

**Download Docker:**  
**<https://store.docker.com/>**

# What could possibly go wrong?

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# Docker for Web Developers

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@MichaelCarducci



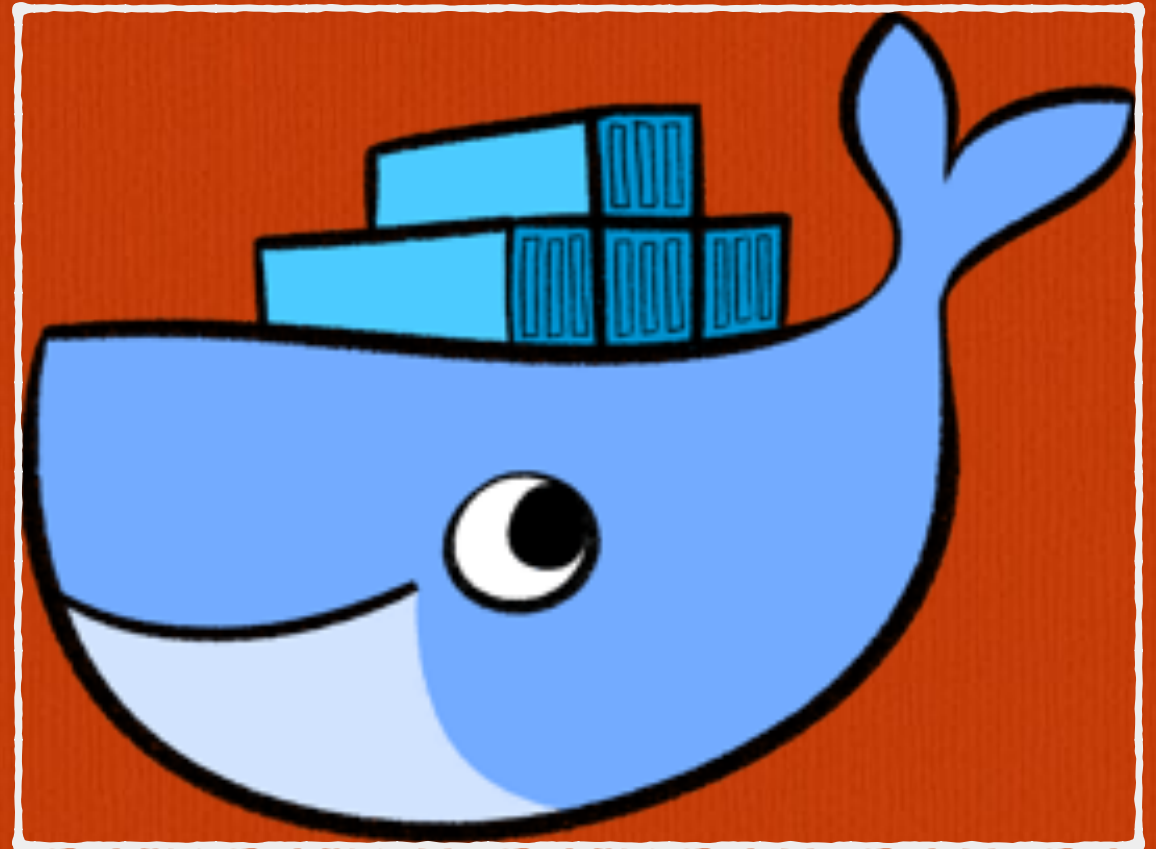
# Agenda

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- ☐ **Docker intro and basics**
- ☐ **Speeding up web development with docker**
- ☐ **Deployment and production**
- ☐ **Building an Angular App inside of Docker**
- ☐ **The broader directions of this space**

# Introducing Docker

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**“Docker allows you to quickly  
create and share development  
projects across the lifecycle”**

# **Docker in as Open Source Platform For**

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- ☐ **Developing**
- ☐ **Shipping and**
- ☐ **Running applications**

**Using Container Virtualization technology**



# History



**One App/One Server**

# VMs/Hypervisor



# VMs/Hypervisor

# VMs/Hypervisor



# Containers

# Containers

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- ☐ **Each guest instance is called a container**
- ☐ **Each container has its own**
  - ☐ **Root file system**
  - ☐ **Processes**
  - ☐ **Memory**
  - ☐ **Network ports**



# Container Advantages

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- ☐ Containers are more lightweight
- ☐ No need to install guest OS
- ☐ Less CPU, RAM, storage space required
- ☐ More containers per machine than VMs
- ☐ Greater portability

# Containers and Devops



# Containers and Devops

# Containers and Devops



# Core Concepts

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- ☐ **Docker containers are usually made of everything needed to run over a LXC-aware Linux kernel**
- ☐ **Container images are built once (usually by development team) and reused as-is everywhere, from development workstation to production environments, with no modification at all.**
- ☐ **Prefer the rebuild/redeploy pattern rather than upgrade when deploying new application version.**
- ☐ **Upgrades simply consist of shutting down the former container and start a new one in its place.**

# **Docker Beyond Devops**



# **Docker Beyond Devops**

# **Docker Beyond Devops**



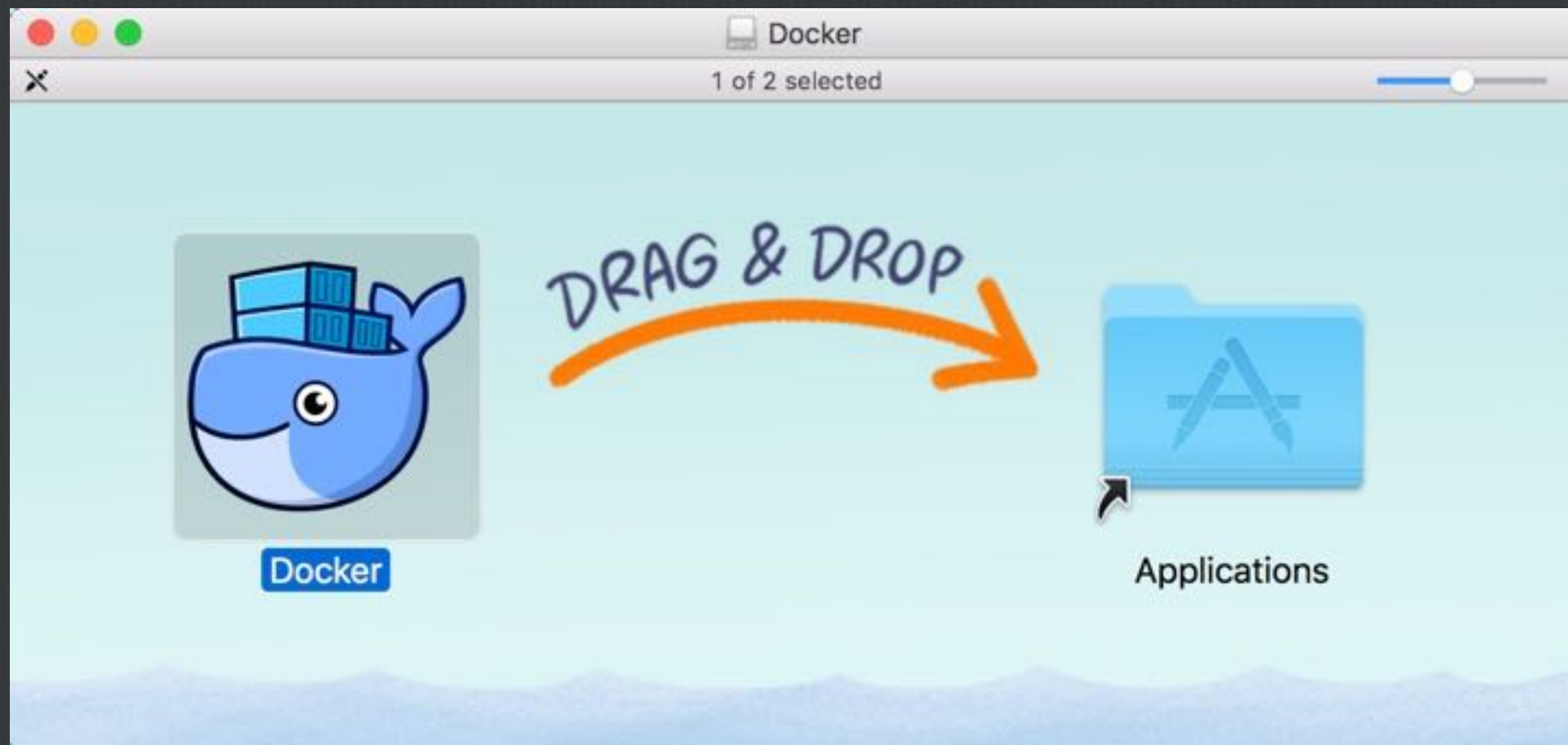
# **Docker Beyond Devops**

# **Docker Beyond Devops**



# **Docker Beyond Devops**

# Installing Docker





# Installing Docker

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# **Working with Images**



# **The Vast Docker Community**

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- ☐ **DockerHub is a repository for existing docker containers**
- ☐ **The community has produced solutions to many common problems**
- ☐ **A quick search of “Angular” shows many images designed to meet various needs**

# Managing Images



# Get a list of Docker Images

Docker Images

# Removing Docker Images

`docker rm <image-id>`



# **Working with Containers**

**Run a container as a  
bash shell**



# **Run a container as a Daemon**

# Managing Containers



# Managing Containers

# **Examining Containers**

**Docker Top  
Docker logs**

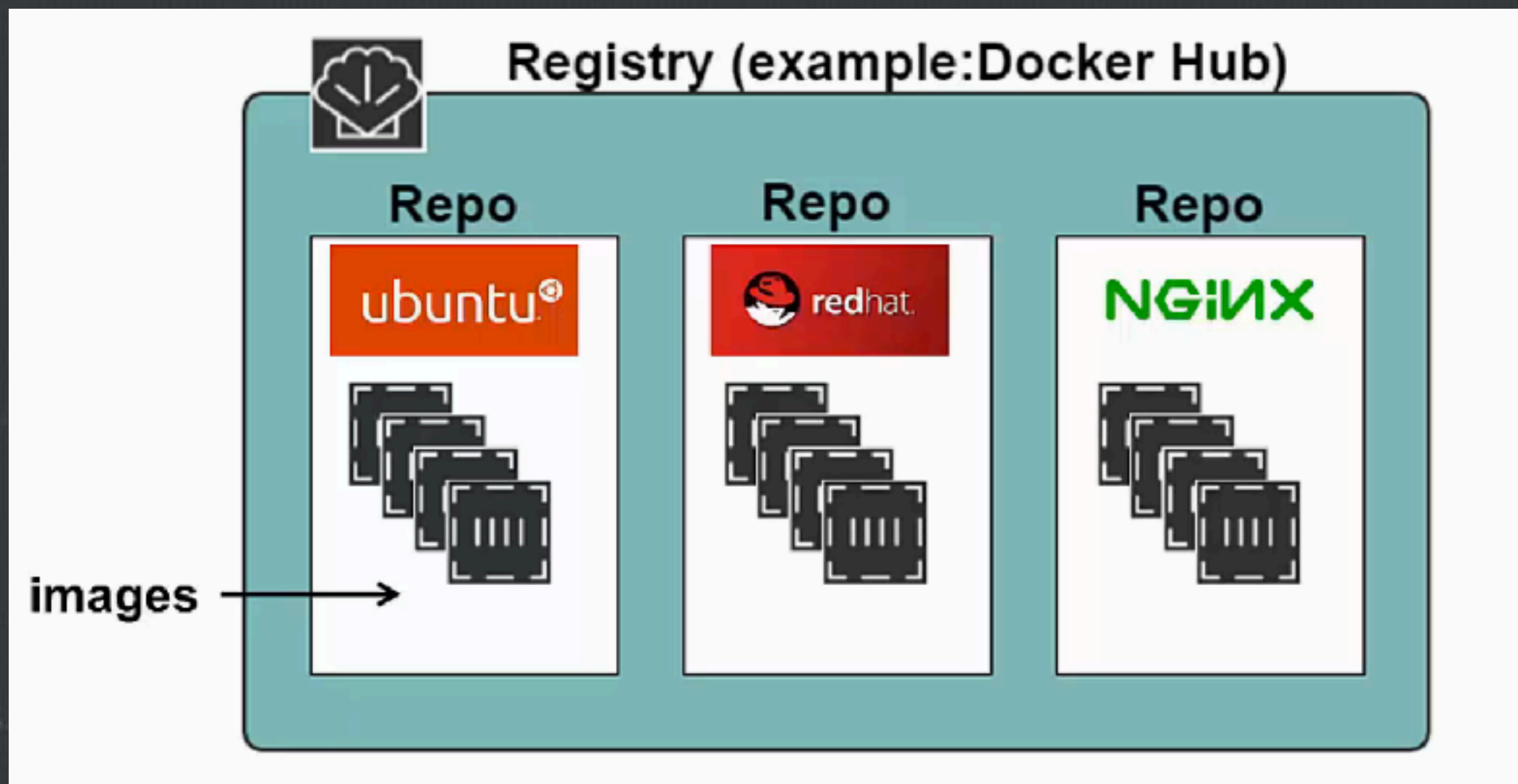


# **Saving State**

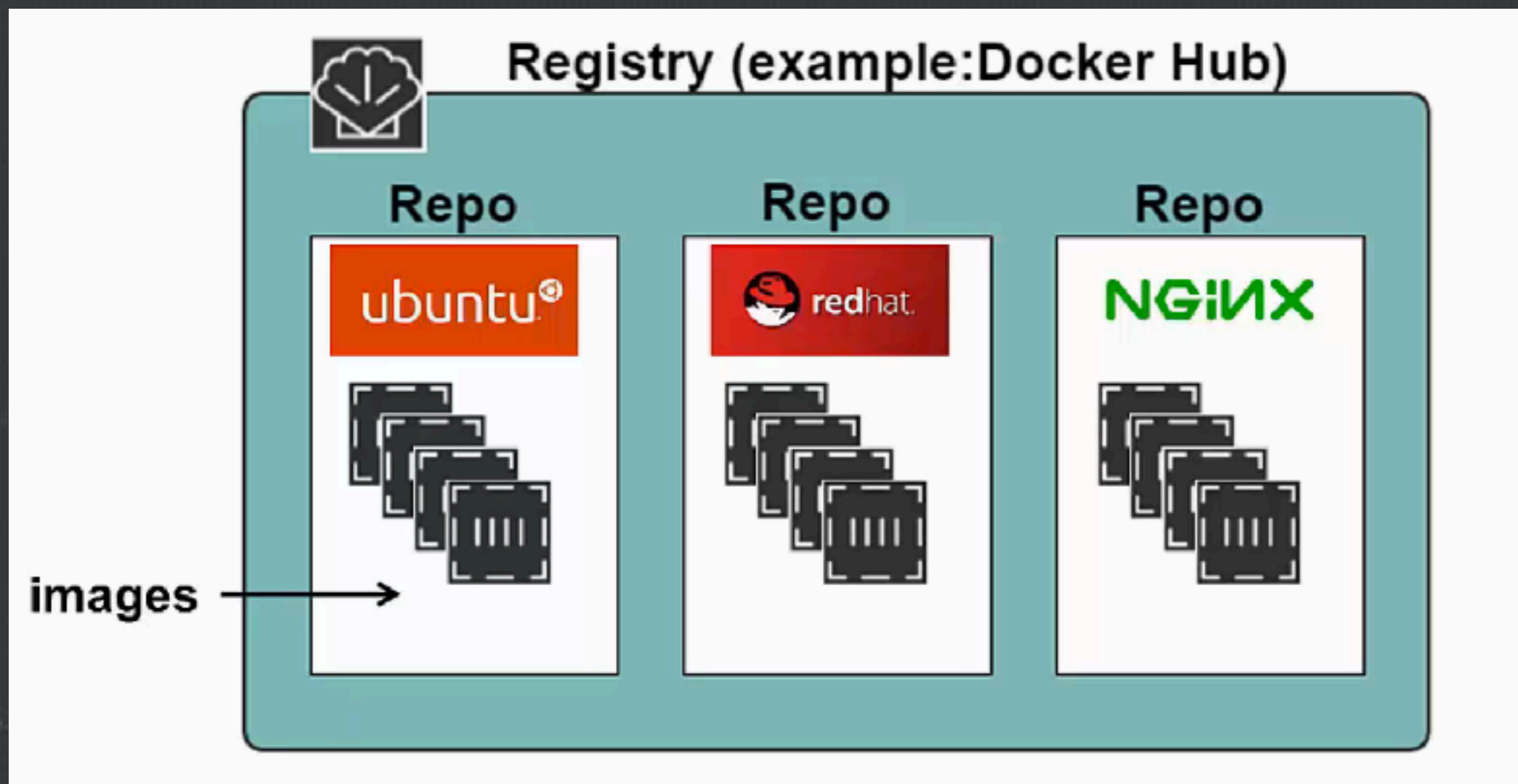
# Sharing State State



# Sharing State State



# Sharing State State





# Filesystem Layers

# **Building Docker Images**



# **Dive into Dockerfiles**

# **Dive into Dockerfiles**



# **Dive into Dockerfiles**

# **Developing Angular Inside Docker**



# **Iterating/Updating Applications**

# Micro FrontEnds