ONAP - Cloudify Cloud Native Approach

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Cloudify architecture evolution

2017 → 2018 → **2019**

2017
- All in one servers
- RPM / virtual image
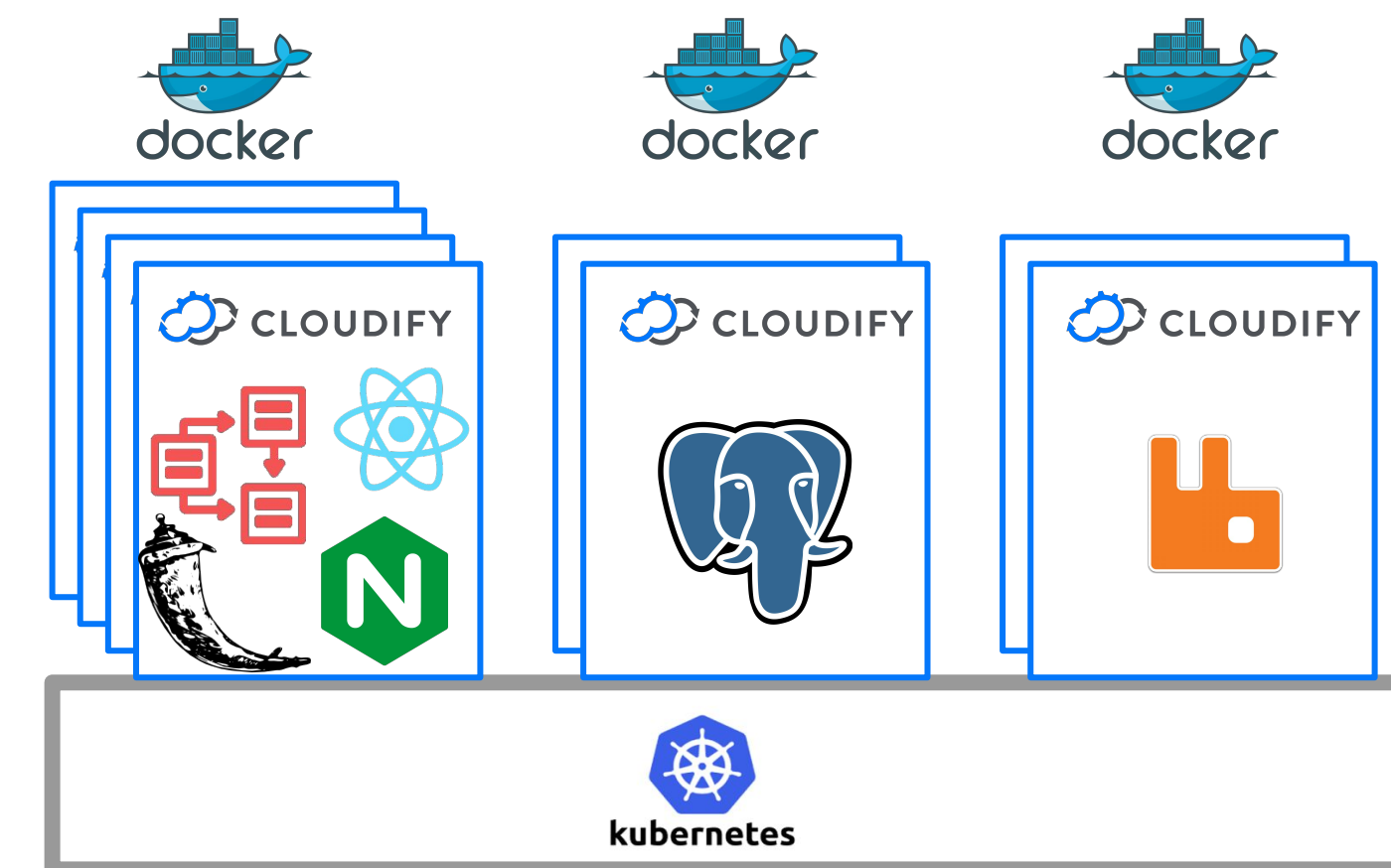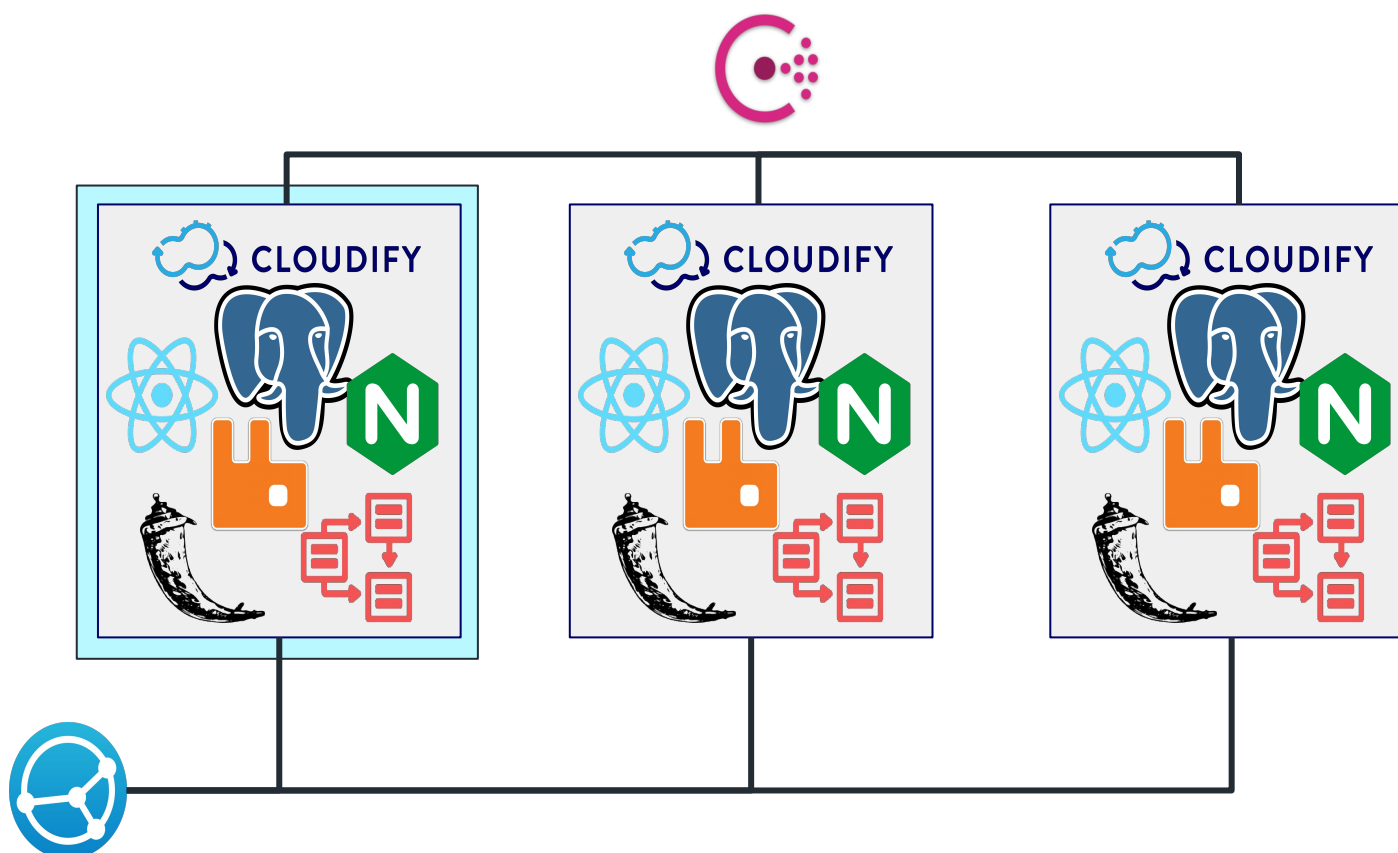- Active-passive cluster architecture

2018
- All in one servers
- Docker as main vehicle
  - Optional: RPM / virtual image
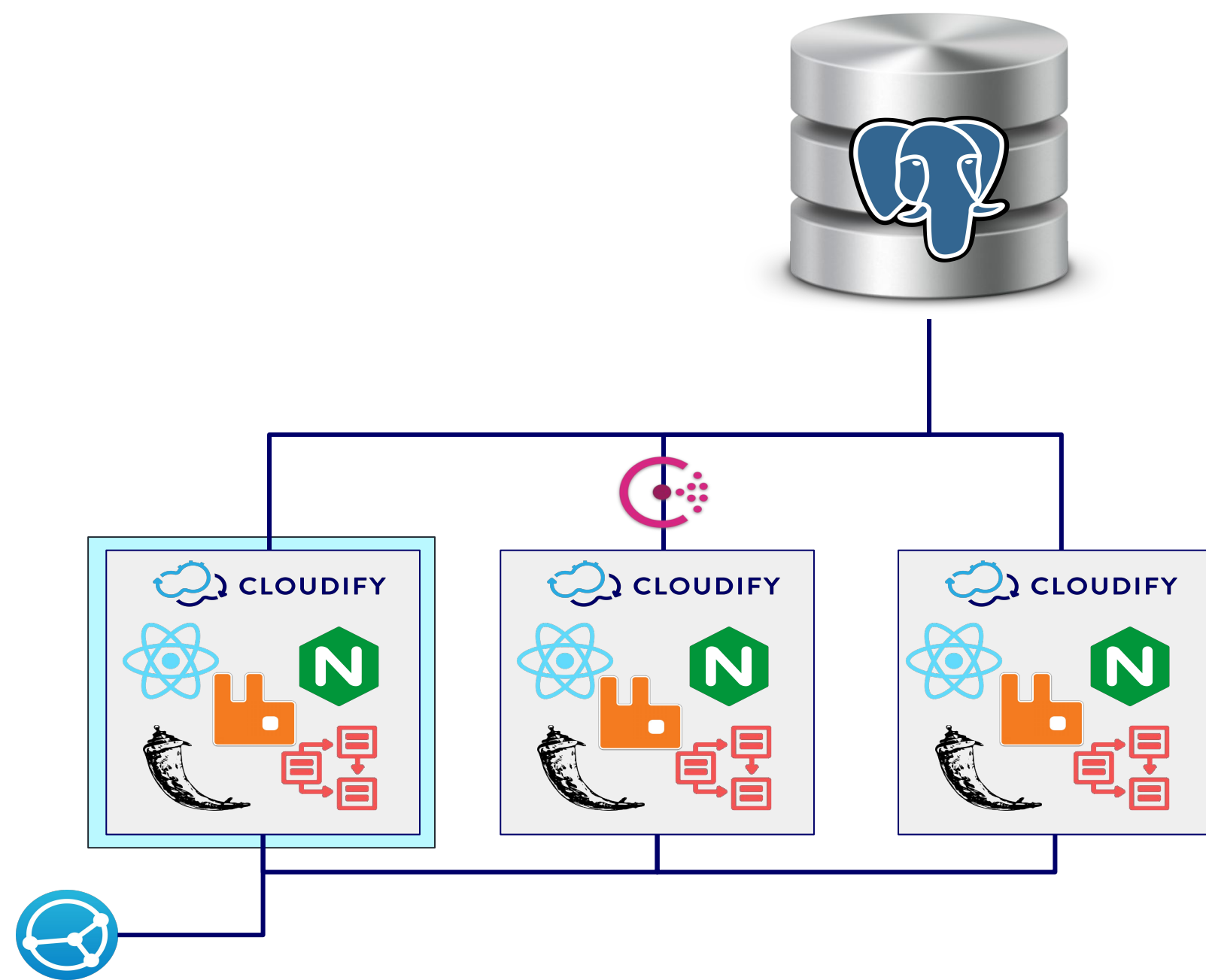- Active-passive cluster architecture

2019

Cloud native
- Stateless service architecture
- Docker as main vehicle
- Kubernetes as the preferred infra
- Active-active cluster topology

CLOUDIFY

Local resilience - cluster architecture changes

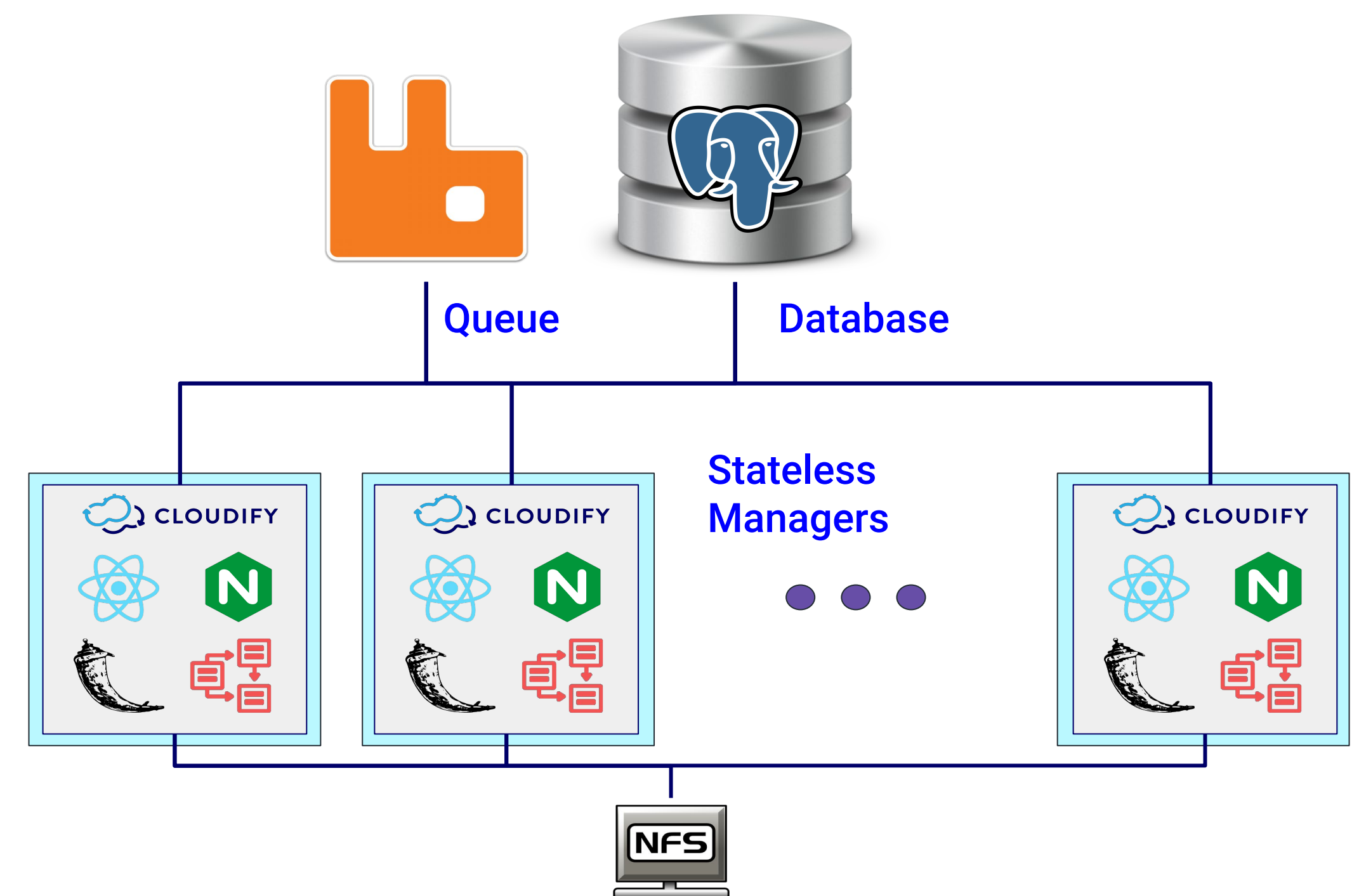## Cloudify 4.5.5

- Active-passive topology (Single active node)
- Stateful services

Cloudify 5.0

- Active-active topology (All active nodes)
- Stateless services

Queue   Database

Stateless Managers

Deployment vehicle

- Container repository
  - Manager
  - Database
  - Queue
  - All-in-one

- Docker based, over Kubernetes (recommended) or other infra

- RPM - mainly for custom builds

Repository
Manager
DB
Queue
All-in-one
docker
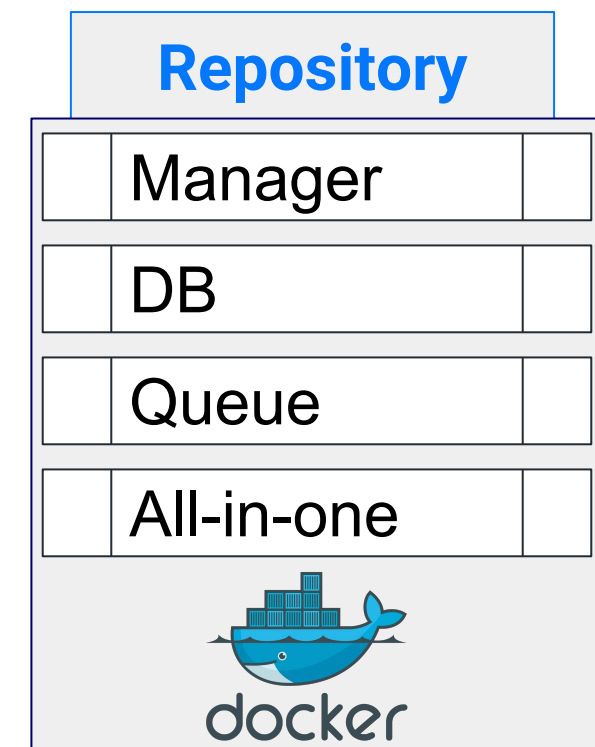
Onboarding

- Deploy Cloudify Central Manager
  - All-in-one / Cluster
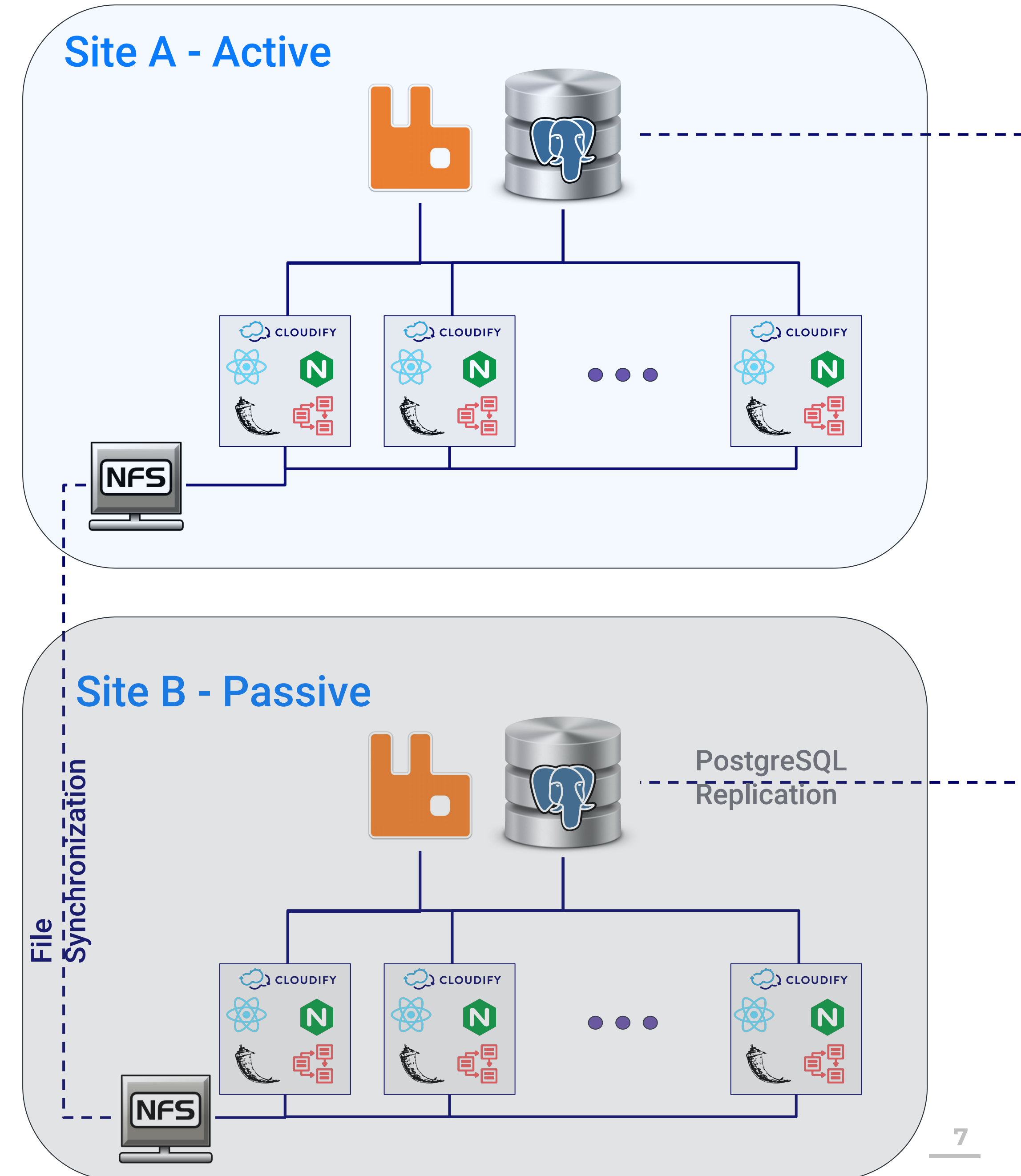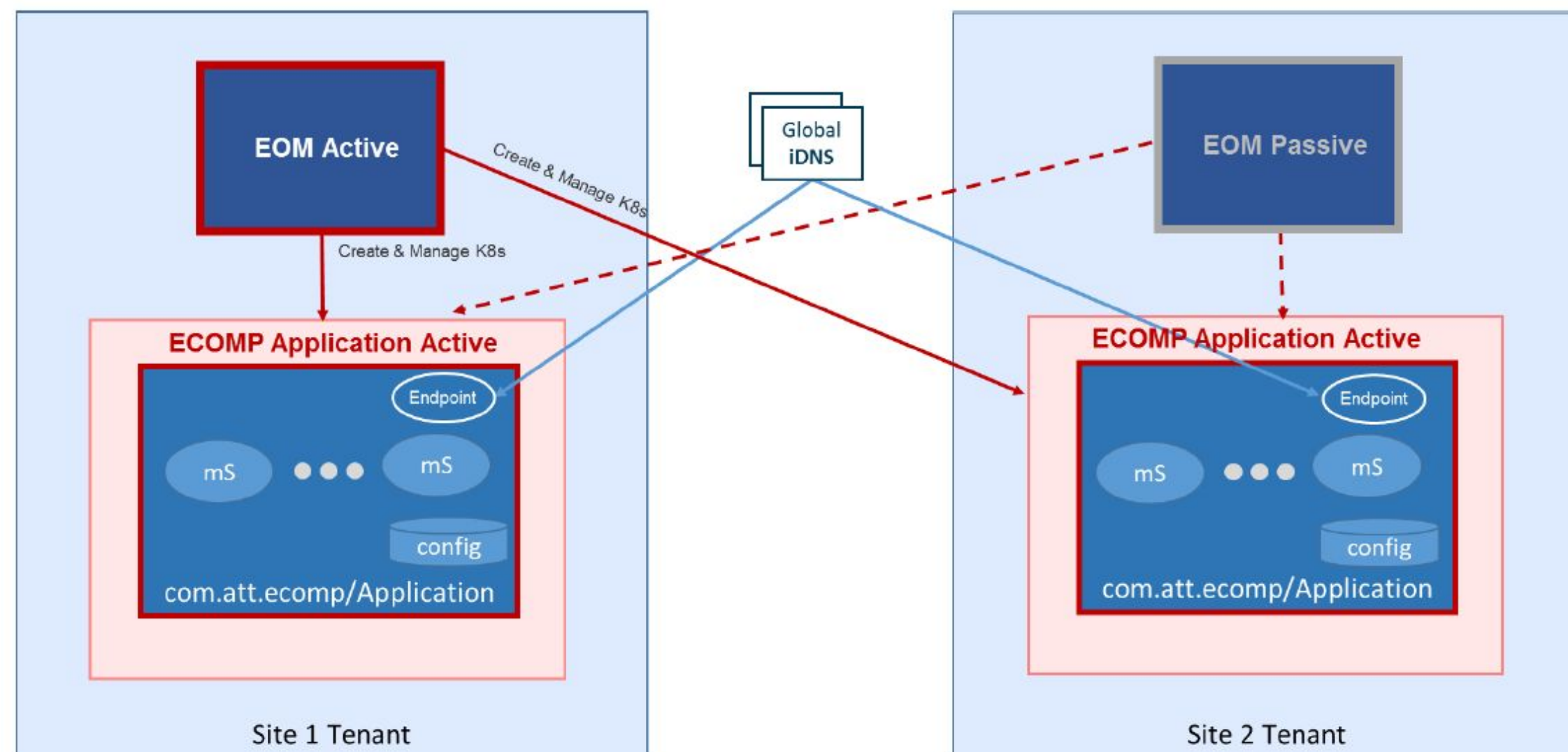 - Docker based, over Kubernetes (recommended) or other infra
  - Helm / template

Central Mgr

Repository

| Manager |
| DB |
| Queue |
| All-in-one |
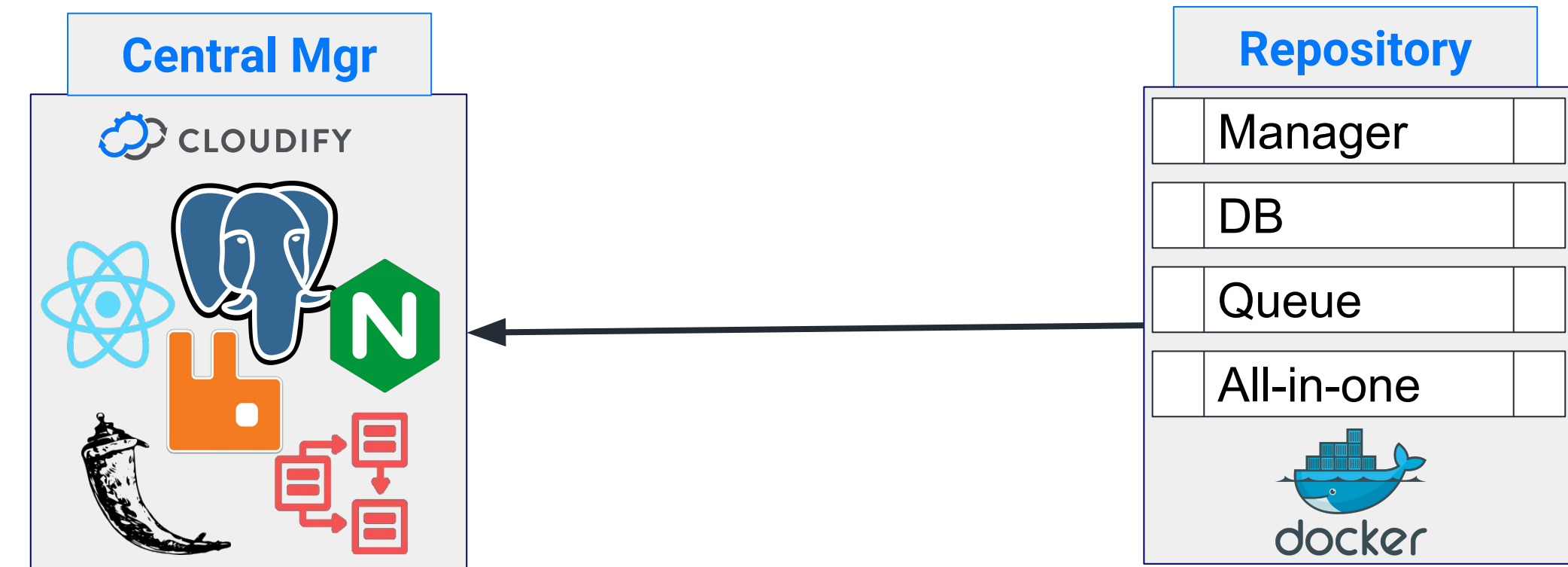
Onboarding

- Cloudify Central Manager orchestrates regional and site managers
  - Clusters/stand alone
- Central control over
  - Upgrade and maintenance
  - Deployment and workflow execution
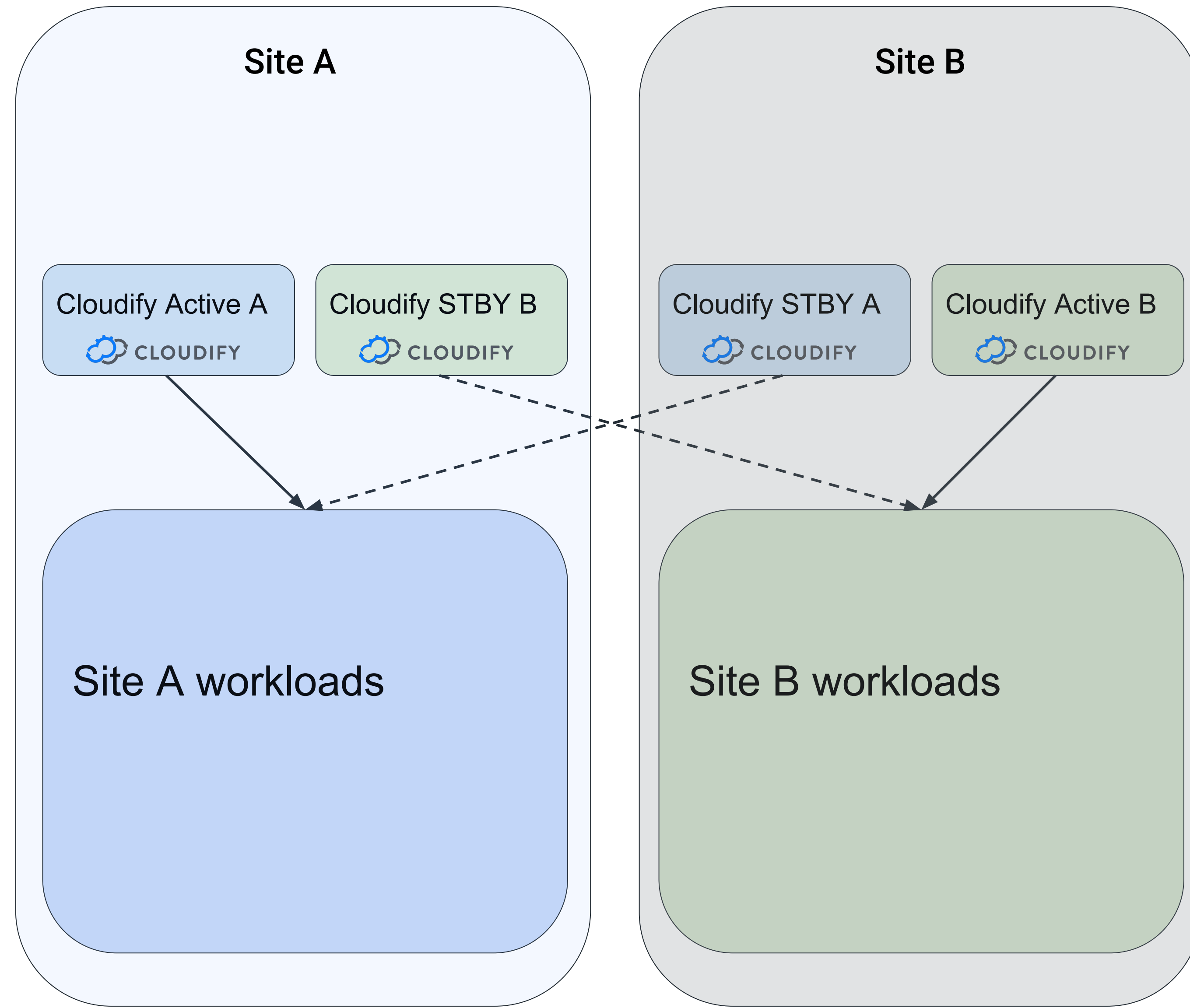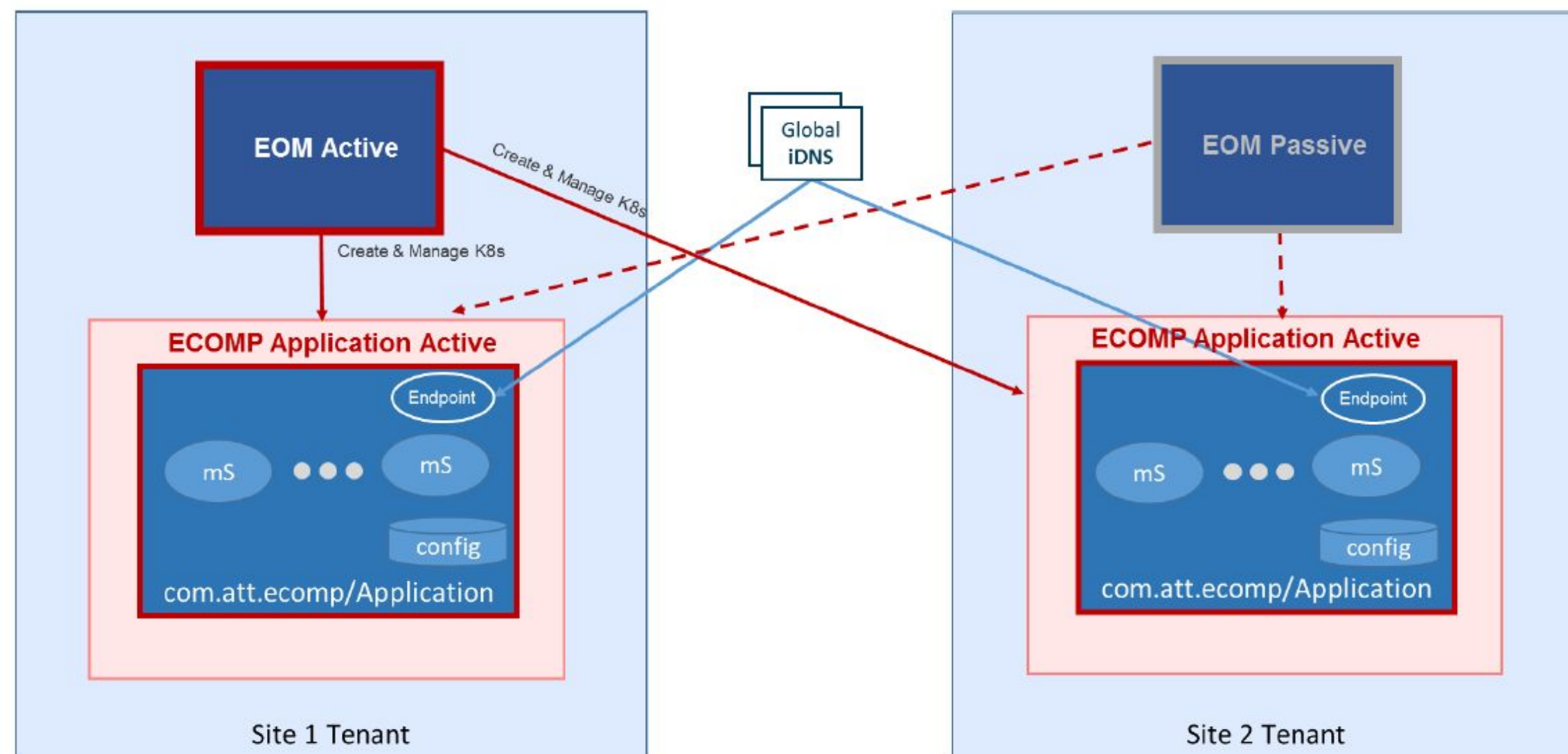 - Dashboards, reports & logs
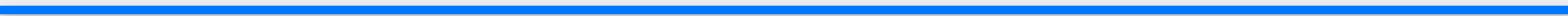

Deploy & Manage   Infra+Services
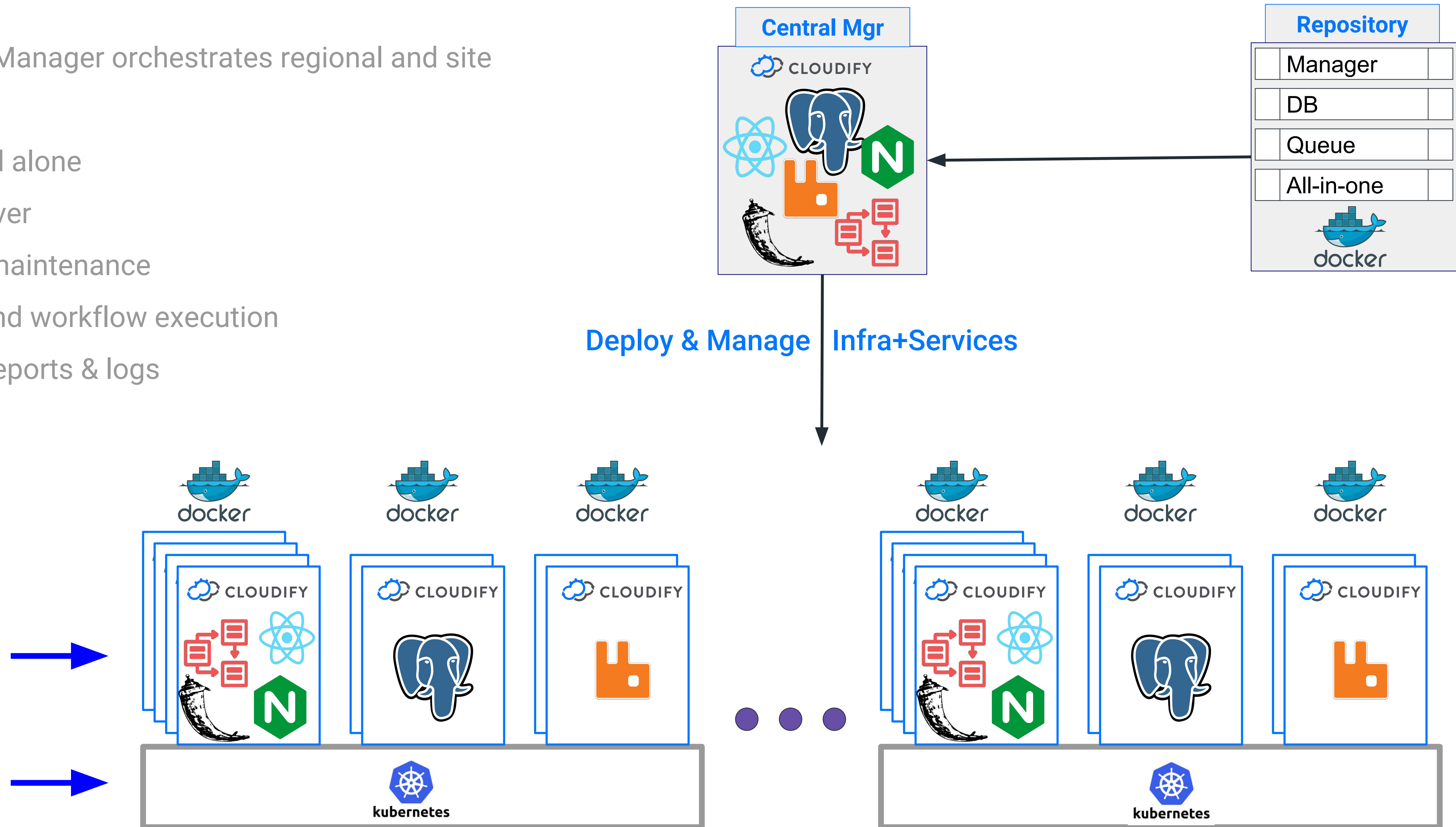
Geo resilience

- Failover external trigger
- Full functionality post failover
- Auto resume of interrupted/incomplete workflows

Geo resilience - full mesh

Site A

Site B

Cloudify Active A

Cloudify STBY B

Cloudify STBY A

Cloudify Active B

Site A workloads

Site B workloads

EOM Active

Global iDNS

EOM Passive

Create & Manage K8s

Create & Manage K8s

ECOMP Application Active

Endpoint

mS • • • mS

config

com.att.ecomp/Application

ECOMP Application Active

Endpoint

mS • • • mS

config

com.att.ecomp/Application

Site 1 Tenant

Site 2 Tenant

Thank You.