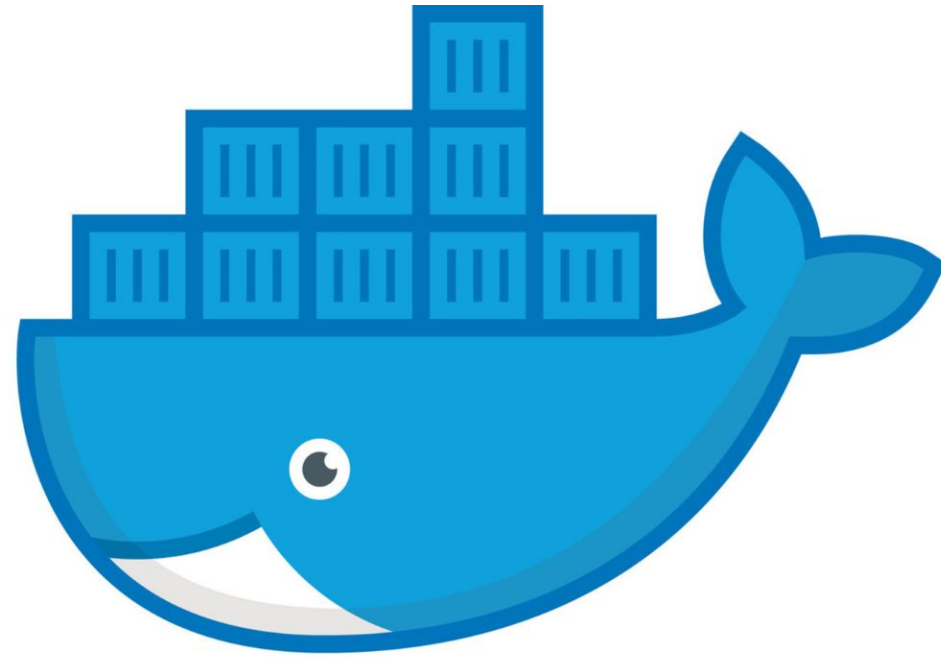


# Kubernetes Workshop

Jakob Beckmann

03.09.2020

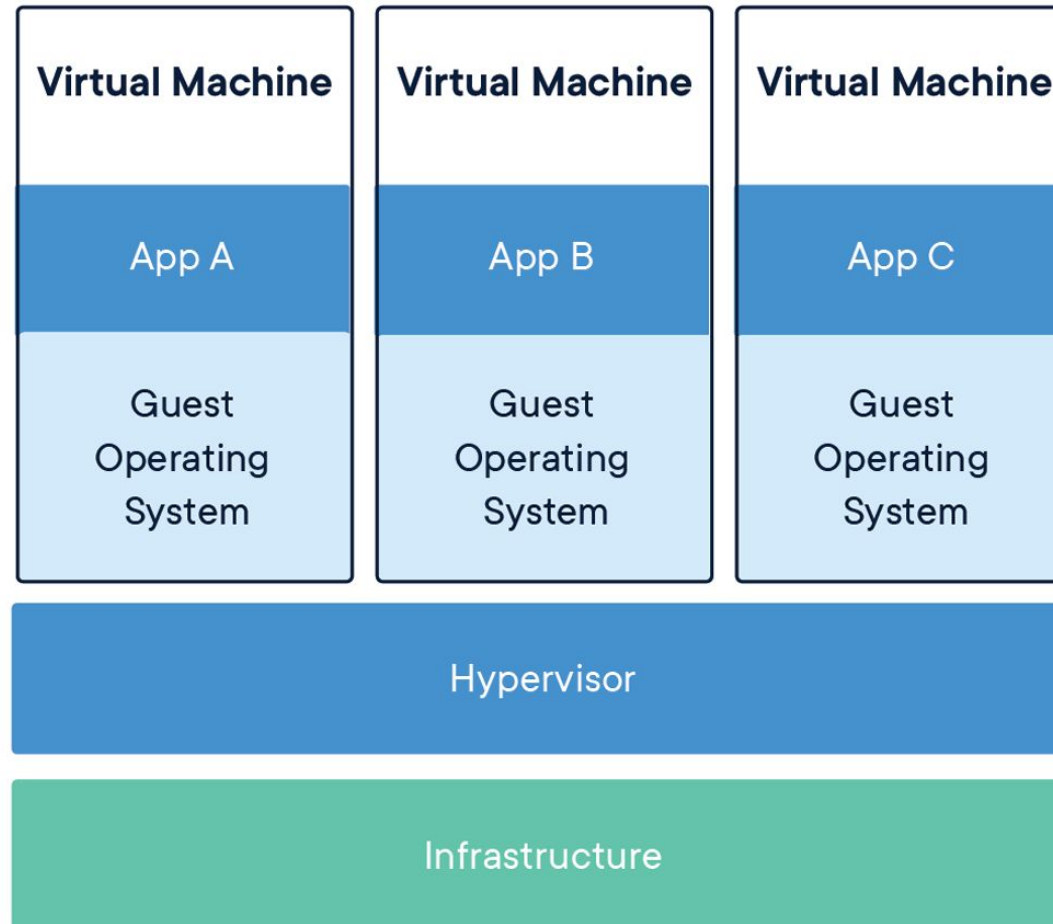




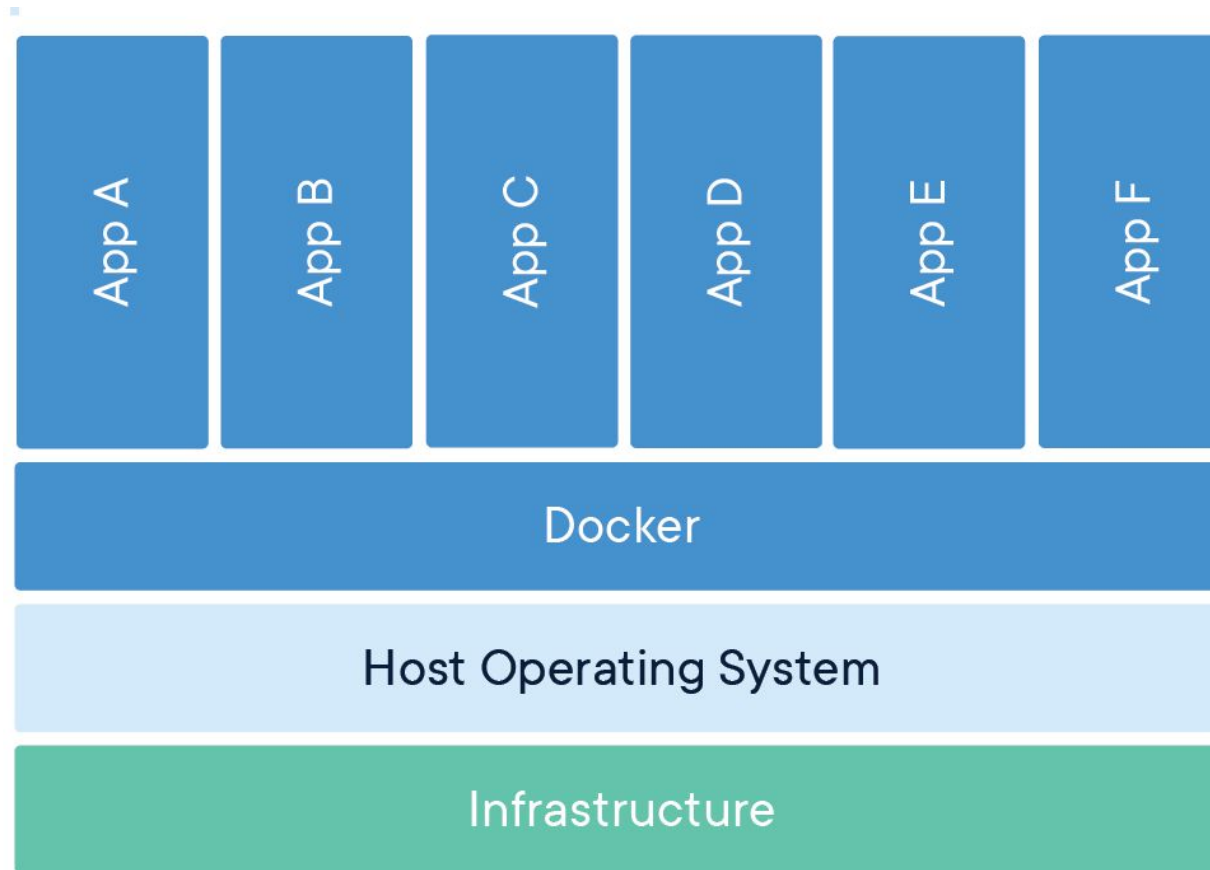
# docker



# 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
```



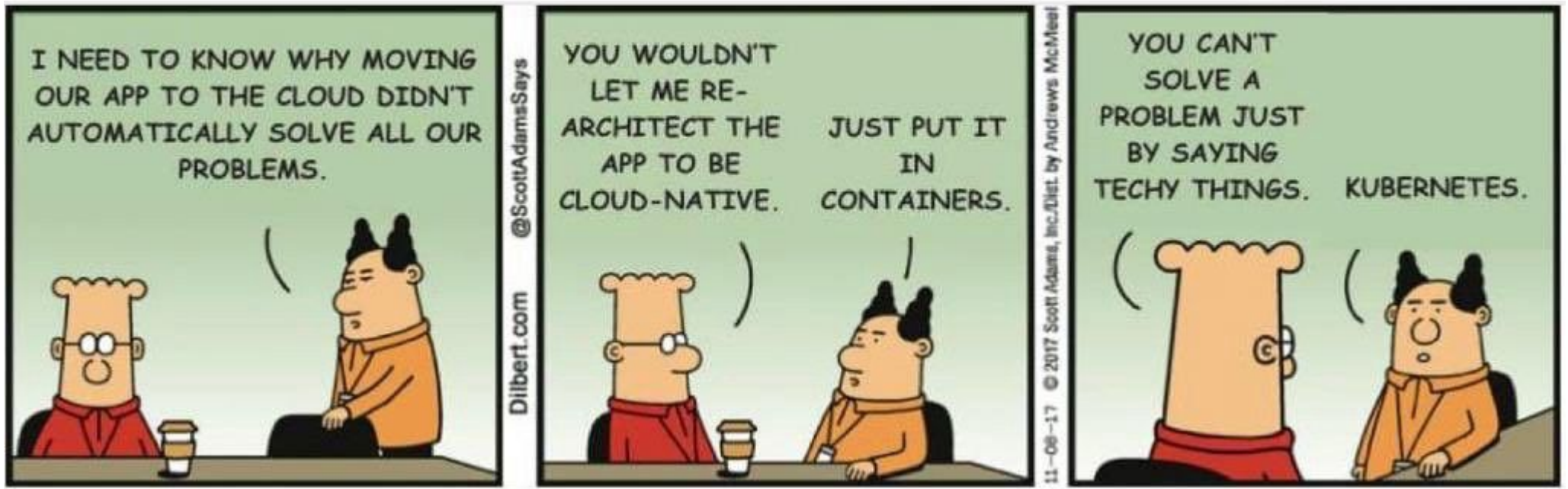
# Best Practices

- **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.

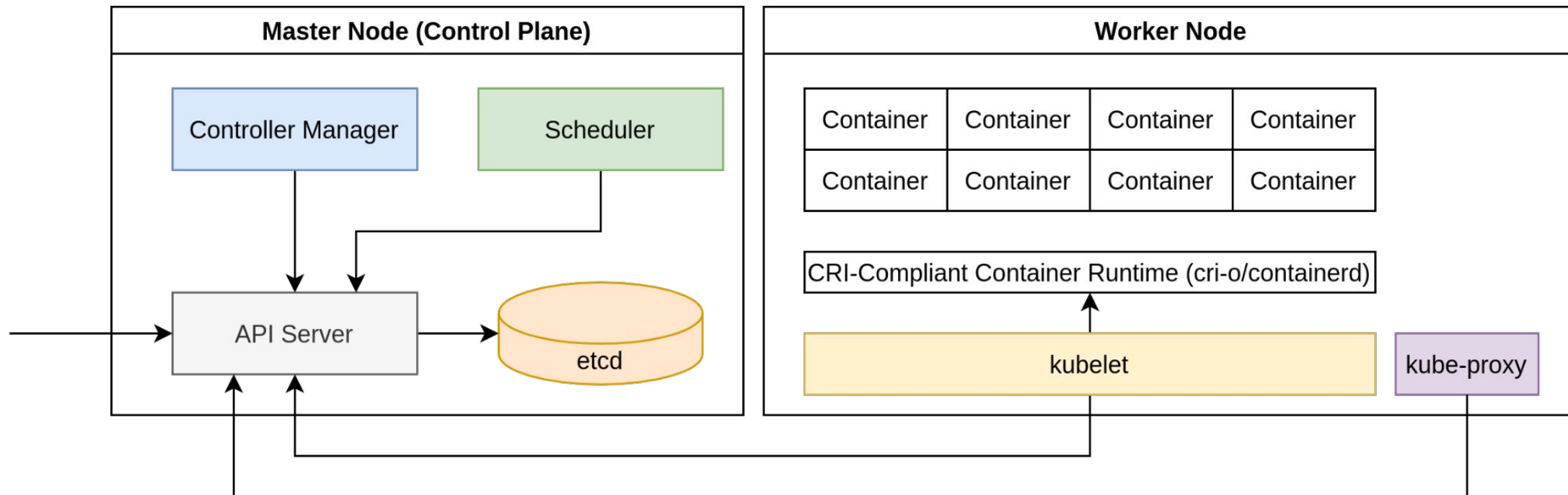




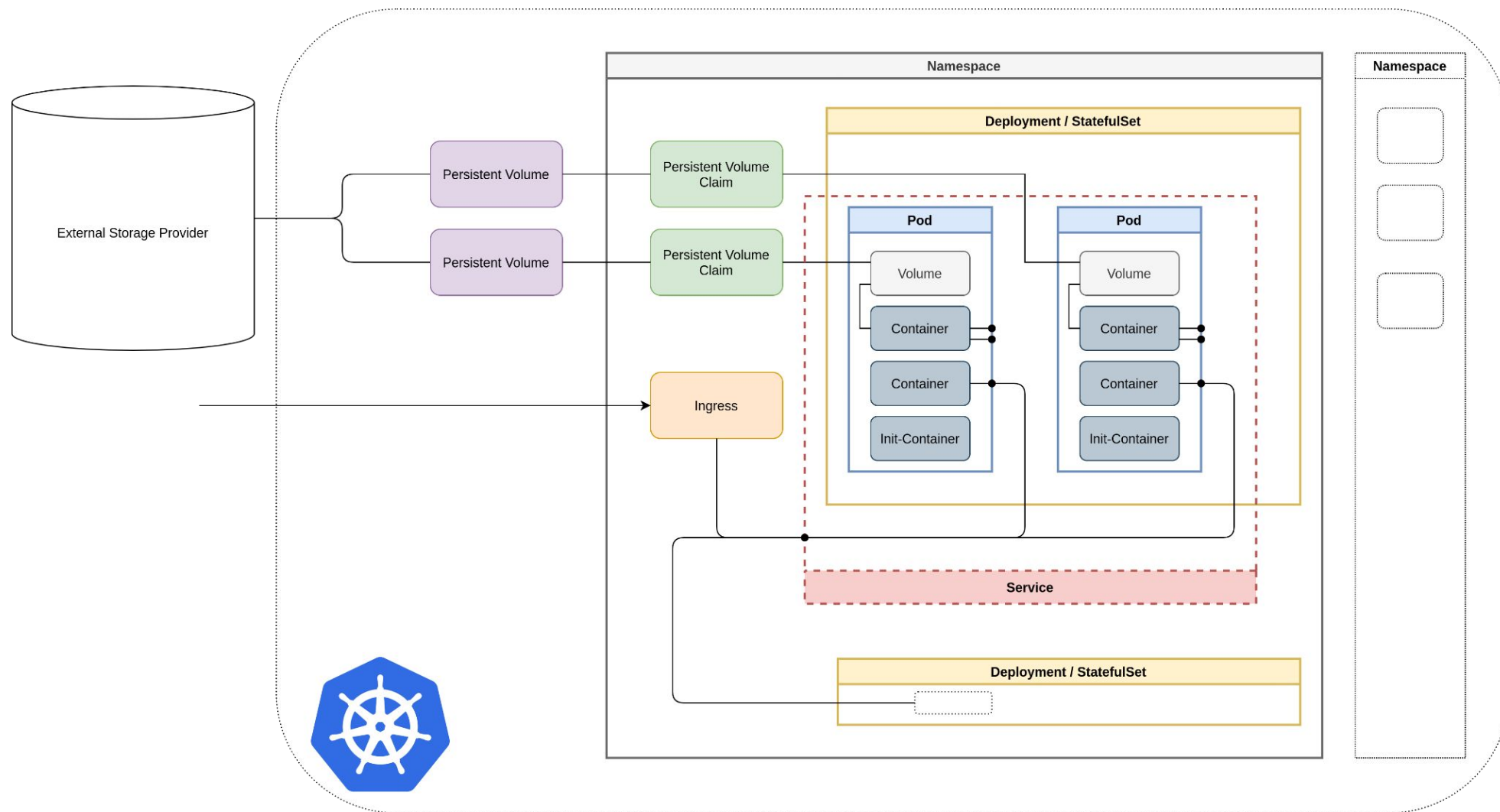
# kubernetes



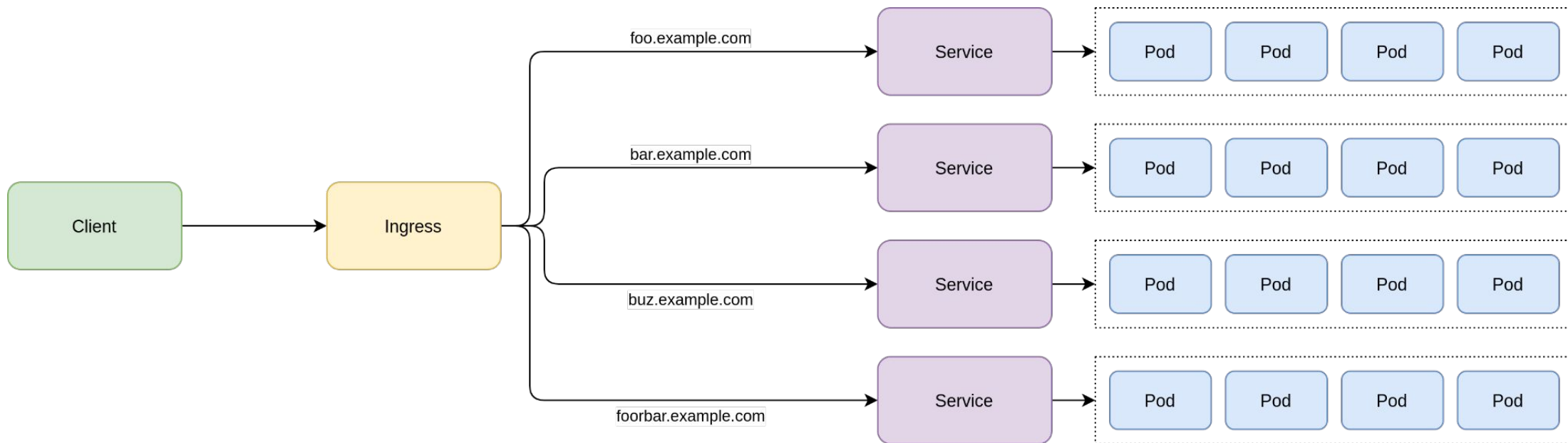
# Architecture



# Core Concepts

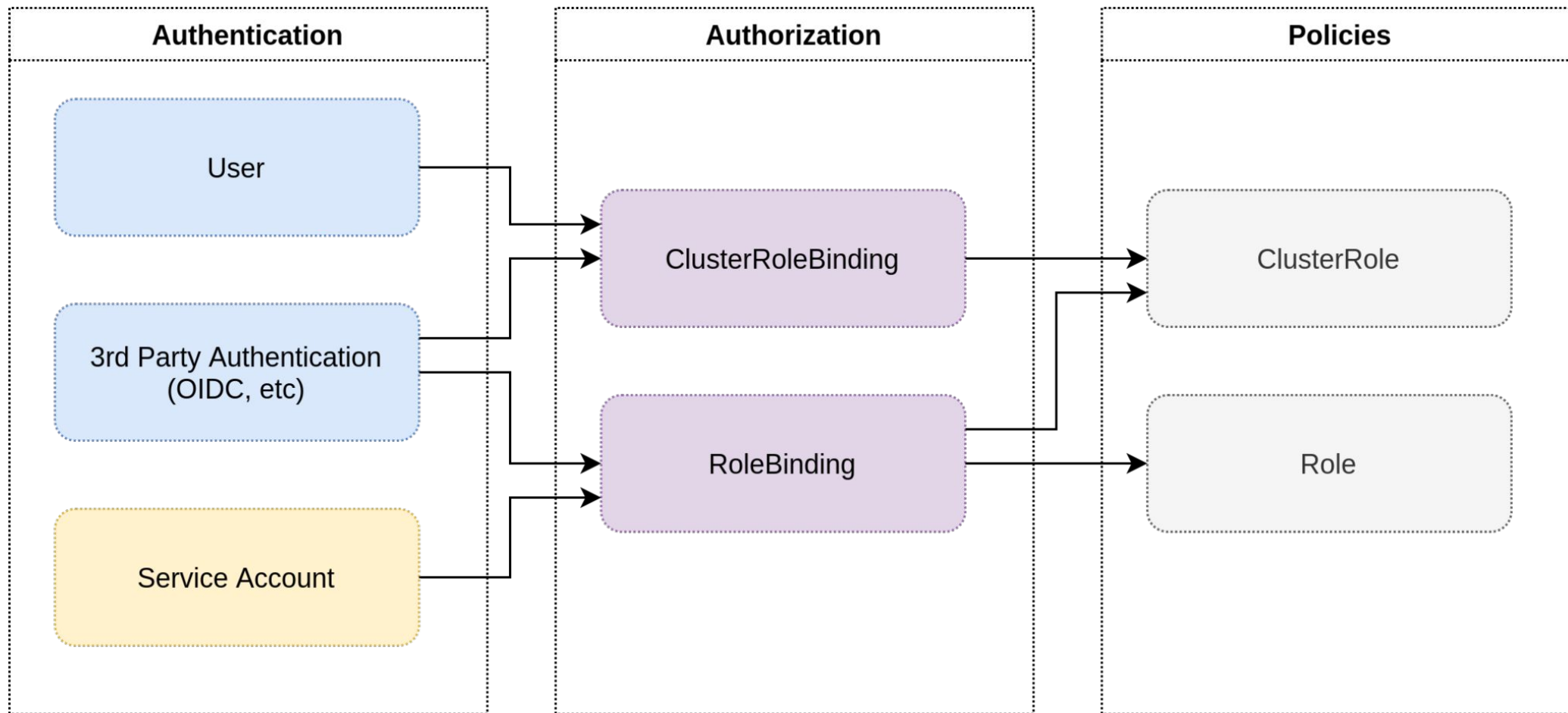


# Ingress





# 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**

