Comprehensive Docker Commands Guide

1. Docker Basics

docker --version

   Check the installed Docker version.

docker info

   Display system-wide information about Docker.

docker help

   List all Docker commands.

2. Working with Images

docker pull <image_name>

   Download an image from Docker Hub.

docker images

   List all Docker images.

docker rmi <image_name>

   Remove a Docker image.

docker tag <image_id> <new_name>

   Tag an image with a new name.

docker save -o <file_name>.tar <image_name>

   Save an image to a tar archive.

docker load -i <file_name>.tar

   Load an image from a tar archive.

3. Working with Containers

docker run <image_name>

   Run a container from an image.

docker ps

List running containers.

docker ps -a

List all containers, including stopped ones.

docker stop <container_id>

Stop a running container.

docker start <container_id>

Start a stopped container.

docker restart <container_id>

Restart a container.

docker rm <container_id>

Remove a container.

docker exec -it <container_id> /bin/bash

Open shell access to a container.

docker logs <container_id>

Show logs from a container.

docker inspect <container_id>

Display detailed information on a container.

4. Docker Volumes

docker volume create <volume_name>

Create a new volume.

docker volume ls

List all volumes.

docker volume inspect <volume_name>

Inspect a specific volume.

docker volume rm <volume_name>

Remove a volume.

5. Docker Networks

docker network ls

    List all networks.

docker network create <network_name>

    Create a new network.

docker network inspect <network_name>

    Inspect a specific network.

docker network rm <network_name>

    Remove a network.

6. Dockerfile & Image Building

docker build -t <tag_name> .

    Build an image from a Dockerfile.

docker history <image_name>

    Show the history of an image.

7. Docker Compose

docker-compose up

    Start services defined in a docker-compose.yml file.

docker-compose down

    Stop and remove all services defined in docker-compose.

docker-compose build

    Build images as defined in docker-compose.yml.

docker-compose ps

    List containers managed by Docker Compose.

8. Monitoring & System Commands

docker stats

    Display live container resource usage statistics.

docker system df

    Show Docker disk usage.

docker system prune

    Remove unused data (containers, networks, images, etc.).