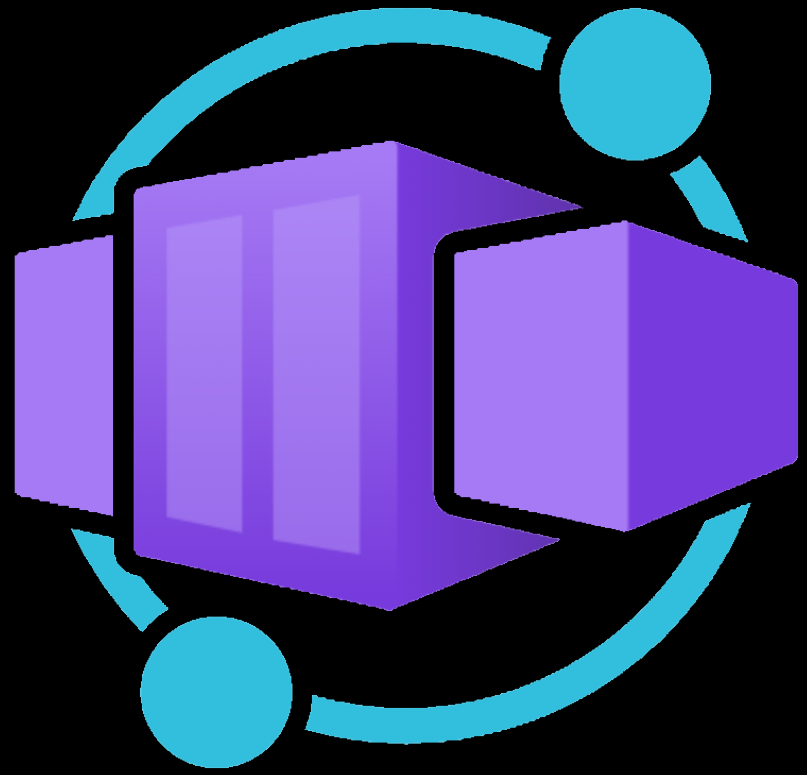
Azure Container Apps



Houssem Dellai
Cloud Solution Architect at Microsoft

Container services in Azure

All services | Containers

- AI + machine learning
- Analytics
- Compute
- Containers
- Databases
- DevOps
- General
- Hybrid + multicloud
- Identity
- Integration
- Internet of Things
- Management and governance
- Migration
- Mixed reality
- Monitor
- Networking

Container Infrastructure

- Container registries
- Container instances

Container Management

- Service Fabric clusters
- Kubernetes services
- Azure Red Hat OpenShift clusters
- Kubernetes fleet manager
- Service Fabric managed clusters

Containerized Applications

- Container Apps
- App Configuration

Containers in Azure

Redhat Openshift

Deploy apps into a managed Openshift cluster

Kubernetes Service

Scale and orchestrate Linux containers using Kubernetes

App Service

Deploy web apps or APIs using Web App for Containers

Container Instance

Elastically burst from your Azure Kubernetes Service (AKS) cluster

Function App

Run containers on a serverless platform

Infrastructure control

Developer productivity

Container Apps positioning

Redhat Openshift

Deploy apps into a managed Openshift cluster

Kubernetes Service

Scale and orchestrate Linux containers using Kubernetes

App Service

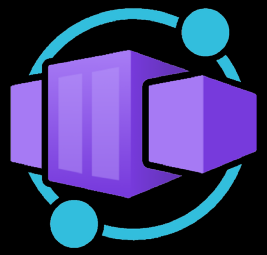
Deploy web apps or APIs using Web App for Containers

Container Instance

Elastically burst from your Azure Kubernetes Service (AKS) cluster

Function App

Run containers on a serverless platform



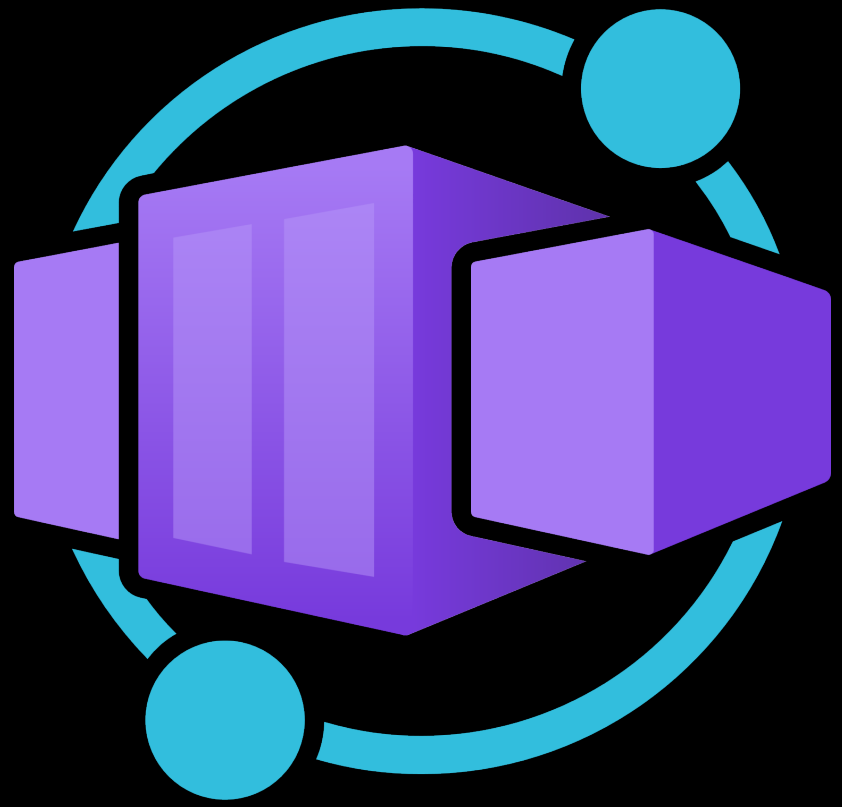
Container Apps

Infrastructure control

Developer productivity

Azure Container Apps

Fully-managed, serverless abstraction running on Kubernetes infrastructure, purpose built for managing and scaling event-driven microservices with a consumption-based pricing model.



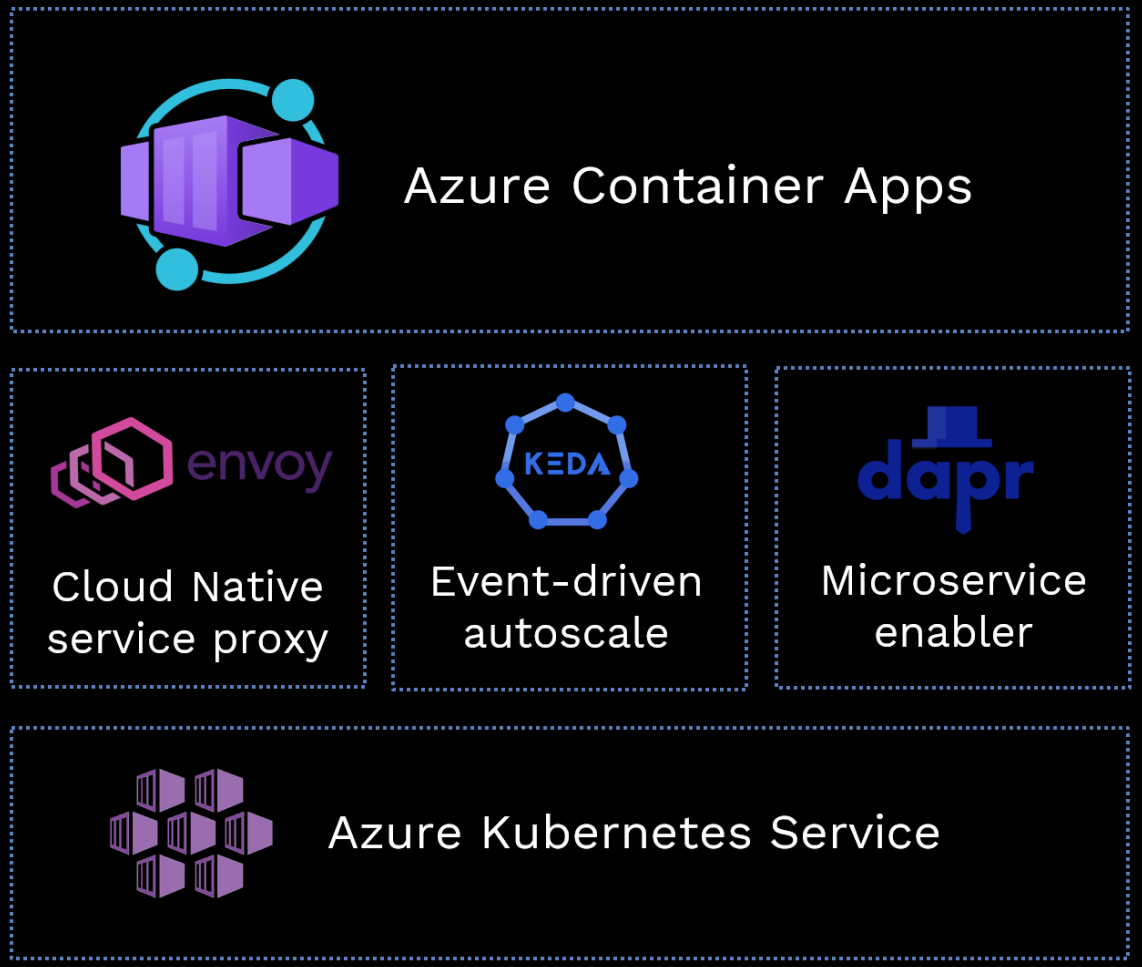
Azure Container Apps

Manages multi apps and microservices

Focus on apps, not infrastructure

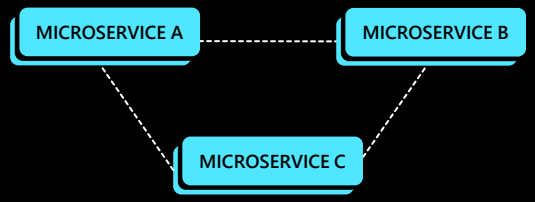
Built on top of AKS, KEDA, DAPR & Envoy

Kubernetes KEDA DAPR Envoy



What can you build with Azure Container Apps ?

Microservices



Deploy and manage a microservices architecture with the option to integrate with DAPR.

AUTO-SCALE CRITERIA

Individual microservices can scale independently using any KEDA scale triggers

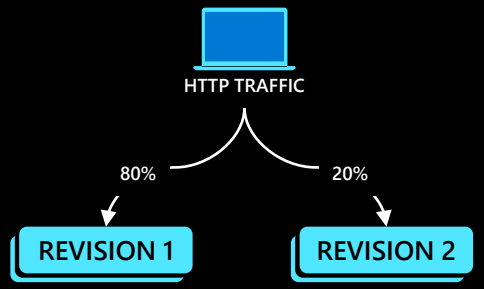
Event-driven processing

E.g. queue reader application that processes messages as they arrive in a queue.

AUTO-SCALE CRITERIA

Scaling is determined by the number of messages in the queue

Public API endpoints



HTTP requests are split between two versions of the container app where the first revision gets 80% of the traffic, while a new revision receives the remaining 20%.

AUTO-SCALE CRITERIA

Scaling is determined by the number of concurrent HTTP requests

Background processing

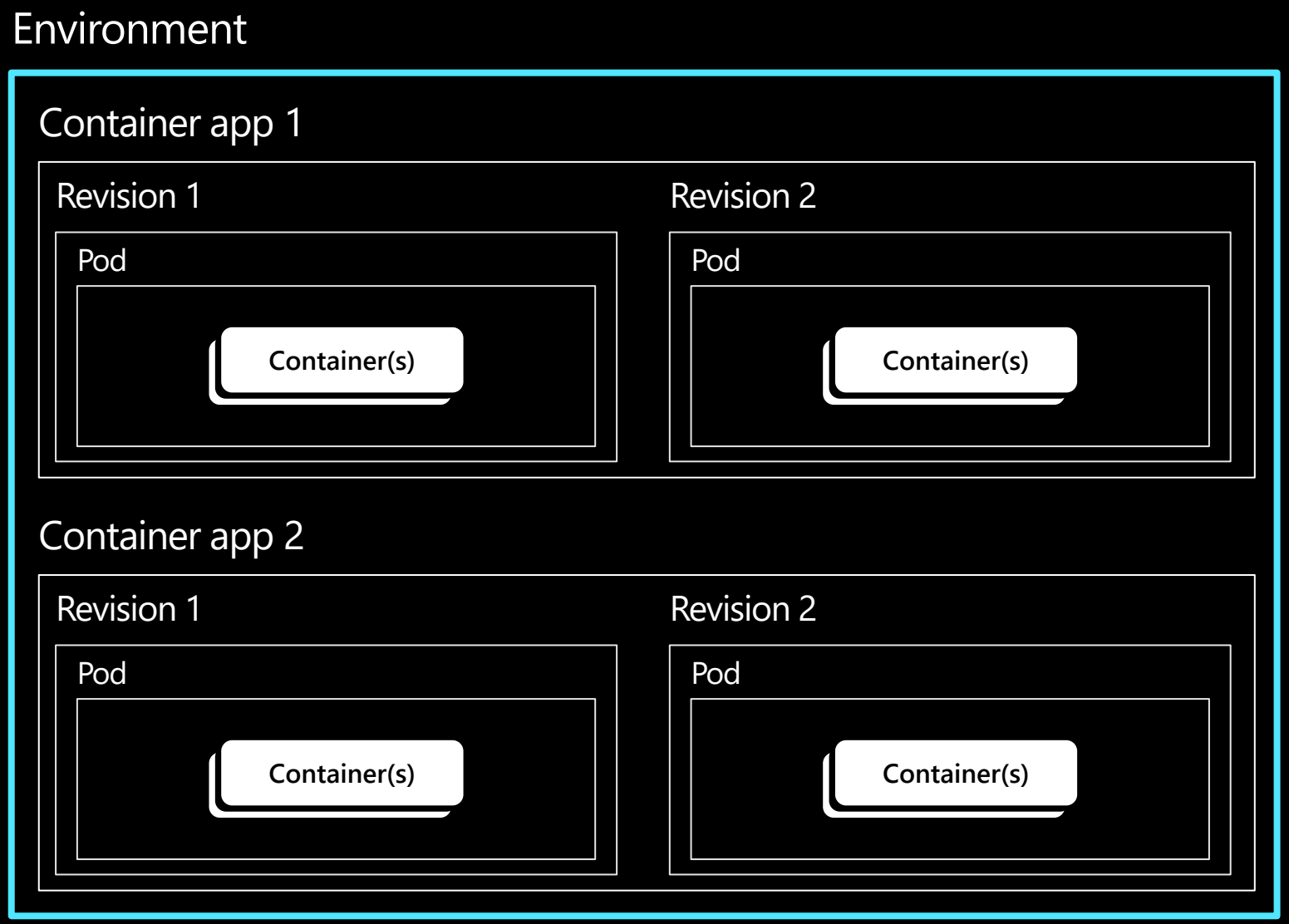
E.g. continuously-running background process that transforms data in a database.

AUTO-SCALE CRITERIA

Scaling is determined by the level of CPU or memory load

Environments

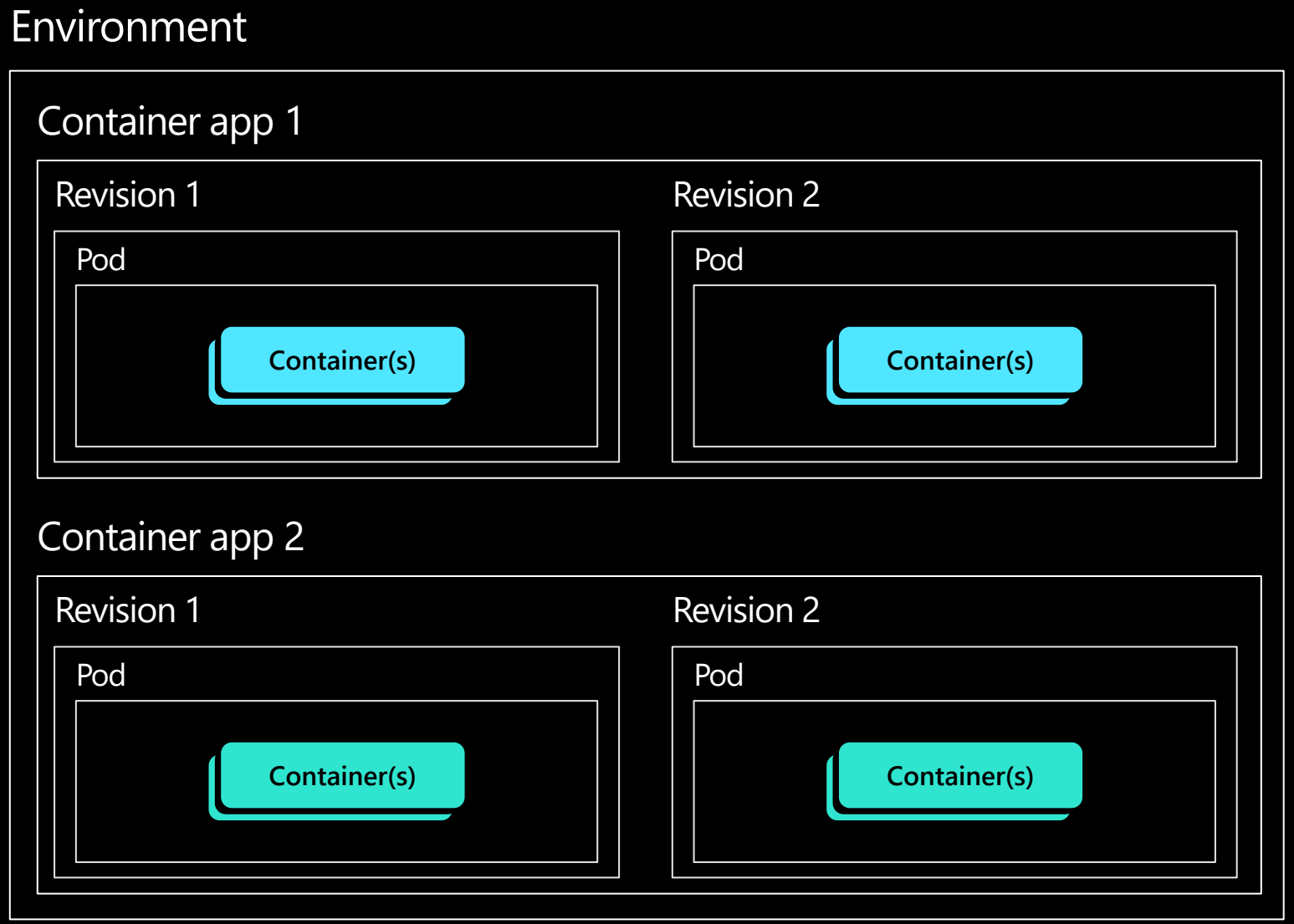
Environments define an isolation and observability boundary around a collection of container apps



Containers

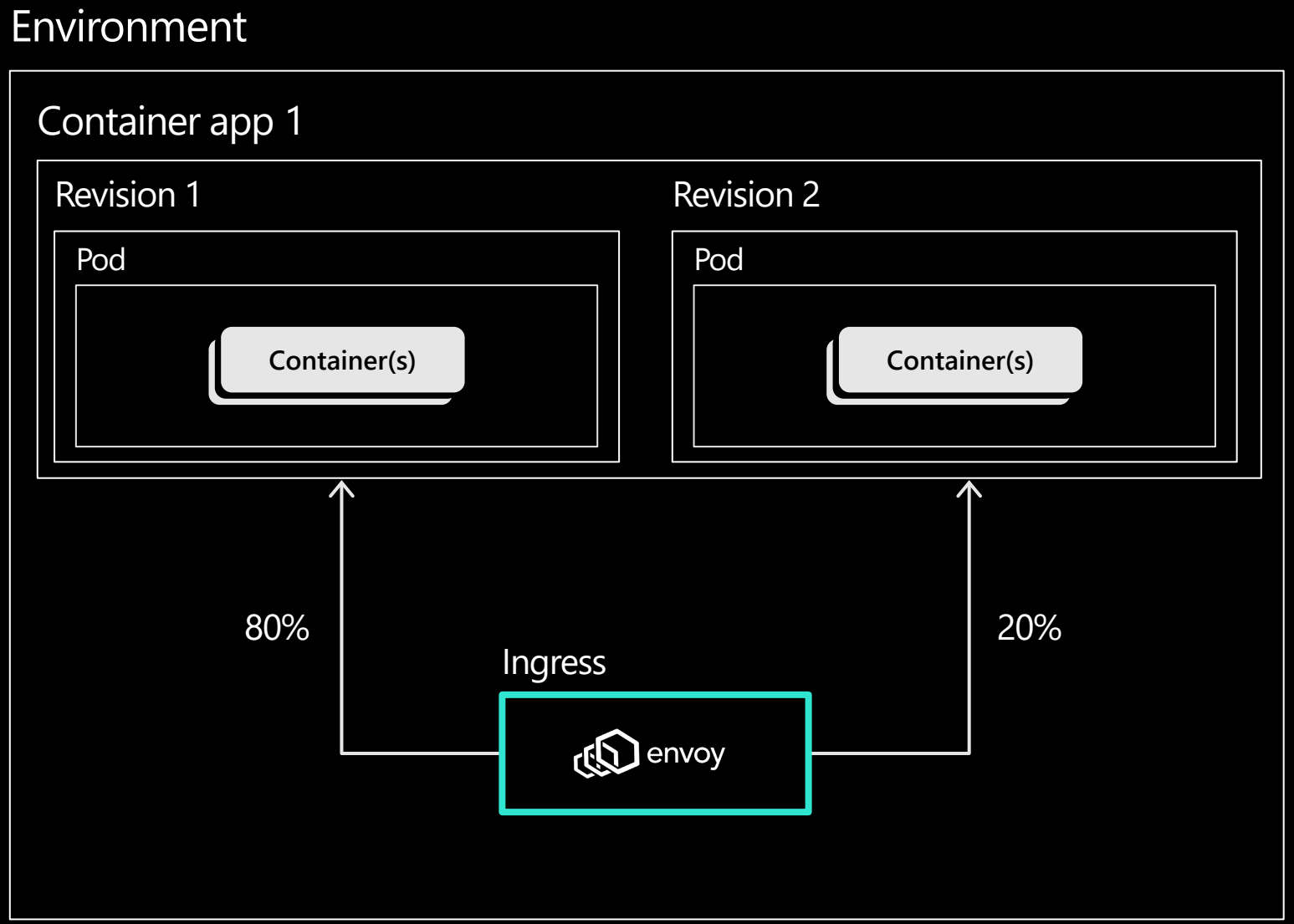
Containers in Azure Container Apps can use any and development stack of your choice

Linux only



Ingress

Internal or external visibility with TLS termination and support for HTTP/1.1 and HTTP/2



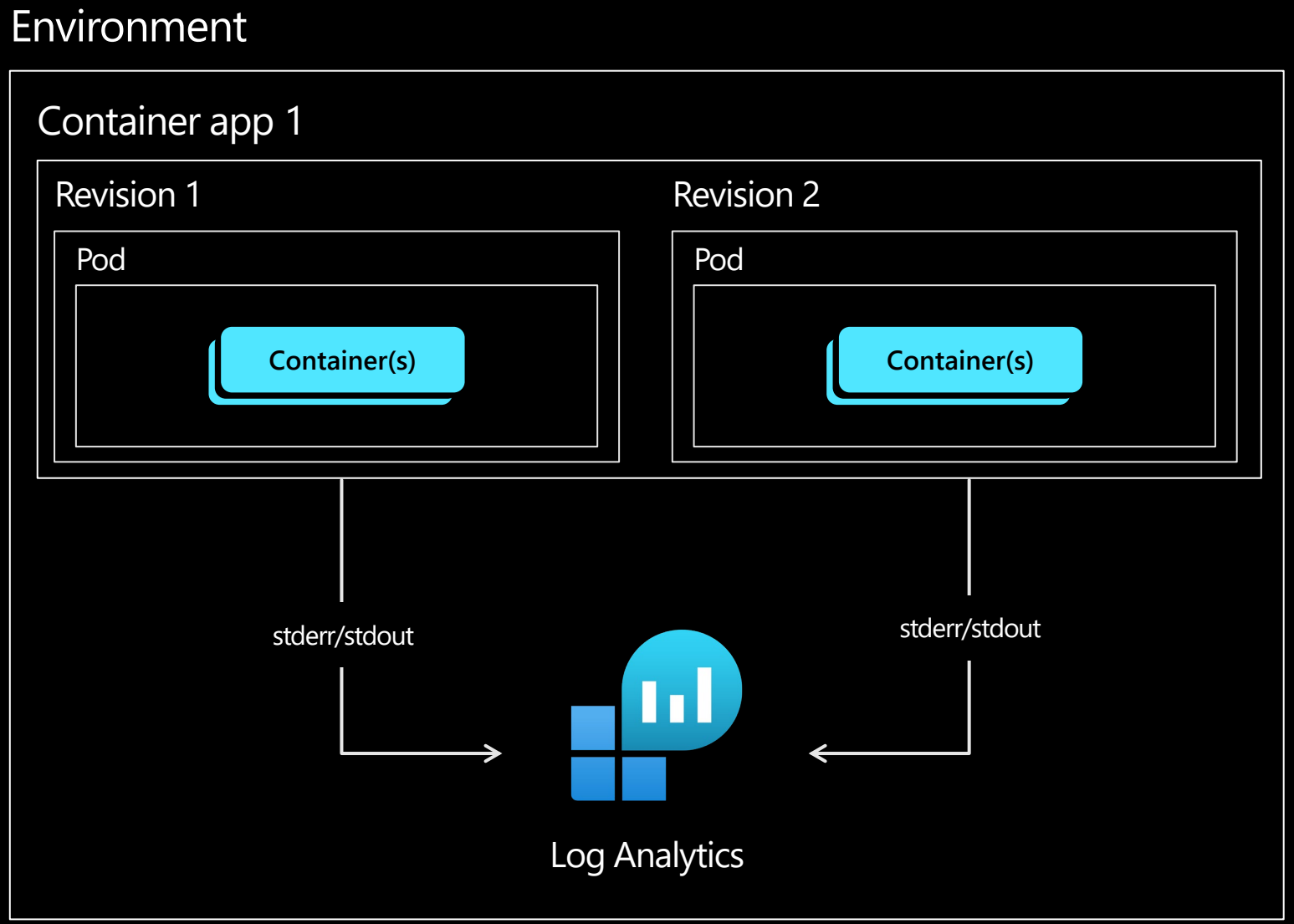
Secrets management

Securely store sensitive configuration elements that are then available to containers through environment variables, scale rules, and Dapr

```
"template": {
    "containers": [
        {
            "image": "myregistry/myQueueApp:v1",
            "name": "myQueueApp",
            "env": [
                {
                    "name": "QueueName",
                    "value": "myqueue"
                },
                {
                    "name": "ConnectionString",
                    "secretref": "queue-connection-string"
                }
            ]
        }
    ],
}
```

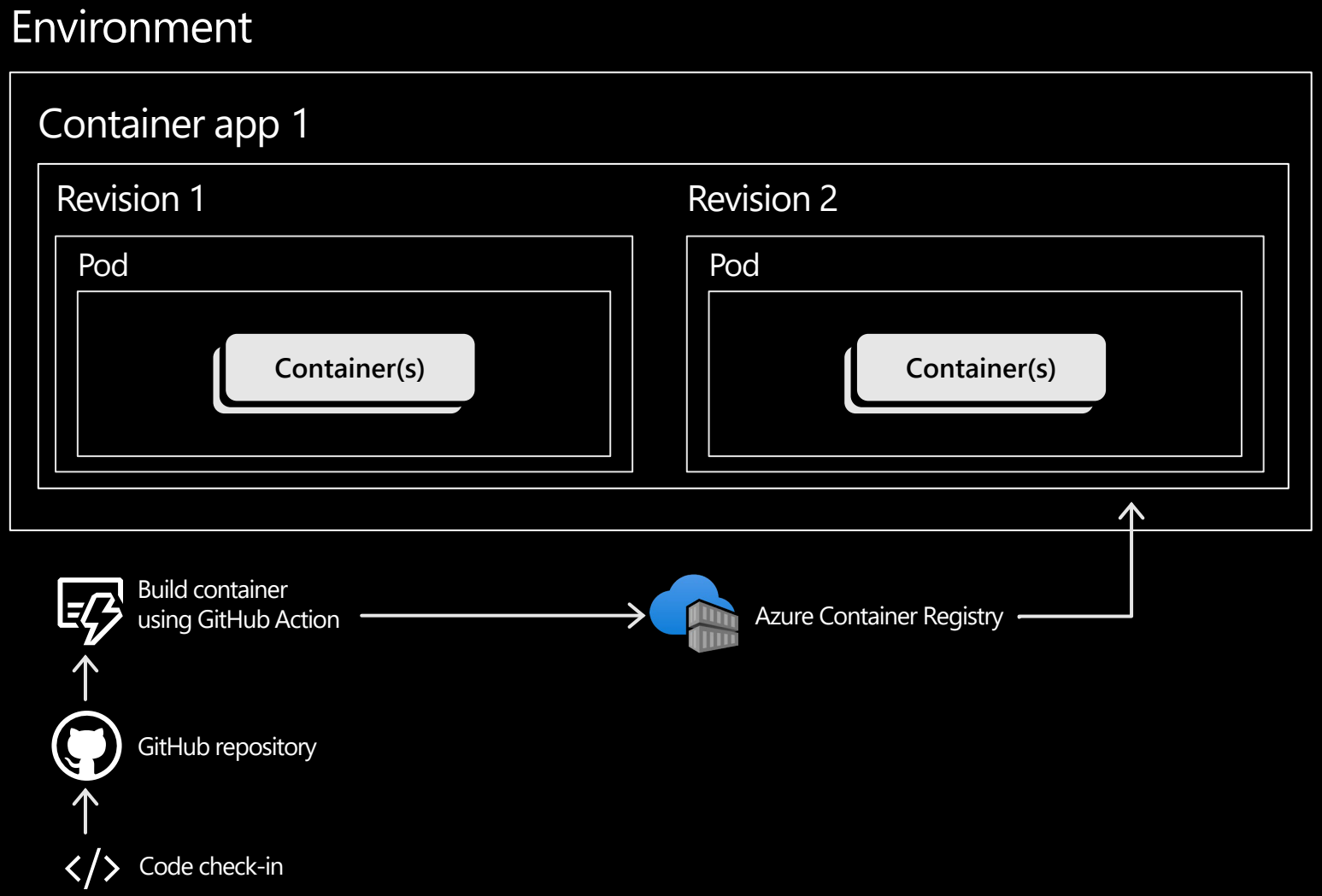
Logging

Containers write logs to standard output or standard error streams surfaced via Log Analytics



GitHub Actions integration

Publish revisions as commits are pushed to your GitHub repository by triggering a GitHub Action to build a new container image



Demo

Creating a Container App in the Azure portal