Microsoft Azure DevOps – Course Contents

Module 1: Introduction to Azure DevOps

- Overview of Course

- Technical Challenges

- Software Tools

- Sustainable DevOps

- Compliance and security in DevOps

Labs:

- Microsoft Azure Account Sign Up

- Walkthrough of Microsoft Azure Services

Module 2: What is DevOps?

- What is DevOps?

- Why Culture is Important to DevOps

- Why Automation is Important to DevOps

- Why Metrics are Important to DevOps

Module 3: The Business Value of DevOps

- How DevOps can Improve Lead Time

- How DevOps can Improve Stability

- How DevOps can Reduce Operational Costs

- What Companies Practice DevOps?

Module 4: Azure Automation

Lessons

- Overview of Azure Automation

- Infrastructure as Code and Automation

- Automation Accounts & Security

- PowerShell Workflows

Labs:

- Create an Automation Account

Module 5: Build and Deploy Automatically to Production

Lessons

- Overview of Build and Deploy

- Automated Builds

- Automated Deployments

- Overview of Continuous Integration

- Continuous Integration

- Pipelines and Agents

- Continuous Delivery

- Release Pipelines

- Environments and Tasks

- Advanced Delivery

- Overview of Continuous Deployment

- Continuous Deployment

- Advanced Continuous Deployment

Labs:

- Create a Build

- Automated the Deployments

- Create a first Pipeline

- Working with Visual Designer

- Deploy Continuously - Local Git, Template

- Working with staging Environment

- Scaling Apps

Module 6: Containerization

Lessons

- What is Containerization?

- Containers and Docker

- Linux and Windows Containers

- Where can you host containers?

- DevOps and Containers

Labs:

- Configuration of Docker on Machine

- Create & Deploy Container Apps

- Working with Container Images

Module 7: Testing Overview

Lessons

- Introduction

- Types of Tests

- Value of Automated Testing in DevOps

- Test-Driven Development and its Benefits

- Integration and Unit Testing

- What is Unit Testing?

- Elements of Unit Test

- Techniques for Advanced Unit Testing

Labs:

- Manual & Load Testing

- Test from Kanban board

- Working with Microsoft Test Manager

Module 8: Application Monitoring

Lessons

- Overview of Application Monitoring

- Application Performance Monitoring

- Application Insights

Labs:

- Application Insights

- Application Monitoring with Visual Studio