

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 filesystem.
- **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.