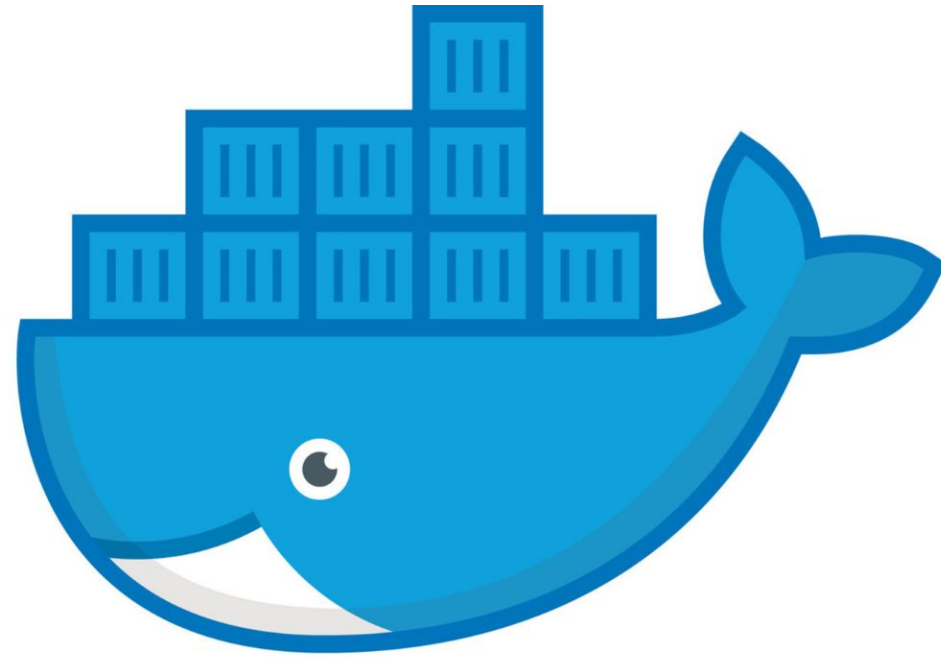


Kubernetes Workshop

Jakob Beckmann

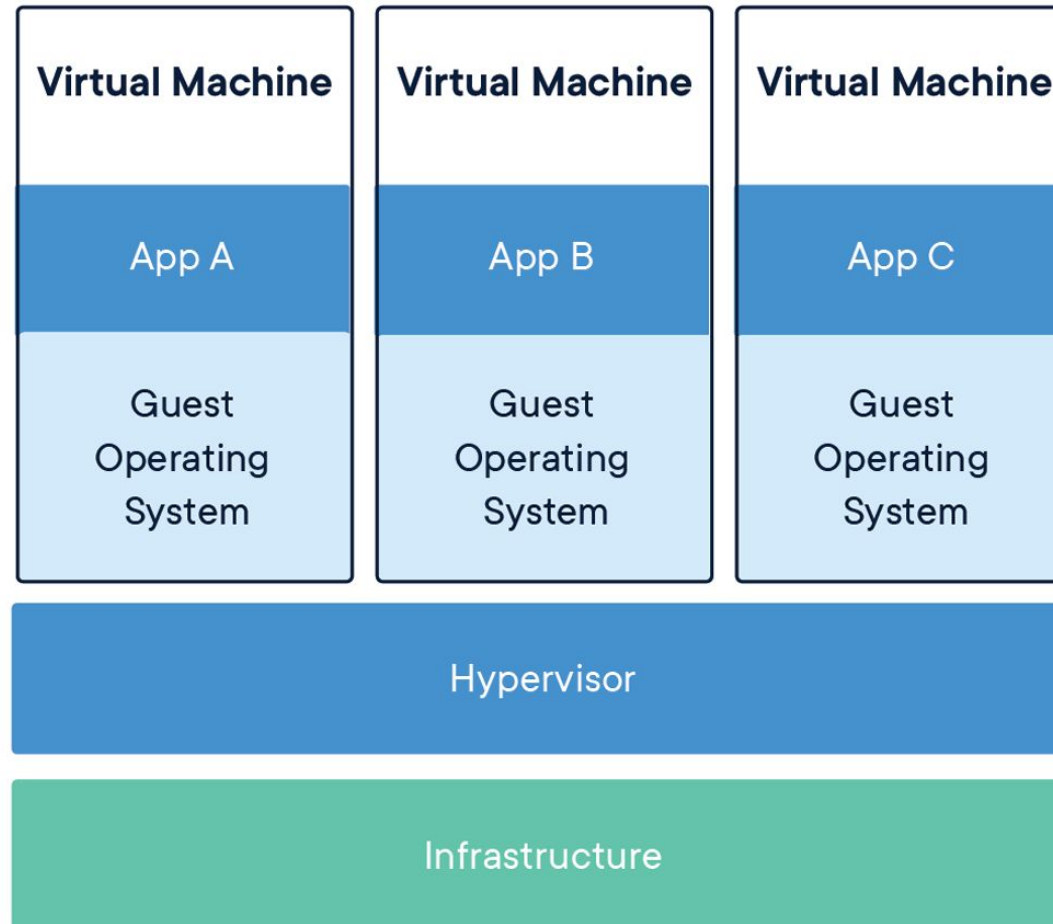
03.09.2021



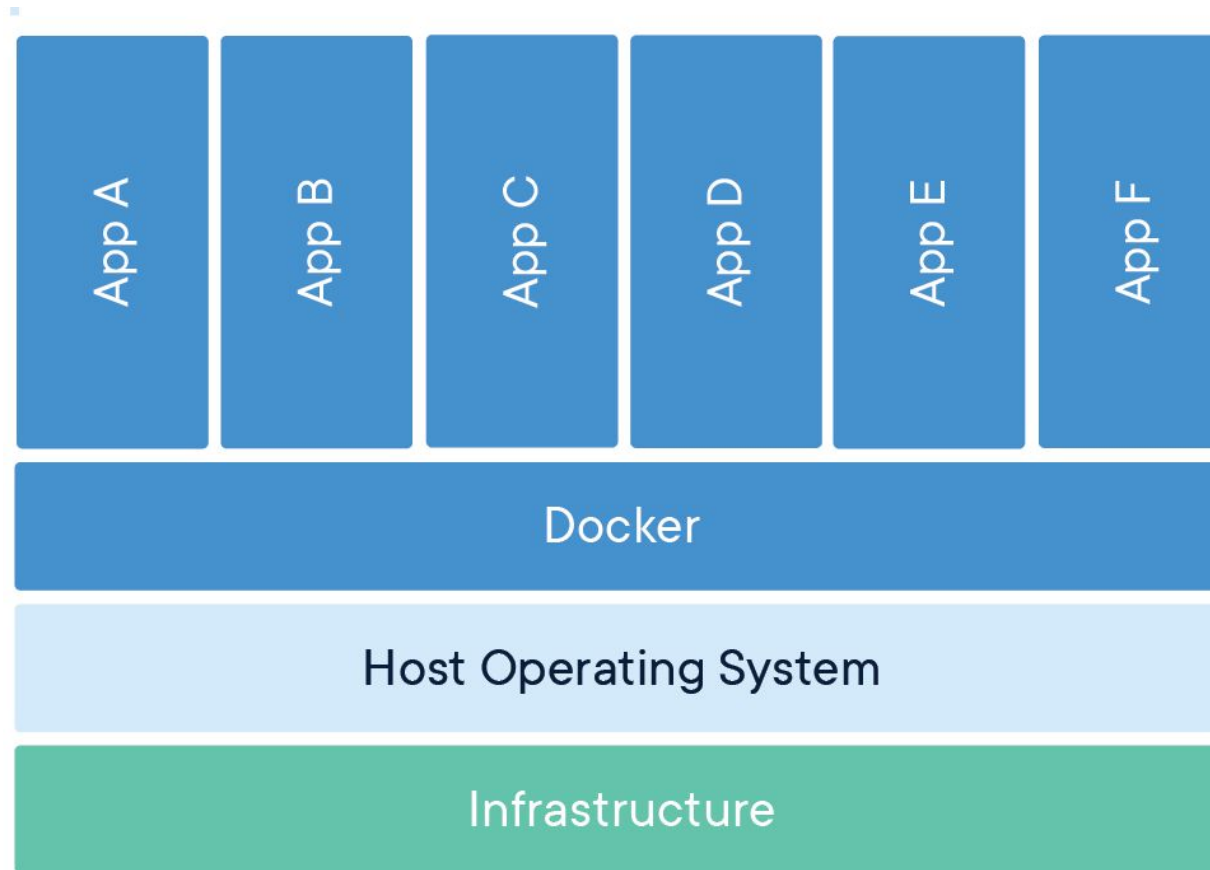


docker

The Virtual Machine World



The Container World



Dockerfiles

'sample.dockerfile+ ≡

```
21 FROM golang:1.17.0-buster AS builder
20
19 WORKDIR /app
18
17 COPY go.mod .
16 COPY go.sum .
15 RUN go mod download
14
13 COPY main.go .
12 RUN CGO_ENABLED=0 GOOS=linux go build -o server -ldflags "-s -w"
11
10
9 FROM scratch
8
7 USER 1000
6
5 COPY --from=builder --chown=1000:1000 /app/server /server
4
3 ENTRYPOINT [ ./server ]
2
```

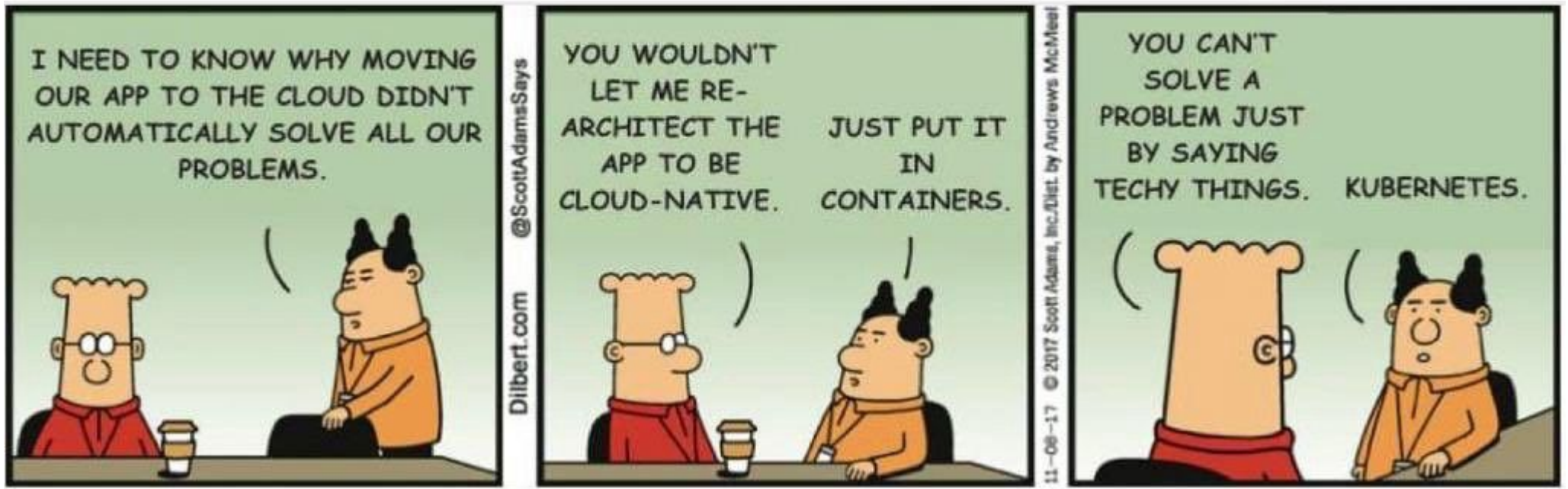


Best Practices

- **Smaller** is better
- **Root** is evil
- Images are **not secure** bank vaults
- Scan, **scan**, and scan again
- **Immutability** is king
- **Stateful** containers will complicate your life ... a lot



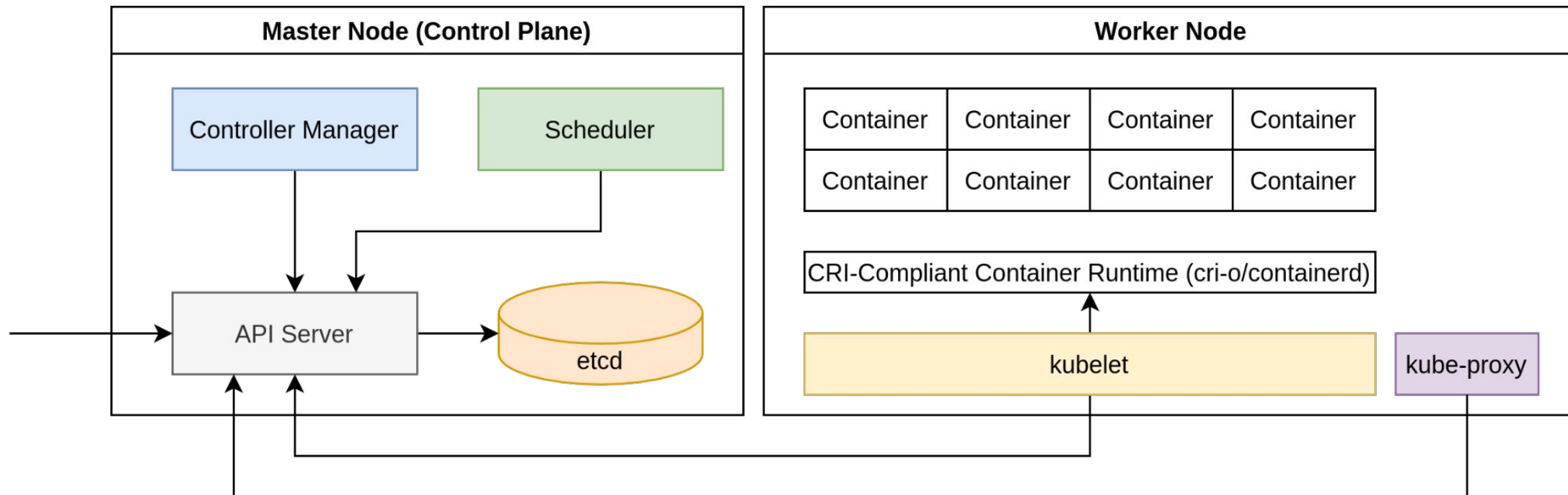
Solved all your problems. You're welcome.



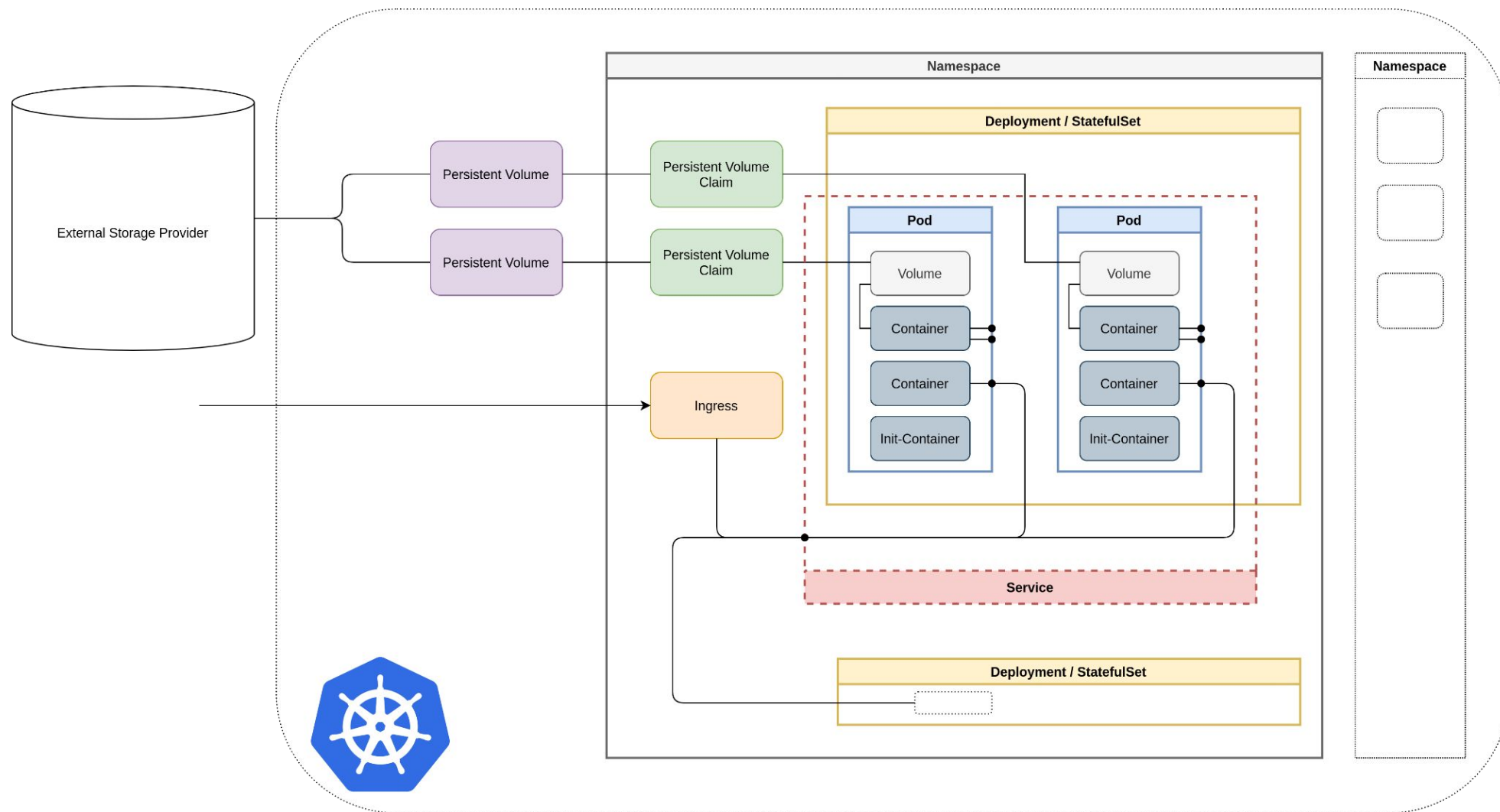


kubernetes

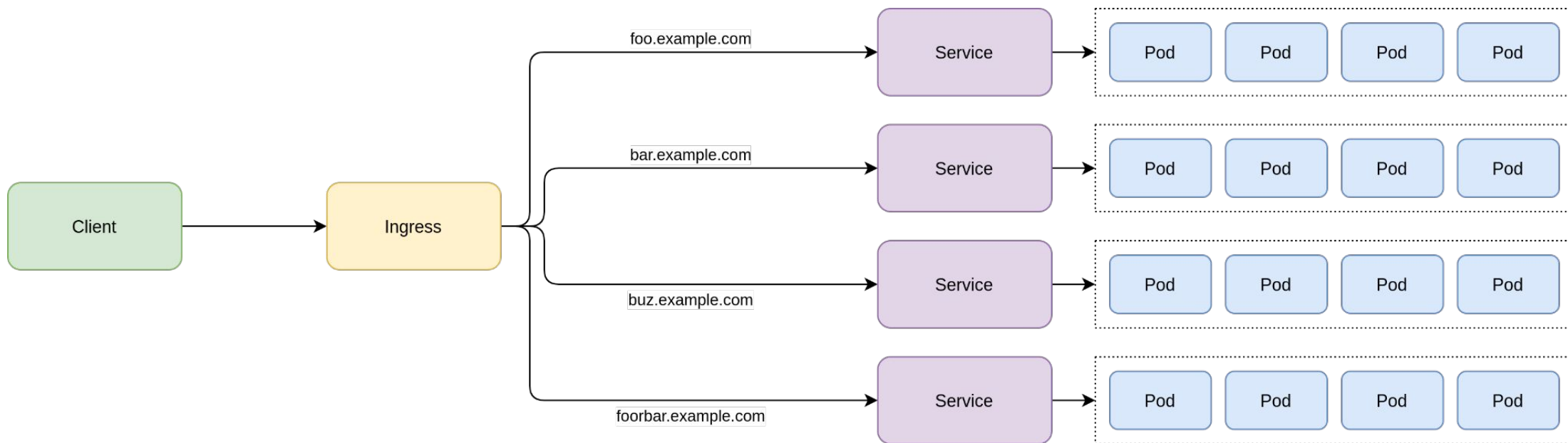
Architecture



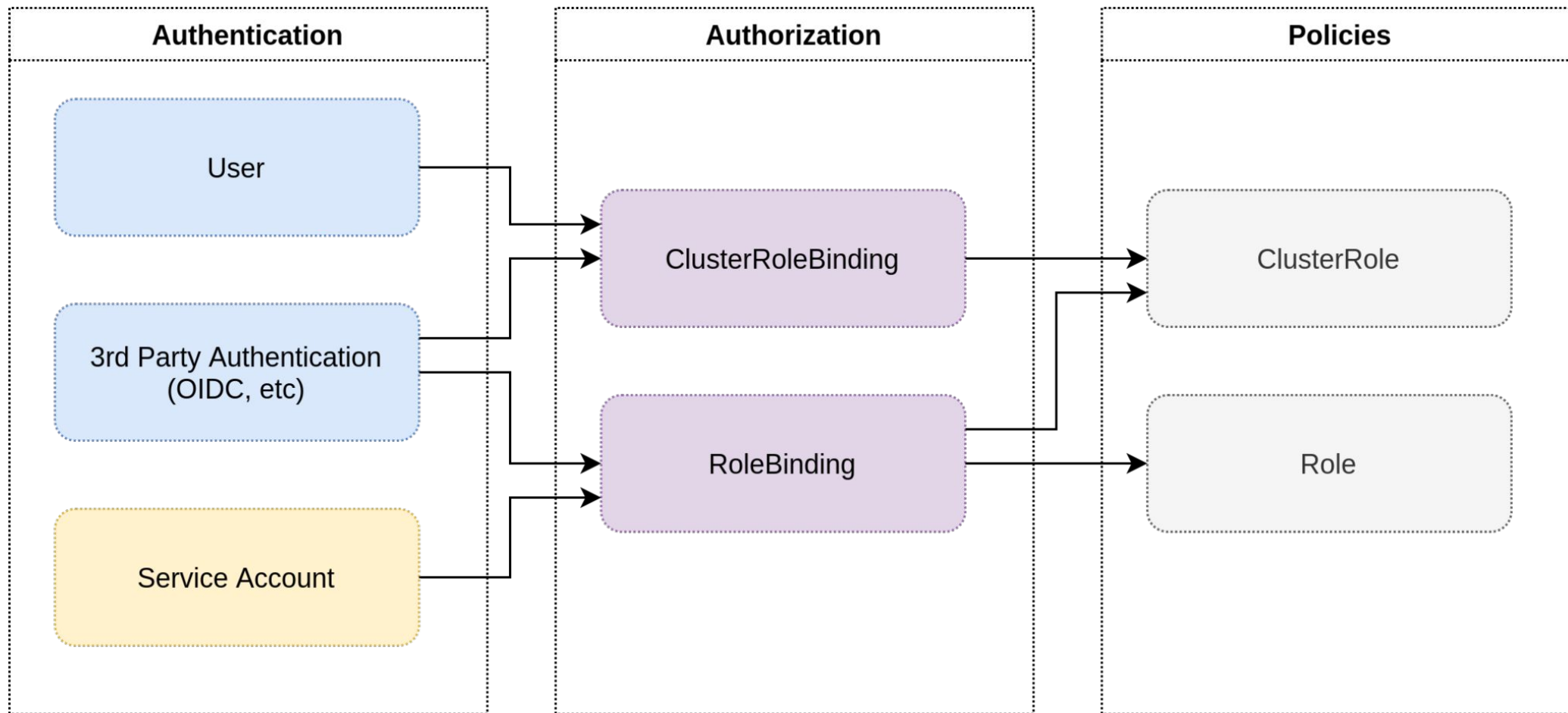
Core Concepts



Ingress



RBAC





Best Practices

Deployments

- Keep resources in **VCS**
- Only **deploy via CI/CD**
- **Protect** internal endpoints

RBAC

- Principle of **least privilege**
- Be very **careful!**
- Use RBAC **managers**

