Azure DevOps Training – Syllabus

Module 1: Introduction to DevOps and Azure

- What is DevOps?

- DevOps Lifecycle and Practices

- Introduction to Microsoft Azure

- Benefits of DevOps on Azure Cloud

- Setting up Azure Free Account

Module 2: Introduction to Azure DevOps Services

- Overview of Azure DevOps Tools

- Azure Boards, Repos, Pipelines, Test Plans, Artifacts

- Creating Azure DevOps Organization and Projects

- Role of Azure DevOps in CI/CD

Module 3: Version Control with Azure Repos and Git

- Git Basics and Branching Strategy

- Working with Azure Repos (Git Repositories)

- Pull Requests, Branch Policies, and Code Reviews

- Integrating GitHub with Azure Pipelines

Module 4: Continuous Integration (CI) with Azure Pipelines

- Introduction to Azure Pipelines

- Building CI Pipelines for Applications

- YAML vs Classic Editor Pipelines

- Automating Builds and Unit Tests

- Pipeline Triggers and Scheduling

Module 5: Continuous Deployment (CD) with Azure Pipelines

- Creating CD Pipelines

- Release Management and Deployment Strategies

- Multi-Stage Pipelines

- Blue-Green Deployment and Canary Releases

- Deploying to Azure App Services and Virtual Machines

Module 6: Infrastructure as Code (IaC) with Azure

- Introduction to Infrastructure as Code

- Working with ARM Templates

- Basics of Terraform on Azure

- Azure Resource Manager (ARM) Deployment

Module 7: Configuration Management

- Introduction to Azure Automation

- Ansible, Chef, Puppet (Basics with Azure)

- Setting up Desired State Configuration (DSC)

Module 8: Monitoring and Logging

- Azure Monitor Overview

- Application Insights for Monitoring Apps

- Log Analytics and Alerts Setup

- Integrating Monitoring into DevOps Pipelines

Module 9: Security and Compliance in DevOps

- Role-Based Access Control (RBAC)

- Managing Secrets with Azure Key Vault

- Secure Pipelines and Secure DevOps Kit for Azure (AzSK)

Module 10: Azure Test Plans and Quality Assurance

- Introduction to Azure Test Plans

- Manual Testing and Exploratory Testing

- Setting up Test Suites and Test Cases

- Load Testing Basics

Module 11: Real-Time Project

- Creating a Complete CI/CD Pipeline for a Real Application

- Infrastructure Automation and Application Deployment

- Monitoring and Scaling in Production

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