Implementing Continuous Delivery (AZ-400T03)

Modality: Virtual Classroom

Duration: 1 Day

SATV Value: 1

About this course:

This is a One-day course with advanced difficulty level. This course talks about the implementation of Continuous Delivery. The course provides with the relevant knowledge and skills needed to make the mentioned implementation in the system. In this course, learners will be taught how to create a release strategy, set up a release management workflow, and incorporate a suitable deployment pattern.

Learning Objectives:

The course has the following learning objectives:

- Distinguishing between a release and deployment
- Describing the features of a release pipeline
- Describing the aspects to keep in view when creating the release strategy
- Categorizing a release versus a release process, and present a framework for controlling the quality of both functions
- Explaining the idea of release gates and the method for dealing with release notes and documentation
- Describing the installation/deployment pattern, both in traditional sense and modern sense
- Selecting a release management tool
- Describing concisely the terminologies being used in Azure DevOps and various other Release Management Tooling
- Explaining the function of Build and Release task, its working, and some other deployment tasks
- Categorizing an Agent, Agent Queue and Agent Pool
- Explaining the reason behind the requirement of multiple release jobs in one release pipeline in some cases
- Distinguishing between multi-agent and multi-configuration release job
- Making use of release variables and stage variables in the release pipeline
- Setting up an environment protectively through the usage of a service connection
- Integrate testing in the pipeline
- Enumerating the different methods used to make survey of the health of the pipeline and release by the usage of alerts, service hooks and reports
- Manufacturing a release gate
- Explaining the deployment patterns
- Incorporating Blue Green Deployment
- Incorporating Canary Release
- Incorporating Progressive Exposure Deployment

Audience:

This course has been designed for the students that have a keen interest in incorporating continuous delivery or gaining the Microsoft Azure DevOps Solutions certification.

Requirements:

The course requires you to have at least the foundational knowledge on Azure, version control, Agile software development, and core software development rules. Other than this, it would be really helpful in learning of this course if the learner has experience working with an organization that delivers software.

Course Outline:

Module 1: Design a Release Strategy

Lessons

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

Lab : Building a release strategy

After completing this module, students will be able to:

- Differentiate between a release and a deployment
- Define the components of a release pipeline
- Explain things to consider when designing your release strategy
- Classify a release versus a release process, and outline how to control the quality of both
- Describe the principle of release gates and how to deal with release notes and documentation
- Explain deployment patterns, both in the traditional sense and in the modern sense
- Choose a release management tool

Module 2: Set up a Release Management Workflow

Lessons

- Create a Release Pipeline
- Provision and Configure Environments
- Manage And Modularize Tasks and Templates
- Integrate Secrets with the release pipeline
- Configure Automated Integration and Functional Test Automation
- Automate Inspection of Health

Lab : Automating your infrastructure deployments in the Cloud with Terraform and Azure Pipelines

Lab : Setting up secrets in the pipeline with Azure Key vault

Lab : Setting up and Running Load Tests

Lab : Setting up and Running Functional Tests

Lab : Using Azure Monitor as release gate

Lab : Creating a Release Dashboard

After completing this module, students will be able to:

- Explain the terminology used in Azure DevOps and other Release Management Tooling
- Describe what a Build and Release task is, what it can do, and some available deployment tasks
- Classify an Agent, Agent Queue and Agent Pool
- Explain why you sometimes need multiple release jobs in one release pipeline
- Differentiate between multi-agent and multi-configuration release job
- Use release variables and stage variables in your release pipeline
- Deploy to an environment securely, using a service connection
- Embed testing in the pipeline
- List the different ways to inspect the health of your pipeline and release by using, alerts, service hooks and reports
- Create a release gate

Module 3: Implement an appropriate deployment pattern

Lessons

- Introduction into Deployment Patterns
- Implement Blue Green Deployment
- Feature Toggles
- Canary Releases
- Dark Launching
- AB Testing
- Progressive Exposure Deployment

Lab : Blue-Green Deployments

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?Lab : Traffic Manager

After completing this module, students will be able to:

- Describe deployment patterns
- Implement Blue Green Deployment
- Implement Canary Release
- Implement Progressive Exposure Deployment