Development, Dockerization, and Deployment with Flask

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Setting the Stage

- You need an API
- Easily Scalable
- Development environment should resemble Production
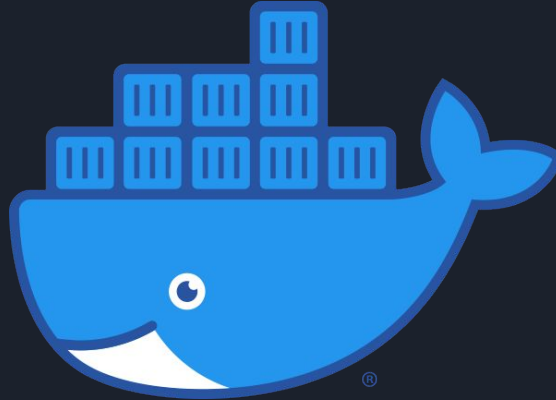- Portable (Environment Agnostic)

Deployment Options

- **Machine Proper**
  - Not portable
  - Hard to Maintain
- **Serverless**
  - Cost efficient (usually)
  - Ephemeral state
  - Difficult to replicate locally
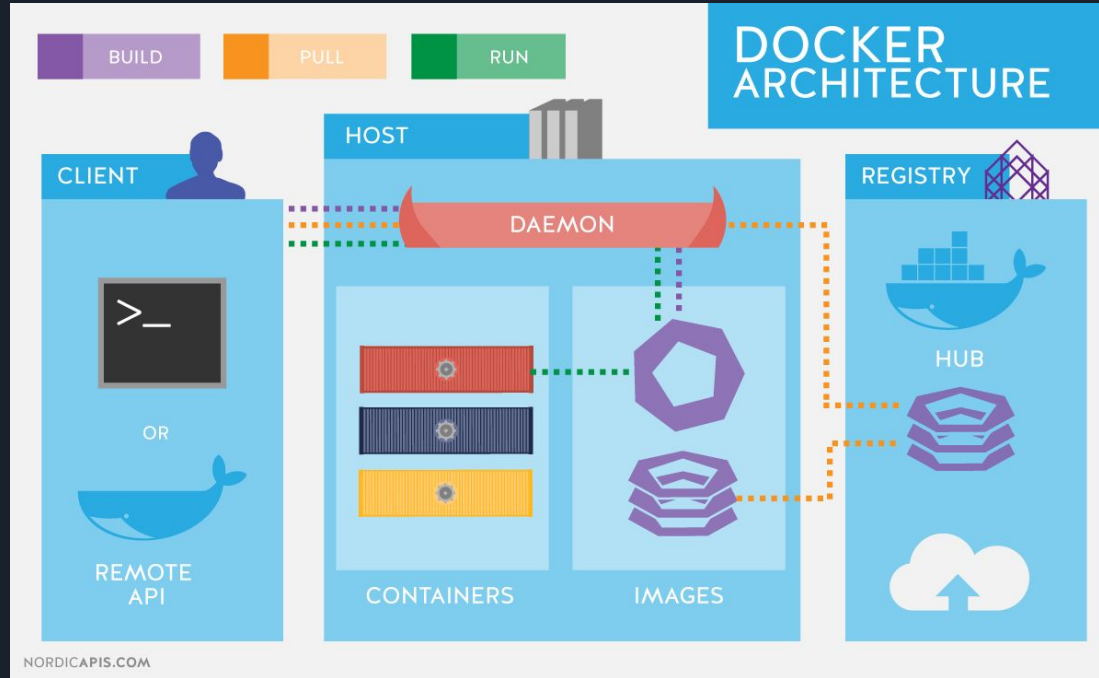- **Containerized**
  - Lots of Perks
  - Can be confusing

Memory (MB)	Price per 100ms
128	$0.000000208
512	$0.000000833
1024	$0.000001667
1536	$0.000002500
2048	$0.000003333
3008	$0.000004896

Docker, the Kleenex of Containers

- Like Virtual Machines, But Not
- Tons of Publicly Available Images
- Hotswap Cake
- Large Community Support

Containers Overview

Docker Compose

- Orchestration of Multiple Containers
- Network, Volumes, Alias mapping
- Individually scalable

Putting it all together and next steps

- Custom Docker Image Based on Python3.7 image
- Pulled NGINX Image with custom config
- Docker Compose to Handle Dependency and Networking
- CI/CD (not featured here for demonstration sake)