Key Steps in the Migration Process

Set Up On-Premises Kubernetes Cluster

- Create a local cluster using tools like Minikube or Kind.

- Deploy a sample application (e.g., Nginx).

Prepare Azure Environment

- Create an Azure Kubernetes Service (AKS) cluster.

- Set up Azure Container Registry (ACR) for image storage.

Export and Adapt Kubernetes Manifests

- Export deployment and service YAML files from the on-premises cluster.

- Modify YAML files to fit Azure's environment, such as changing image paths to ACR.

Transfer Docker Images to ACR

- Tag and push the application's Docker images to ACR.

Deploy Application to AKS

- Use `kubectl` to apply the adapted YAML files to the AKS cluster.

Verify Deployment

- Check the status of pods and services in the AKS cluster to ensure everything is running correctly.

Cleanup

- Remove resources from the on-premises cluster if the migration is successful.

- Monitor the new environment and adjust configurations as needed.

Flowchart of the Migration Process

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flowchart TD

    A[Start] --> B[Set Up On-Premises Cluster]
```

B --> C[Deploy Sample Application]

C --> D[Create AKS Cluster]

D --> E[Set Up ACR]

E --> F[Export Kubernetes Manifests]

F --> G[Adapt Manifests for Azure]

G --> H[Push Docker Images to ACR]

H --> I[Deploy Application to AKS]

I --> J[Verify Deployment]

J --> K[Cleanup On-Premises Resources]

K --> L[End]