

GitHub Actions with Azure

Number of Days: 4

Duration of Course: 32 hours

Course Objective: This course focuses upon the usage of GitHub Actions with Azure. After completion of the course, student will be able to work on basic Git commands and create workflows and jobs using GitHub actions with Azure.

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Day 1:

Module 1: Get Started with Git and GitHub

- Introduction to Version Control System
- Introduction to GIT
- Difference between GIT and GITHUB
- Beginning with GIT Bash
- GIT Config Commands
- SourceTree settings and preference
- Examining the basic flow

Module 2: Working with Branches and Conflicts

- Committing files and messages: GIT status, GIT Add and Tracking of
- commits
- Branching and merging: GIT Branch, merge commands and rebase
- Resolving conflicts while merging

Module 3: Restoring the commit

- Reversing the commit
- Adding to the stash
- Restoring from the stash

Day 2:

Module 4: Get Started with GitHub Actions

- Understanding YAML
- Components of GitHub Actions
- Workflows
- Events
- Jobs
- Runners
- GitHub Actions Marketplace

Module 5 Creating Workflow and Jobs

- Workflow Syntax
- Trigger a workflow
- Reusing Workflow
- Using jobs in a workflow
- Use conditions to control job execution
- Examples and Activities

Day 3:

Module 6: Introduction to GitHub Actions for Azure

- Why to use GitHub Actions for Azure
- What is the difference between GitHub Actions and Azure Pipelines
- Connecting GitHub Actions and Azure
- What is included in a GitHub Actions workflow

Module 7: Authentication from Azure to GitHub

- Use the Azure login action with OpenID Connect
- Use the Azure login action with a service principal secret
- Connect with other Azure services
- Github Actions with Azure TOC

Day 4:

Module 8: Deploy apps and database to Azure

- Azure App Service
- Azure Function
- Azure App Configuration
- Trigger Pipeline run from GitHub Actions
- Use GitHub Actions with Azure Machine Learning (Optional)
- Use GitHub Actions to connect to Azure SQL Database

Module 9: More in GitHub actions and Azure

- Use variable substitution with GitHub Actions
- Use Key Vault secrets in GitHub Actions workflows
- Manage Azure Policies with GitHub
- Build custom virtual machine images with GitHub Actions and Azure