

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

Lab : Blue-Green Deployments

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