

Docker basics and Docker compose

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And anywhere else



Agenda:

- Docker basics recap
- Docker under the hood
- Issues with docker in prod
- Docker compose
- Docker compose hands-on
- Issues with docker compose in prod

Docker

What

Why

How

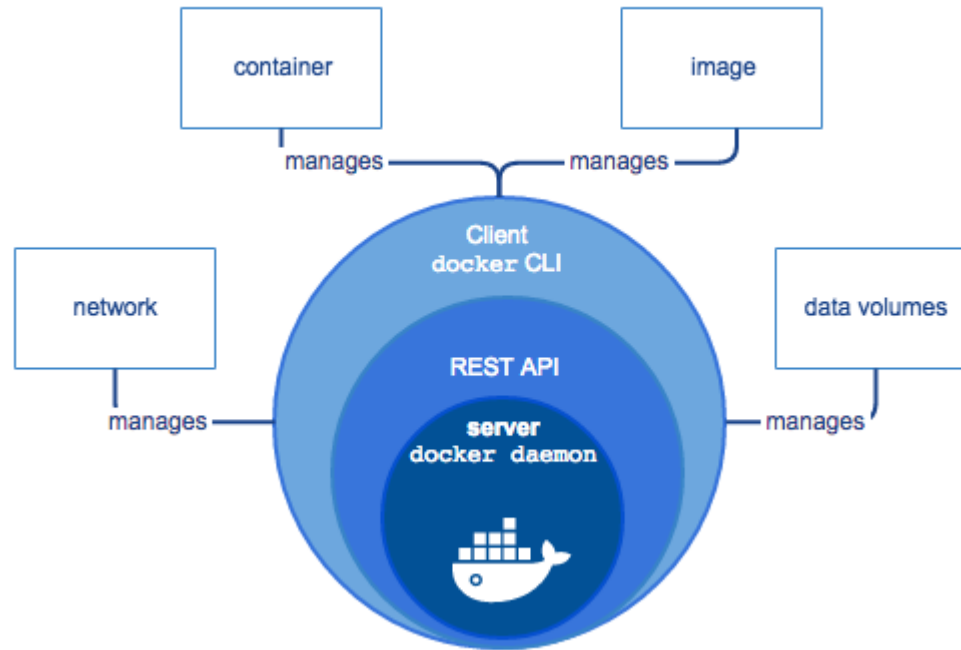
Container lingo

- Image
- Container
- Volumes
- Registry
- Entry point
- Networks
- Ports
- Swarm

Docker 101 practice

- Pull an nginx image
- Run an nginx image running on port 8086 on host
- Inspect running container and print it's IP address
- List running containers
- List existing networks
- List volumes

Docker client-daemon communication



Docker – Under the hood

- Observe the events using Docker events command
- Find differences in container file system – docker diff & files on host filesystem
- Client – daemon communication over unix sockets. Examples using Docker engine API (<https://docs.docker.com/develop/sdk/#api-version-matrix>) and curl calls

How to deploy a 3 tier app now?
Possible?

Docker compose

- Compose is a tool for defining and running multi-container Docker applications.
- You use a YAML file to configure your application's services. Then, with a single command, you create and start all the services from your configuration.

Ref: <https://docs.docker.com/compose/compose-file/>

Docker compose Demo

Ref: <https://github.com/sumanthkumarc/docker102>

*Netflix launches one million
containers per week!!!

How can we achieve this scale? Can we use
docker compose?

*Quoted from blog: <https://medium.com/netflix-techblog/the-evolution-of-container-usage-at-netflix-3abfc096781b>

The most important question?? – How to contribute!!!

- Files for building custom images can be kept at github like Dockerfile and other artifacts
- Writing blog posts about docker and its usage
- Editing mistakes or suggesting changes at docs.docker.com
- Helping answer docker questions on stackoverflow and at docker slack channel by registering here <https://community.docker.com/registrations/groups/4316>
- If you know Golang, you can help fix docker issues or test and review at docker github repo: <https://github.com/moby/moby/blob/master/CONTRIBUTING.md>
- More ways to contribute at <https://www.docker.com/contribute>

Questions?

Thank You