Infrastructure as Code

Modality: On Demand

Duration: 16 Hours

About this course:

In this course, you will gain the knowledge and skills to be able to deliver stable environments rapidly, reliably and at scale, avoiding manual configuration of environments and enforcing consistency, by representing your environments as code. This course provides an overview of DevOps practices. It doesn't go into heavy depth or theory, but provides examples for you to follow along with and expand upon as part of your further development in the DevOps world.

The average salary for a Devops Engineer is **$138,378** per year.

Course Objective:

After completing this course, students will be able to:

- Configure and implement Azure Automation accounts and security
- Create and run an Automation Windows PowerShell workflow-based textual Runbooks to provision and de-provision an environment
- Understand Desired State Configuration (DSC) and how to create a DSC configuration file, import it into the automation account and compile it
- Onboard Azure VMs for Automation DSC
- Generate an Azure Resource Manager (ARM) template based on an existing resource group and apply an ARM template that removes all resources in a resource group
- Create an ARM template by using Visual Studio.
- Implement Chef and Puppet deployments in Azure
- Use Chef to configure Azure DevTest Lab VMs
- Configure Continuous Integration and Continuous Deployment of Azure SQL Database using Visual Studio Team Services (VSTS) and Visual Studio

Audience:

This course is intended for

- People who work in IT either as a linux admin or developer.

Prerequisites:

- Experience working in an organization delivering software,either in development or in operations.
- Knowledge and experience working with Cloud based solutions, experience using Microsoft Azure.

Course Outline:

Azure Automation

- Module 1 Learning Objectives
- Infrastructure as Code and Automation
- Automation Accounts
- Automation Security
- Runbook Assets
- Runbook Basics
- PowerShell Workflows
- Labs
- Module Review Questions
- Module 1 Summary

Desired State Configuration (DSC)

- Module 2 Learning Objectives
- DSC in DevOps
- Automation DSC
- Implementing Automation DSC
- Labs
- Module Review Questions
- Module 2 Summary

Azure Resource Manager Templates

- Module 3 Learning Objectives
- Azure Resource Manager Templates
- Implementing Azure Resource Manager Templates
- Azure Resource Manager Templates and Visual Studio
- Logging, Troubleshooting, and Diagnostics
- Provisioning and Configuring Environments with Azure DevTest Labs
- Labs
- Module Review Questions
- Module 3 Summary

Deploying and Managing Environments in Azure

- Module 4 Learning Objectives
- IaaS, PaaS, and Containers in Azure
- Configuration Management
- Chef, Puppet, and Ansible in Azure
- SaltStack in Azure
- Cost Tracking and Optimization
- Labs
- Module Review Questions
- Module 4 Summary

Final Exam

- Graded Final Exam?