Designing and Configuring AKS for Business Continuity

Anthony E. Nocentino
Principal Architect

@nocentino www.nocentino.com

Course Overview

Designing and Configuring Networking in AKS

Accessing Applications Deployed in AKS

Designing and Configuring AKS for Business Continuity

Overview

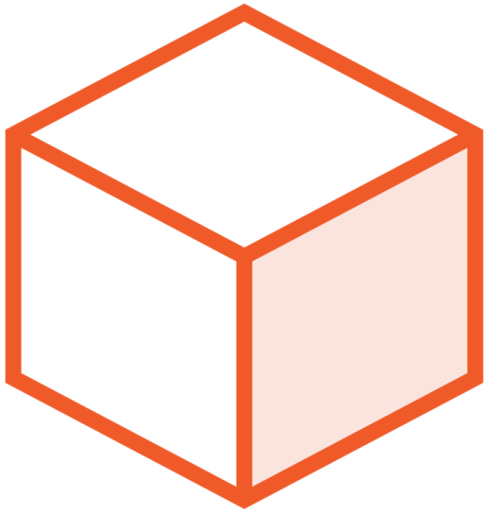
Cluster, Node, and Pod Availability

Disaster Recovery Patterns in AKS

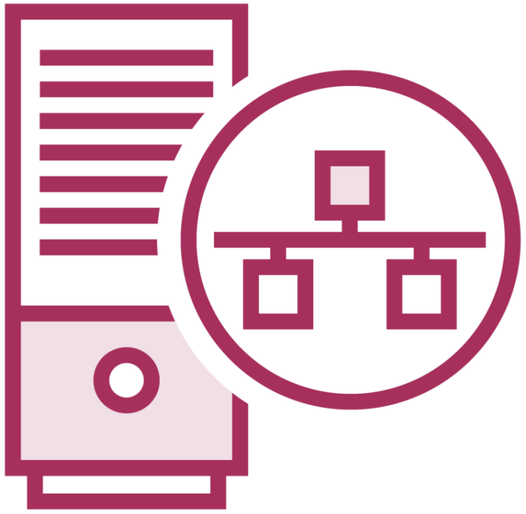
Understanding Availability Zones in AKS

Geo-Replication for Container Images

Pod, Node, and Cluster Availability



Pod Availability

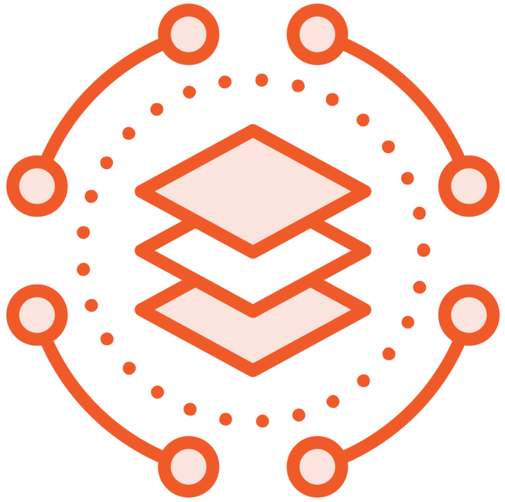


Node Availability

Cluster Availability

Disaster Recovery Patterns in AKS

Azure paired regions



Stagger Deployments

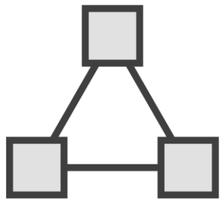
Azure Traffic Manager

Understanding Availability Zones in AKS

Availability Zones are a high-availability options

Zones are unique physical locations within an Azure Region

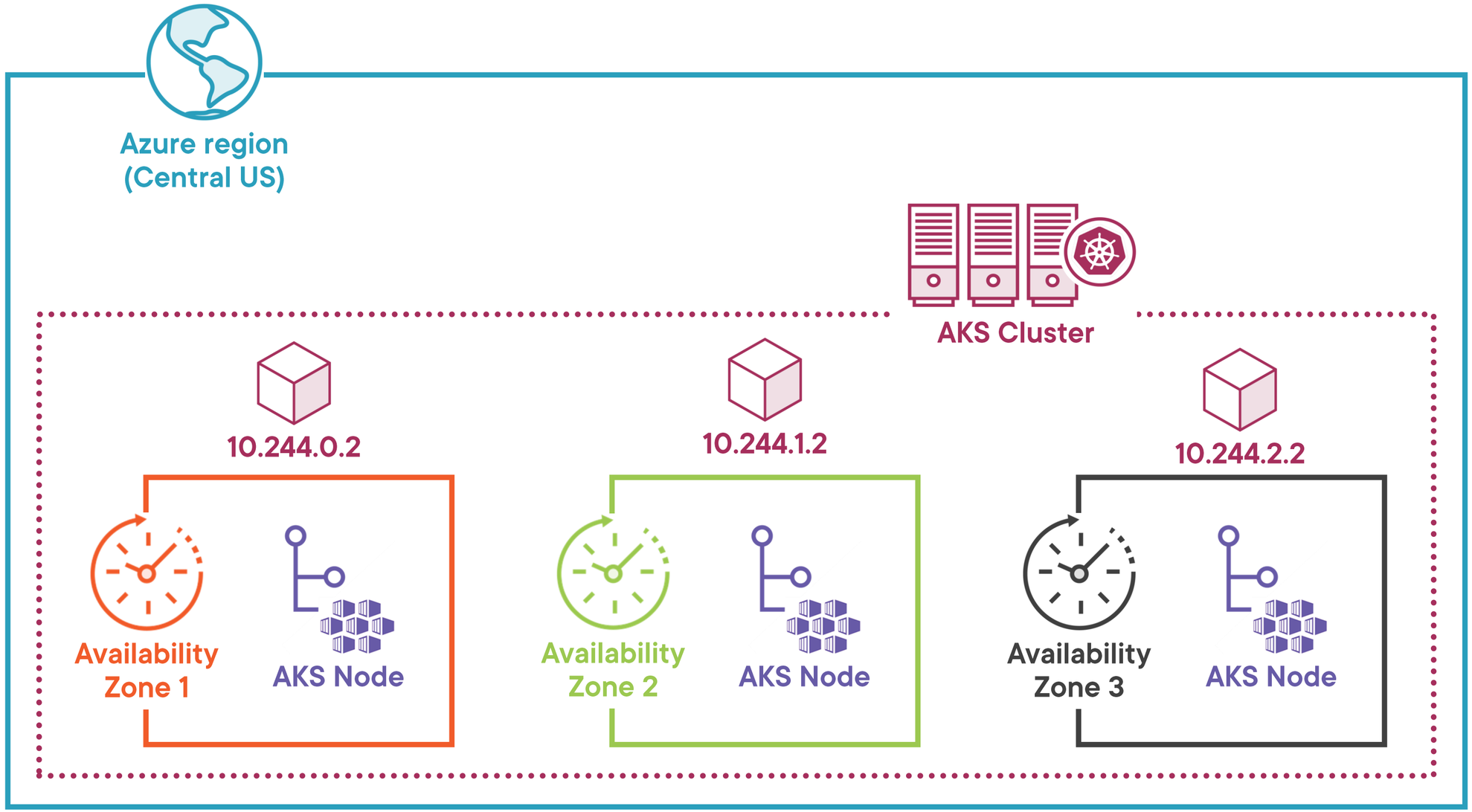
Physical separation of Availability Zones within a Region protects applications



A Cluster's Nodes can span multiple Availability Zones

https://docs.microsoft.com/en-us/azure/availability-zones/az-overview

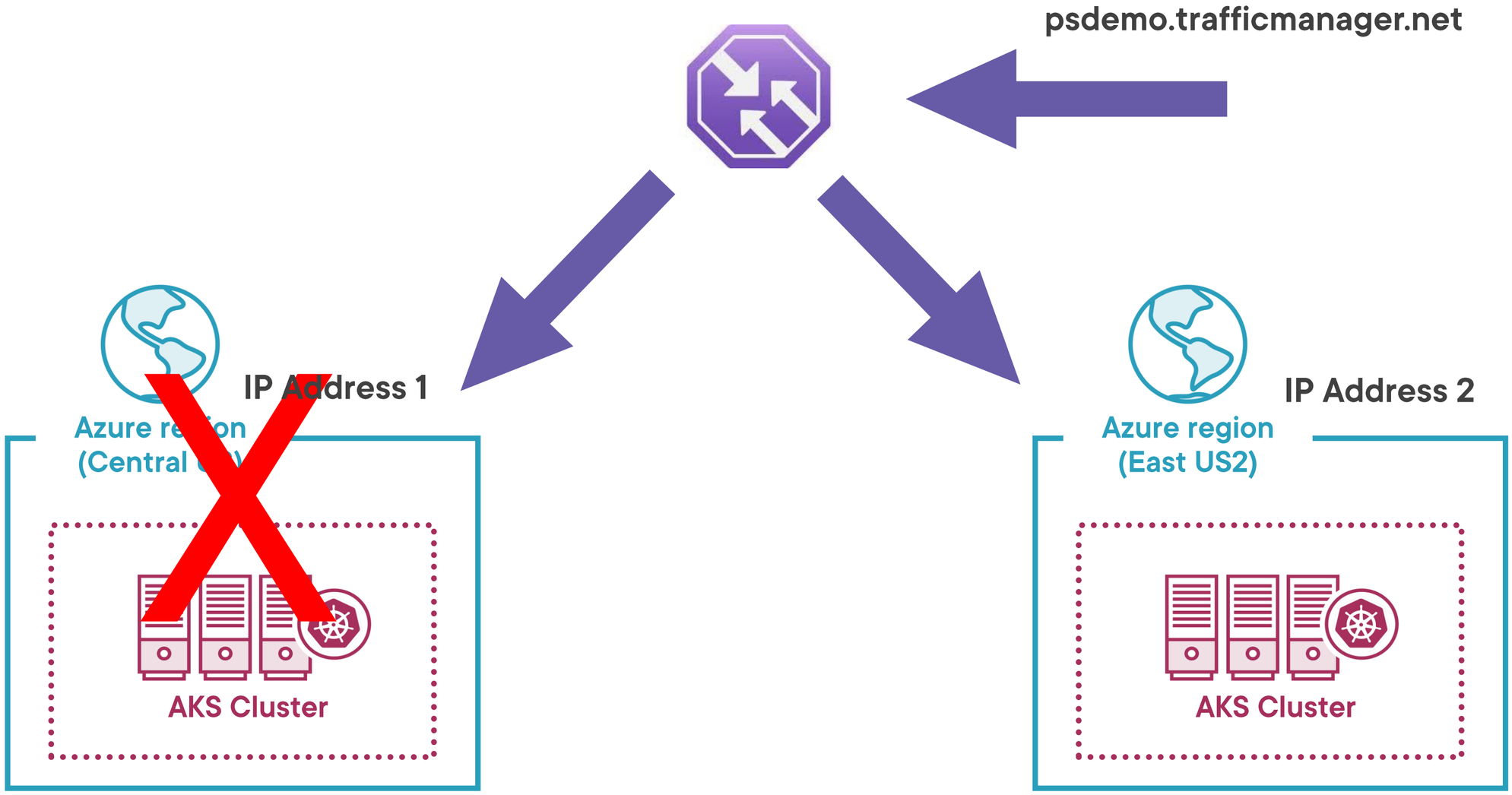
Understand Availability Zones and AKS



Deploying an AKS Cluster with AZ Support

```
az aks create \
    --resource-group aks-az \
    --name aks-az \
    --generate-ssh-keys \
    --node-count 3 \
    --zones 1 2 3
```

Using Azure Traffic Manager to Distribute Workload



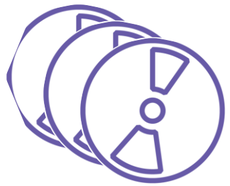
Demo

Deploying an Availability Zone enabled AKS cluster

Deploying Azure Traffic Manager to providing fault tolerance between two AKS clusters

Enable Geo-Replication for Container Images

Azure Container Registry supports geo-replication



Automatically replicate your images to Azure regions

Faster

More resilient and reliable

https://docs.microsoft.com/en-us/azure/container-registry/container-registry-geo-replication

Persistent Data Protection

Persistent State Applications

Generally asynchronous

Between nodes or even between clusters

Summary

Cluster, Node, and Pod Availability

Disaster Recovery Patterns in AKS

Understanding Availability Zones in AKS

Geo-Replication for Container Images

Thank you!
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