

Running Containers on Azure Kubernetes Service



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Azure Container
Instances (ACI)

Azure Web App
for Containers

Azure Service Fabric

Azure Kubernetes
Service (AKS)



Overview



Orchestrators

Kubernetes basics

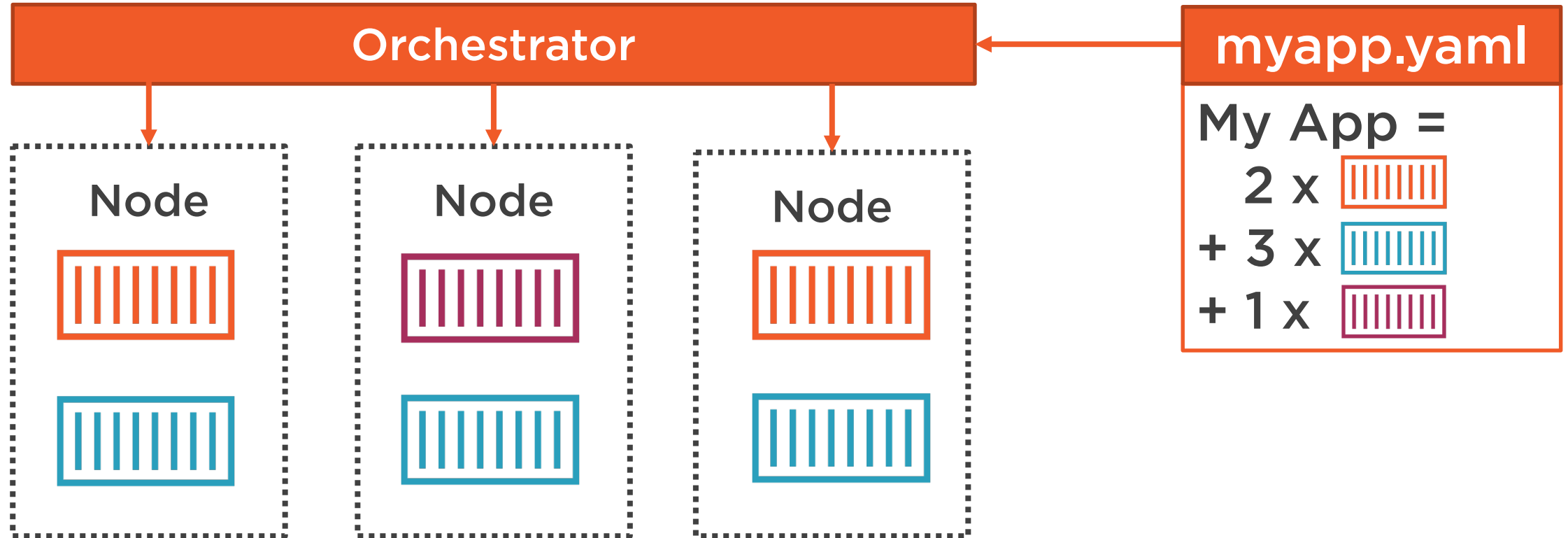
Azure Kubernetes Service (AKS)

Demos

- Create an AKS cluster
- Deploy apps with kubectl
- Scaling



Orchestrators



Health monitoring | Self-healing | Upgrades | Scaling

Resource constraints | Networking | Service discovery | Ingress



Kubernetes Basics



A “production grade container orchestration system”

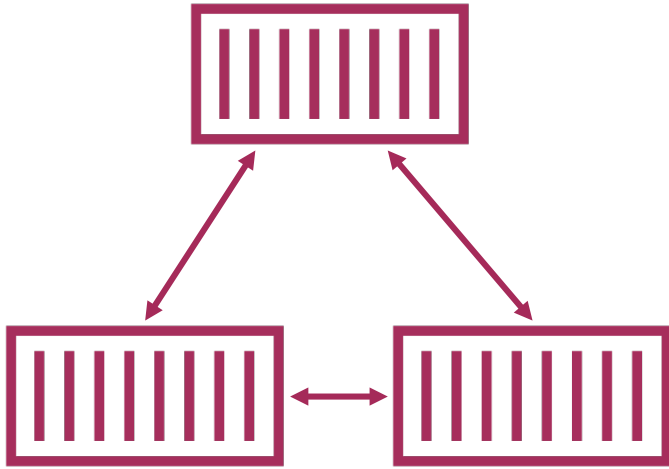
Cluster

- Master nodes schedule containers
- Worker nodes run containers

kubectl

- Command line tooling

Kubernetes Concepts



Pod – one or more containers

ReplicaSet – multiple instances of a pod

Deployment – running code on Kubernetes

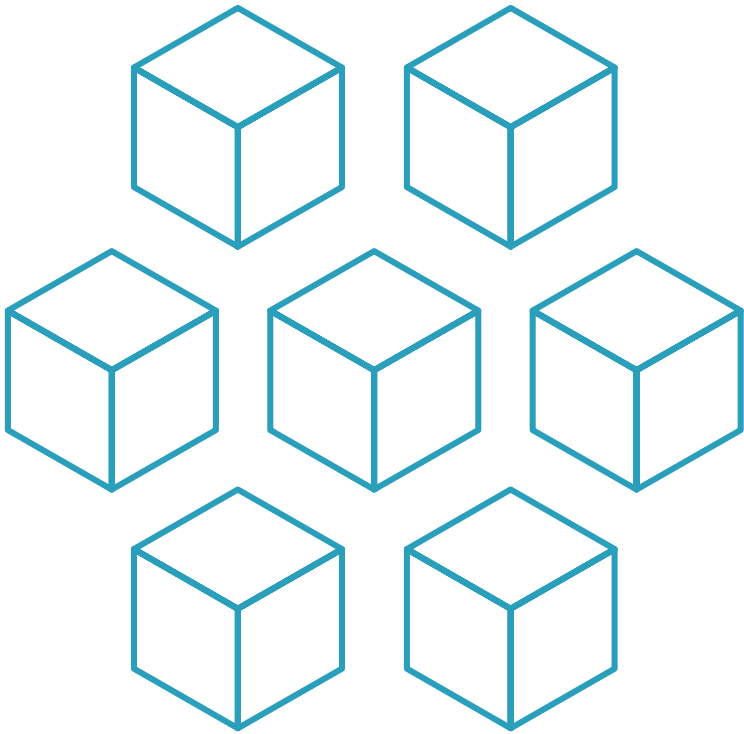
Service - load balancing

Namespaces – isolation

YAML – declarative deployments

Helm – package manager for Kubernetes

Azure Kubernetes Service (AKS)



Managed Kubernetes cluster

- Control plane is free
- Only pay for worker nodes
- Simplified version upgrades
- 100% upstream Kubernetes

Integration with Azure Services



Azure Monitor

Mount Azure file shares or disks

Secure with RBAC and AD

Virtual network integration

Elastic scale with ACI

Develop and debug with Dev Spaces

Demo



Create an AKS cluster

- Azure portal
- Azure CLI
- kubectl



Demo



Deploy an application to AKS

- kubectl
- YAML
- View container logs



Demo

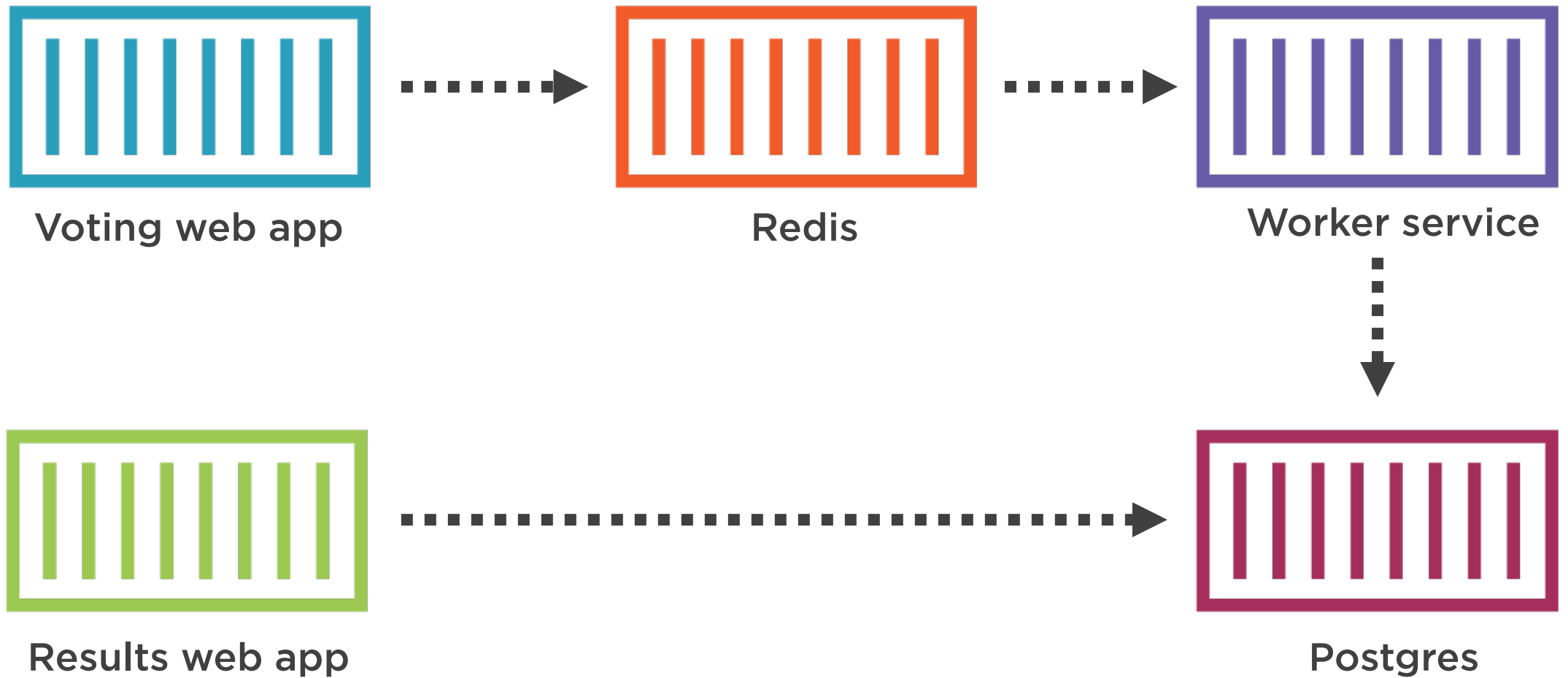


Scaling AKS

- Scale cluster
- Scale a microservice
- View the Kubernetes dashboard



Demo Voting Application



<https://github.com/dockerexamples/example-voting-app>



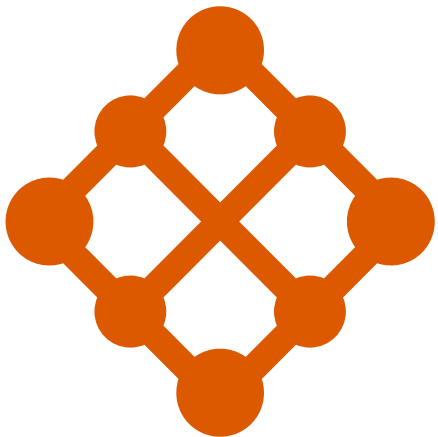
Choosing an Orchestrator

Azure Service Fabric

Azure Kubernetes Service

Both are excellent orchestrators!

✓ Scheduling ✓ Upgrades ✓ Health monitoring ✓ Service discovery



- ⊕ Windows
- ⊕ Stateful services
- ⊕ Serverless (Mesh)

- ⊕ Open source tooling ecosystem
- ⊕ Other clouds
- ⊕ Virtual Kubelet
- ⊕ Dev Spaces



Summary



Azure Kubernetes Service

- Managed Kubernetes cluster
- Pods, deployments, services
- kubectl

Create an AKS cluster

- az aks create

Deploy applications

- kubectl apply

Scale clusters and services

Azure Kubernetes Service (AKS)

- The Big Picture

by Manoj Nair

AKS offers a managed Kubernetes Platform on Microsoft Azure. This course will teach you the basics of Kubernetes; deploy an AKS Cluster; and run, scale and update application code in AKS with minimal effort.

 **Resume Course**



Bookmarked



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Description

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Course Overview



1m 53s



What Is Azure Kubernetes Service (AKS)?



46m 50s



Course author



Manoj Nair

With a Bachelor of Engineering (IT) from Mumbai University, Manoj is currently working with Microsoft Australia as a Cloud Solutions Architect. In his current role, he enables Cloud and Enterprise...

Course info

Level **Beginner**

Rating **★★★★☆ (40)**

My rating **★★★★★**

Duration **1h 34m**

Released **13 Aug 2018**

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[https://github.com/markheath/
azure-deploy-manage-containers](https://github.com/markheath/azure-deploy-manage-containers)

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