

Full-Stack MEAN Deployment

This project involves containerizing and deploying a full-stack MEAN (MongoDB, Express, Angular, Node.js) application with Docker, Docker Compose, GitHub Actions CI/CD, and Nginx reverse proxy.

Project Setup

- Extract the provided ZIP file and verify it contains `frontend`, `backend`, and `README.md`.
- Initialize a Git repository and push the full code to a new GitHub repository (`main` branch).

Dockerization

- Create separate `Dockerfile` for both frontend and backend.
- Build both Docker images locally using Docker.
- Push these images to your Docker Hub repository.

Virtual Machine Setup

- Launch an Ubuntu VM (e.g., AWS EC2 t2.micro).
- Install Docker and Docker Compose on the instance.

Docker Compose Deployment

- Create a `docker-compose.yml` with services: `frontend`, `backend`, and `MongoDB`.
- Run `docker-compose up -d` to deploy all services on the VM.

CI/CD with GitHub Actions

- Add `.github/workflows/main.yml` to automate:
 - Building Docker images when changes are pushed to GitHub.
 - Pushing images to Docker Hub.
 - (Optionally) Triggering a remote deploy script via SSH or webhooks.

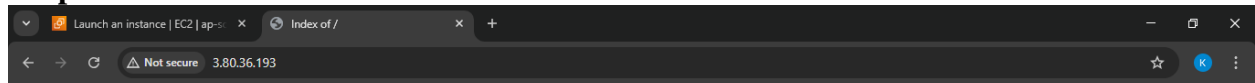
Nginx Reverse Proxy

- Install Nginx on the VM.
- Configure it to forward traffic from port 80 to the frontend container (usually running on port 4200).
- Restart Nginx to apply the configuration.

Documentation and Screenshots

- Update `README.md` with clear step-by-step setup instructions.
- Add relevant screenshots (CI/CD pipeline, DockerHub images, app UI, Nginx config).

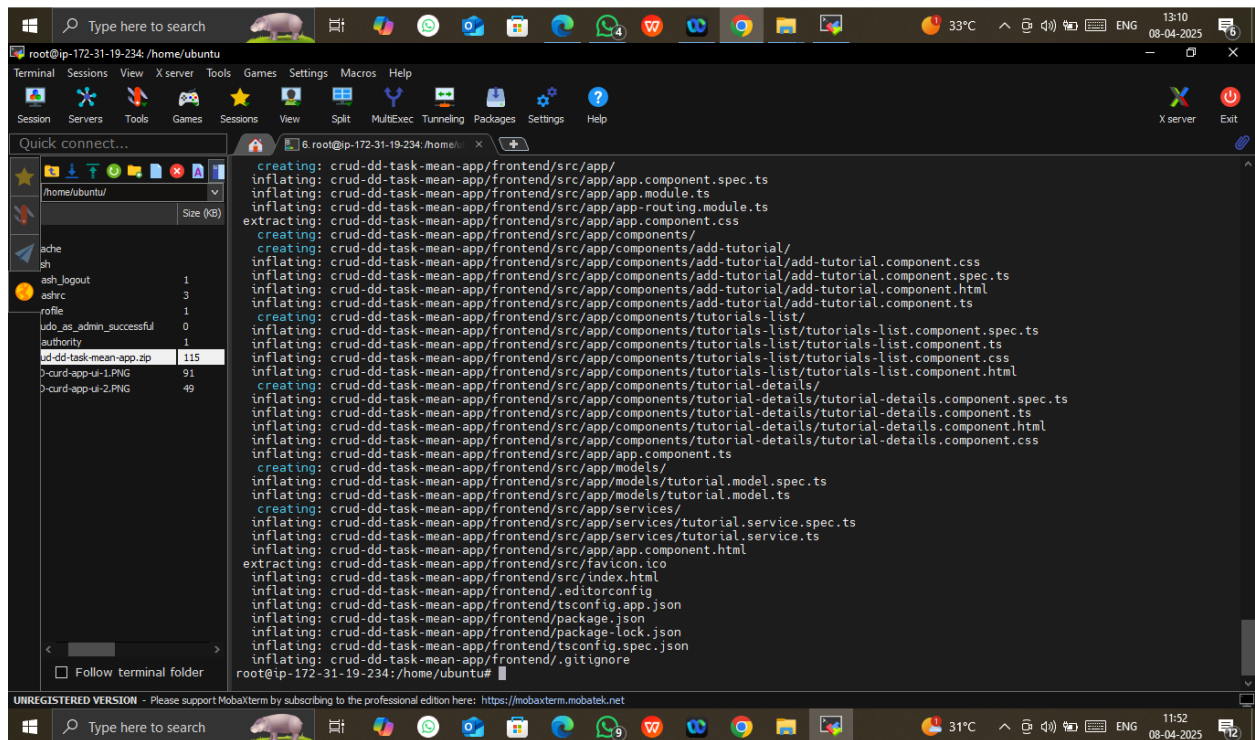
Output:



Index of /

(drwxr-xr-x) 08-Apr-2025 07:13 [angular-15-crud/](#)

Node.js v18.20.8/ [http-server](#) server running @ 3.80.36.193



kartheekchadaram12 / crud-dd-task-mean-app

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Releases

No releases published

Create a new release

root first commit d8d3b99 · 2 minutes ago 2 Commits

.cache Initial commit 3 minutes ago

.ssh Initial commit 3 minutes ago

crud-dd-task-mean-app Initial commit 3 minutes ago

.Xauthority Initial commit 3 minutes ago

.bash_logout Initial commit 3 minutes ago

.bashrc Initial commit 3 minutes ago

root@ip-172-31-19-234: /home/ubuntu/crud-dd-task-mean-app/frontend

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

6 ubuntu@ip-172-31-19-234: ~

8 root@ip-172-31-19-234: /home/

- Generating index.html...

- Generating index.html...

1 rules skipped due to selector errors:

.custom-file-input:lang(en)->.custom-file-label -> unmatched pseudo-class :lang

Index.html generation complete.

Initial Chunk Files	Names	Raw Size	Estimated Transfer Size
main.e26964ebd99c884f.js	main	245.67 kB	63.64 kB
styles.370d4f5455219bfb.css	styles	142.78 kB	16.67 kB
polyfills.b2254348b2e4dac6.js	polyfills	33.09 kB	10.63 kB
runtime.76aa1c0226a0a824.js	runtime	908 bytes	513 bytes

| Initial Total | 422.43 kB | 91.44 kB

Build at: 2025-04-08T07:13:42.965Z - Hash: 256e4cd8cad159e2 - Time: 692144ms

----> Removed intermediate container dfce9e7e1221

----> dffdf39f3c9a

Step 7/9 : RUN npm install -g http-server

----> Running in c499f9fcf9ec

added 48 packages in 5s

15 packages are looking for funding

run 'npm fund' for details

----> Removed intermediate container c499f9fcf9ec

----> 62171e63791e

Step 8/9 : EXPOSE 4200

----> Running in 7dab6f804cdb

----> Removed intermediate container 7dab6f804cdb

----> 6bd9dd374105

Step 9/9 : CMD ["http-server", "dist"]

----> Running in fe59c042022d

----> Removed intermediate container fe59c042022d

----> 1cecfcae404b

Successfully built 1cecfcae404b

Successfully tagged kartheekchadaram/mean-frontend:latest

root@ip-172-31-19-234: /home/ubuntu/crud-dd-task-mean-app/frontend#

root@ip-172-31-19-234: /home/ubuntu/crud-dd-task-mean-app/frontend#

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kartheekchadaram / mean-frontend / Tags

kartheekchadaram/mean-frontend

Last pushed 1 minute ago

Add a description

Add a category

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TAG	Digest	OS/ARCH	Last pull	Compressed size
latest	d58c74083e0f	linux/amd64	less than 1 day	520.64 MB

docker push kartheekchadaram/mean-frontend:tagname

docker pull kartheekchadaram/mean-frontend:latest

kartheekchadaram / mean-backend / Tags / latest

kartheekchadaram/mean-backend:latest

MANIFEST DIGEST sha256:884e6e8a232d31c6055a29ca1550192f4d318e5ed1f3641e5797f0dbb4b07dfa

OS/ARCH	COMPRESSED SIZE	LAST PUSHED	TYPE	MANIFEST DIGEST
linux/amd64	392.61 MB	1 minute by kartheekchadaram	Image	sha256:884e6e8a...

Image Layers Vulnerabilities

Image Layers

Layer	Size
1 # debian.sh --arch 'amd64' out/	46.24 MB
2 RUN /bin/sh -c set -eux;	22.9 MB
3 RUN /bin/sh -c set -eux;	61.41 MB
4 RUN /bin/sh -c set -ex;	281.54 MB
5 RUN /bin/sh -c groupadd --gid	3.25 KB
6 ENV NODE_VERSION=18.20.8	0 B
7 RUN /bin/sh -c ARCH= &&	43.56 MB

Command

```
# debian.sh --arch 'amd64' out/ 'bookworm' '01743984000'
```

root@ip-172-31-19-234: /home/ubuntu/crud-dd-task-mean-app

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultExec Tunneling Packages Settings Help

Quick connect...

logs Fetch the logs of a container
pause Pause all processes within one or more containers
port List port mappings or a specific mapping for the container
rename Rename a container
restart Restart one or more containers
rm Remove one or more containers
rmi Remove one or more images
save Save one or more images to a tar archive (streamed to STDOUT by default)
start Start one or more **stopped** containers
stats Display a live stream of container(s) resource usage statistics
stop Stop one or more running containers
tag Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
top Display the running processes of a container
unpause Unpause all processes within one or more containers
update Update configuration of one or more containers
wait Block until one or more containers stop, then print their exit codes

Global Options:
--config string Location of client config files (default "/root/.docker")
-c, --context string Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker context use")
-D, --debug Enable debug mode
-H, --host list Daemon socket to connect to
-l, --log-level string Set the logging level ("debug", "info", "warn", "error", "fatal") (default "info")
--tls Use TLS; implied by --tlsverify
--tlscacert string Trust certs signed only by this CA (default "/root/.docker/ca.pem")
--tlscert string Path to TLS certificate file (default "/root/.docker/cert.pem")
--tlskey string Path to TLS key file (default "/root/.docker/key.pem")
--tlsverify Use TLS and verify the remote
-v, --version Print version information and quit

Run 'docker COMMAND --help' for more information on a command.

For more help on how to use Docker, head to <https://docs.docker.com/go/guides/>

```
root@ip-172-31-19-234:/home/ubuntu/crud-dd-task-mean-app# docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS        NAMES
root@ip-172-31-19-234:/home/ubuntu/crud-dd-task-mean-app#
```

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github.com/http-party/http-server

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operagxoksana chore: update readme license (#913) 791a1f1 · last month 637 Commits

.github Bump actions/checkout -> v4.2.2, actions/setup-node -> 4.1.0 5 months ago

bin feat: add --base-dir to cli options to specify base path (#837) 5 months ago

doc Doc -H/--header option 6 months ago

lib feat: add --base-dir to cli options to specify base path (#837) 5 months ago

public Optimize rasters 8 years ago

screenshots better start image 6 years ago

test feat: add --base-dir to cli options to specify base path (#837) 5 months ago

.dockerignore dev: add Dockerfile 7 months ago

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Dedicated Hosts

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Instances (1/1) Info

Last updated 16 minutes ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

Instance ID = i-05be8836d72777bed

Clear filters

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<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
<input checked="" type="checkbox"/>	ubuntu	i-05be8836d72777bed	Running	t2.micro	2/2 checks passed	View alarms +	us-east-1d

i-05be8836d72777bed (ubuntu)

Instance summary Info

Instance ID

i-05be8836d72777bed

IPv6 address

-

Public IPv4 address

3.80.36.193 | open address

Private IPv4 addresses

172.31.19.234

Public IPv4 DNS

ec2-3-80-36-193.compute-1.amazonaws.com

Instance state

Running

CloudShell

Feedback

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