

Kubernetes

CS398 - ACC

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Osmar Coronel

MP8

How's it going?

Final Autograder run:

- Tonight ~8pm
- Tomorrow ~3pm
- Due tomorrow at 11:59 pm.
- Latest Commit to the repo at the time will be graded.
- Last Office Hours today after the lecture until 7pm.

Final Project Presentation Groups

- **Monday 4/22**

- Me_irl, taksumbong, Victory Dance, BigNet

- **Wednesday 4/25**

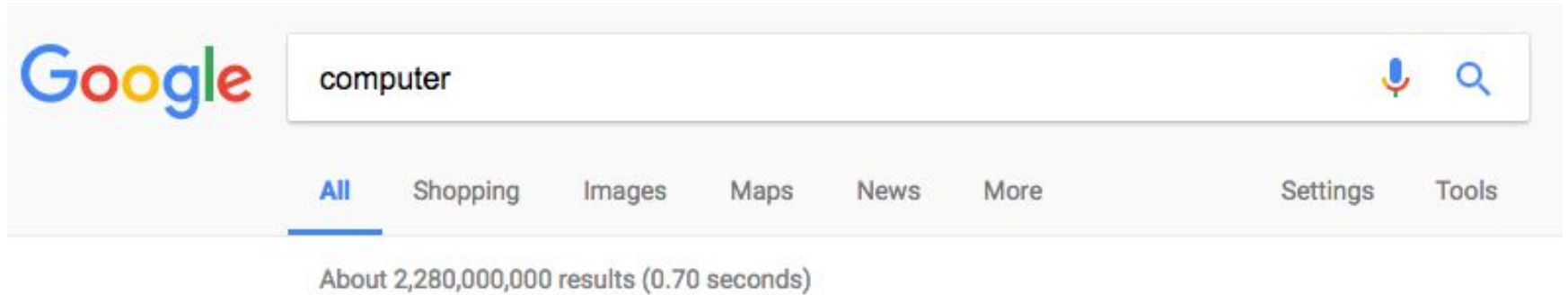
- collegeanalysis, mcmc, Team DAAL, tqI, 404, spicy

- **Monday 4/30**

- CleverTeamName, deatheaters, newbies, jjts, meh, CloudyWithAChanceOfClusterFailure

Scalable Cloud Infrastructure

Problem Statement



ticketmaster[®]

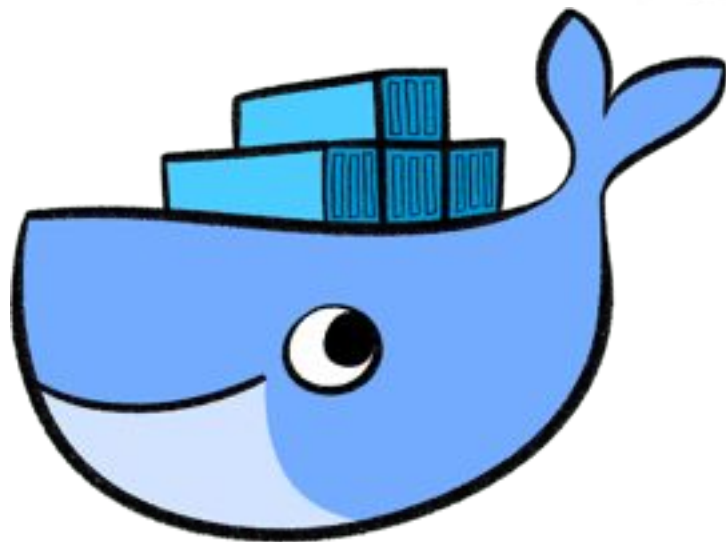


Kubernetes

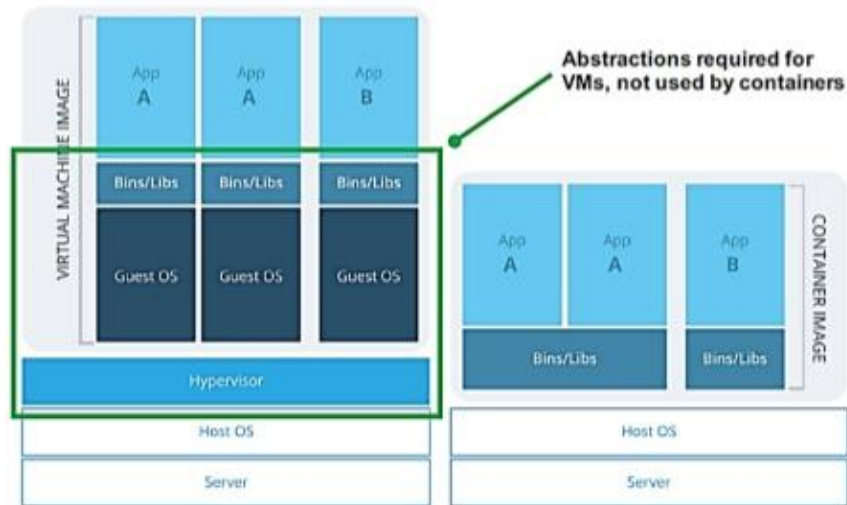
An open-source system for automating deployment, scaling, and management of containerized applications



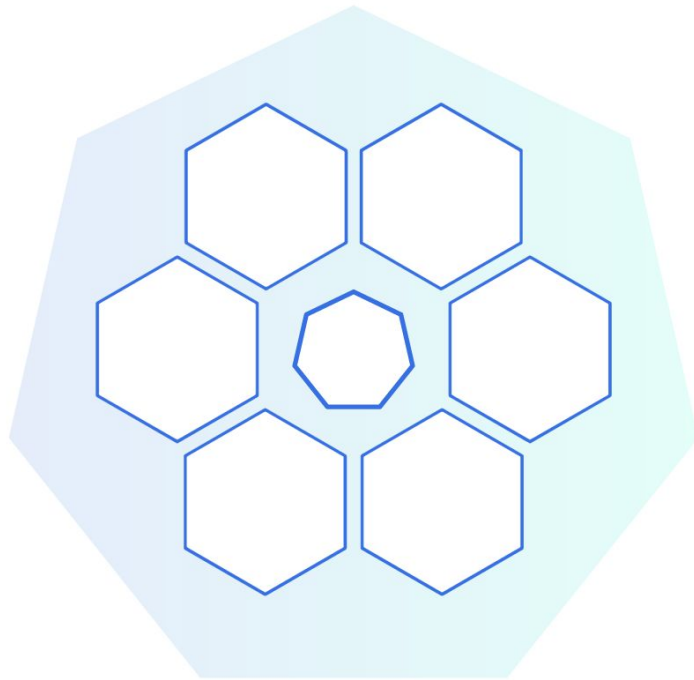
Recap on Containerization



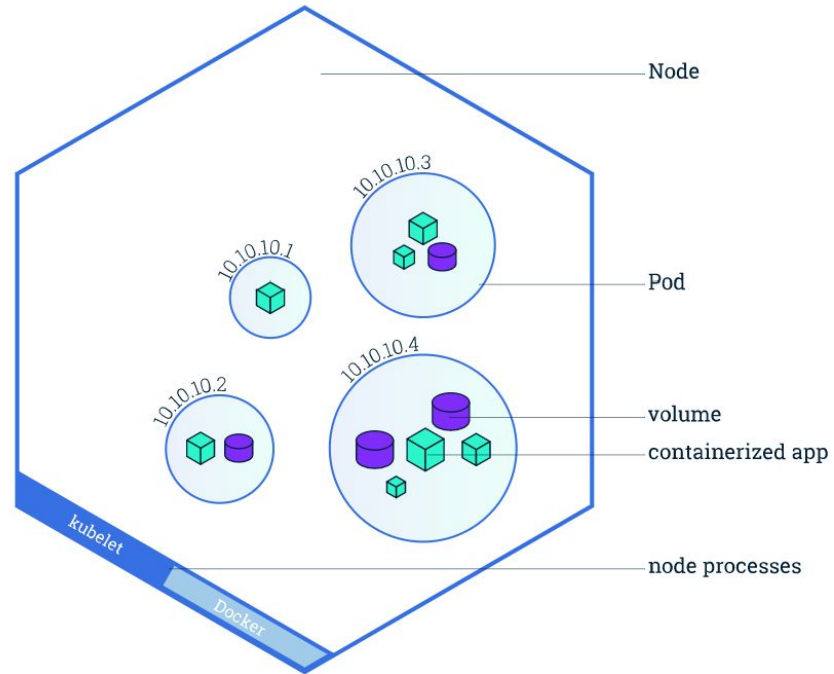
Containers vs. Virtual Machines



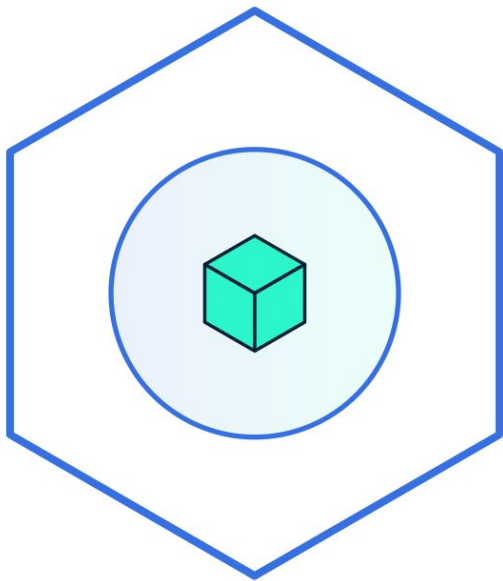
Clusters



Nodes



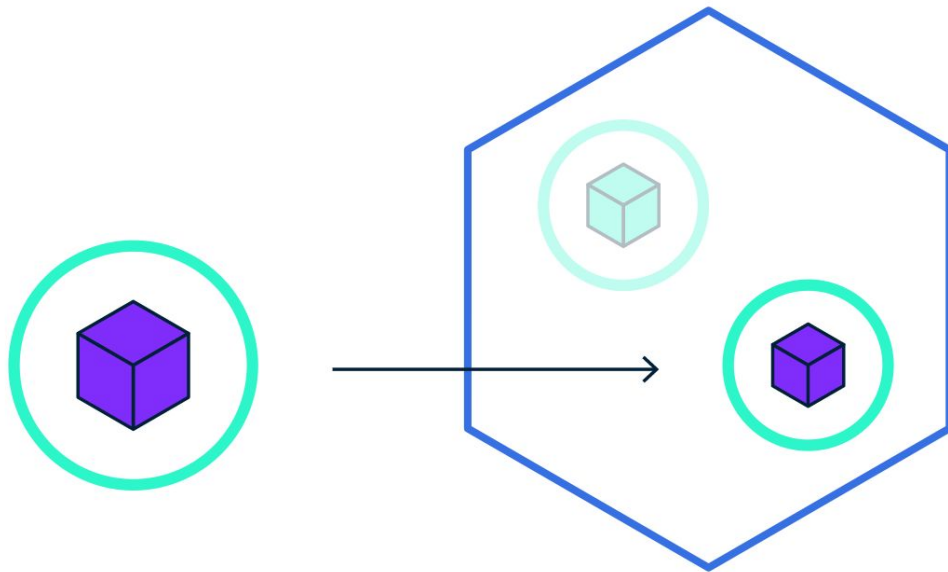
Deployment



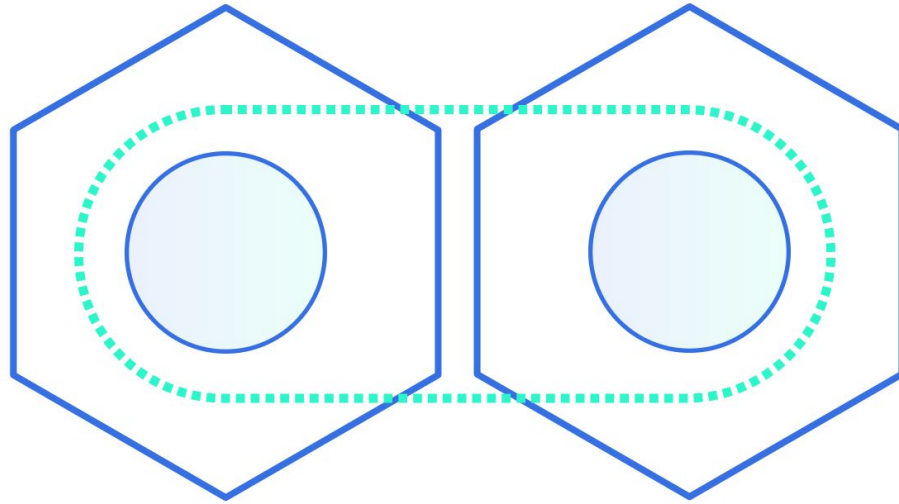
nginx-deployment.yaml

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx-deployment
spec:
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx:1.7.9
          ports:
            - containerPort: 80
```

Scalability



Exposure



When to use Kubernetes

- ... as a container platform
- ... as a microservices platform
- ... as a portable cloud platform

Disclaimer

Just because we can use a distributed system does not mean we should use it for everything.

MP9 (Last MP!)

Kubernetes

This MP will run on individual GCP. Please read the documentation.

Due Next Tuesday

Hand Graded (No Autograder)