

Cloud Computing

Assignment II

Group No. 52

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Description

A web-application for searching Image meta-data using a Nodejs server as backend and MongoDB server as database running on separate docker containers communicating with each other hosted on an AWS EC2 instance.

Public IP : 18.222.223.173

Procedure

- Configured Nodejs server to listen to port 3000(using Express), and mongo on its default port 27017(using mongoose).
- Database Schema consisting of 7 fields : Date of Addition, Format of image (jpeg,png etc) , Image Size, Focal Length, Exposure, Location, Date & Time of Capture. Created indexes for all fields for searching purposes.
- Configured login page with two users.
 - guest with password guest with the functionality to search image metadata from database. Additionally all present items will be displayed to the user.
 - Admin with username : root and password : root with only one functionality to add new items to the database. Admin can add only one item in a session after which he'll be logged out.
 - Authentication not secure. Implemented using a simple form with text fields.
- Configured Dockerfile specifying node version, commands to run and exposing

port 3000.

- Configured docker-compose.yml specifying two containers used docker-node-app and mongo and linking them. Mapped port 3000 of container to port 80 of localhost.
- Tested with docker-compose up in local system.
- Created an EC2 instance in AWS to deploy the app, did all configuration.
- Connected to the instance and deployed the app.
 - Public IPv4 : 18.222.223.173
 - Public IPv4 DNS : ec2-18-222-223-173.us-east-2.compute.amazonaws.com
 - Private IP : 172.31.20.34

Snapshots

```
ubuntu@ip-172-31-20-34:~/docker-node-mongo$ sudo docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED
STATUS        PORTS                NAMES
7f154b5c4b74   dockernodemongo_app   "docker-entrypoint.s..." 6 hours ago
Up 6 hours     0.0.0.0:80->3000/tcp   docker-node-mongo
317a069e3136   mongo                 "docker-entrypoint.s..." 6 hours ago
Up 6 hours     0.0.0.0:27017->27017/tcp mongo
```



