

# Docker Commands Cheat Sheet

## 1. Basic Docker Commands

### Installation & Version Check

# Check Docker version

```
docker --version
```

# Check system-wide Docker information

```
docker info
```

### Working with Images

# Search for an image

```
docker search <image_name>
```

# Pull an image from Docker Hub

```
docker pull <image_name>
```

# List all images

```
docker images
```

# Remove an image

```
docker rmi <image_id>
```

### Working with Containers

# Run a container

```
docker run <image_name>
```

# Run a container in detached mode

```
docker run -d <image_name>
```

# Run a container with an interactive shell

```
docker run -it <image_name> /bin/bash
```

# List running containers

```
docker ps
```

# List all containers (including stopped ones)

`docker ps -a`

# Stop a running container

`docker stop <container_id>`

# Start a stopped container

`docker start <container_id>`

# Restart a container

`docker restart <container_id>`

# Remove a container

`docker rm <container_id>`

## **Logs & Monitoring**

# View logs of a container

`docker logs <container_id>`

# Show running processes in a container

`docker top <container_id>`

# Display resource usage statistics

`docker stats`

## **2. Intermediate Docker Commands**

### **Managing Volumes**

# Create a volume

`docker volume create <volume_name>`

# List all volumes

`docker volume ls`

# Inspect a volume

`docker volume inspect <volume_name>`

# Remove a volume

`docker volume rm <volume_name>`

## Networking in Docker

# List available networks

`docker network ls`

# Create a network

`docker network create <network_name>`

# Connect a container to a network

`docker network connect <network_name> <container_id>`

# Disconnect a container from a network

`docker network disconnect <network_name> <container_id>`

# Inspect a network

`docker network inspect <network_name>`

## Working with Docker Compose

# Start services defined in docker-compose.yml

`docker-compose up -d`

# Stop services

`docker-compose down`

# Restart services

`docker-compose restart`

# Check the logs

`docker-compose logs`

# View running containers

`docker-compose ps`

## Copying Files to & from Containers

# Copy from host to container

`docker cp <file_path> <container_id>:<destination_path>`

# Copy from container to host

`docker cp <container_id>:<file_path> <destination_path>`

## 3. Advanced Docker Commands

### Building Custom Images

# Build an image from a Dockerfile  
docker build -t <image\_name> .

# Build an image with a specific tag  
docker build -t <image\_name>:<tag> .

### Tagging & Pushing Images

# Tag an image  
docker tag <image\_id> <repository>:<tag>

# Push an image to Docker Hub  
docker push <repository>:<tag>

### Managing Container Resources

# Limit CPU usage  
docker run --cpus="1.5" <image\_name>

# Limit memory usage  
docker run -m 512m <image\_name>

### Docker Security

# Scan an image for vulnerabilities  
docker scan <image\_name>

# Run a container with read-only filesystem  
docker run --read-only <image\_name>

### Docker Swarm & Orchestration

# Initialize a swarm  
docker swarm init

# Add a worker node  
docker swarm join --token <token> <manager\_ip>:2377

# List swarm nodes  
docker node ls

# Deploy a service

docker service create --name <service\_name> <image\_name>

# List services

docker service ls

## **Cleanup & Maintenance**

# Remove all stopped containers

docker container prune

# Remove all unused images

docker image prune -a

# Remove all unused volumes

docker volume prune

# Remove all unused networks

docker network prune