

KOENIG SOLUTIONS · COURSE OUTLINE

GitHub Actions with Azure (Fundamentals)

Learn to manage Git and GitHub, then build and deploy GitHub Actions workflows integrated with Azure services.

4 Days

32 HOURS

9

MODULES

41

TOPICS

COURSE OVERVIEW

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.

WHO THIS COURSE IS FOR

DevOps Engineers

Software Developers

Cloud Administrators

Release Engineers

Azure Administrators

LEARNING OBJECTIVES

- Explain core version control concepts and Git commands
- Manage branches, merges and conflict resolution in Git
- Restore commits using reverting and stashing techniques
- Describe GitHub Actions components such as workflows, events and jobs
- Create workflows and jobs using GitHub Actions syntax
- Compare GitHub Actions with Azure Pipelines
- Configure authentication between Azure and GitHub Actions
- Deploy apps, databases and other resources to Azure

9 Modules, 41 Topics

DAY 1

01

Get Started with Git and GitHub

TOPICS

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

02

Working with Branches and Conflicts

TOPICS

- **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

03

Restoring the Commit

TOPICS

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

DAY 2

04

Get Started with GitHub Actions

TOPICS

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

05

Creating Workflow and Jobs

TOPICS

Workflow Syntax · Trigger a workflow · Reusing Workflow · Using jobs in a workflow · Use conditions to control job execution

06

Introduction to GitHub Actions for Azure

TOPICS

- 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

07

Authentication from Azure to GitHub

TOPICS

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

08

Deploy Apps and Database to Azure

TOPICS

- 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

09

More in GitHub Actions and Azure

TOPICS

- 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

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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