

#90DaysOfDevOps Challenge - Day 20 - Docker for DevOps Engineers Wrap up

Welcome to Day 20 of the #90DaysOfDevOps challenge. In today's article, we will wrap up our exploration of Docker for DevOps Engineers and provide you with a handy Docker cheat sheet filled with examples and tips. Let's dive in.

Docker Advanced Command Cheat Sheet

Image Management

- `docker pull <image_name>:<tag>`: Pull an image from Docker Hub.
- `docker images`: List downloaded images.
- `docker rmi <image_id>`: Remove an image.

Container Management:

- `docker run <image_name>`: Run a container from an image.
- `docker run -d <image_name>`: Run a container in detached mode.
- `docker ps`: List running containers.
- `docker ps -a`: List all containers (including stopped ones).
- `docker stop <container_id>`: Stop a running container.
- `docker rm <container_id>`: Remove a container.

Docker Compose:

- `docker-compose up`: Start the containers defined in the Docker Compose file.
- `docker-compose down`: Stop and remove the containers defined in the Docker Compose file.

Volume Management:

- `docker volume create <volume_name>`: Create a new volume.
- `docker volume ls`: List all volumes.
- `docker volume inspect <volume_name>`: Display detailed information about a volume.
- `docker volume rm <volume_name>`: Remove a volume.

Network Management:

- `docker network create <network_name>`: Create a new network.

- `docker network ls`: List all networks.
- `docker network inspect <network_name>`: Display detailed information about a network.
- `docker network rm <network_name>`: Remove a network.

Logging and Troubleshooting:

- `docker logs <container_id>`: Fetch the logs of a container.
- `docker exec -it <container_id> <command>`: Execute a command inside a running container.
- `docker inspect <container_id>`: Display detailed information about a container.
- `docker stats`: Display real-time CPU, memory, and network usage of containers.

Image and Container Cleanup:

- `docker system df`: Show Docker disk usage.
- `docker system prune`: Remove unused data such as stopped containers, unused networks, and dangling images.
- `docker image prune`: Remove unused images.
- `docker container prune`: Remove stopped containers.

Registry and Authentication:

- `docker login`: Log in to a Docker registry.
- `docker logout`: Log out from a Docker registry.
- `docker push <image_name>:<tag>`: Push an image to a Docker registry.

Tips and Best Practices

- Use descriptive names for containers, images, and volumes.
- Keep your Dockerfile and docker-compose.yml files in version control for easier management and collaboration.
- Use environment variables in your Docker Compose files for dynamic configurations.
- Regularly clean up unused containers, images, and volumes to free up disk space.
- Explore Docker Hub and official repositories for pre-built images.

Congratulations on completing Day 20 of the #90DaysOfDevOps challenge. Throughout this article, I have provided you with a Docker cheat sheet containing essential commands and tips for effective Docker usage. By referencing this cheatsheet, you'll be able to streamline your Docker workflows and work more efficiently as a DevOps Engineer.

Stay tuned for Day 21, where we will review the Docker Important interview Questions. Stay tuned!