Training: Microsoft
AZ-400T00: Design and Implement Microsoft DevOps solutions

Microsoft Partner

TRAINING GOALS:

This course provides the knowledge and skills to design and implement DevOps processes and practices. Students will learn how to plan for DevOps, use source control, scale Git for an enterprise, consolidate artifacts, design a dependency management strategy, manage secrets, implement continuous integration, implement a container build strategy, design a release strategy, set up a release management workflow, implement a deployment pattern, and optimize feedback mechanisms.

Audience Profile:
Students in this course are interested in designing and implementing DevOps processes or in passing the Microsoft Azure DevOps Solutions certification exam.

Skills earned upon completion:

- Implement continuous integration (CI) with Pipelines and GitHub Actions
- Design a release strategy with Azure DevOps and GitHub
- Manage infrastructure as code (IaC) with Azure and DSC

CONSPECT:

- Development for Enterprise DevOps
  - Module 1: Introduction to DevOps
  - Module 2: Plan Agile with GitHub Projects and Azure Boards
  - Module 3: Design and implement branch strategies and workflows
  - Module 4: Collaborate with pull requests in Azure Repos
  - Module 5: Explore Git hooks
  - Module 6: Plan to foster inner source
  - Module 7: Manage and configure repositories
  - Module 8: Identify technical debt

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- Implement CI with Azure Pipelines and GitHub Actions
  - Module 1: Explore Azure Pipelines
  - Module 2: Manage Azure Pipeline agents and pools
  - Module 3: Design and implement a pipeline strategy
  - Module 4: Integrate with Azure Pipelines
  - Module 5: Introduction to GitHub Actions
  - Module 6: Learn continuous integration with GitHub Actions
  - Module 7: Design a container build strategy
- Design and implement a release strategy
  - Module 1: Create a Release Pipeline
  - Module 2: Explore release strategy recommendations
  - Module 3: Configure and Provision Environments
  - Module 4: Manage and Modularize Tasks and Templates
  - Module 5: Automate inspection of health
- Implement a secure continuous deployment using Azure Pipelines
  - Module 1: Introduction to deployment patterns
  - Module 2: Implement blue-green deployment and feature toggles
  - Module 3: Implement canary releases and dark launching
  - Module 4: Implement A/B testing and progressive exposure deployment
  - Module 5: Integrate with identity management systems
  - Module 6: Manage application configuration data
- Manage infrastructure as code using Azure and DSC
  - Module 1: Explore Infrastructure as Code and configuration management
  - Module 2: Create Azure Resources by using Azure Resource Manager templates
  - Module 3: Create Azure resources by using Bicep
  - Module 4: Create Azure resources by using Azure PowerShell
  - Module 5: Create Azure resources by using Azure CLI
  - Module 6: Explore configuration management in Azure
- Implement security and validate code bases for compliance
  - Module 1: Introduction to Secure DevOps
  - Module 2: Implement open-source software security
  - Module 3: Manage code base security and compliance
  - Module 4: Monitor and govern security in DevOps
- Design and implement a dependency management strategy
  - Module 1: Explore package dependencies
  - Module 2: Explore package feeds

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- Module 3: Explore package consumption and licenses
- Module 4: Implement a package versioning strategy
- Module 5: Implement GitHub Packages and Azure Artifacts

- Implement continuous feedback
  - Module 1: Recommend system feedback mechanisms
  - Module 2: Implement a process for routing feedback
  - Module 3: Implement a process for collecting and analyzing feedback
  - Module 4: Implement real-time collaboration with Microsoft Teams
  - Module 5: Implement a process for continuous improvement

REQUIREMENTS:

None specified (advanced DevOps concepts recommended).

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by Microsoft (course completion). This course will help prepare you for the **Microsoft Certified: DevOps Engineer Expert** certification exam (Exam AZ-400), which is available through the Pearson VUE test centers.

TRAINER:

Microsoft Certified Trainer (MCT)

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