AZURE DevOps

Cloud Computing Project

Presented by Group 12

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OUTLINE

INTRODUCTION

- To scale up and deliver applications

- Cloud computing

- Other relevant Cloud services

- Automation

- Cost effective

- Mostly pay-as-you-go

WHY AZURE DEVOPS

- Azure Devops is a MS cloud hosting services

- Users capability

- Monitoring

- Managing test plans

- Azure DevOps is modular and integrated

OBJECTIVES

- Personalising a webservice

- Containerize the applications

- Deploying App services using Docker and Azure Kubernetes

- Azure Pipelines for the entire deployment stages - Build and Release

- DevOps for CI/CD

- Deploying the web service from Azure DevOps to Azure portal

AZURE KUBERNETES SERVICE

- Deployment and manage containerised applications

- Serverless Kubernetes

- Integrated continuous integration and continuous delivery experience

- Enterprise-grade security
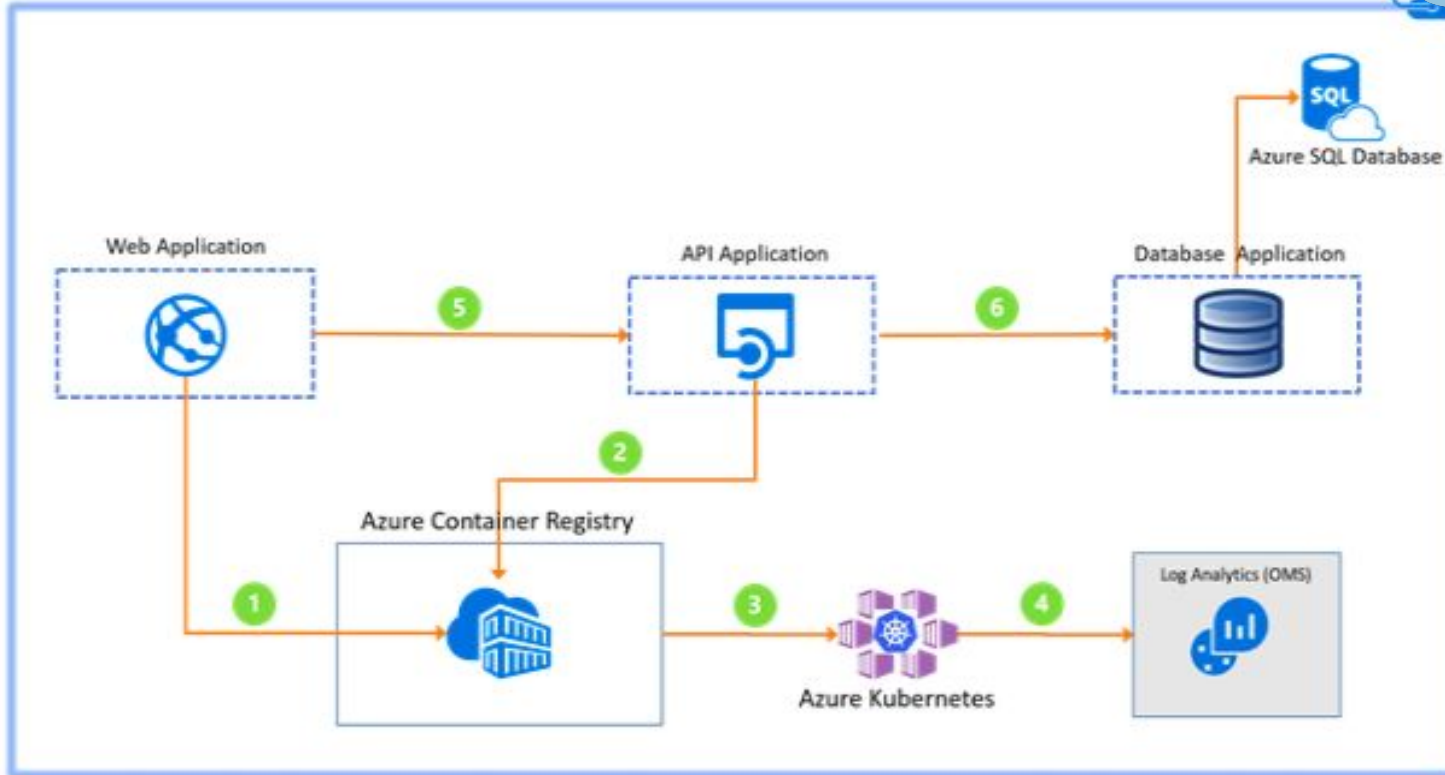
- Governance

- Unite developments

- Operations teams
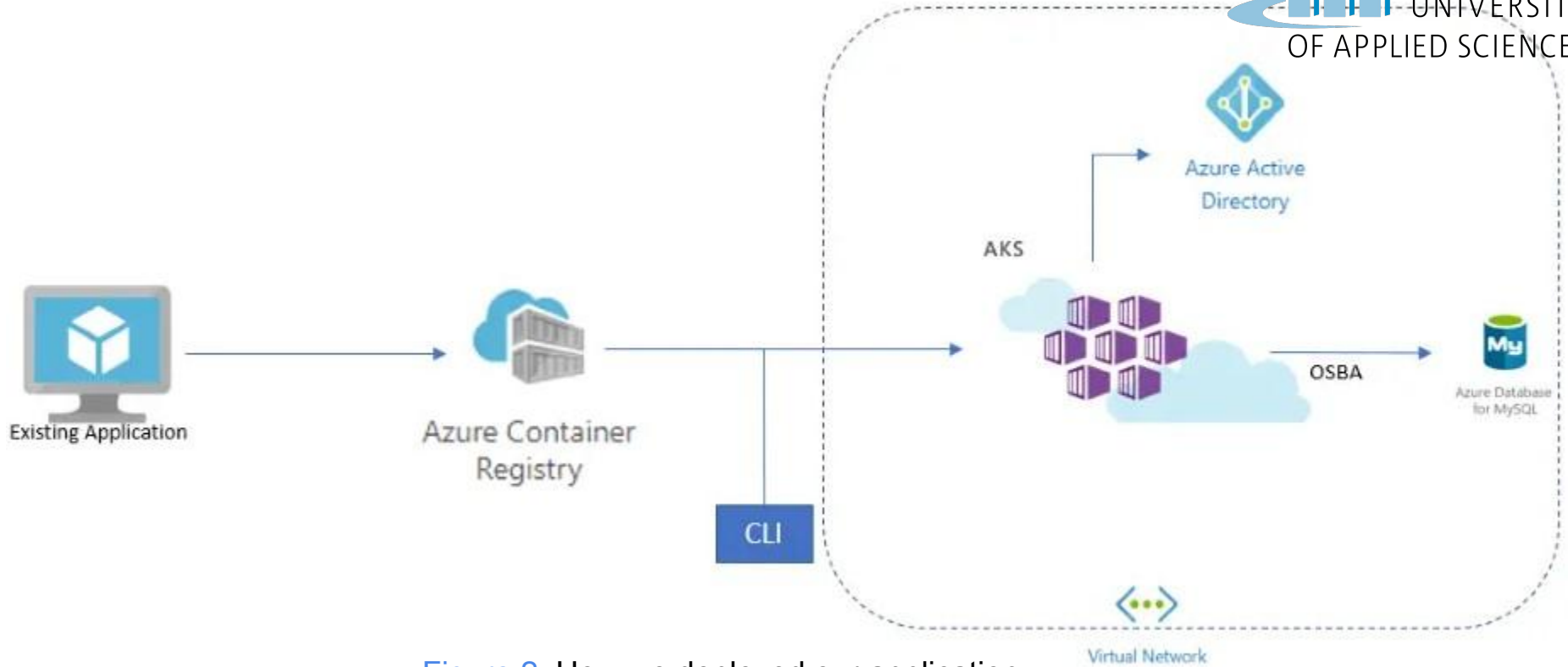
Figure 1: How to implement AKS

Source : https://docs.microsoft.com/en-us/azure/aks/

Figure 2: How we deployed our application

AZURE APP SERVICE

- Cloud computing based platform
- Hosting websites
- Created and operated by Microsoft.
- Platform as a service
- Publishing Web apps
- Different programming languages
- Including Microsoft proprietary ones and 3rd party ones

Deployment:

- Build Pipeline->YAML Configuration->Release Pipeline->Hosted by Azure App Service

DEPLOYMENT TO VM

- Environment Creation

- Deployment Group

- Registration with VM with token in deployment pool

Process:

- Build Pipeline->YAML Configuration->Registration Process start->Release Pipeline->Deployment

DEPLOYMENT TO VMSS

- Useful for Autoscaling Identical VM's

VMSS Process:

- Creation of Storage Accounts, Resource Groups, Image Gallery

Process:

- Build Pipeline->YAML Configuration->VMSS Process->Publishing Artifacts and creating custom Image->Release Pipeline->Deployment

AZURE DOCKER SERVICE

- Enables developers to use native Docker commands

- To run applications in ACI

- Tight integration

- Quickly run applications using the Docker CLI

- VS Code extension

- local development to cloud deployment.

AZURE DOCKER SERVICE

- Docker CLI

- Easily log in

- Set up an ACI context

- single container and multi-container application development

- Docker image

- Simplicity
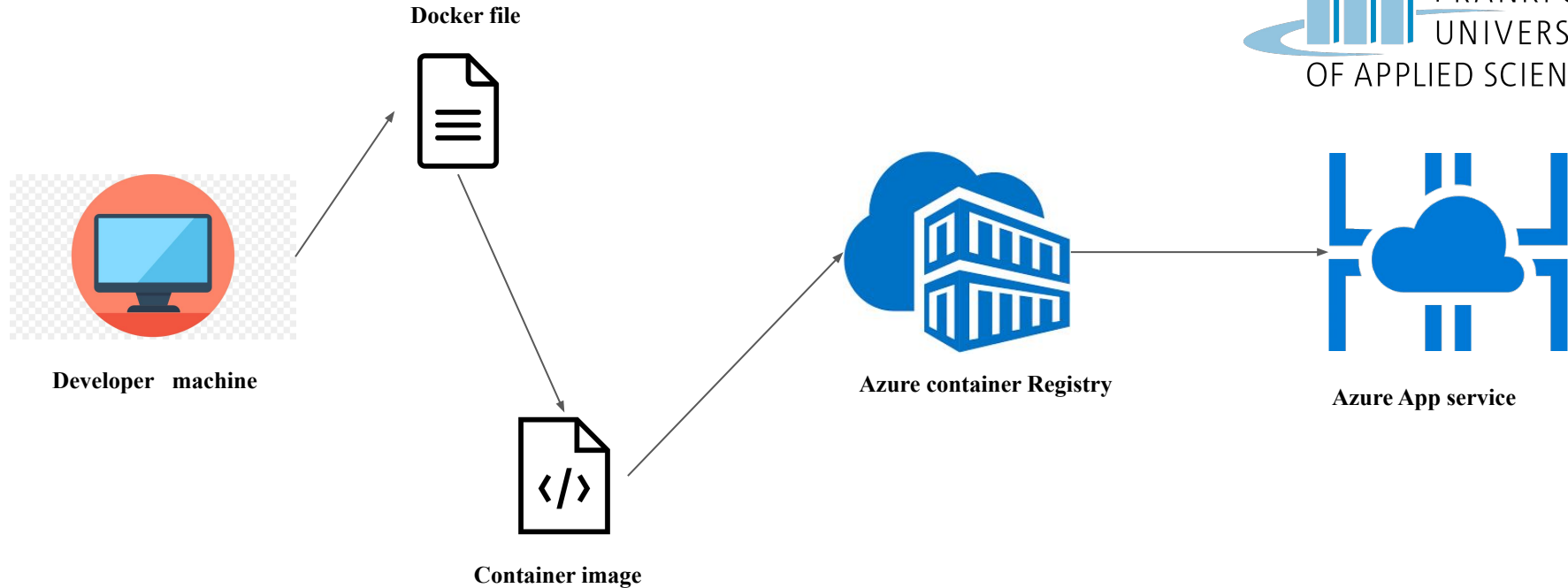
- Collaboration

- Flexibility

Figure 4: Azure Container instance with Docker

CONCLUSION

- Integrated Version and source control

- Various Deployments on various platform

- Creation of modern software applications

- Ease access to our applications and tracking the process

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Thank you