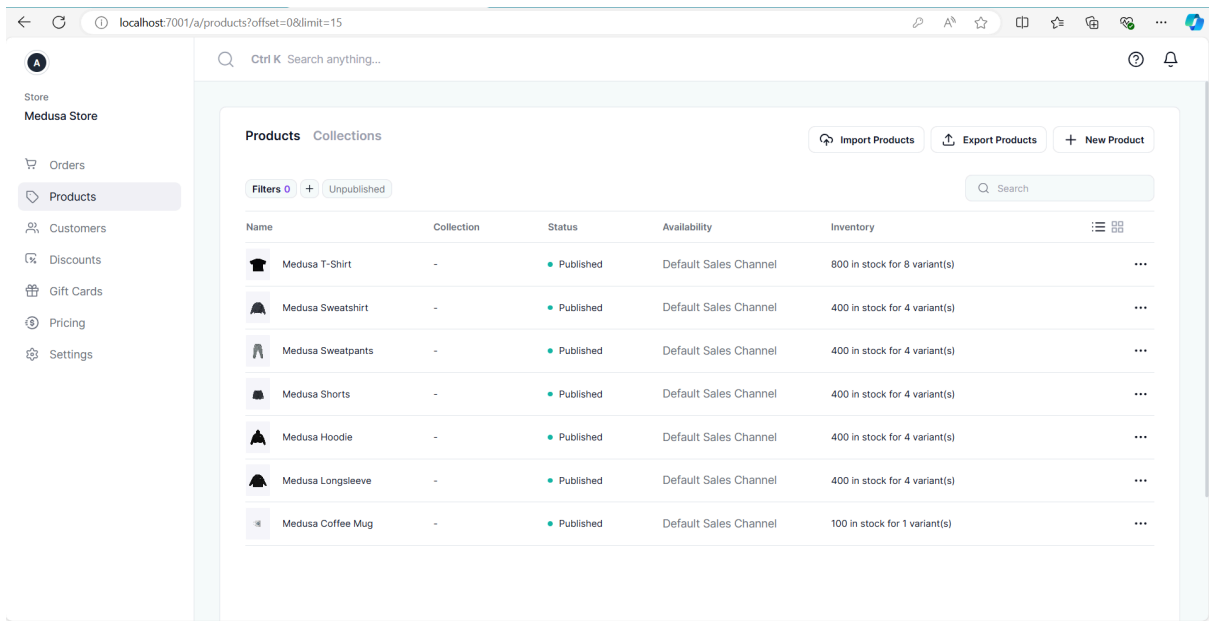
  cd my-medusa-eval
  medusa develop

C:\Users\USER>cd my-medusa-eval

C:\Users\USER\my-medusa-eval>medusa develop
Successfully compiled 0 files with Babel (48ms).
3:33:54 pm [medusajs/admin] Started development server on http://localhost:7001/
<i> [webpack-dev-server] Project is running at:
<i> [webpack-dev-server] Loopback: http://localhost:7001/, http://[::1]:7001/
<i> [webpack-dev-server] Content not from webpack is served from 'C:\Users\USER\my-medusa-eval\public' directory
<i> [webpack-dev-server] 404s will fallback to '/'
[medusa-config] ⚠ redis_url not found. A fake redis instance will be used.
info:   Using fake Redis
✓ Models initialized - 233ms
✓ Plugin models initialized - 153ms
✓ Strategies initialized - 406ms
✓ Database initialized - 1263ms
✓ Repositories initialized - 316ms
- Initializing services
✓ Services initialized - 998ms
- Initializing modules
```

```
webpack 5.94.0 compiled successfully in 84308 ms
<i> [webpack-dev-middleware] wait until bundle finished: /
<i> [webpack-dev-middleware] wait until bundle finished: /_cache_admin_src_extensions__main-entry_ts.chunk.js
<i> [webpack-dev-middleware] wait until bundle finished: /public/locales/en/translation.json
<i> [webpack-dev-middleware] wait until bundle finished: /68fda0752a470b05a5c5.ttf
<i> [webpack-dev-middleware] wait until bundle finished: /_cache_admin_src_extensions__main-entry_ts.chunk.js
<i> [webpack-dev-middleware] wait until bundle finished: /public/locales/en/translation.json
assets by status 4.29 MiB [cached] 33 assets
assets by status 36.1 MiB [emitted]
  asset vendors-node_modules_medusajs_ui_dist_cjs_index_js-node_modules_iso8601-duration_lib_index_js-398b7d.chunk.js 14.9 MiB [emitted] [minimized] (id h
int: vendors)
  asset vendors-node_modules_emoji-picker-react_dist_emoji-picker-react_esm_js-node_modules_react-col-28f01f.chunk.js 1.41 MiB [emitted] [minimized] (id h
int: vendors)
```

DEPLOYMENT SITE



CONNECT WITH DATABASE

