

cdCon 2022

**Building DevOps metrics for your choice of CD tools through
CDEvents**

A long long time ago

A long long time...

cdCon 2022

**Building DevOps metrics for your choice of CD tools through
CDEvents**

Andrea Frittoli, IBM. Erik Sternerson, doWhile

In this talk

- **Learn About CDEvents**
- **Learn About DevOps Metrics**
- **How do they fit together**

CDEvents

Conceptual: Common language

Wider effort

- CDF SIG Interoperability**
- CDF SIG Events**

CDEvents

Concrete: Spec and SDKs

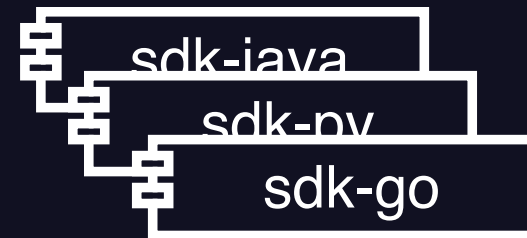
Specification



Specification



Specification

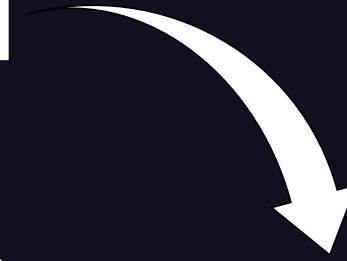


SDKs

Specification



```
// Create an event.  
event, _ := cde.CreateServiceEvent(  
    cde.ServiceDeployedEventV1,  
    serviceEnvId,  
    serviceName,  
    serviceVersion,  
    serviceData)  
  
// Set a source.  
event.SetSource(source)  
  
// Set a target.  
ctx := cloudevents.ContextWithTarget(  
    context.Background(), CDE_SINK)
```



SDKs

Specification



Integrations
&
Proof-of-Concepts



SDKs

Wider effort (again)

- **CDEvents team**
- **Project communities**

What we want to achieve through CDEvents

Interoperability

Observability

DevOps Metrics

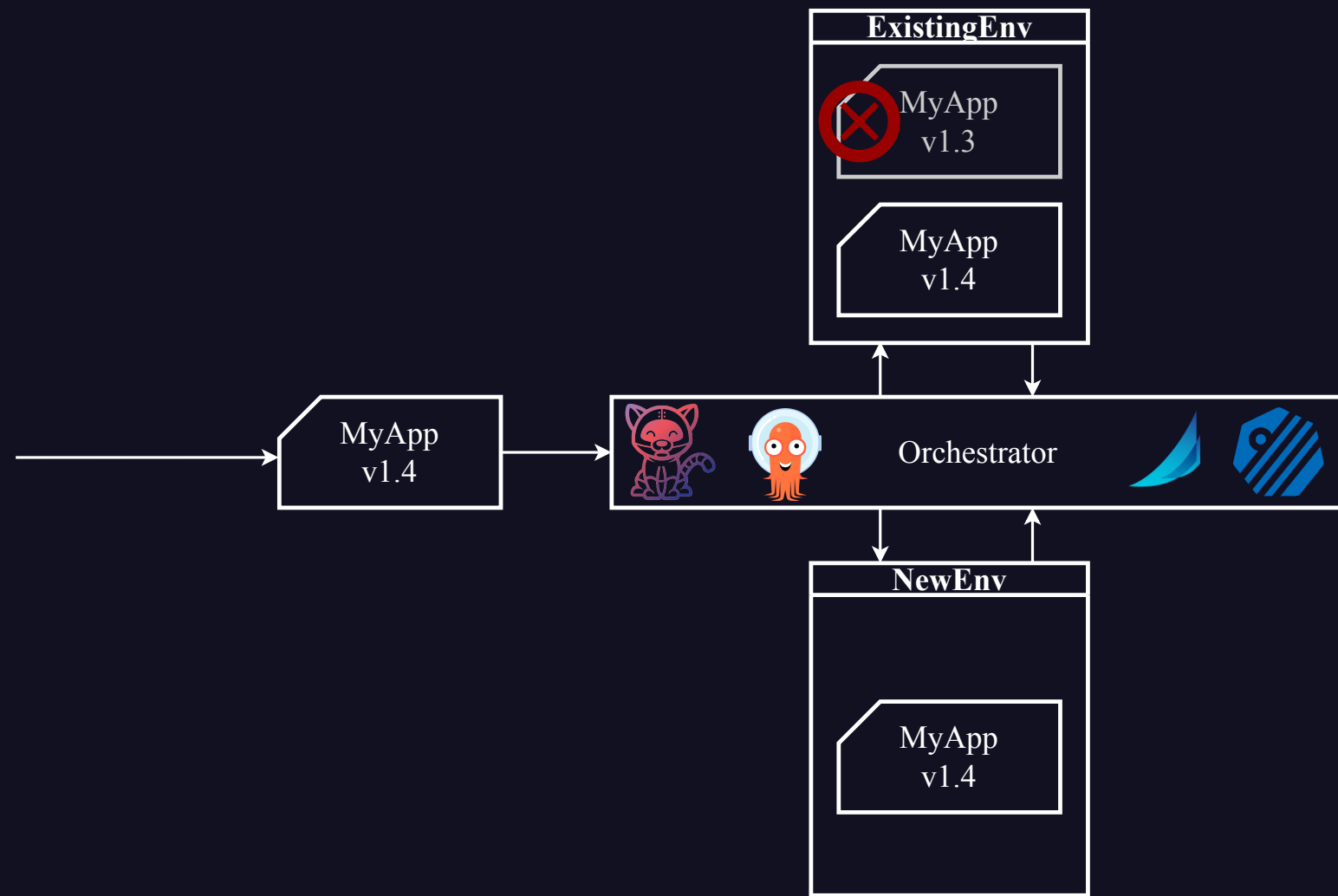
DORA Metrics

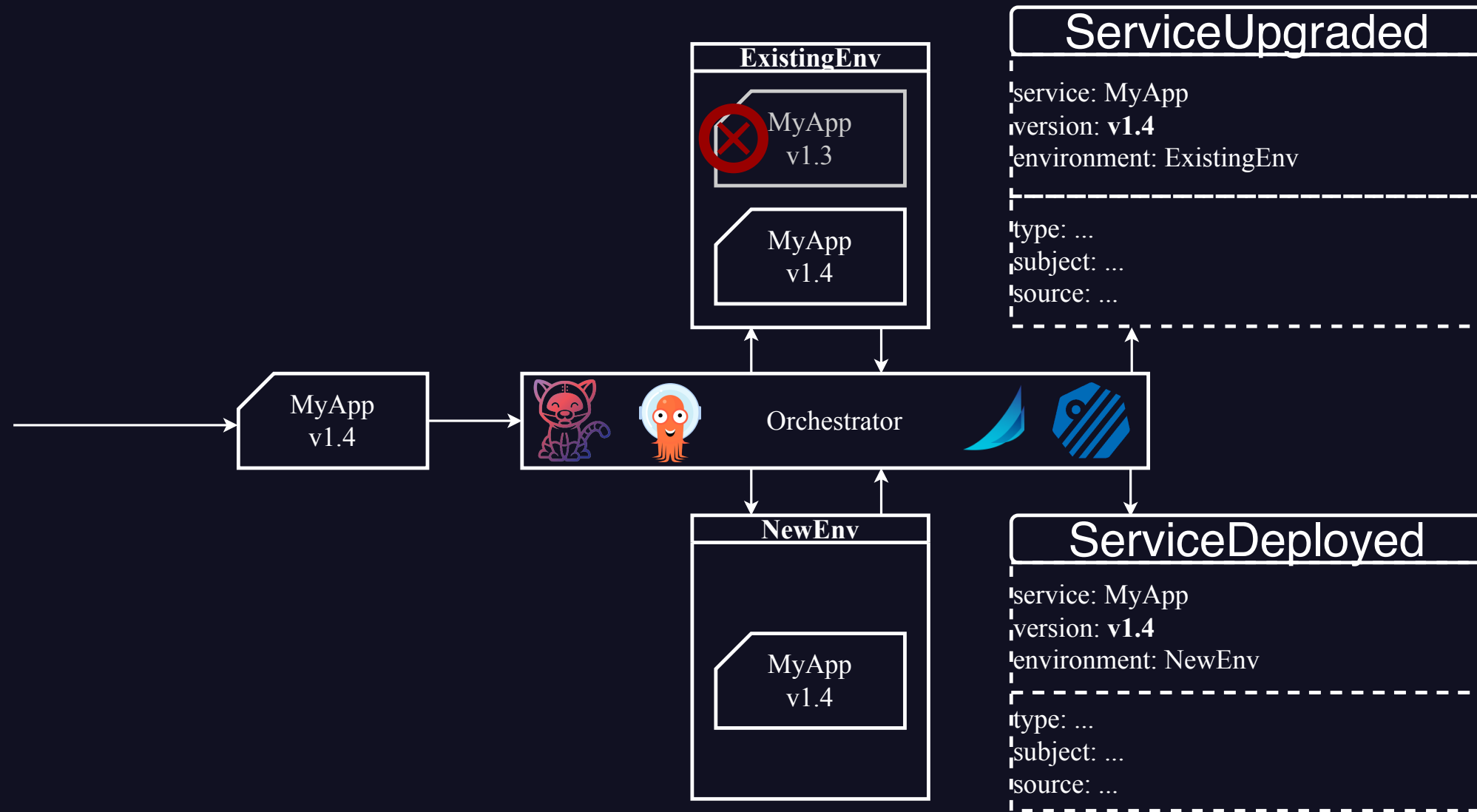
- Deployment Frequency
- Lead Time for Changes
- Change Failure Rate
- Time to Restore Service

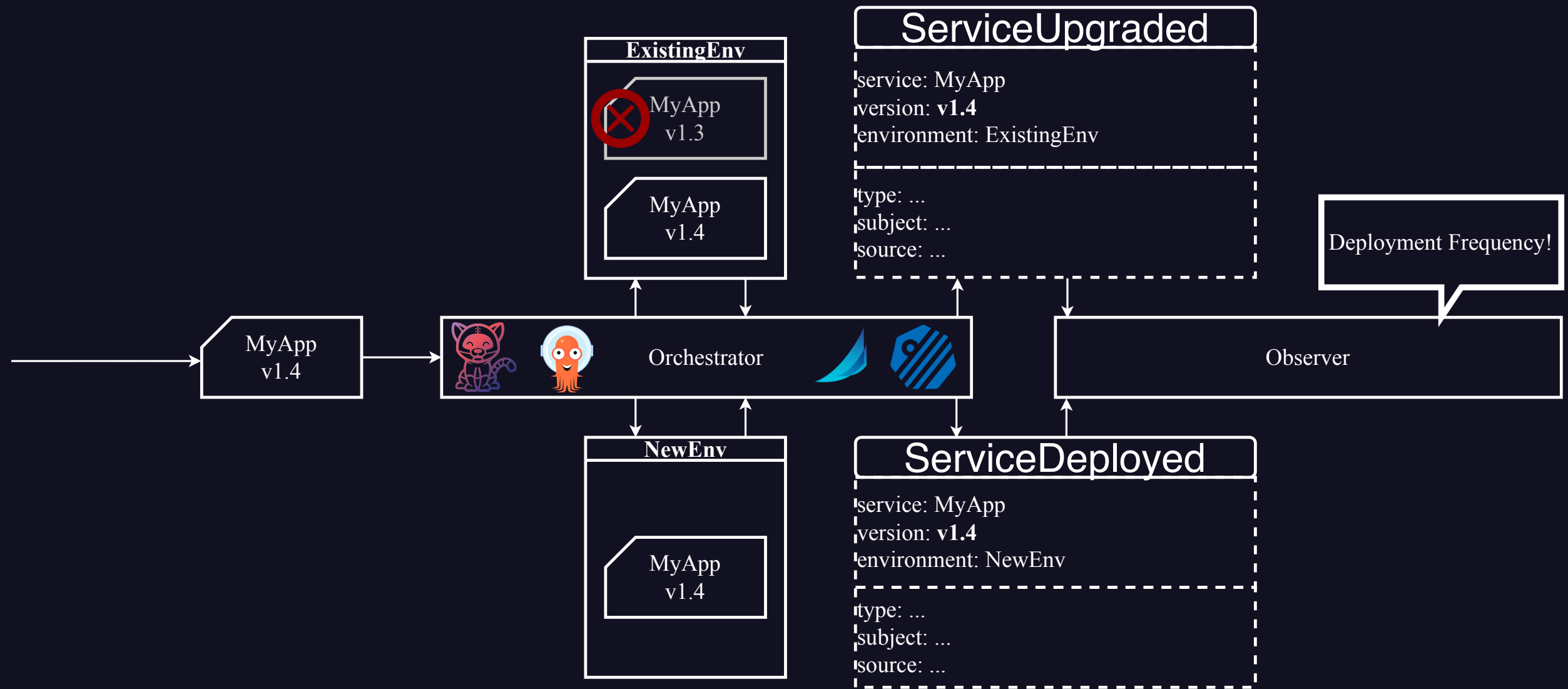
Metrics through CDEvents

Deployment Frequency



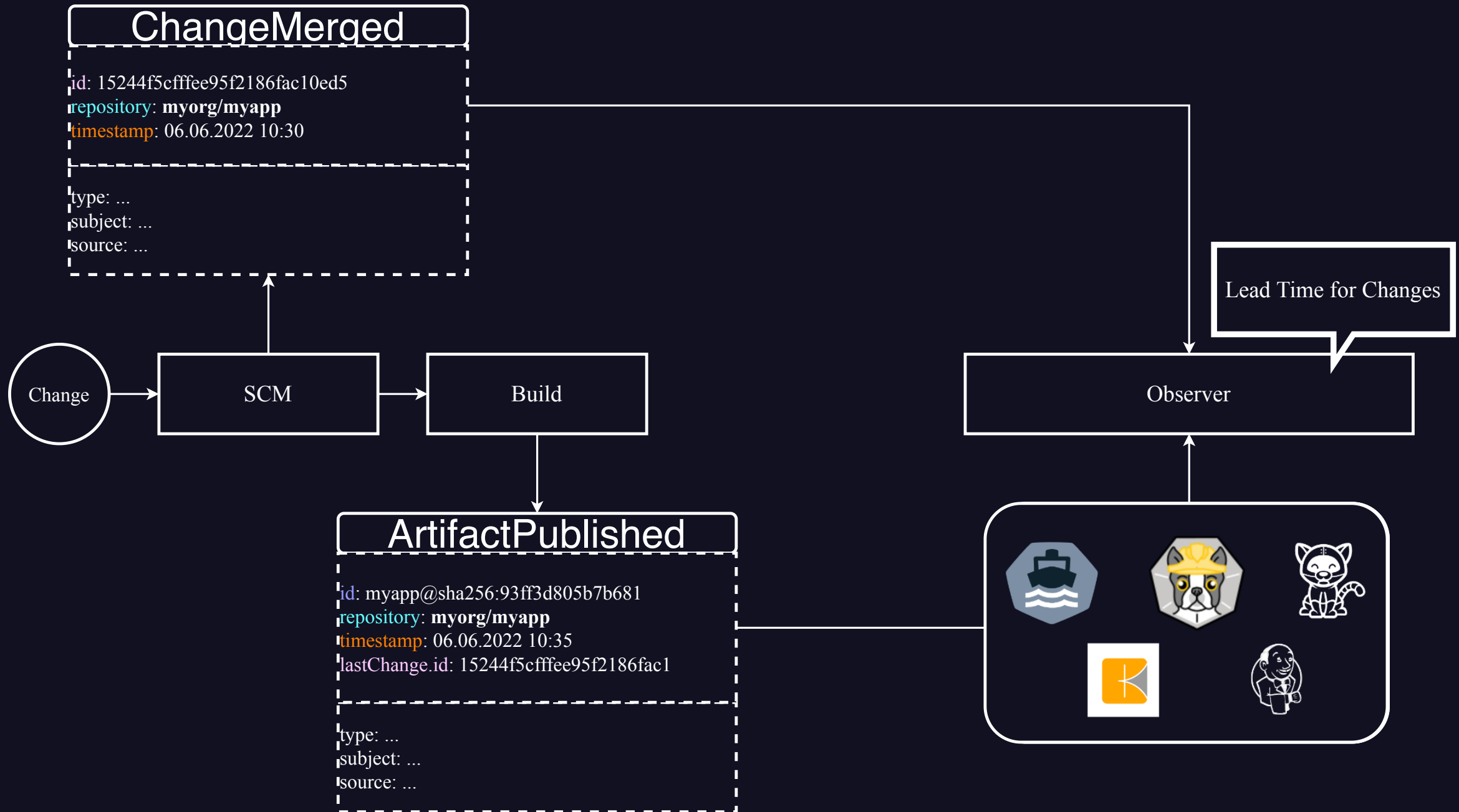


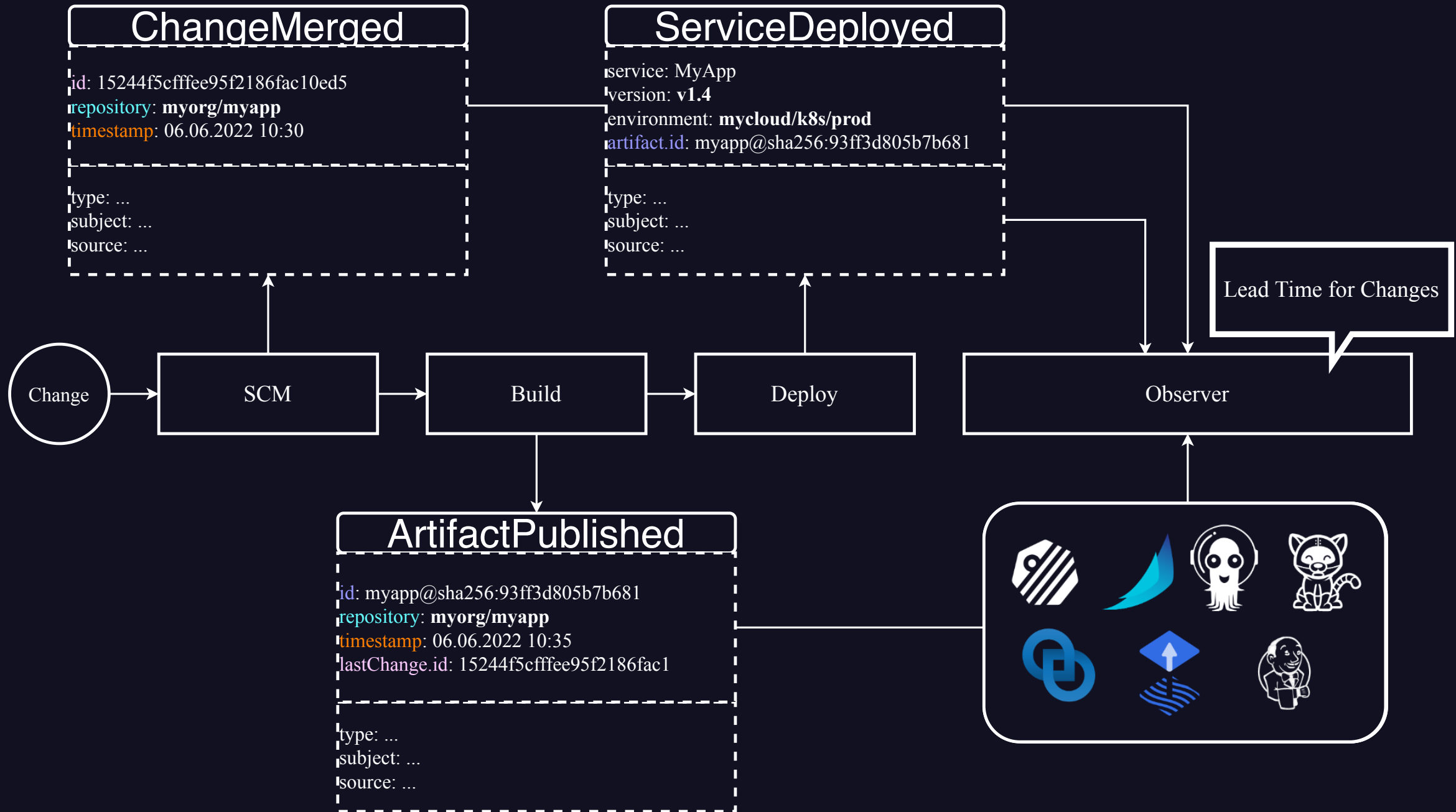




Lead Time for Changes

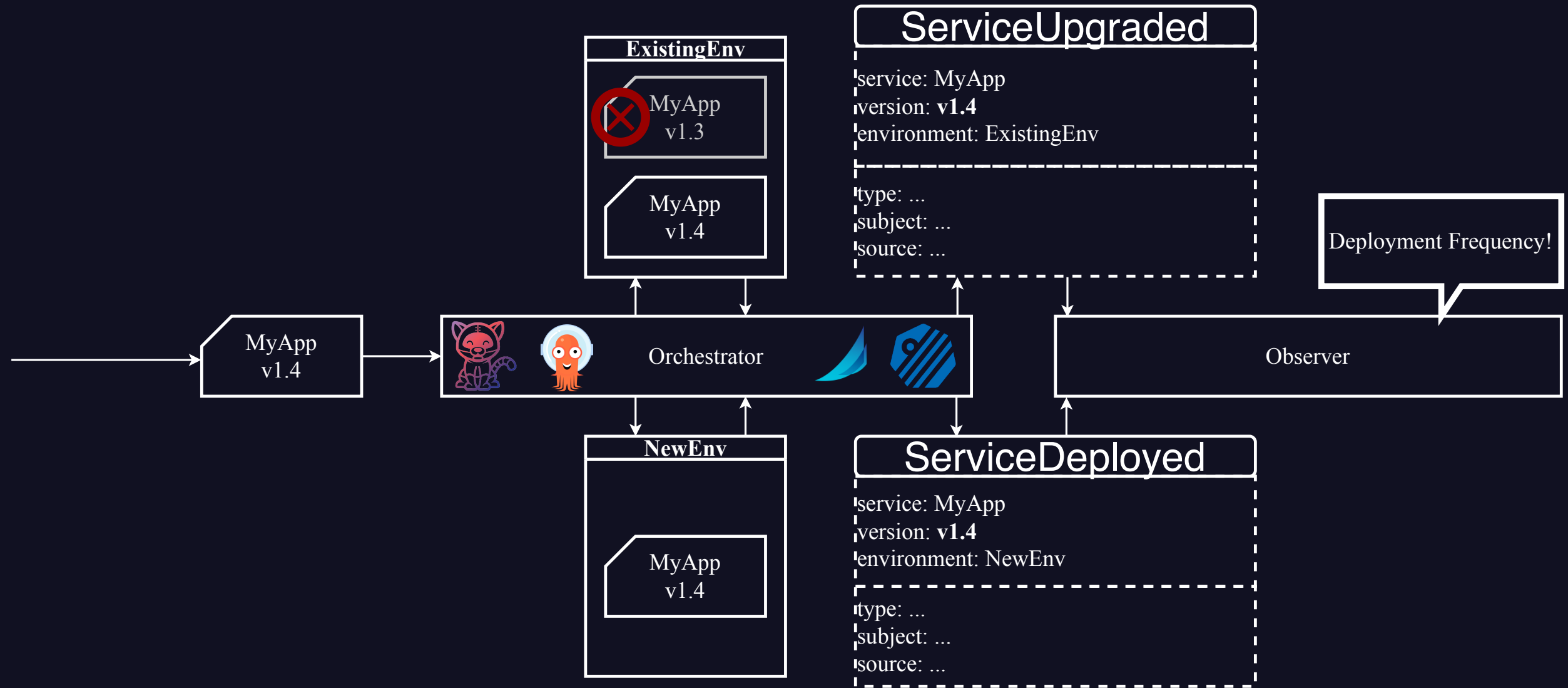






Change Failure Rate

Deployments / # Incidents



Incidents

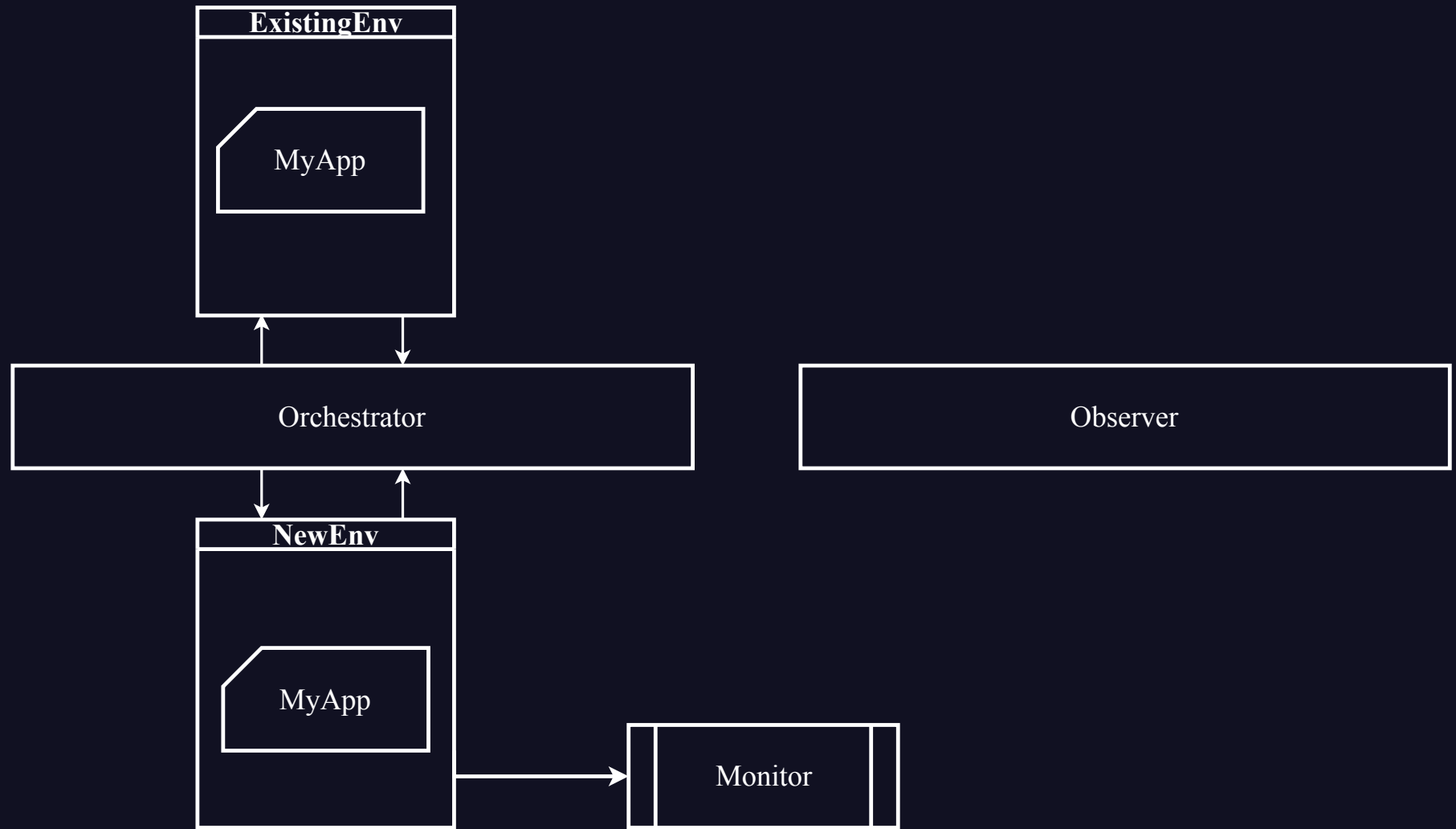
What can cause an incident?

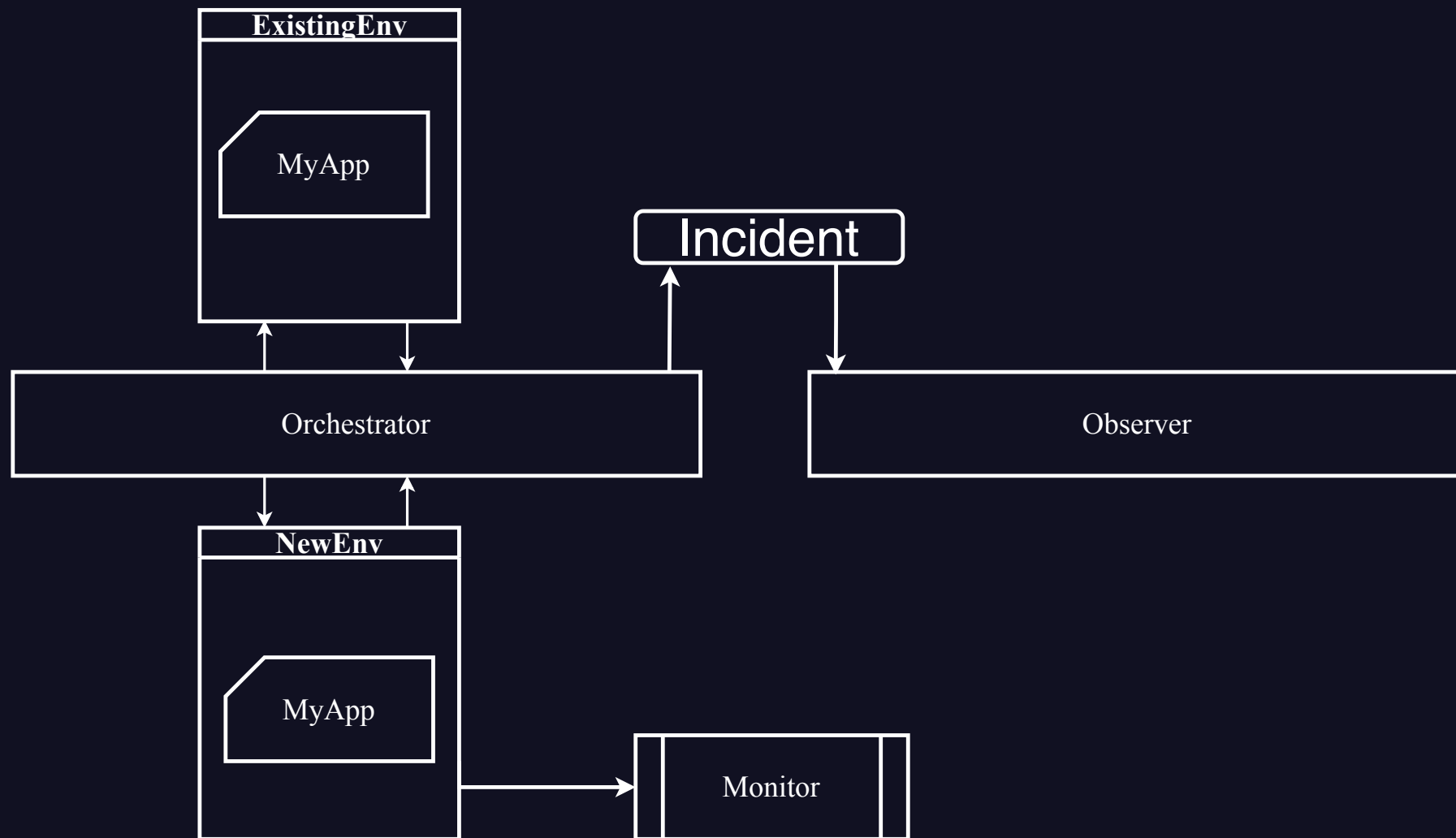
- **Application error (bug!)**
- **Configuration error**
- **Environment error**
- ...

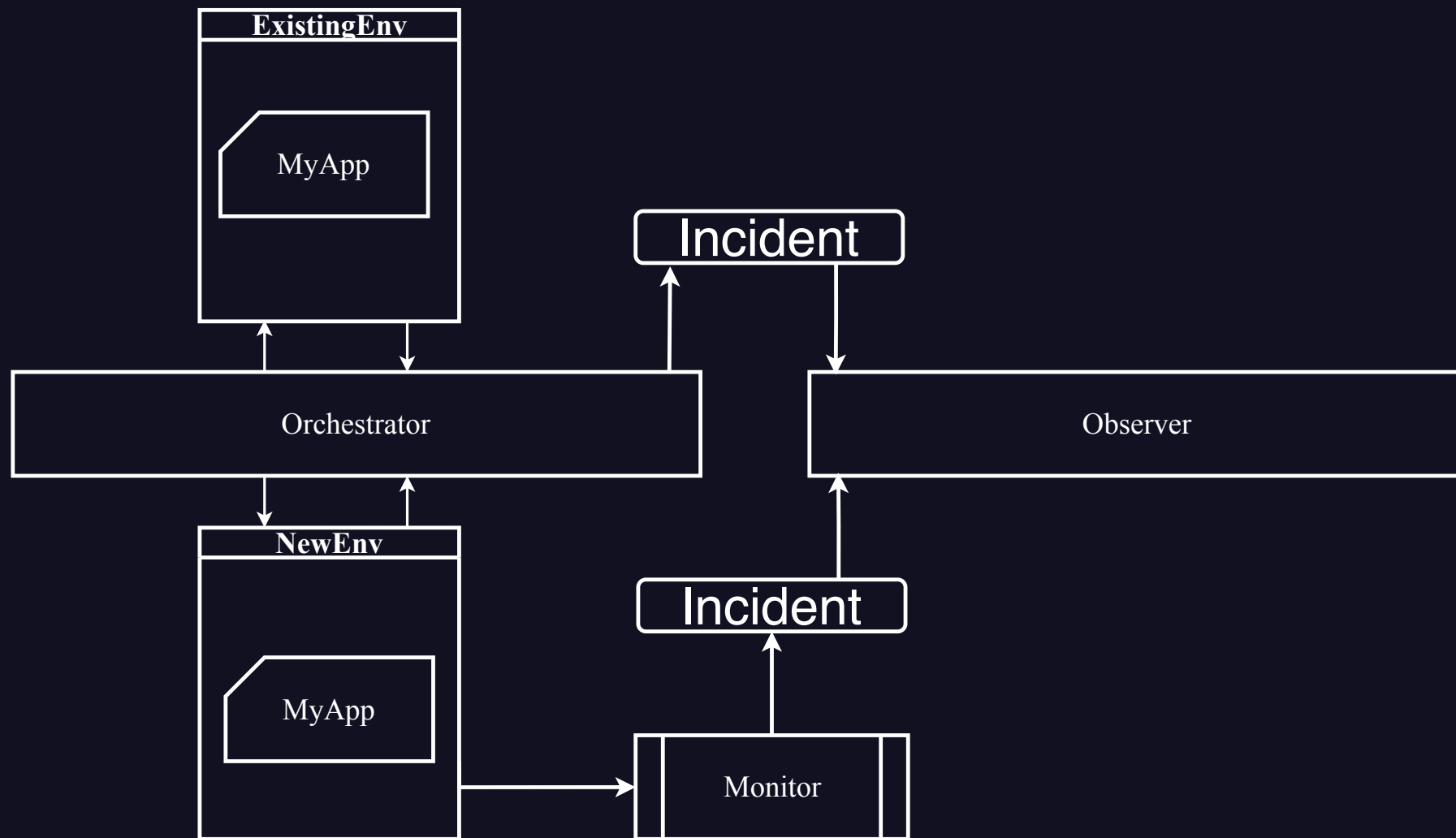
Who can discover an incident?

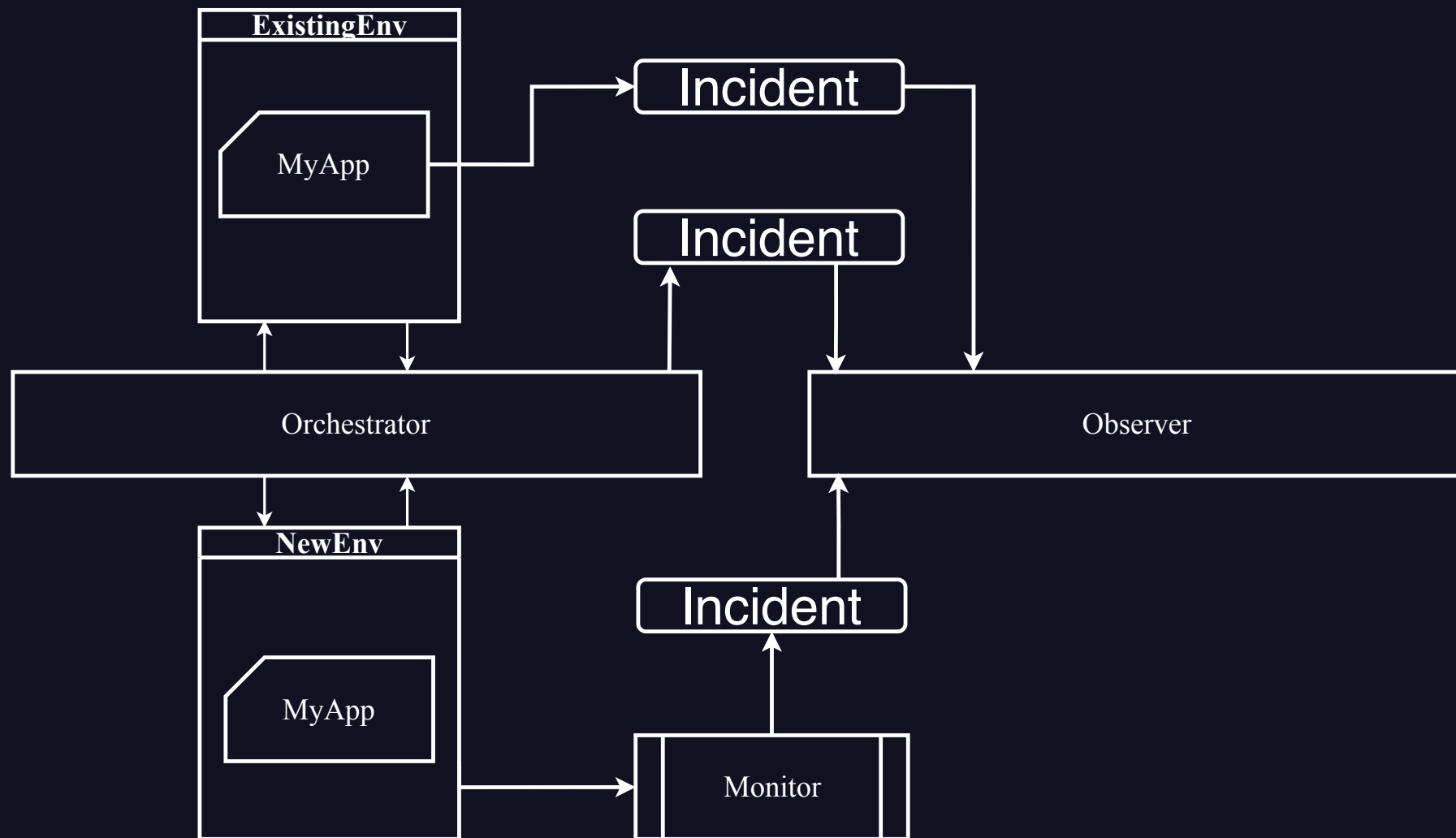
- **Orchestrator**
- **Monitoring system**
- **Application itself**
- **Users / DevOps team**

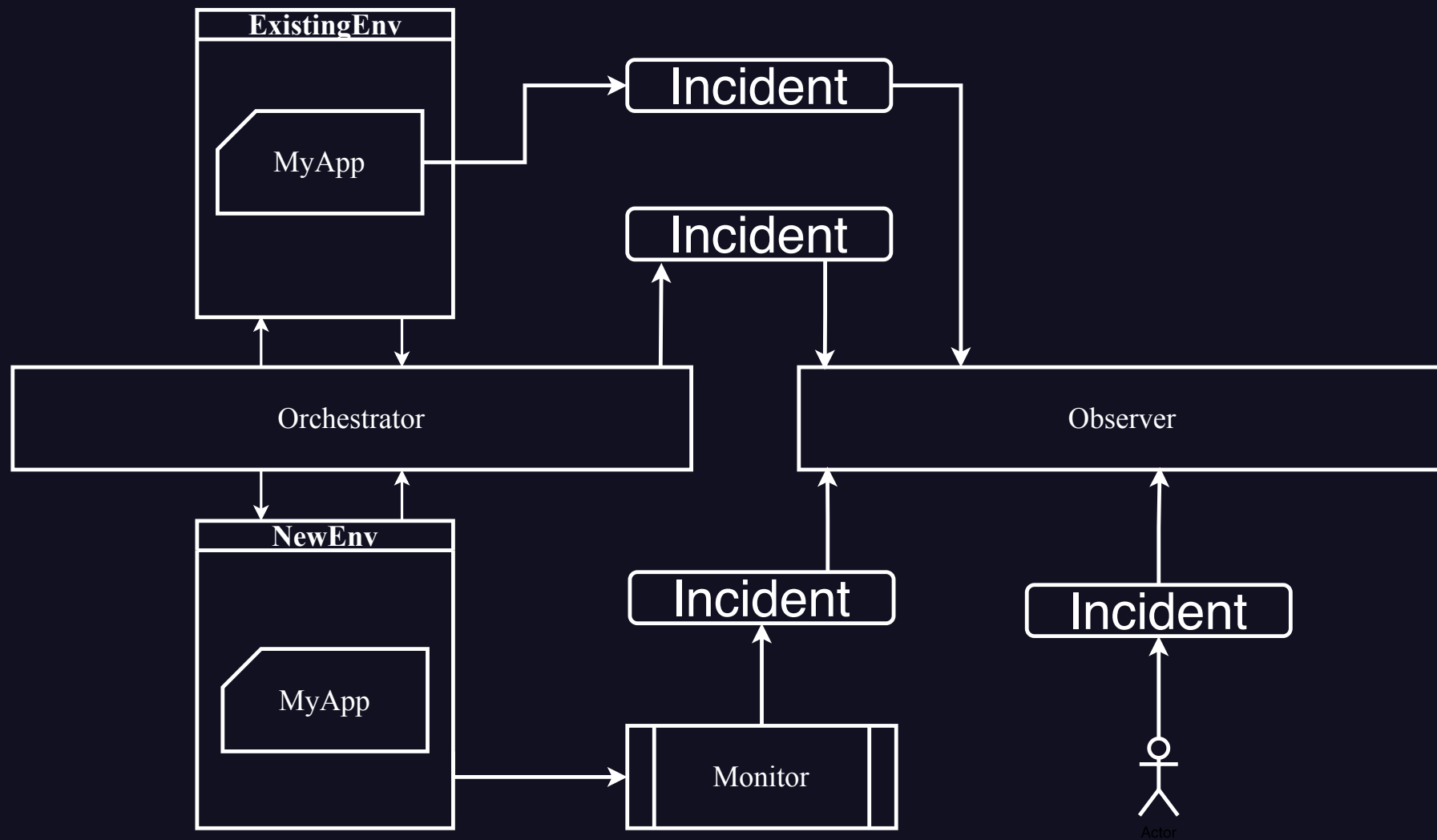
Send an Incident event!











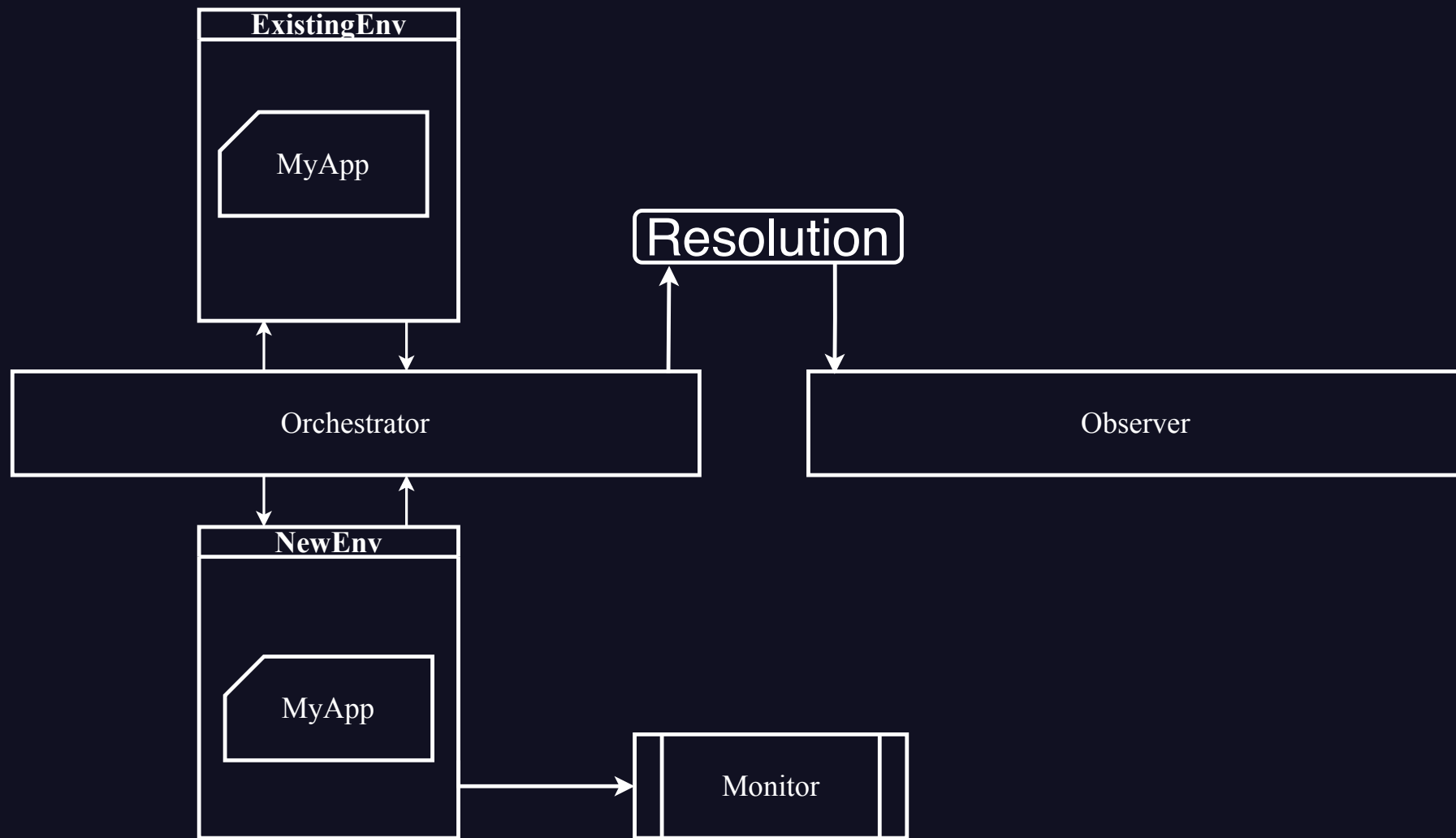
Time to Restore Service

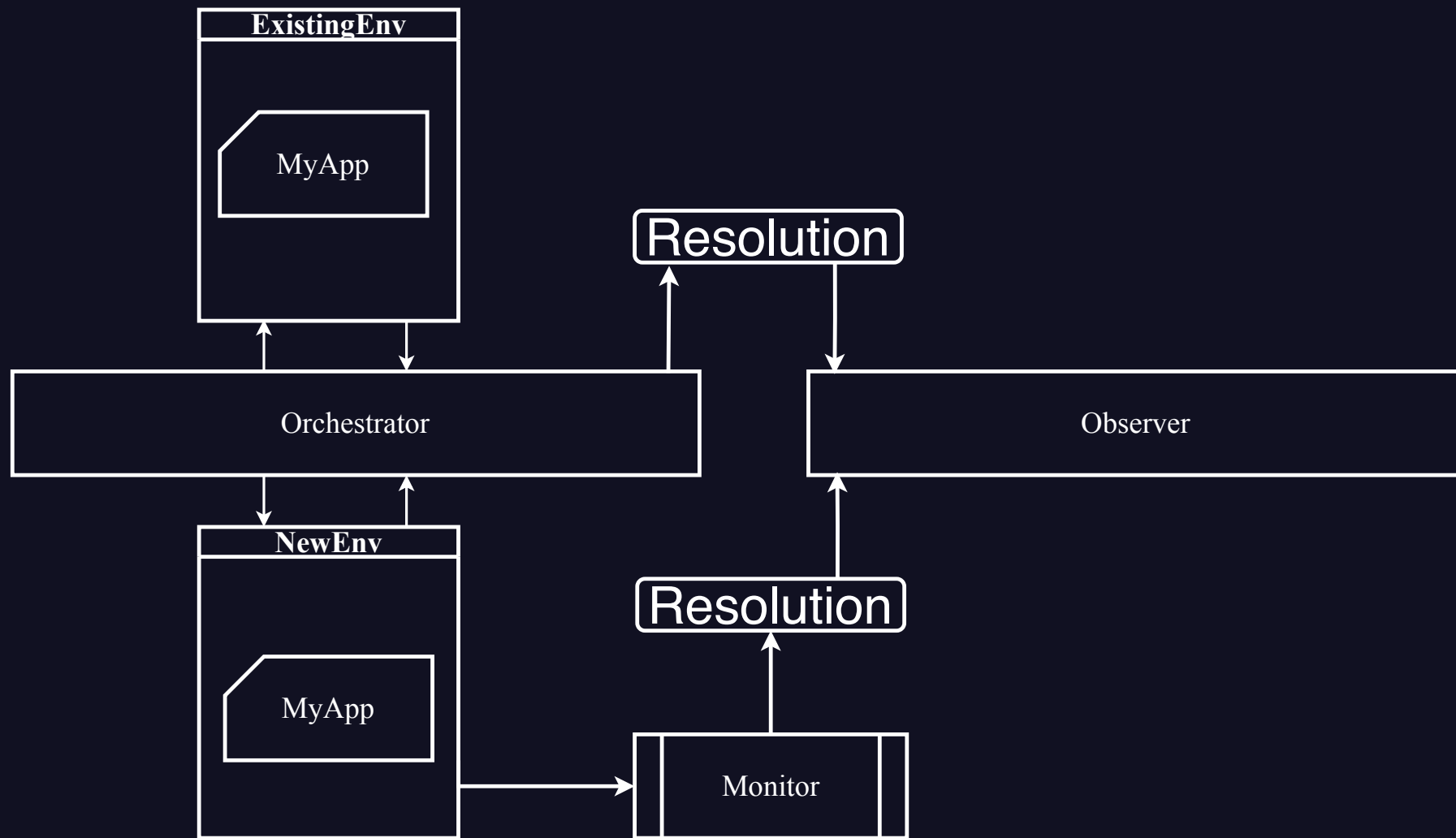
What can restore the service?

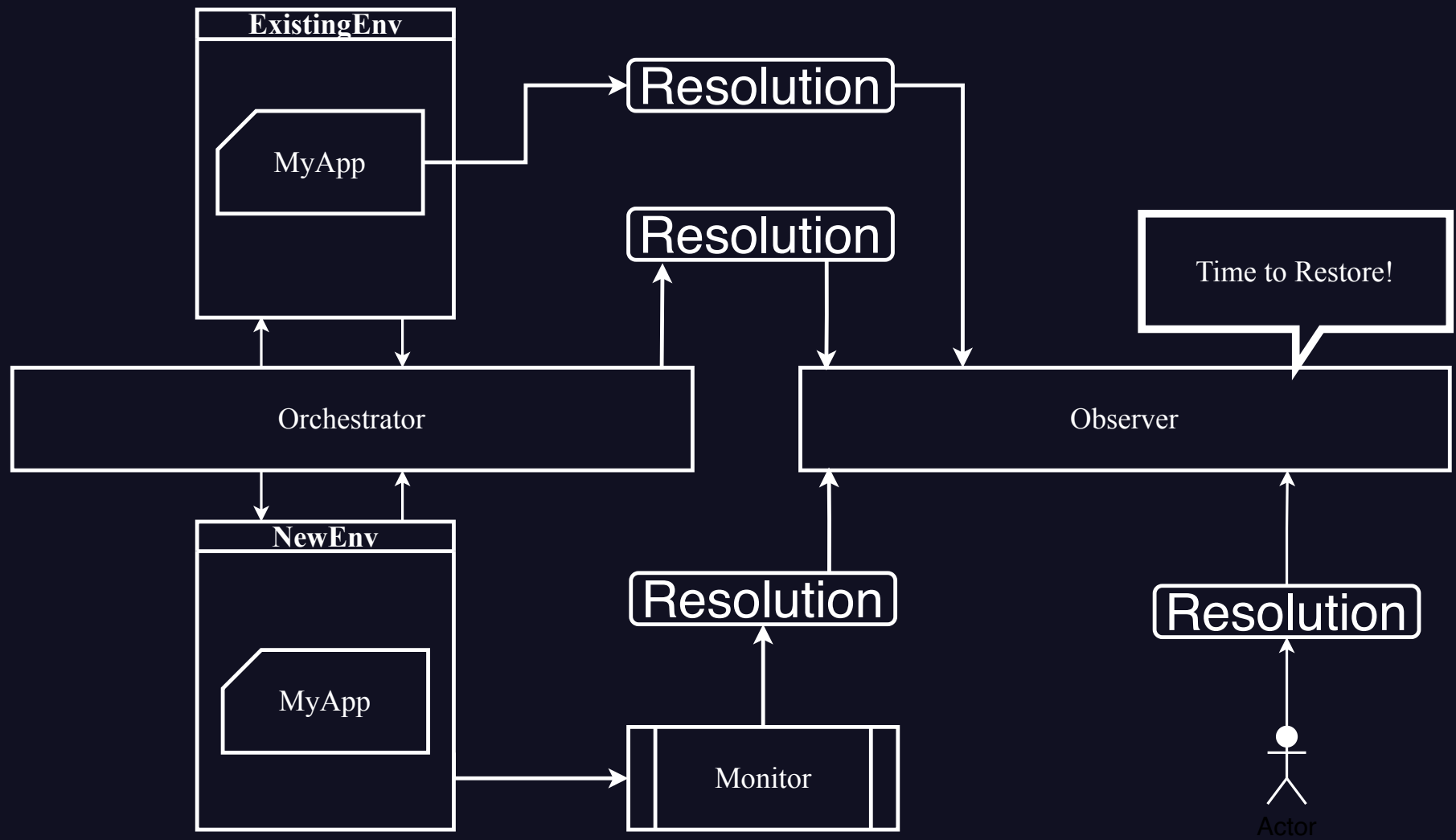
- A rollback or deployment of a newer version**
- Configuration change (e.g. scaling)**
- A change to an external dependency**

Keptn Application Lifecycle Events

**Who generate the incident resolution
events**







Key takeaways

Metrics are tricky

Deployment Frequency!

Lead Time for Changes

Change Failure Rate!

Time to Restore Service

Metrics are tricky



Deployment Frequency!

Lead Time for Changes

Change Failure Rate!

Time to Restore Service

A common language helps!



Deployment Frequency!

Lead Time for Changes

Change Failure Rate!

Time to Restore Service

Observer

cd cd A common language helps! cd cd

ChangeMerged

ArtifactPublished

ServiceDeployed

IncidentResolved



A call to action

cdevents.dev

Thank you!

Questions?

Andrea Frittoli, IBM. Erik Sternerson, doWhile