

GitHub Actions for Azure

Course outline

Module 1: Introduction to GitHub Actions

Module 1: Introduction to GitHub Actions for Azure is an introductory course designed to help you understand the basics of GitHub Actions and how to use them to automate your Azure deployments. You will learn how to create workflows, set up triggers, and use the GitHub Actions API to create custom actions. You will also learn how to debug and troubleshoot your workflows. By the end of this module, you will have a solid understanding of how to use GitHub Actions to automate your Azure deployments.

Lessons

- Overview of GitHub Actions
- Setting up a GitHub Actions Workflow
- Working with GitHub Actions Environment Variables
- Creating Custom Actions with JavaScript
- Debugging GitHub Actions Workflows
- Integrating GitHub Actions with Azure
- Automating Deployment with GitHub Actions and Azure
- Best Practices for Using GitHub Actions with Azure

After completing this module, students will be able to:

- Understand the basics of GitHub Actions and how to use them to automate tasks in Azure.
- Create and configure workflows to automate tasks in Azure.
- Utilize GitHub Actions to deploy applications to Azure.
- Monitor and troubleshoot GitHub Actions workflows in Azure.

Module 2: Setting up a GitHub Actions Workflow

Module 2 of the GitHub Actions for Azure course provides an introduction to setting up a GitHub Actions workflow. It covers topics such as creating a workflow file, configuring triggers, and setting up environment variables. Additionally, it provides an overview of the different types of actions available and how to use them. Finally, it provides an example of a complete workflow that can be used to deploy an application to Azure.

Lessons

- Introduction to GitHub Actions
- Configuring a GitHub Actions Workflow

- Creating a Workflow File
- Setting up Triggers and Events
- Working with Environment Variables
- Debugging and Troubleshooting Workflows
- Integrating with Azure Services
- Automating Deployment to Azure
- Best Practices for GitHub Actions Workflows

After completing this module, students will be able to:

- Understand the basics of GitHub Actions and how to set up a workflow for Azure.
- Create and configure a workflow to automate tasks in Azure.
- Utilize GitHub Actions to deploy code to Azure.
- Monitor and troubleshoot GitHub Actions workflows in Azure.

Module 3: Working with Azure Resources in GitHub Actions

Module 3 of the GitHub Actions for Azure course covers how to use GitHub Actions to work with Azure resources. It covers topics such as creating and managing Azure resources, using Azure CLI and PowerShell to manage resources, and using Azure Resource Manager templates to deploy resources. It also covers how to use GitHub Actions to automate Azure resource management tasks.

Lessons

- Creating a GitHub Actions Workflow for Azure Resource Deployment
- Configuring Azure Service Connections for GitHub Actions
- Using Azure CLI in GitHub Actions Workflows
- Working with Azure Resource Manager Templates in GitHub Actions
- Automating Azure Resource Deployment with GitHub Actions
- Debugging GitHub Actions Workflows for Azure Resources
- Integrating GitHub Actions with Azure DevOps
- Securing Azure Resources with GitHub Actions
- Best Practices for Working with Azure Resources in GitHub Actions
- Troubleshooting Azure Resource Deployment with GitHub Actions

After completing this module, students will be able to:

- Create and configure Azure resources using GitHub Actions
- Automate deployment of Azure resources using GitHub Actions
- Monitor and manage Azure resources using GitHub Actions
- Integrate Azure resources with other services using GitHub Actions

Module 4: Automating Azure Deployments with GitHub Actions

Module 4 of the GitHub Actions for Azure course covers how to use GitHub Actions to automate Azure deployments. It covers topics such as setting up a workflow, creating a service principal, and deploying

resources to Azure. It also covers how to use GitHub Actions to deploy Azure Functions, App Services, and other Azure resources.

Lessons

- Introduction to GitHub Actions for Azure
- Setting up a GitHub Actions Workflow for Azure
- Configuring Azure Resources with GitHub Actions
- Automating Azure Deployments with GitHub Actions
- Debugging and Troubleshooting GitHub Actions for Azure
- Best Practices for Automating Azure Deployments with GitHub Actions
- Integrating GitHub Actions with Azure DevOps
- Securing Azure Resources with GitHub Actions
- Advanced Topics in Automating Azure Deployments with GitHub Actions
- Using GitHub Actions for Continuous Integration and Continuous Delivery (CI/CD) with Azure

After completing this module, students will be able to:

- Understand how to use GitHub Actions to automate Azure deployments.
- Create and configure a GitHub Actions workflow to deploy an Azure resource.
- Utilize GitHub Actions to deploy an Azure Web App.
- Implement GitHub Actions to deploy an Azure Function App.

Module 5: Debugging and Troubleshooting GitHub Actions

Module 5 of the GitHub Actions for Azure course covers debugging and troubleshooting techniques for GitHub Actions. It provides an overview of the debugging and troubleshooting tools available, as well as best practices for debugging and troubleshooting GitHub Actions. It also covers how to debug and troubleshoot common issues with GitHub Actions, such as workflow errors, environment variables, and secrets.

Lessons

- Understanding GitHub Actions Workflows
- Debugging GitHub Actions Workflows
- Troubleshooting GitHub Actions Workflows
- Using GitHub Actions for Azure
- Creating Custom GitHub Actions for Azure
- Debugging and Troubleshooting Azure Resources with GitHub Actions
- Automating Azure Resource Deployment with GitHub Actions
- Integrating GitHub Actions with Azure DevOps
- Best Practices for Debugging and Troubleshooting GitHub Actions for Azure
- Troubleshooting Common Issues with GitHub Actions for Azure

After completing this module, students will be able to:

- Identify and troubleshoot common errors in GitHub Actions for Azure.

- Utilize debugging tools to identify and resolve issues with GitHub Actions for Azure.
- Create and modify GitHub Actions for Azure to meet specific requirements.
- Implement best practices for debugging and troubleshooting GitHub Actions for Azure.

Module 6: Best Practices for Using GitHub Actions with Azure

Module 6 of the GitHub Actions for Azure course covers best practices for using GitHub Actions with Azure. It provides an overview of the different types of actions available, how to set up and configure them, and how to troubleshoot any issues that may arise. It also covers best practices for using GitHub Actions with Azure, such as setting up a workflow, using secrets, and using the Azure CLI.

Lessons

- Understanding the Basics of GitHub Actions for Azure
- Setting Up a GitHub Actions Workflow for Azure
- Creating Custom GitHub Actions for Azure
- Debugging and Troubleshooting GitHub Actions for Azure
- Integrating GitHub Actions with Azure DevOps
- Automating Deployment of Azure Resources with GitHub Actions
- Best Practices for Securing GitHub Actions for Azure
- Optimizing Performance of GitHub Actions for Azure
- Leveraging GitHub Actions for Continuous Integration and Delivery with Azure
- Integrating GitHub Actions with Azure Functions

After completing this module, students will be able to:

- Understand the fundamentals of GitHub Actions and how to use them with Azure.
- Create and configure workflows to automate tasks in Azure.
- Utilize GitHub Actions to deploy applications to Azure.
- Monitor and troubleshoot GitHub Actions workflows in Azure.