Microsoft DevOps Solutions
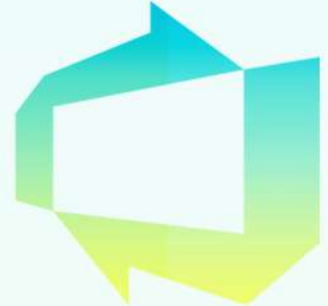
Zetlan Technologies

Online Course

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Course Modules

1: Getting started with Source Control
- What is Source Control?
- Benefits of Source Control
- Types of source control systems
- Introduction to Azure Repos
- Migrating from TFVC to Git
- Authenticating to your Git Repos
- Describe the benefits of using source control
- Migrate from TFVC to Git

2: Scaling git for enterprise DevOps
- How to structure your git-repo
- Git Branching workflows
- Collaborating with Pull Requests
- Why care about Git-Hooks?
- Fostering Internal Open Source
- Git Version
- Public projects
- Files in Git
- Scale Git for Enterprise DevOps

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3: Implement & Manage Build Infrastructure
- The concept of pipelines in DevOps
- Azure Pipelines
- Evaluate use of Hosted vs Private Agents
- Agent pools
- Pipelines & Concurrency
- Azure DevOps and Open Source projects
- Azure Pipelines YAML vs Visual Designer
- Setup private agents
- Integrate Jenkins with Azure Pipelines
- Integration external source control with Azure Pipelines
- Analyze & Integrate Docker multi-stage builds
- Implement and manage build infrastructure
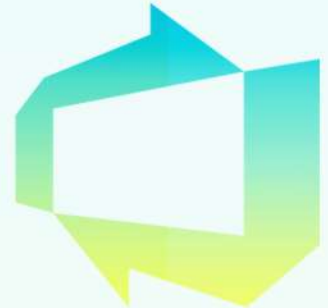
4: Managing application Config & secrets
- Introduction to Security
- Implement secure & compliant development process
- Rethinking application config data
- Manage secrets, tokens & certificates
- Tools for managing security and compliance in a pipeline
- Manage application config & secrets

5: Implement a mobile DevOps strategy
- Introduction to Mobile DevOps
- Introduction to Visual Studio App Center
- Manage mobile target device sets and distribution groups
- Manage target UI test device sets
- Provision tester devices for deployment

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6: Continuous Integration in an Azure DevOps Pipeline
- Continuous Integration Overview
- Implementing a Build Strategy
- Explain why continuous integration matters
- Implement continuous integration using Azure DevOp

7: Managing Code Quality and Security Policies
- Managing Code Quality
- Managing Security Policies
- Managing Technical Debt with Azure DevOps and Sonar Cloud
- Checking using White Source Bolt and Azure DevOps

8: Implementing a Container Build Strategy
- Implementing a Container Build Strategy
- Existing .NET Applications with Azure and Docker Images
- Implement containers using Docker.

9: Design a Release Strategy
- Introduction to Continuous Delivery
- Release strategy recommendations
- Building a High Quality Release pipeline
- Choosing a deployment pattern
- Choosing the right release management tool

10: Set up a Release Management Workflow
- Create a Release Pipeline
- Provision and Configure Environments
- Manage and Modularize Tasks and Templates
- Integrate Secrets with the release pipeline

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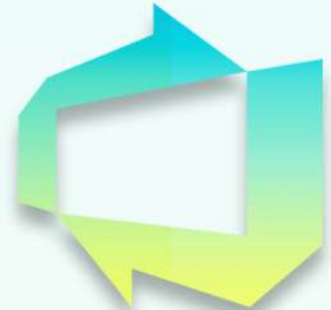
11: Implement an appropriate deployment pattern
- Introduction into Deployment Patterns
- Implement Blue Green Deployment
- Feature Toggles
- Canary Releases
- Dark Launching
- AB Testing
- Progressive Exposure Deployment
- Describe deployment patterns
- Implement Blue Green Deployment
- Implement Canary Release
- Implement Progressive Exposure Deployment

12: Designing a Dependency Management Strategy
- Introduction
- Packaging dependencies
- Package management
- Implement a versioning strategy
- Manage security and compliance

13: Manage security and compliance
- Introduction
- Package security
- Open source software
- Integrating license and vulnerability scans
- Build pipeline to access package security and license rating
- Configure secure access to package feed

14: Implementing Application Infrastructure

- Infrastructure as Code and Configuration Management
- Create Azure Resources using ARM Templates
- Create Azure Resources using Azure CLI
- Create Azure Resources by using Azure PowerShell
- Additional Automation Tools
- Version Control
- Deploy to Azure using ARM templates

15: Azure Deployment Models and Services

- Deployment Models and Options
- Azure Infrastructure-as-a-Service (IaaS) Services
- Azure Automation with DevOps
- Desired State Configuration (DSC)
- Azure Platform-as-a-Service (PaaS) services
- Azure Service Fabric

16: Create and Manage Kubernetes Service Infrastructure

- Azure Kubernetes Service
- Lab Deploy and Scale AKS Cluster
- Deploy and configure a Managed Kubernetes cluster

17: Third Party and Open Source Tools available with Azure

- Deploy and configure Chef
- Deploy and configure Puppet
- Deploy and configure Ansible
- Deploy and configure Cloud-Init
- Deploy and configure Terraform

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18: Implement Compliance and Security in your Infrastructure
- Security and Compliance Principles with DevOps
- Azure Security Center
- Scanning extension or tool in an AZ DevOps pipeline
- Compliance and security in your application infrastructure

19: Recommend and design system feedback mechanism
- The inner loop
- Continuous Experimentation mindset
- Design practices to measure end-user satisfaction
- Design processes to capture and analyze user feedback
- Design process to automate application analytics
- Integration between Azure DevOps and Teams
- Design practices to measure end-user satisfaction
- Capture and analyze user feedback from external sources
- Design routing for client application crash report data
- Recommend monitoring tools and technologies

20: Process for routing system feedback to development teams
- Tools to track system usage, feature usage, and flow
- Implement routing for mobile application crash report data
- Develop monitoring and status dashboards
- Integrate and configure ticketing systems
- Configure crash report integration for client applications
- Develop monitoring and status dashboards
- Implement routing for client application crash report data
- Implement tools to track system usage, feature usage, and flow

21: Optimize feedback mechanisms
- Site Reliability Engineering
- Analyze telemetry to establish a baseline
- Tuning to reduce meaningless or non-actionable alerts
- Analyze alerts to establish a baseline
- Blameless Post-Mortems and a Just Culture
- Analyze alerts to establish a baseline
- Analyze telemetry to establish a baseline
- Perform live site reviews & capture fback for system outages
- Tuning to reduce meaningless or non-actionable alerts

22: Planning for DevOps
- Transformation Planning
- Project Selection
- Team Structures
- Plan for the transformation with shared goals and timelines
- Select a project and identify project metrics and KPIs
- Create a team and agile organizational structure

23: Planning for Quality and Security
- Planning a Quality Strategy
- Planning Secure Development
- Flag Management with LaunchDarkly and AzureDevOps
- Develop a project quality strategy
- Plan for secure development practices and compliance rules

24: Migrating and Consolidating Artifacts and Tools
- Migrating and Consolidating Artifacts
- Migrating and Integrating Source Control
  - Integrating Azure Repos and Azure Pipelines with Eclipse
- Migrate and consolidate artifacts
- Migrate and integrate source control measures

LEARN REMOTELY!!

The efficiency of online learning in terms of time management, flexibility, and the ability to access resources anytime, anywhere can be compelling.

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