Quick Docker Essentials

Chapter 1: Docker Image Basics

1. Pull and Run Nginx

docker run -d -p 8080:80 --nae my-nginx nginx

- Pulls Nginx image if not available locally.
- Runs a detached container named 'my-nginx'.
- Maps port 8080 on the host to port 80 in the container.

2. Access Containerized Website

curl http://localhost:8080

3. Attach to Container

docker exec -it my-nginx bash

Chapter 2: Tomcat Web Server

1. Create Dockerfile for Tomcat

FROM tomcat:latest
COPY ./webpages /usr/local/tomcat/webapps/ROOT

Dockerfile for Tomcat web server.

2. Build and Run Tomcat Container

```
docker build -t my-tomcat .
docker run -d -p 8080:8080 --name my-tomcat-container my-tomcat
```

- Builds the image.
- Launches the container with port 8080 mapping.

3. Access Tomcat Web Page

```
curl http://localhost:8080
```

Chapter 3: Docker Compose

1. Create Docker Compose File

```
version: '3'
services:
  tomcat:
    build: .
    ports:
    - "8080:8080"
```

Docker Compose file for launching the Tomcat container.

2. Build and Launch with Docker Compose

```
docker-compose up -d
```

Builds and launches the container using Docker Compose.

Chapter 4: Docker Compose with Image Building

1. Dockerfile Integration with Docker Compose

```
version: '3'
```

```
services:
  tomcat:
    build: .
    ports:
    - "80:8080"
```

- Integrates Dockerfile with Docker Compose.

2. Build Image with Docker Compose

docker-compose build
        docker-compose build

- Builds the image defined in the Docker Compose file.

Conclusion

Mastering these Docker essentials is crucial for effective containerization. This quick guide provides a sequential overview, ideal for those preparing for the Docker Certified Associate exam. Explore further for a deeper understanding of Docker's capabilities.

Check_Detailed_Blog:-https://medium.com/@srivastavayushmaan1347/introduction-99 ea3cbc9a4b