## **#\_ Essential Docker Commands** [+100 ]

## Basic Docker Commands:

- docker --version: Check Docker version.
- docker info: Display system-wide information.
- docker --help: Get help and list commands.
- docker run IMAGE: Run a container from an image.
- docker pull IMAGE: Download an image from a registry.
- docker images: List all available images.
- docker ps: List running containers.
- docker ps -a: List all containers (including stopped ones).
- docker stop CONTAINER: Stop a running container.
- docker start CONTAINER: Start a stopped container.
- docker restart CONTAINER: Restart a container.
- docker pause CONTAINER: Pause a running container.
- docker unpause CONTAINER: Unpause a paused container.
- docker rm CONTAINER: Remove a stopped container.
- docker rmi IMAGE: Remove an image.
- docker search TERM: Search for images on Docker Hub.
- docker logs CONTAINER: View container logs.
- docker exec -it CONTAINER COMMAND: Run a command in a running container.
- docker build -t IMAGE: TAG PATH: Build a Docker image from a Dockerfile.
- docker push IMAGE: TAG: Push an image to a registry.
- docker pull IMAGE:TAG: Pull an image from a registry.
- docker commit CONTAINER NEW\_IMAGE: Create a new image from a container.
- docker network ls: List Docker networks.
- docker volume ls: List Docker volumes.
- docker version: Show Docker version information.
- docker login: Log in to a Docker registry.
- docker logout: Log out from a Docker registry.
- docker run -d IMAGE: Run a container in detached mode.

- docker run -p HOST\_PORT:CONTAINER\_PORT IMAGE: Map ports.
- docker run -v HOST\_DIR:CONTAINER\_DIR IMAGE: Mount volumes.
- docker stats: Show container resource usage statistics.
- docker top CONTAINER: Display running processes in a container.
- docker inspect CONTAINER/IMAGE: View detailed information.
- docker events: Monitor Docker events.
- docker rename OLD\_NAME NEW\_NAME: Rename a container.
- docker cp CONTAINER:SRC\_PATH DEST\_PATH: Copy files between a container and the local filesystem.
- docker-compose up: Start services defined in a docker-compose.yml file.
- docker-compose down: Stop and remove containers defined in a docker-compose.yml file.
- docker-compose ps: List containers managed by Docker Compose.
- docker-compose logs: View logs for services managed by Docker Compose.
- docker system df: Show disk usage.
- docker system prune: Remove all stopped containers, dangling images, and unused networks and volumes.
- docker system prune -a: Remove all containers, images, networks, and volumes.

## Intermediate Docker Commands:

- docker history IMAGE: View image history.
- docker inspect --format="{{.NetworkSettings.IPAddress}}" CONTAINER: Get a container's IP address.
- docker exec -u USER CONTAINER COMMAND: Run a command as a specific user in a container.
- docker run -e KEY=VALUE IMAGE: Set environment variables.
- docker run --rm IMAGE: Automatically remove the container when it exits.
- docker build --build-arg KEY=VALUE -t IMAGE: TAG PATH: Pass build arguments to a Dockerfile.
- docker push REGISTRY/IMAGE: TAG: Push an image to a custom registry.

- docker pull REGISTRY/IMAGE: TAG: Pull an image from a custom registry.
- docker login REGISTRY: Log in to a custom registry.
- docker tag SOURCE\_IMAGE: TAG TARGET\_IMAGE: TAG: Tag an image.
- docker volume create VOLUME: Create a named volume.
- docker volume inspect VOLUME: Inspect a volume.
- docker network create NETWORK: Create a custom network.
- docker network inspect NETWORK: Inspect a network.
- docker network connect NETWORK CONTAINER: Connect a container to a network.
- docker network disconnect NETWORK CONTAINER: Disconnect a container from a network.
- docker-compose -f FILE up: Start services defined in a specific docker-compose.yml file.
- docker-compose -f FILE down: Stop and remove containers defined in a specific docker-compose.yml file.
- docker-compose -f FILE ps: List containers managed by Docker Compose for a specific file.
- docker-compose -f FILE logs: View logs for services managed by Docker Compose for a specific file.
- docker-compose -f FILE build: Build services defined in a specific docker-compose.yml file.
- docker save -o OUTPUT\_FILE IMAGE: Save an image to a tarball.
- docker load -i INPUT\_FILE: Load an image from a tarball.
- docker export CONTAINER > OUTPUT\_FILE: Export a container's filesystem as a tarball.
- docker import INPUT\_FILE: Import an exported container filesystem as an image.
- docker attach CONTAINER: Attach to a running container's STDIN, STDOUT, and STDERR.
- docker pause \$(docker ps -q): Pause all running containers.
- docker unpause \$(docker ps -q): Unpause all paused containers.
- docker kill CONTAINER: Send a SIGKILL to a container.
- docker wait CONTAINER: Block until a container stops, then print its exit code.

- docker logs --tail N CONTAINER: Show the last N lines of a container's logs.
- docker ps -q -f status=exited: List only container IDs of exited containers.
- docker system prune -f: Force removal of all unused data.
- docker system events: Stream real-time events from the server.
- docker system df -v: Show detailed disk space usage.
- docker plugin install PLUGIN: Install a Docker plugin.
- docker plugin ls: List installed Docker plugins.
- docker plugin disable PLUGIN: Disable a Docker plugin.
- docker plugin enable PLUGIN: Enable a Docker plugin.
- docker plugin upgrade PLUGIN: Upgrade a Docker plugin.
- docker plugin remove PLUGIN: Remove a Docker plugin.
- docker swarm init: Initialize a swarm.
- docker swarm join: Join a swarm as a worker or manager.
- docker swarm leave: Leave a swarm.
- docker swarm update: Update a swarm.
- docker service create: Create a new service.
- docker service scale: Scale a service up or down.
- docker service inspect: Inspect a service.
- docker service ps: List the tasks of a service.
- docker service logs: Fetch the logs of a service.
- docker stack deploy: Deploy a new stack or update an existing stack.
- docker stack ls: List stacks.
- docker stack rm: Remove one or more stacks.
- docker stack services: List services in a stack.
- docker stack ps: List tasks in a stack.
- docker secret create: Create a secret.
- docker secret ls: List secrets.

## Advanced Docker Commands:

- docker save IMAGE: TAG -o FILE: Save an image to a file.
- docker load -i FILE: Load an image from a file.
- docker manifest: Create and push multi-architecture images.

- docker manifest inspect: Inspect a multi-architecture image manifest.
- docker manifest push: Push a multi-architecture image manifest.
- docker buildx: Build and push multi-platform images.
- docker run -d --restart=unless-stopped IMAGE: Run a container that restarts unless explicitly stopped.
- docker run --init IMAGE: Run a container with an init process.
- docker cp SRC\_PATH CONTAINER: DEST\_PATH: Copy files or folders between the host and a container.
- docker exec -it CONTAINER sh: Start an interactive shell in a running container.
- docker diff CONTAINER: Show file changes in a container's filesustem.
- docker logs -f CONTAINER: Stream container logs in real-time.
- docker network create --driver overlay NETWORK: Create an overlay network for Docker swarm.
- docker network create --driver macvlan NETWORK: Create a MACVLAN network.
- docker network create --driver bridge NETWORK: Create a bridge network.
- docker network create --driver host NETWORK: Create a host network.
- docker network inspect --format '{{json .Containers}}' NETWORK: List containers connected to a network.
- docker-compose config: Validate and view the merged Docker Compose configuration.
- docker-compose config --services: List all services defined in a Docker Compose file.
- docker-compose config --volumes: List all volumes defined in a Docker Compose file.