DORA metrics in Eiffel

Erik Sternerson, doWhile / Volvo Cars

Eiffel Summit 2023.1 | 13.06.2023

In this talk

- The DORA metrics
- DORA metrics through Eiffel events

DORA

DEVOPS RESEARCH & ASSESSMENT

The DORA metrics

Deployment Frequency

Deployment Frequency

How often does your organization deploy code to production or release it to end users?

Lead Time for Changes

Lead Time for Changes

How long does it take to go from code committed to code successfully running in production?

Change Failure Rate

Change Failure Rate

What percentage of changes to production or releases to users result in degraded service and subsequently require remediation?

Time to Restore

Time to Restore

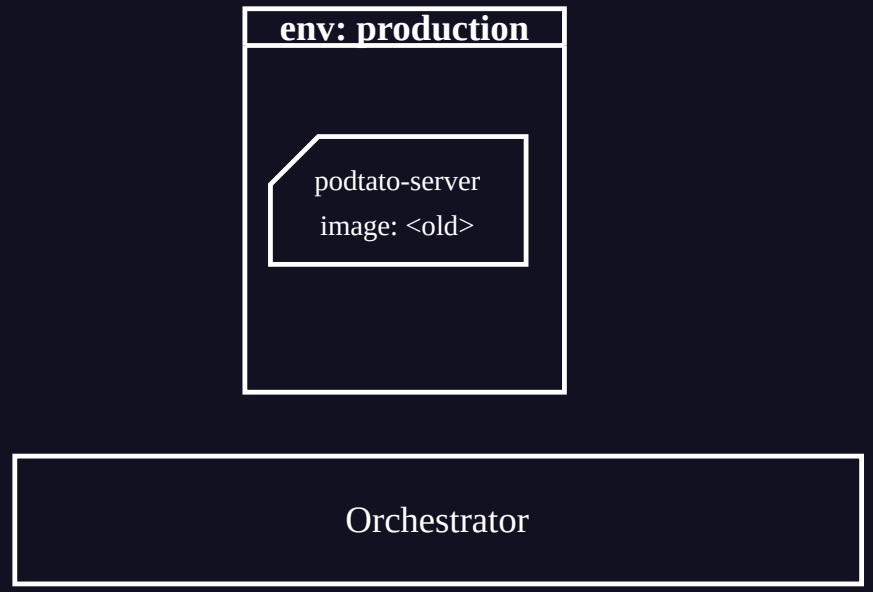
How long does it generally take to restore service when a service incident or a defect that impacts users occurs?

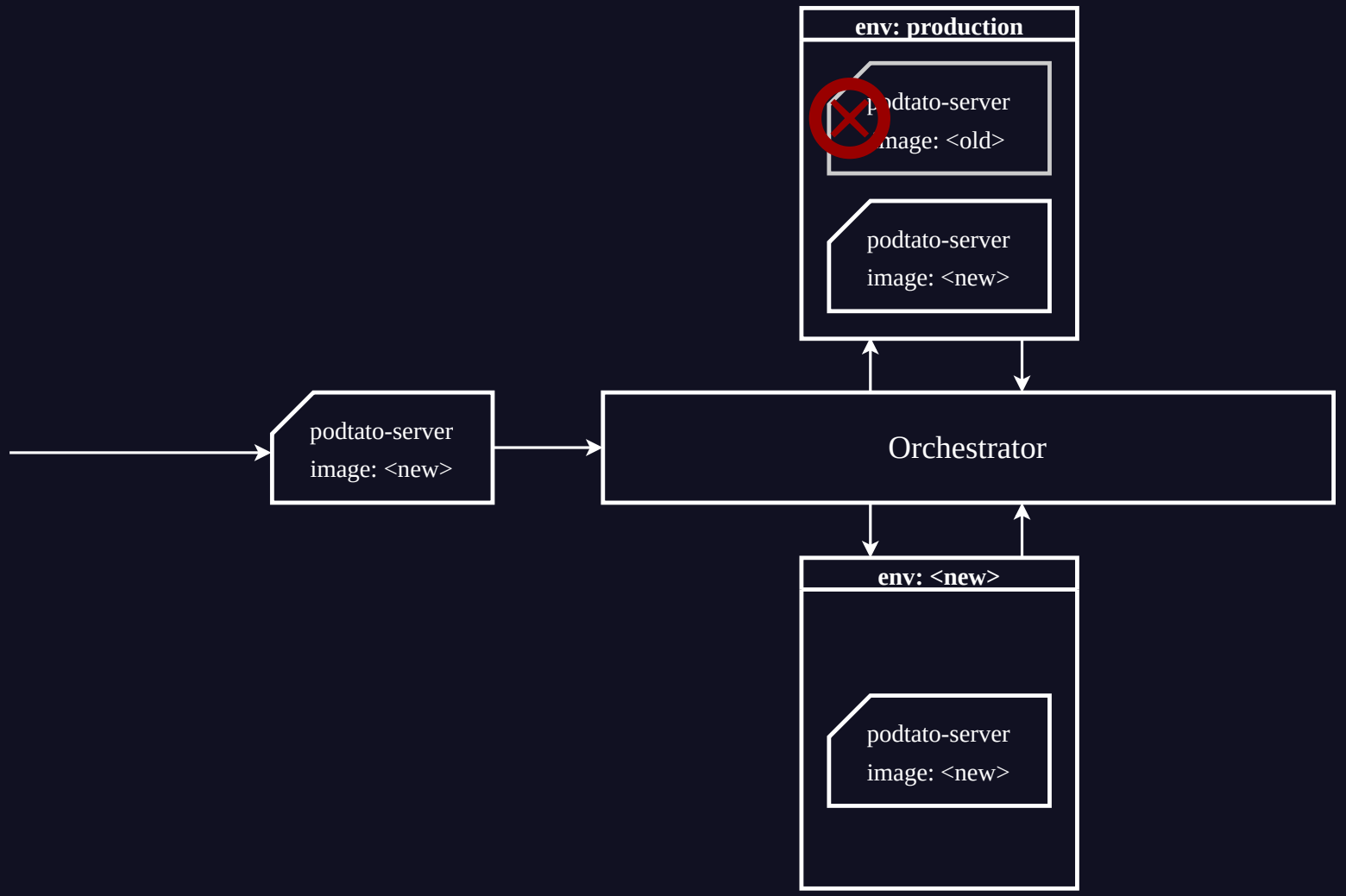
DORA Metrics

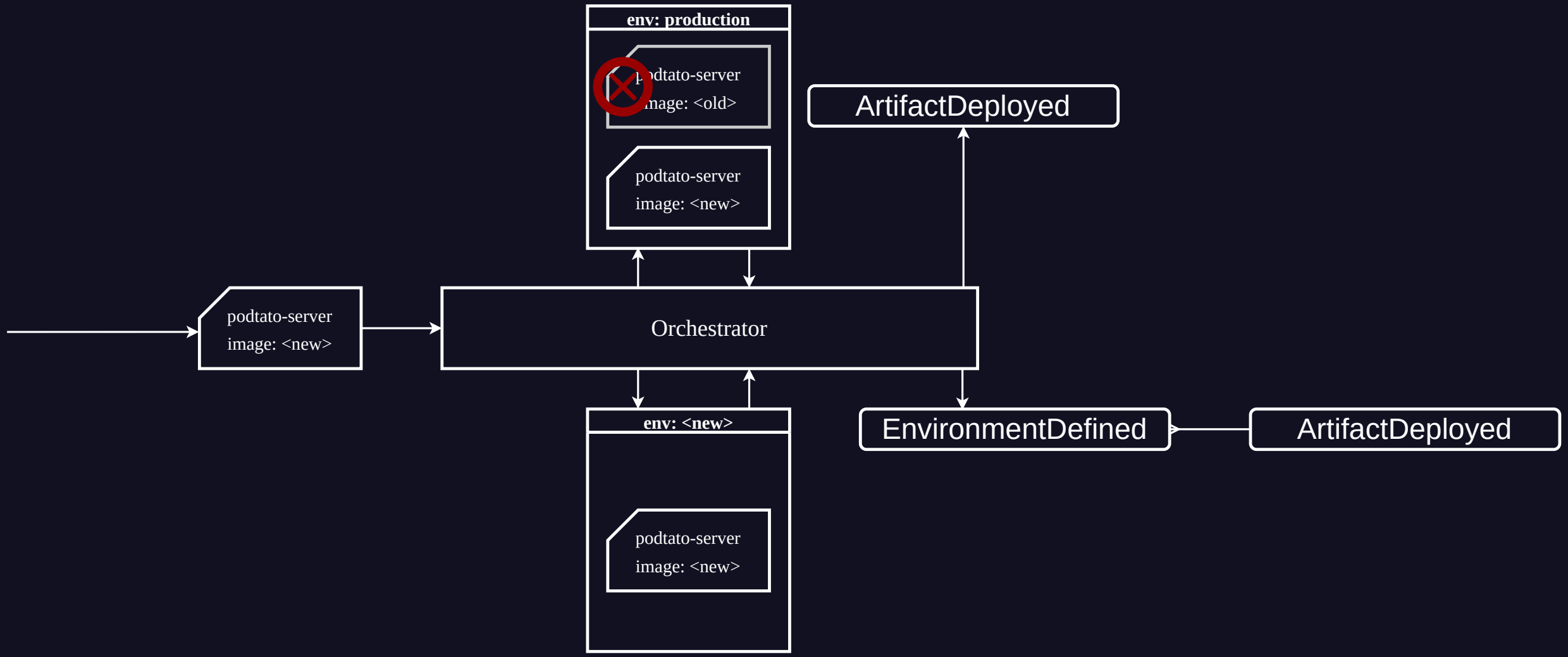
- Deployment Frequency
- Lead Time for Changes
- Change Failure Rate
- Time to Restore

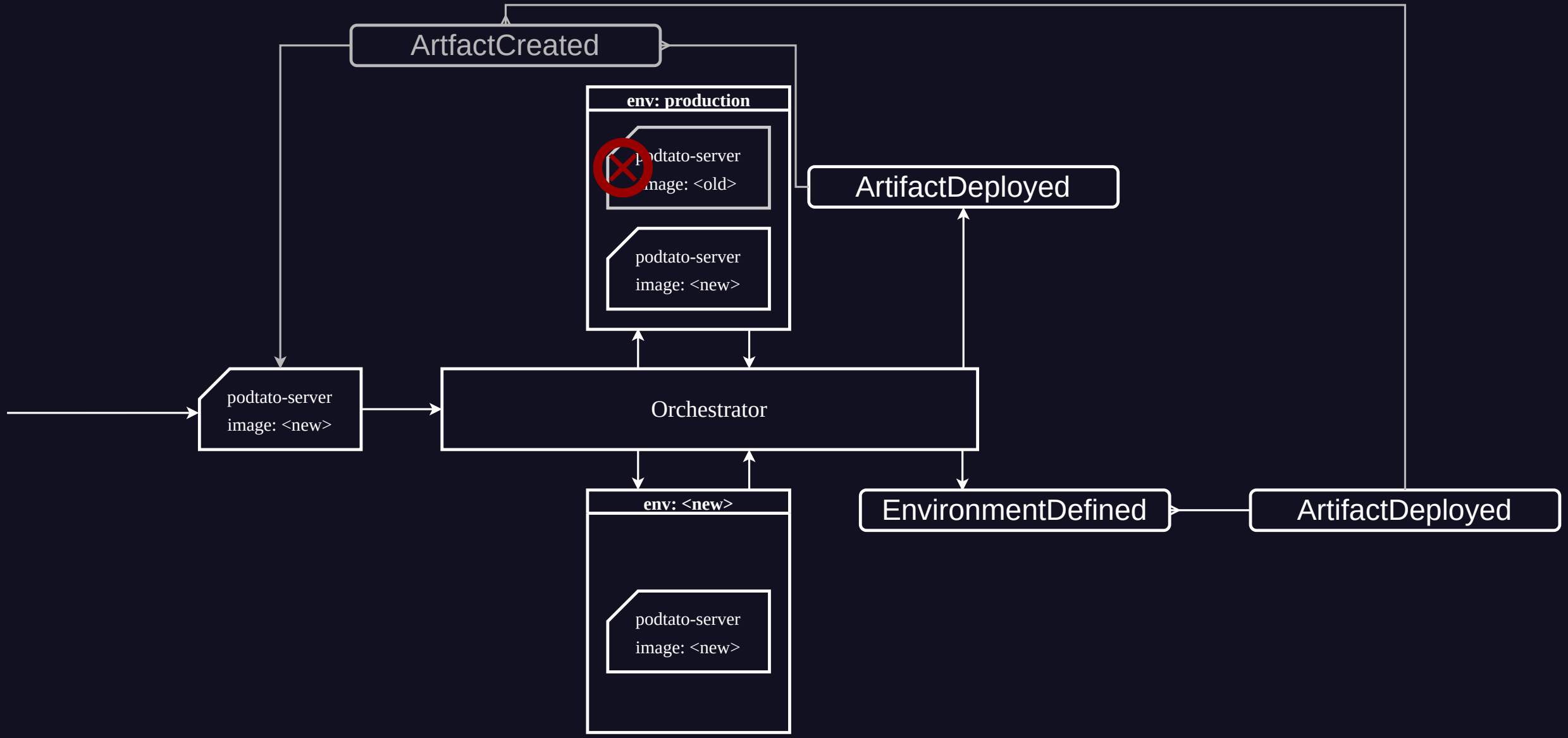
Metrics through Eiffel

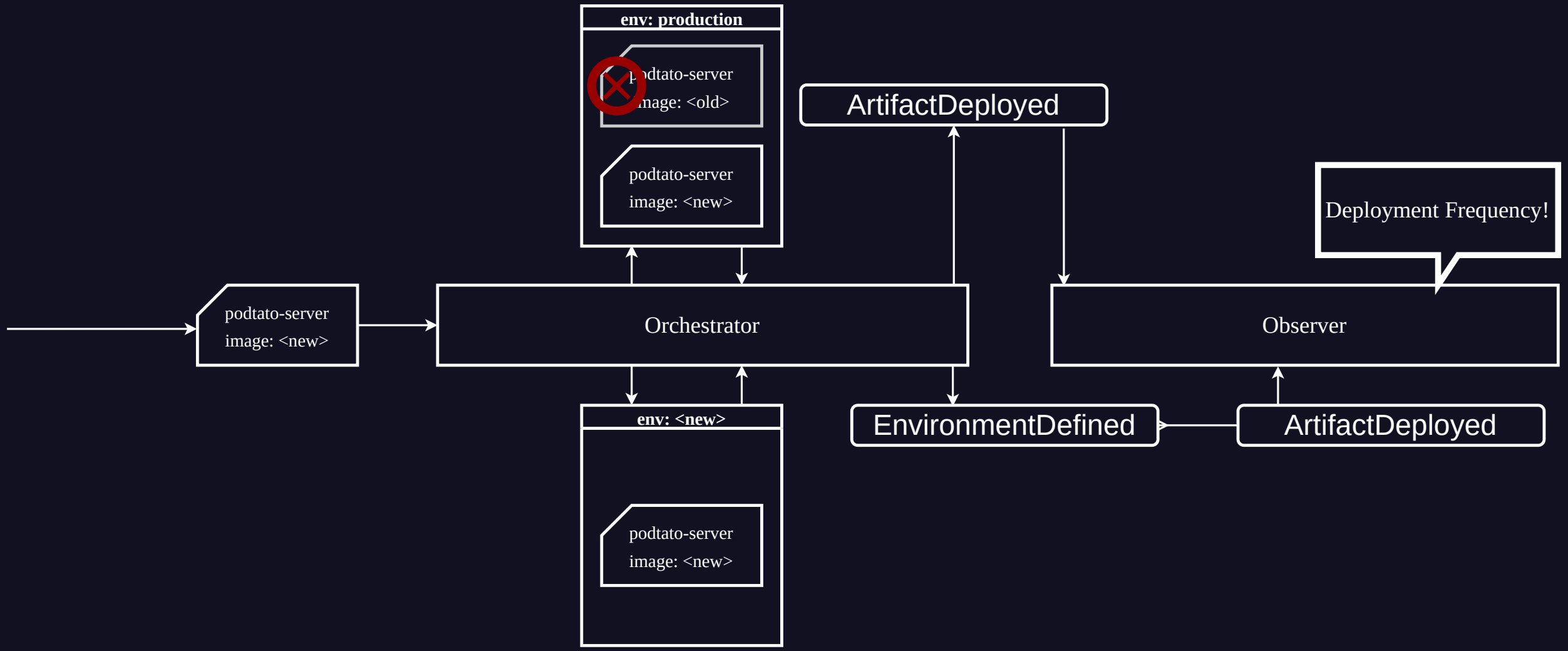
Deployment Frequency


env: production
podtato-server
image: <old>
Orchestrator


env: production
podtato-server
image: <old>
podtato-server
image: <new>
podtato-server
image: <new>
Orchestrator
env: <new>
podtato-server
image: <new>


env: production
podtato-server
image: <old>
podtato-server
image: <new>
ArtifactDeployed
podtato-server
image: <new>
Orchestrator
env: <new>
podtato-server
image: <new>
EnvironmentDefined
ArtifactDeployed


ArtfactCreated
env: production
podtato-server
image: <old>
podtato-server
image: <new>
ArtifactDeployed
podtato-server
image: <new>
Orchestrator
env: <new>
podtato-server
image: <new>
EnvironmentDefined
ArtifactDeployed

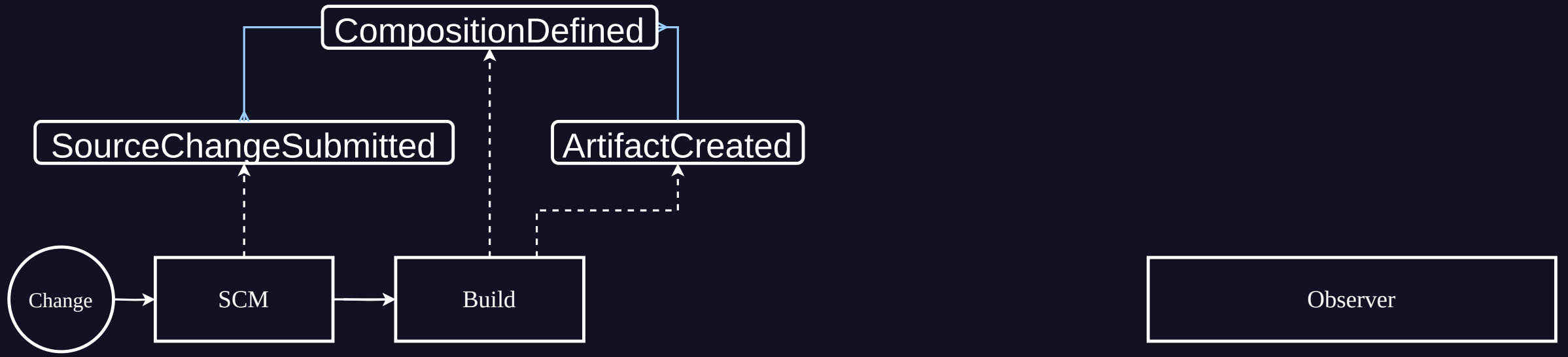

env: production
podtato-server
image: <old>
podtato-server
image: <new>
ArtifactDeployed
Deployment Frequency!
podtato-server
image: <new>
Orchestrator
Observer
env: <new>
EnvironmentDefined
ArtifactDeployed
podtato-server
image: <new>

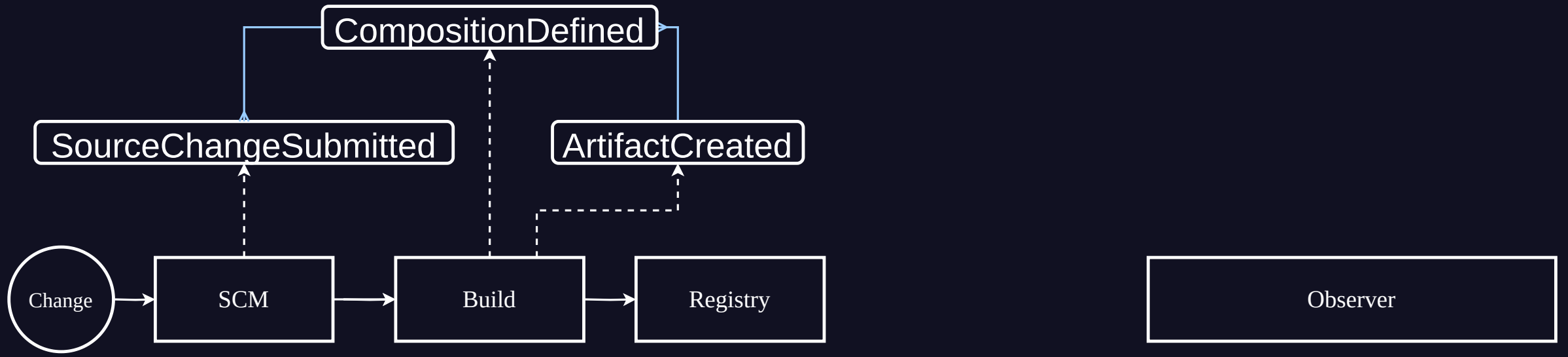
Lead Time for Changes

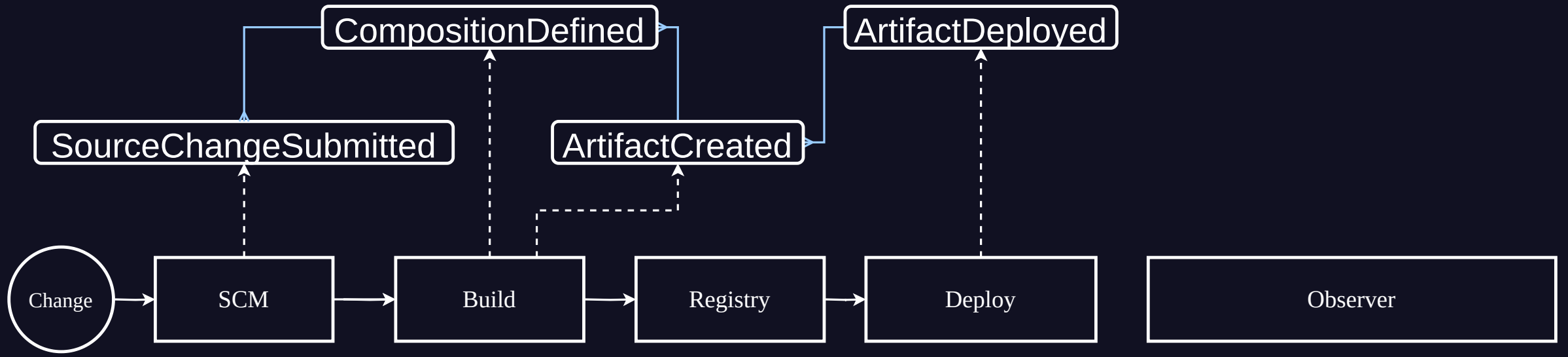
Change

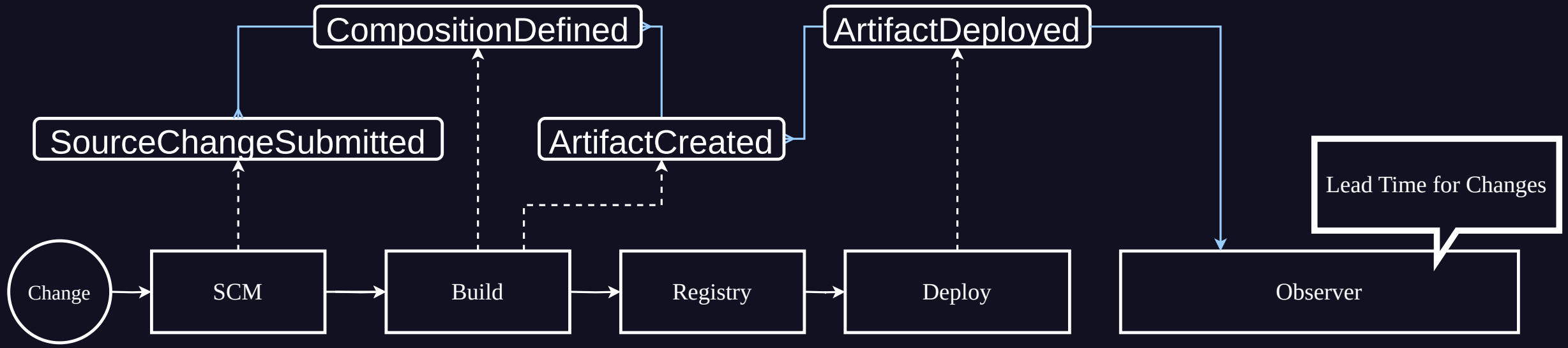
Observer

SourceChangeSubmitted
Change
SCM
Observer

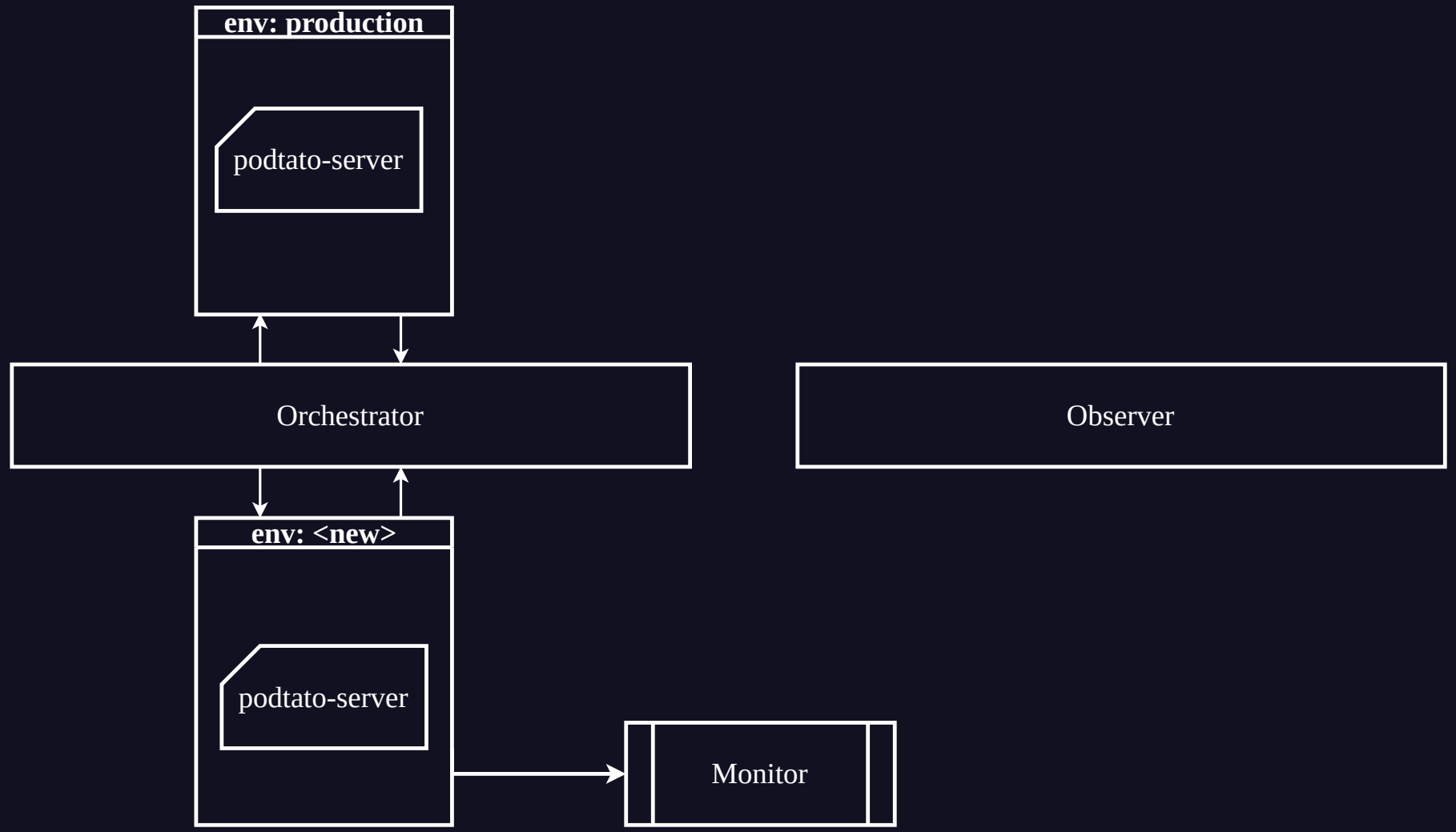

CompositionDefined
SourceChangeSubmitted
ArtifactCreated
Change
SCM
Build
Observer

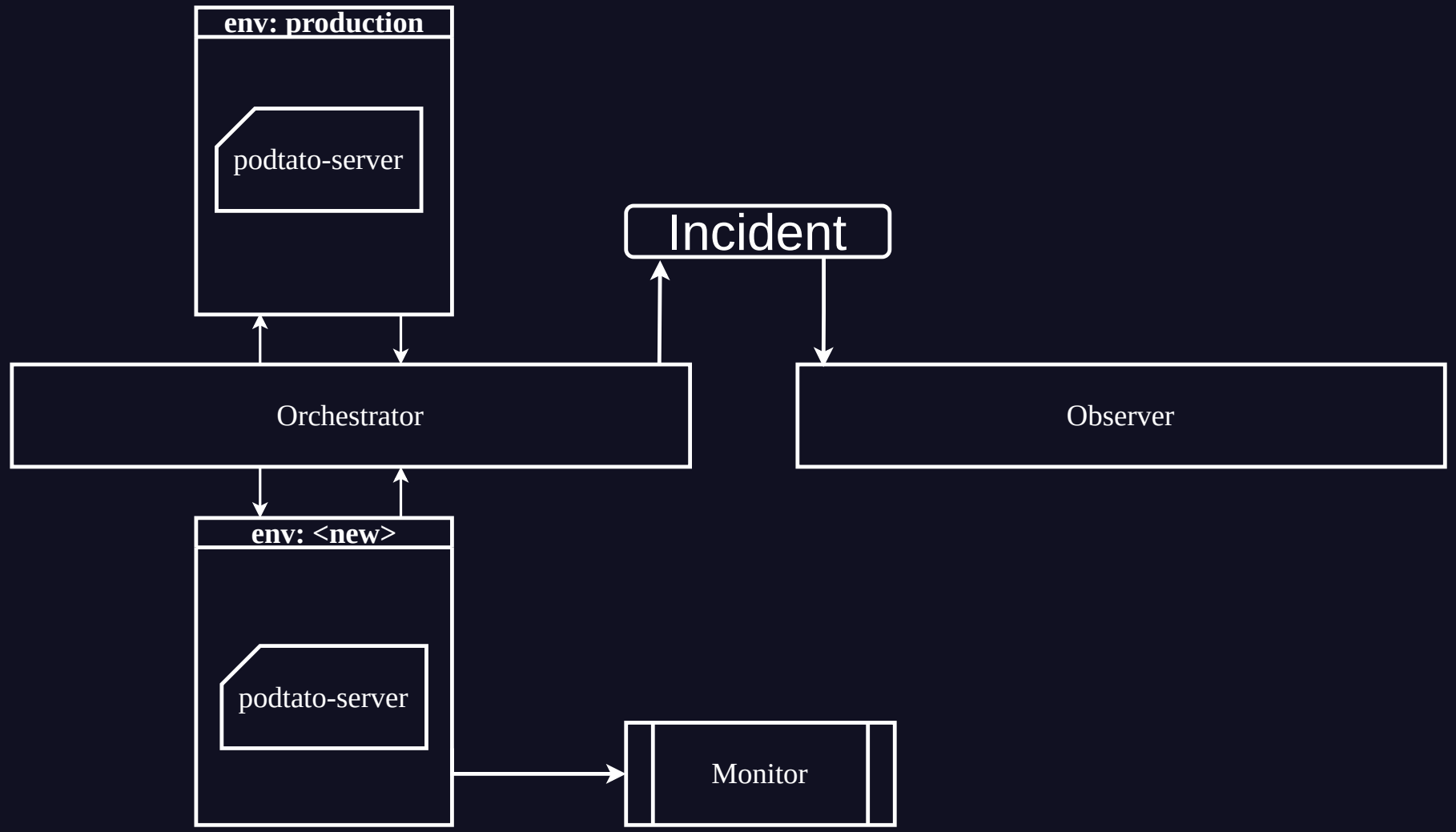

CompositionDefined
SourceChangeSubmitted
ArtifactCreated
Change
SCM
Build
Registry
Observer

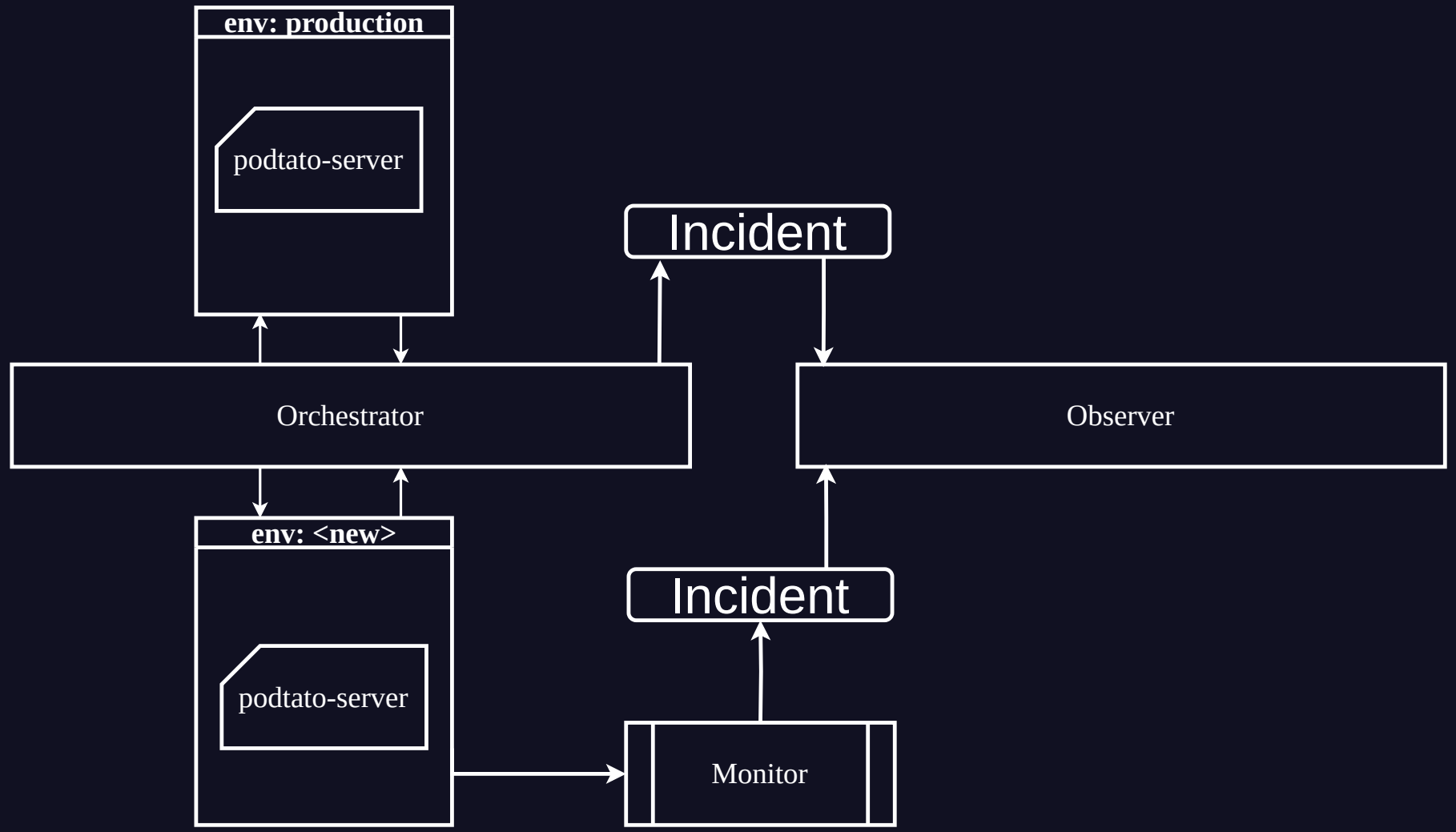

CompositionDefined
ArtifactDeployed
SourceChangeSubmitted
ArtifactCreated
Change
SCM
Build
Registry
Deploy
Observer

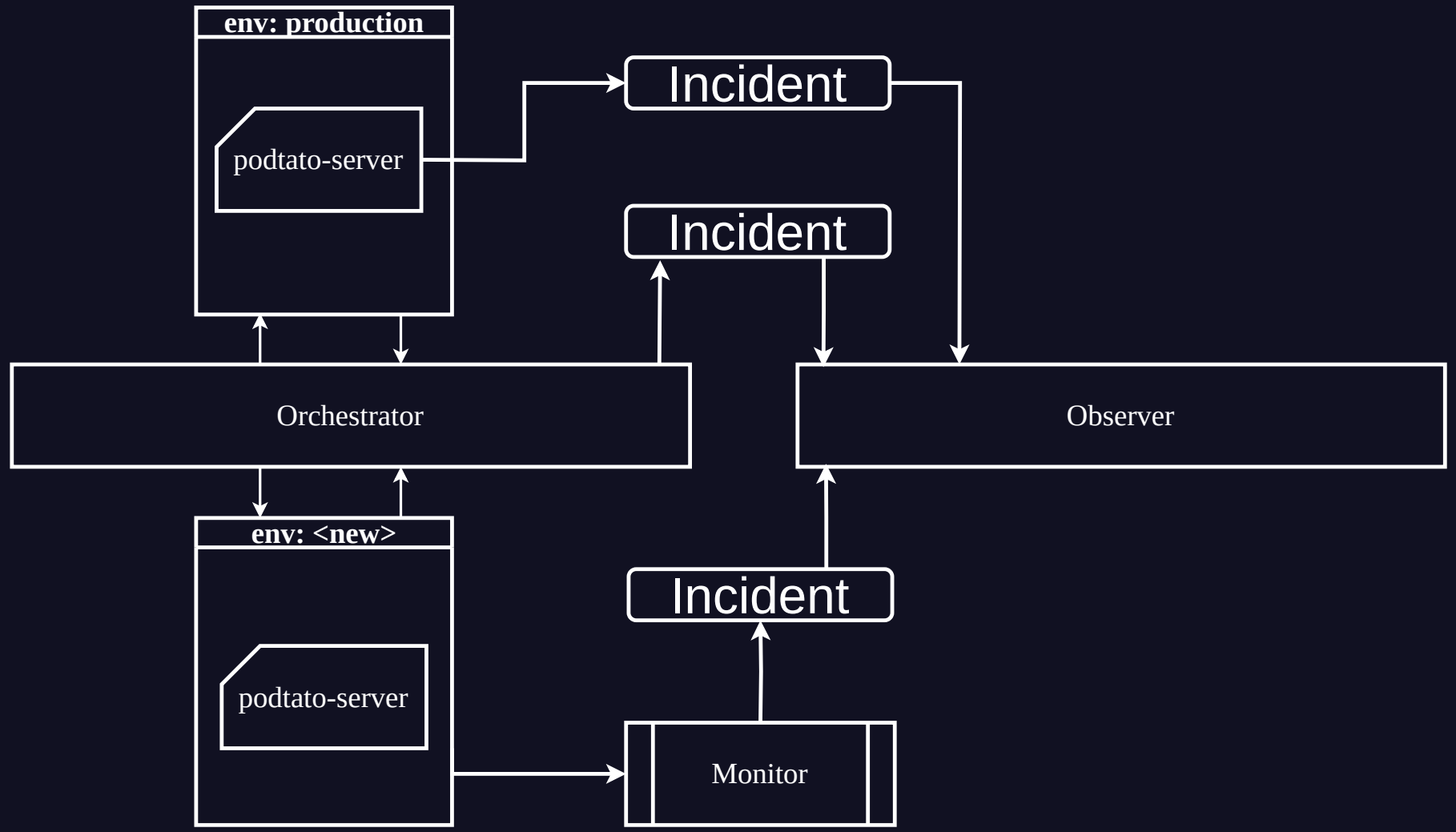

CompositionDefined
ArtifactDeployed
SourceChangeSubmitted
ArtifactCreated
Lead Time for Changes
Change
SCM
Build
Registry
Deploy
Observer

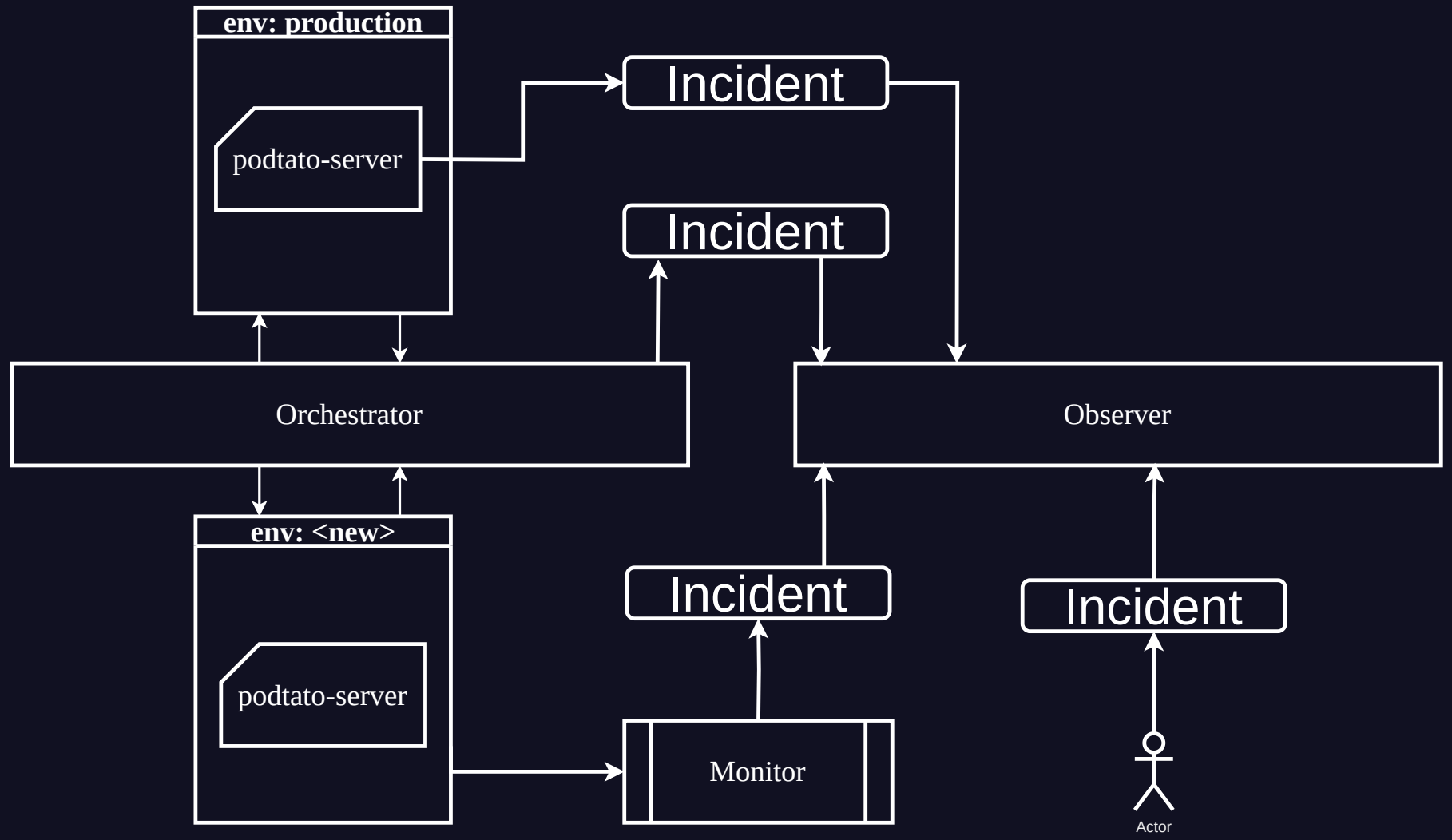
Change Failure Rate

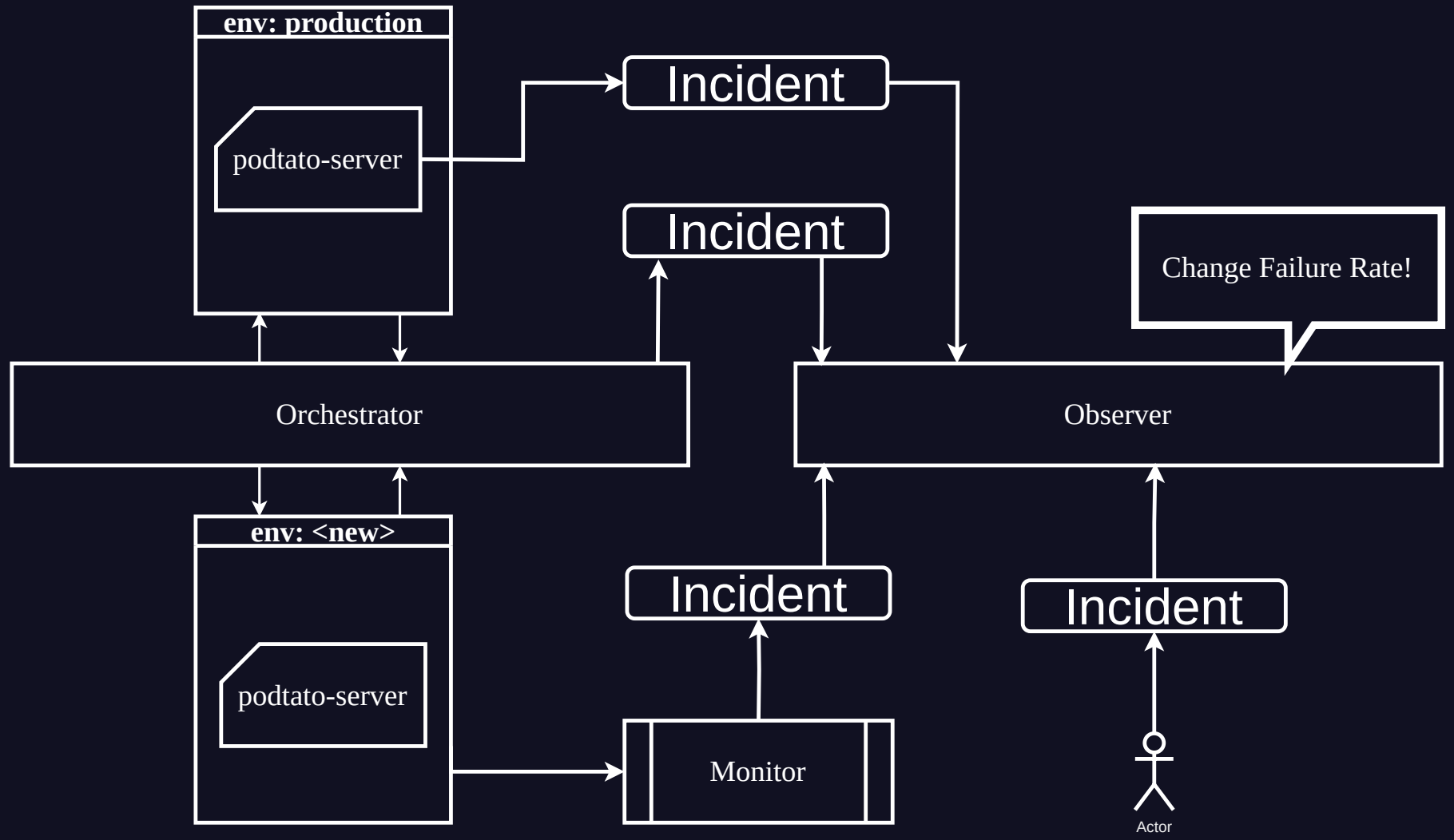

env: production
podtato-server
Orchestrator
Observer
env: <new>
podtato-server
Monitor


env: production
podtato-server
Incident
Orchestrator
Observer
env: <new>
podtato-server
Monitor


env: production
podtato-server
Incident
Orchestrator
Observer
env: <new>
podtato-server
Incident
Monitor


env: production
podtato-server
Incident
Incident
Orchestrator
Observer
env: <new>
podtato-server
Incident
Monitor

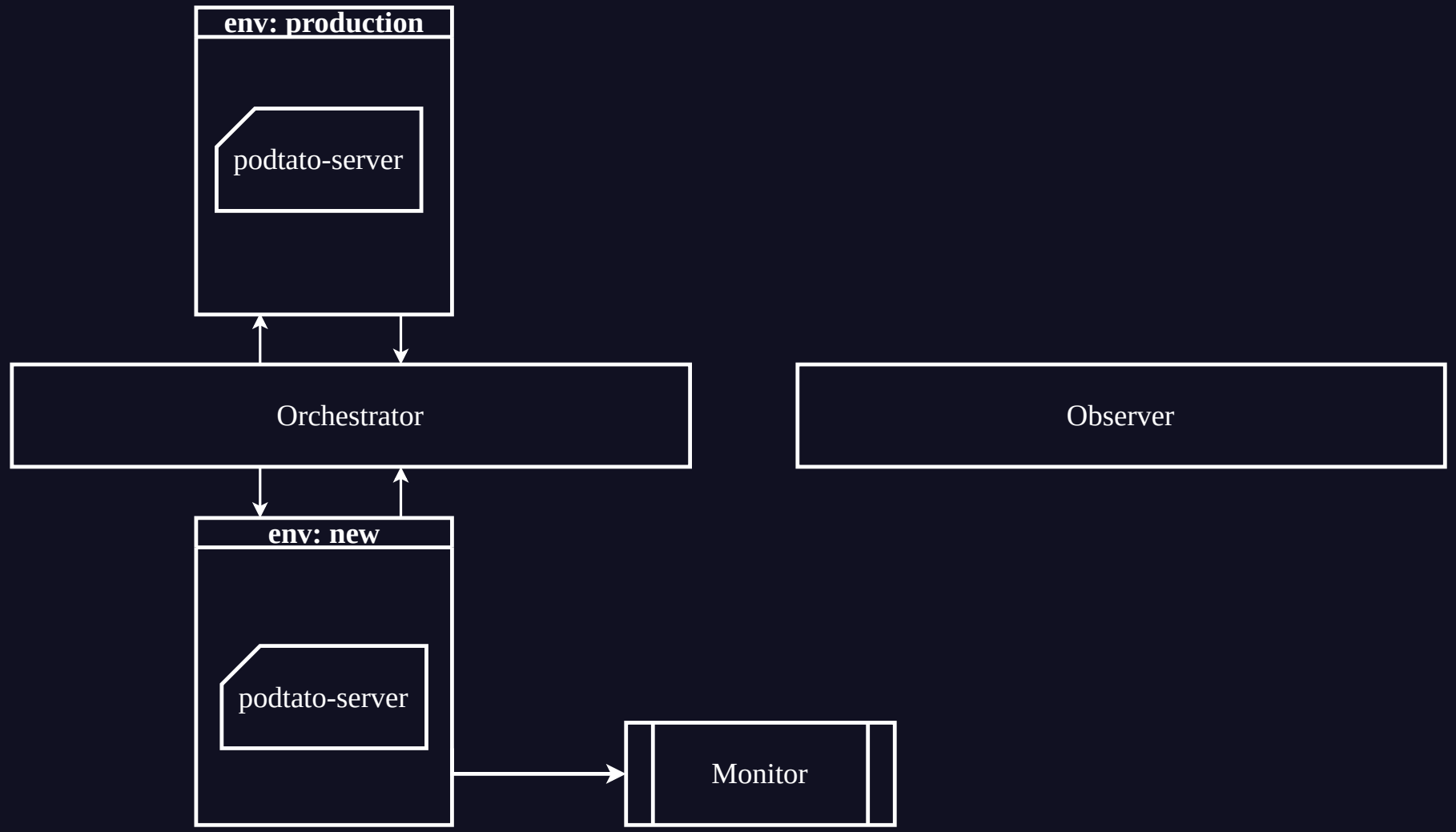

env: production
podtato-server
Incident
Incident
Orchestrator
Observer
env: <new>
podtato-server
Incident
Incident
Monitor
Actor

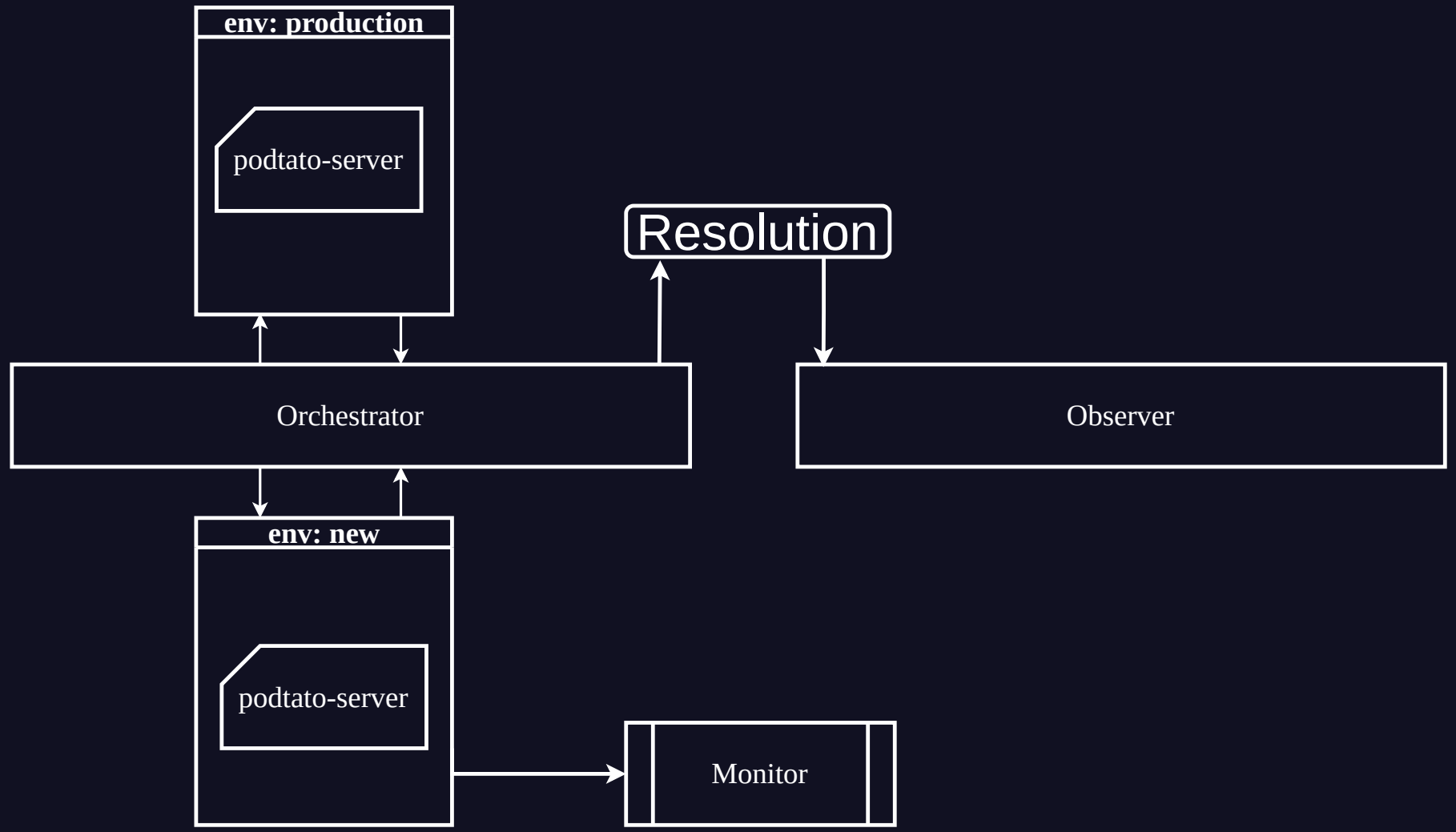

env: production
podtato-server
Incident
Incident
Change Failure Rate!
Orchestrator
Observer
env: <new>
podtato-server
Incident
Incident
Monitor
Actor

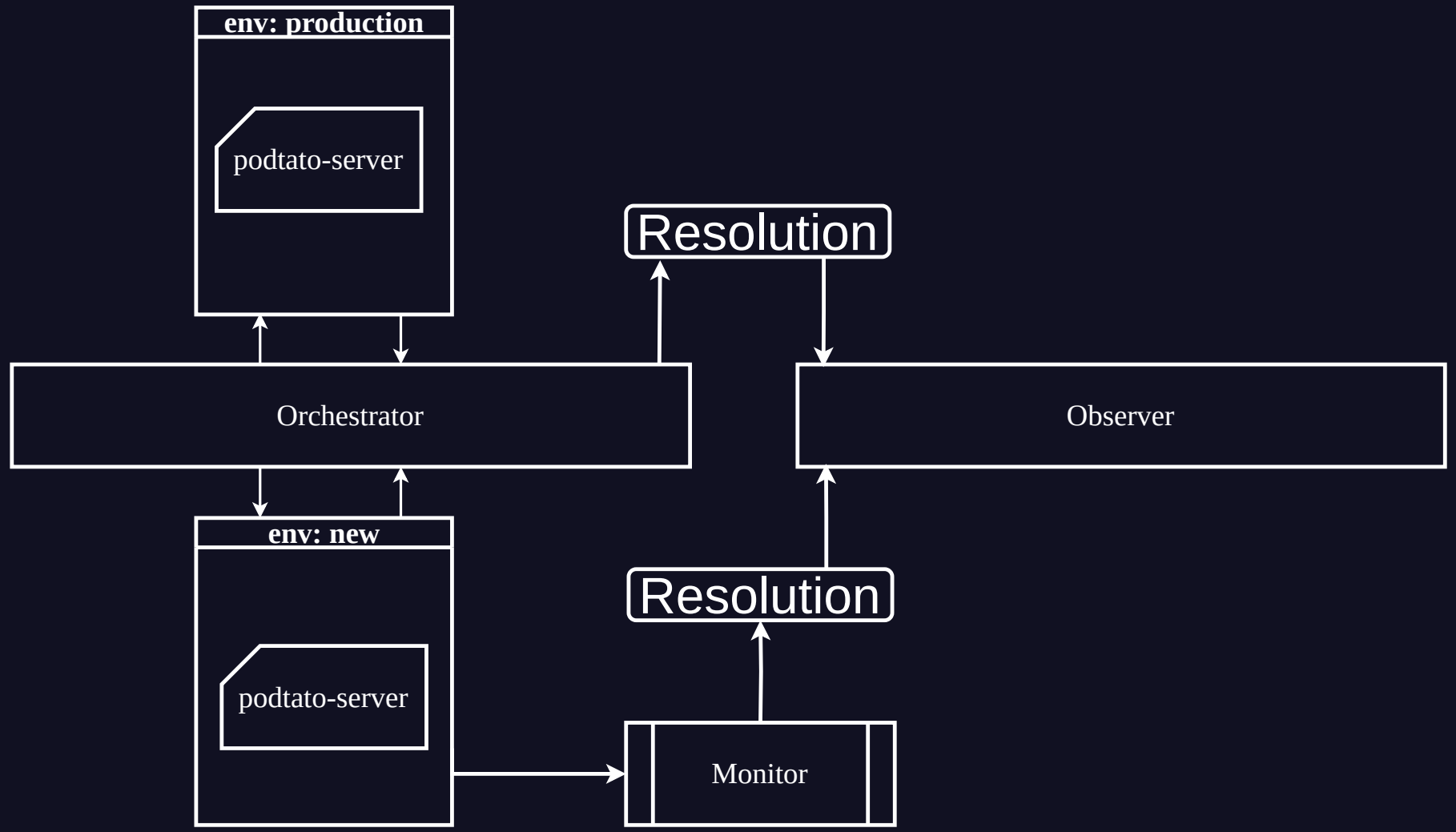
No dedicated incident event

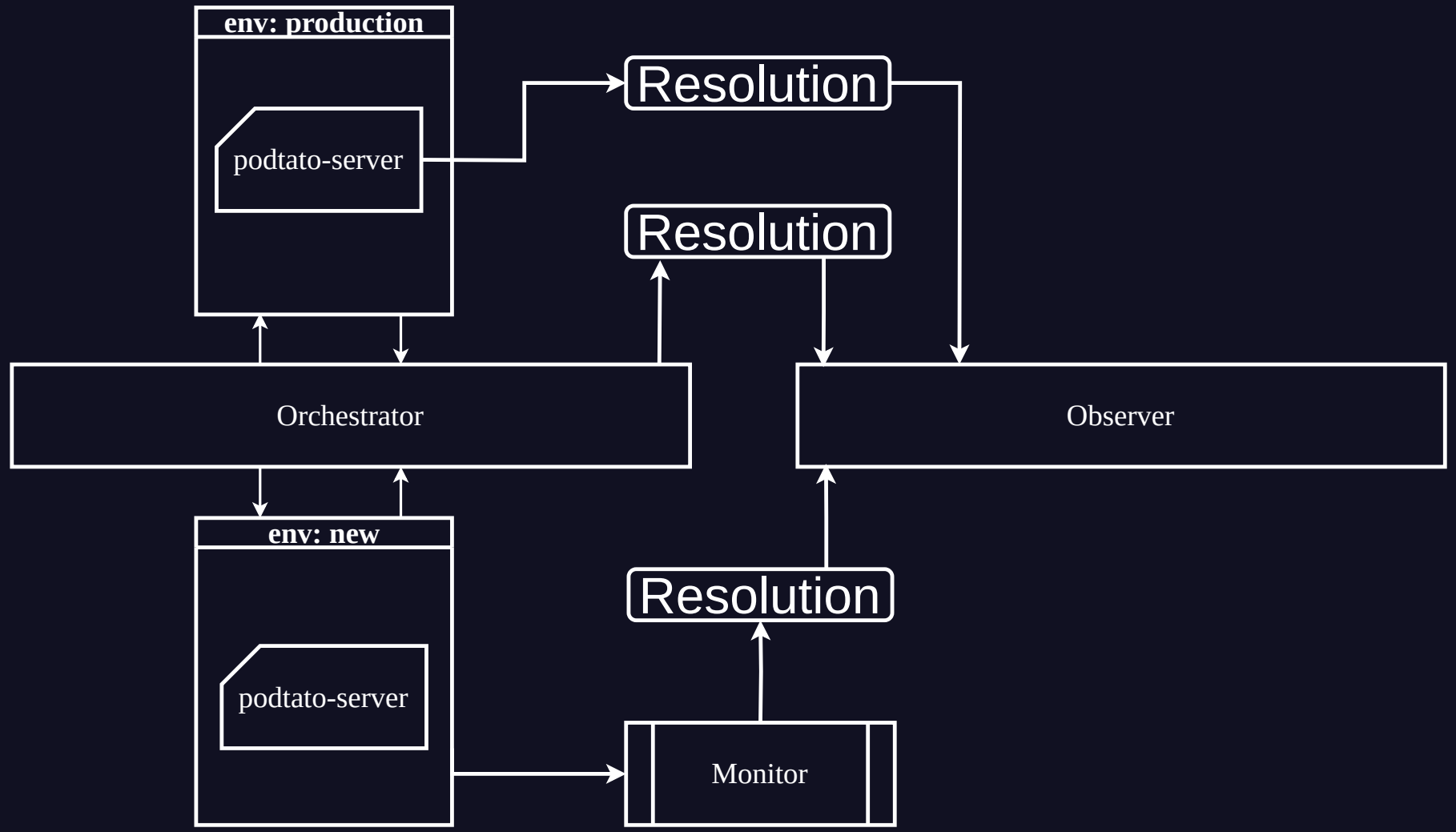
Suggestion: AnnouncementPublished

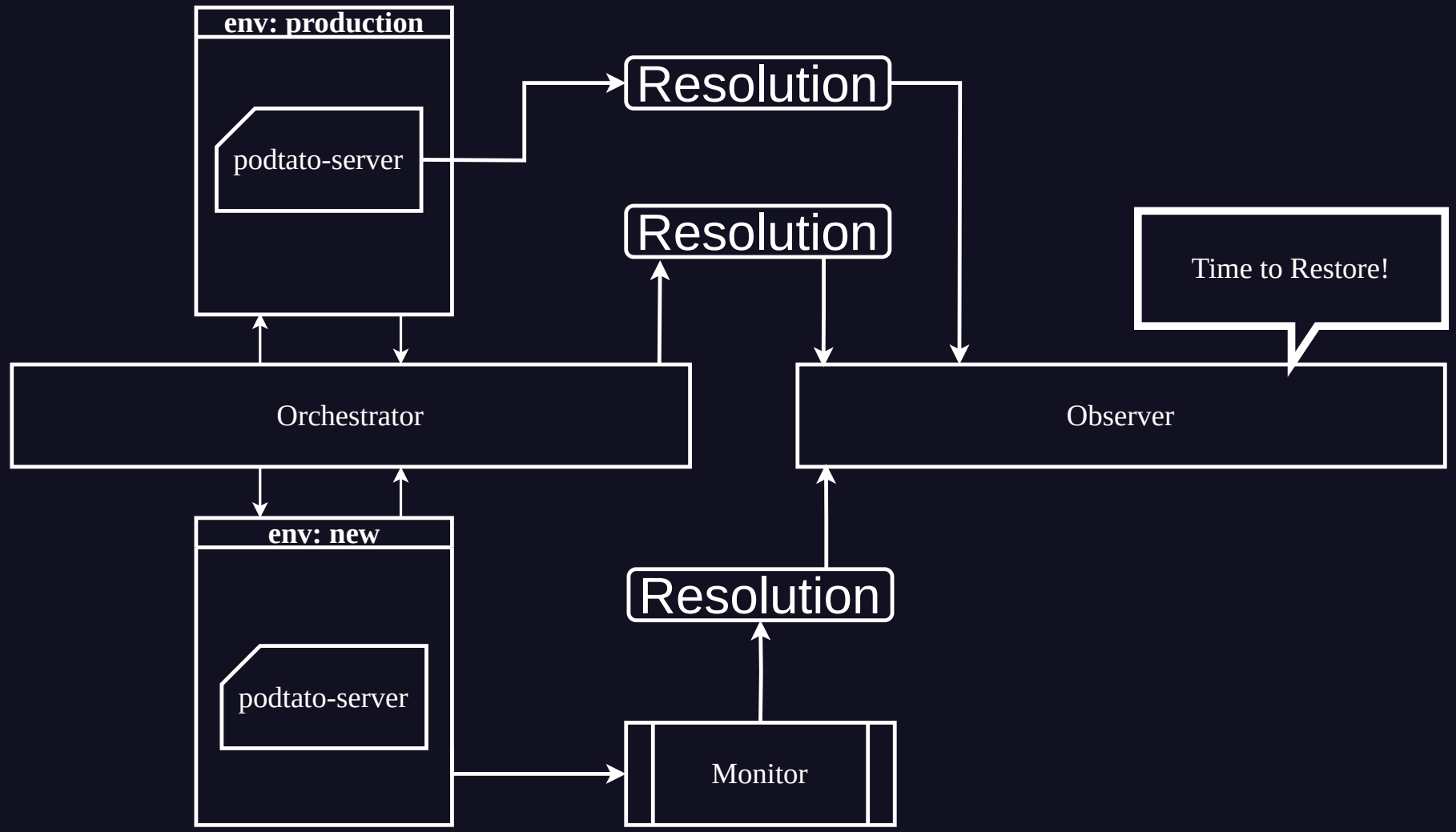
Time to Restore


env: production
podtato-server
Orchestrator
Observer
env: new
podtato-server
Monitor


env: production
podtato-server
Resolution
Orchestrator
Observer
env: new
podtato-server
Monitor


env: production
podtato-server
Resolution
Orchestrator
Observer
env: new
podtato-server
Resolution
Monitor


env: production
podtato-server
Resolution
Resolution
Resolution
Orchestrator
Observer
env: new
podtato-server
Monitor


env: production
podtato-server
Resolution
Resolution
Time to Restore!
Orchestrator
Observer
env: new
podtato-server
Resolution
Monitor

No dedicated resolution event

Suggestion: AnnouncementPublished

DORA Metrics

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

Deployment Frequency!

Lead Time for Changes

Change Failure Rate!

Time to Restore

Observer

SourceChangeSubmitted

ArtifactCreated

ArtifactDeployed

AnnouncementPublished

Deployment Frequency!

Lead Time for Changes

Change Failure Rate!

Time to Restore

Observer

Eiffel as the common language

SourceChangeSubmitted

ArtifactCreated

ArtifactDeployed

AnnouncementPublished

Thank you!

Q&A