

Deploying an Application on Kubernetes

Ryan Tolboom

New Jersey Institute of Technology



What do we need to know about an app before we deploy on Kubernetes?

What are the different parts of this app?

Which part faces the users?

Who are the admins?

Which parts are stateful?

What resources does this app require?

What is the baseline for use?

Containerizing the Application



[“Multicolored containers”](#) by [Håkan Dahlström](#) is licensed under [CC BY 2.0](#)

- Developed internally
- Deployed to an internal container registry
- Usually the end result of a CI/CD pipeline

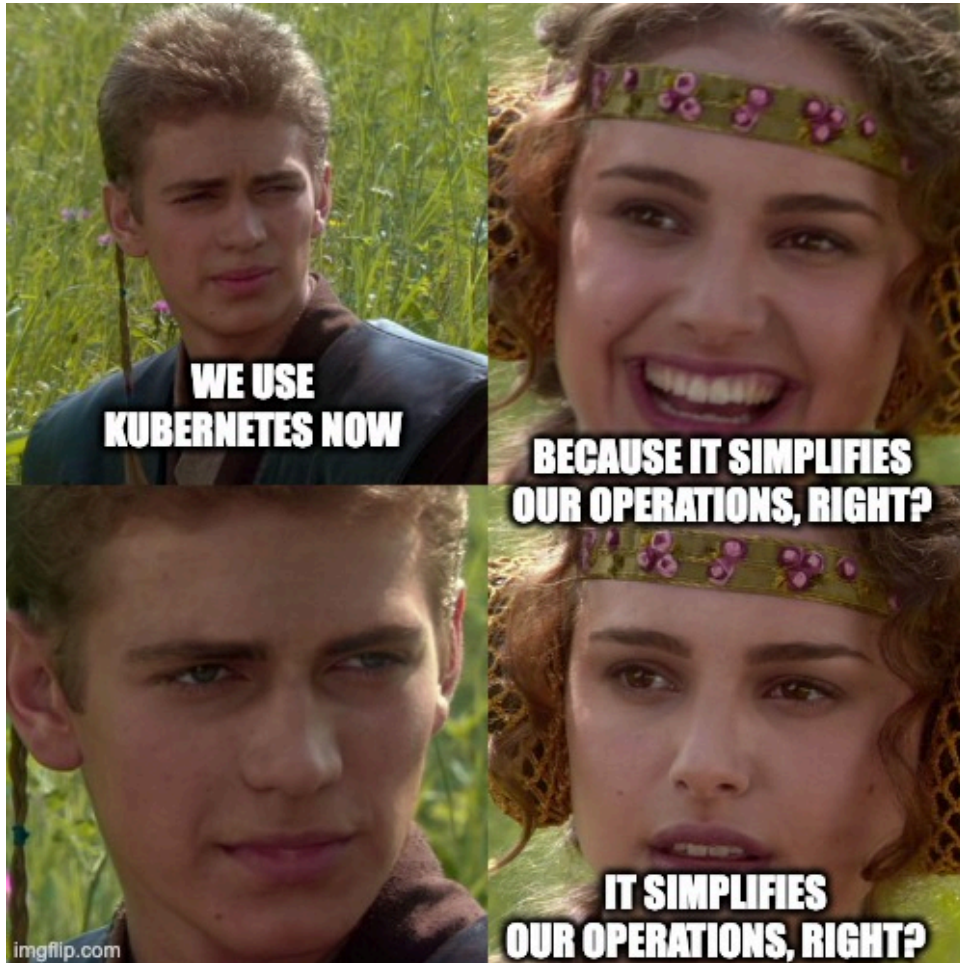
Designing K8s Objects

- Deployments
- Services
- Volumes



“Kubernetes Icons Set” by [Etienne Coutaud](#) is licensed under [CC BY 4.0](#)

Testing

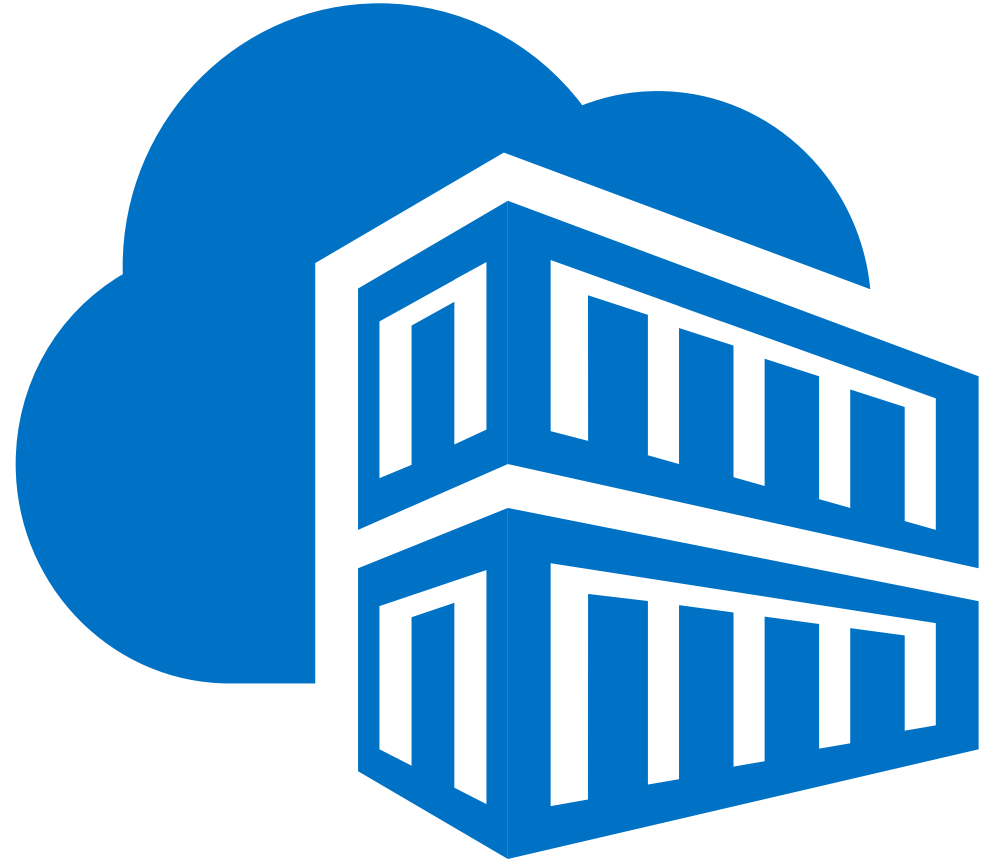


[We use kubernetes now](#) is used under fair use

- Can users use it?
- Can the admins use it?
- Does it scale?
- Can you update?
- Can you rollback?

Container Registry Options

- self-hosted
- [Docker Hub](#) (not private)
- [ECR](#)
- [GCR](#)
- [ACR](#)



[Azure Container Registry Logo](#) is used under fair use

Kubernetes Cluster Options



[“Kubernetes logo without workmark.svg”](#) by [Google, Inc](#) is licensed under [CC BY 4.0](#)

- Self-hosted
- k8s on IaaS
- k8s as a service: ([EKS](#) , [AKS](#) , [GKE](#))
- What's the container registry (CR) interop?