

Advanced Docker

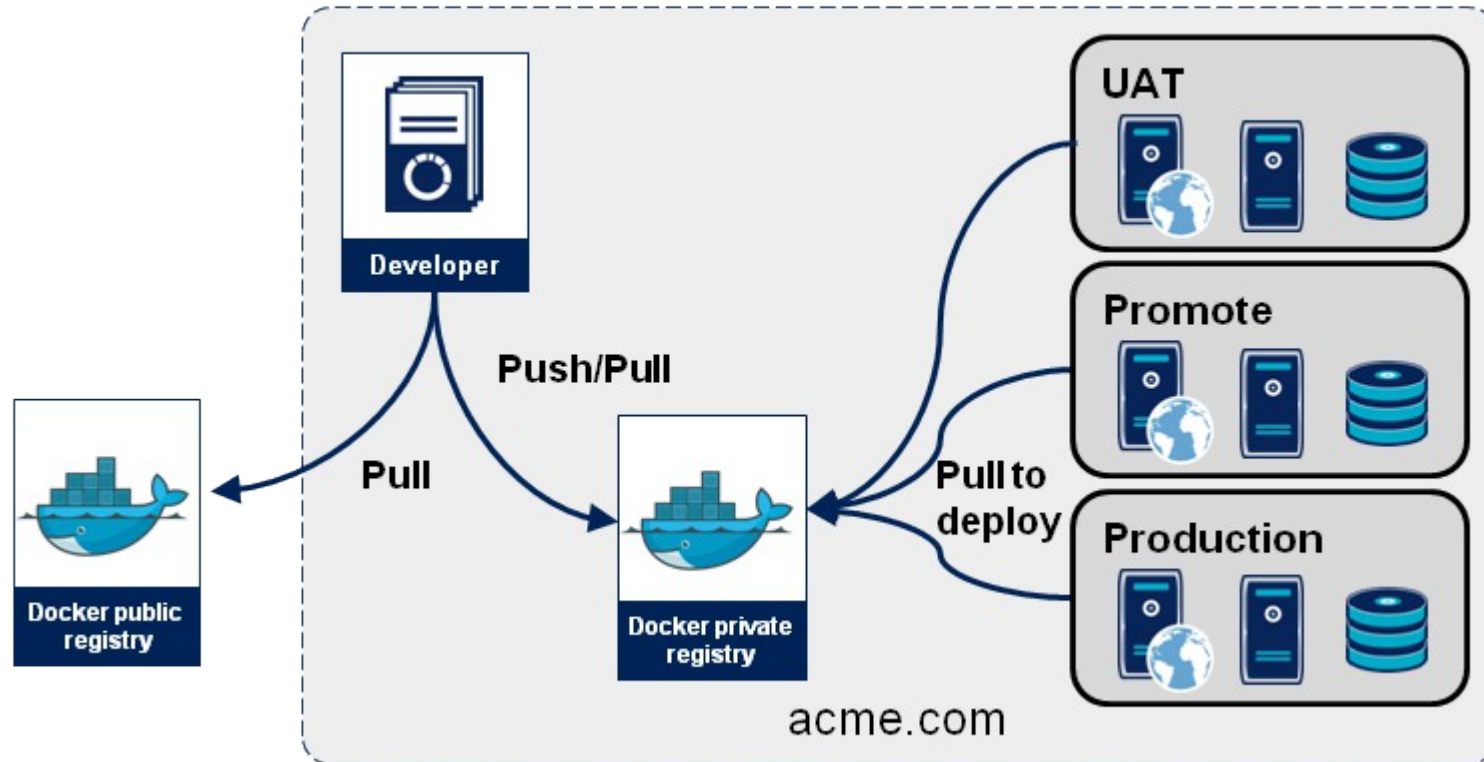
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Private registry



Setting up your private registry

- Mount your storage to a local location
- Pull registry image from Docker public repository
- `docker run -p 5000:5000 -v <local storage>:<container storage> -e STORAGE_PATH=<container storage> registry`
- `docker push registry <server>:5000/registry`

Debugging Docker

- Run `/bin/bash` in your image
- `docker cp`
- `docker logs`
- `docker exec` (no longer present in latest version)
- `docker attach` (doesn't appear to work in latest version)

Docker in Docker

- Sometimes you want to run Docker inside a Docker container
- libcontainer must be installed in the image
 - taylodl/centos has libcontainer installed
- `docker run -v `which docker`: /usr/bin/docker -v /var/run/docker.sock: /var/run/docker.sock <image name>`

Linking containers

Databases such as Derby should be run in a separate container because we don't want monolithic containers. But we need to be able to run multiple Derby containers and yet the Derby container runs Derby on port 1527. We also need to be able to link the WebLogic container to the Derby container – ideally without exposing the Derby port to the outside world.

Docker linking is the solution to this problem.

Volume containers

Avoid 'permissions hell' where the uid ,and gid differ between environments and containers.

A volume container is a container that only contains a mounted volume which can be shared across multiple containers.

- Share data between multiple containers
- Eliminates permissions issues across systems
- Provides a means for distributing data
 - A volume container image may contain data
 - See `taylodl/derby-tododb`, `taylodl/wls-autodeploy-responsive-todo`
- Perfect for databases
 - And configuration files!
- Data can be copied to/from volume containers



Fig

Fast, isolated development environments using Docker

Creating centos base image

febootstrap

Docker errata

- Use `docker start/stop` more and name your containers
- Images can be transferred using `docker save/load`
- Use `docker export/import` to transfer container data
- Try to use `docker rm` sparingly
- Use Fig to coordinate containers

Questions

