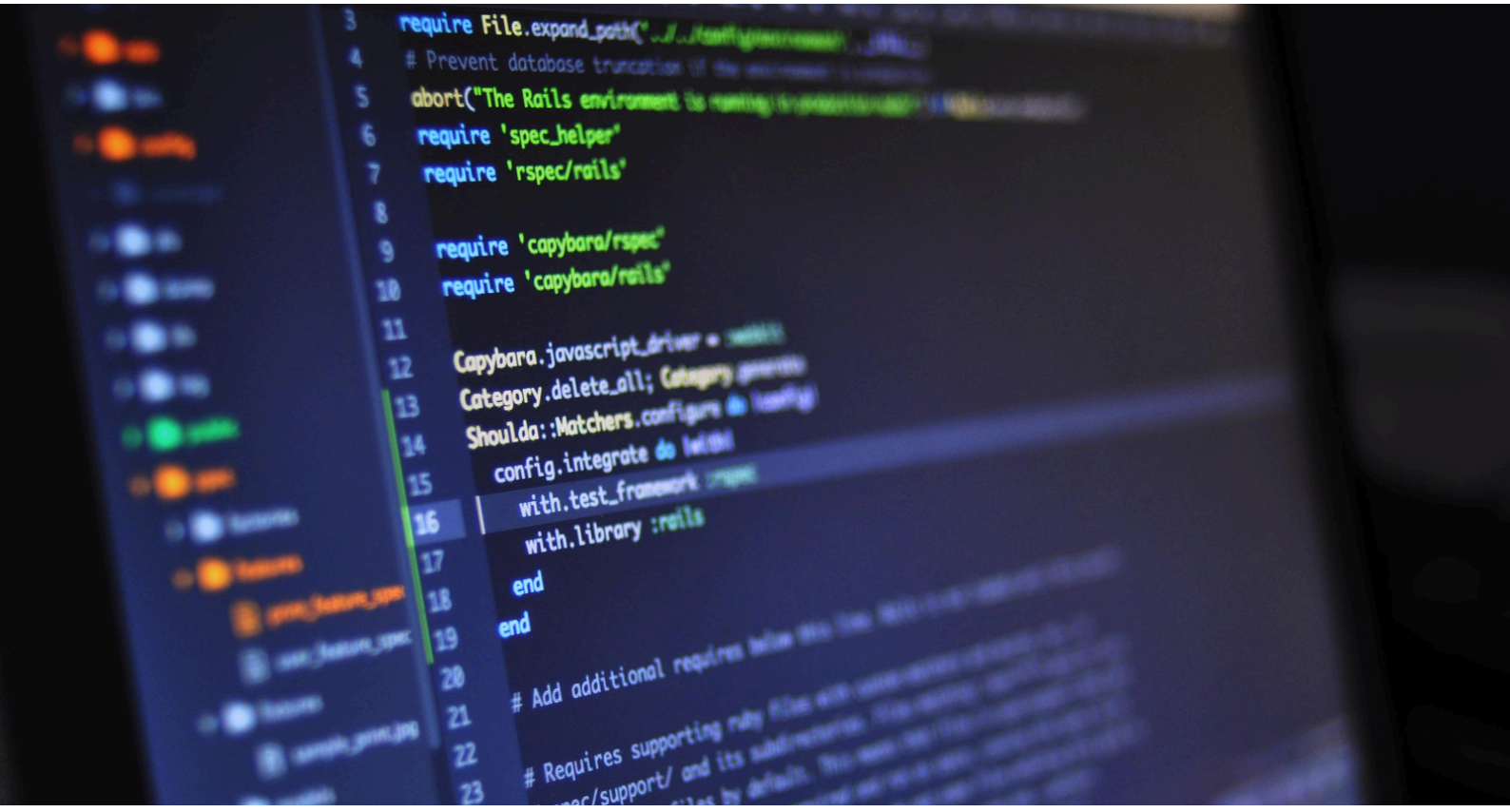
Sabik academy
THE LEARNER'S HUB

Azure DevOps Training

GUIDANCE
Internship & Certification Program

Table of Contents



About the Program

Are you curious to learn both Azure and DevOps? If yes, here's an amazing training course for you. With Sabik's Azure with DevOps training course, you can master the concepts of both DevOps and Azure and develop formidable skills in cloud architecture, Azure Resource Manager, virtual network connectivity, Windows PowerShell, Azure administration, Git, Jenkins, Ansible, and Docker, among other concepts. In this course, you will receive material issued by Microsoft for 'Integrating On-premises Identity Infrastructure with Microsoft Azure' and 'Implementing Security in All Modules of Azure Infrastructure.'

Microsoft

Benefits for students from Microsoft:

- Industry-recognized Microsoft certification
- Real-time projects and exercises

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#1

Career Guidance
Employability & life skills
Communication Skills

Teach you How to Succed in life

#2

MON - FRI, DAILY
1 HOUR LIVE CLASS

Via **Online** or **Offline** at our location.

#3

NO PRE-REQUISITES REQUIRED

All degrees are welcome.

#4

MOST BEGINNER-FRIENDLY TRAINING PROGRAM

From **ABC** to **XYZ**, No worries at all.

#5

3 MONTHS CLASSROOM LEARNING

#100DaysAzureChallenge

Key Features

70 HRS INSTRUCTOR-LED TRAINING

108 HRS SELF-PACED TRAINING

140 HRS REAL-TIME PROJECT WORK

LIFETIME ACCESS

24/7 TECHNICAL SUPPORT

INDUSTRY-RECOGNIZED CERTIFICATION

JOB ASSISTANCE THROUGH 80+ CORPORATE TIE-UPS

FLEXIBLE SCHEDULING

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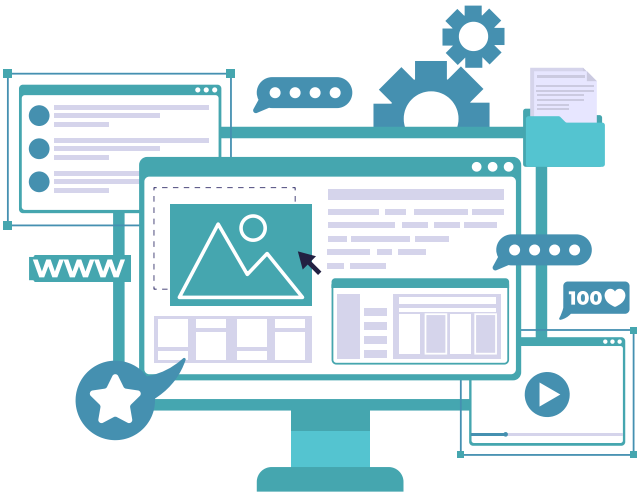
Career Support

SESSIONS WITH INDUSTRY MENTORS
Attend sessions from top industry experts and get guidance on how to boost your career growth

MOCK INTERVIEWS
Mock interviews to make you prepare for cracking interviews by top employers

INTERVIEWS & JOB SUPPORT
Get interviewed by our hiring partners

RESUME PREPARATION
Get assistance in creating a world-class resume from our career services team



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Why take up this course?

- The demand for DevOps is at an all-time high, and more than 80% of all companies would adopt DevOps shortly – Gartner
- The average salary of a professional with DevOps and Azure skills is US$130,000 per year – Business Insider
- People who have skills in both Azure with DevOps have great demand in the marketplace – Indeed

Our online training will help you learn Azure and DevOps and hence upgrade your career.

Who should take up this course?

- Software Developers
- Cloud Professionals and Solutions Architects
- Project Managers and Technical Leads
- Learners who want to build a career in DevOps and Azure

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Program Curriculum

Azure DevOps Training Course Content

MANAGING AZURE SUBSCRIPTION & RESOURCES

1.1 Managing Azure subscriptions
1.2 Assigning administrator permissions
1.3 Configuring Azure subscriptions
1.4 Utilizing and consuming Azure resources
1.5 Analyzing alerts and metrics
1.6 Configuring diagnostic settings
1.7 Monitoring unused resources
1.8 Utilizing log search query functions
1.9 Viewing alerts in Log Analytics
1.10 Managing resource groups
1.11 Configuring resource locks and policies
1.12 Moving resources across resource groups
1.13 Managed role-based access control (RBAC)

IMPLEMENTING & MANAGING STORAGE

2.1 Creating and configuring storage accounts
2.2 Installing Azure Storage Explorer
2.3 Monitoring activity using Log Analytics
2.4 Deploying Azure storage replication
2.5 Exporting from and importing into an Azure job
2.6 Azure Data Box
2.7 Configuring blob storage
2.8 Azure Content Delivery Network (CDN)
2.9 Creating Azure file share and file sync
2.10 Implementing Azure backup

2.11 Creating Recovery Services Vault

2.12 Configuring the backup policy

DEPLOYING & MANAGING VIRTUAL MACHINES

3.1 Configuring VMs for Windows and Linux

3.2 Configuring monitoring

3.3 Networking, storage, deploying, and configuring scale sets

3.4 Modifying Azure Resource Manager (ARM)

3.5 Configuring a VHD template

3.6 Deploying Windows and Linux VMs

3.7 Managing Azure VMs

3.8 Automate configuration management with PowerShell Desired State Configuration (DSC)

3.9 Managing VM sizes

3.10 Moving VMs from one resource to another

3.11 Managing VM backups

3.12 Configuring VM backups

3.13 Performing VM restore

3.14 Azure Site Recovery

CONFIGURING & MANAGING VIRTUAL NETWORKS

4.1 Creating connectivity between virtual networks

4.2 Creating and configuring VNet peering

4.3 Virtual network connectivity

4.4 Creating virtual network gateway

4.5 Implementing and managing virtual networking

4.6 Configuring private and public IP addresses

4.7 Network routes and network interfaces

4.8 Configuring name resolution

4.9 Configuring Azure DNS

4.10 Configuring private and public DNS zones

4.11 Configuring Network Security Groups (NSGs)

4.12 Creating security rules and associating an NSG to a subnet or network

interface

4.13 Implementing Azure Load Balancer

4.14 Monitoring and troubleshooting virtual networking

4.15 Integrating an on-premises network with Azure virtual network

MANAGING IDENTITIES

5.1 Managing Azure Active Directory (AD)

5.2 Managing Azure AD objects

5.3 Creating users and groups

5.4 Implementing and managing hybrid identities

5.5 Installing and configuring Azure AD Connect and managing Azure AD Connect

5.6 Performing bulk user updates and managing guest accounts

5.7 Including password hash and pass-through synchronization

5.8 Active Directory Domain Services (AD DS)

5.9 Implementing multi-factor authentication (MFA)

INFRASTRUCTURE SETUP

6.1 Installation of DevOps tools on the cloud:

- o Git
- o Docker
- o Selenium
- o Maven
- o Jenkins
- o Puppet
- o Ansible
- o Kube

INTRODUCTION TO DEVOPS

7.1 What is software development?

7.2 Software development life cycle

7.3 Traditional models for SDLC
7.4 Why DevOps? 7.5 What is DevOps? 7.6 DevOps life cycle
7.7 DevOps tools

SOFTWARE VERSION CONTROL

8.1 What is version control?
8.2 Types of version control systems
8.3 Introduction to SVN
8.4 Introduction to Git
8.5 Git life cycle
8.6 Common Git commands
8.7 Working with branches in Git
8.8 Merging branches
8.9 Resolving merge conflicts
8.10 Git workflow

CONTAINERIZATION WITH DOCKER

9.1 Introduction to Docker
9.2 Understanding Docker life cycle
9.3 Components of the Docker ecosystem
9.4 Common Docker operations
9.5 Creating a Docker Hub account
9.6 Committing changes in a container
9.7 Pushing a container image to Docker Hub
9.8 Creating custom Docker images using a Dockerfile
9.9 What are Docker volumes?
9.10 Deploying a multi-tier application using the Docker network
9.11 Using Docker Compose to deploy containers
9.12 What is container orchestration?
9.13 Container orchestration tools

9.14 Introduction to Docker Swarm

9.15 Deploying a 2-Node cluster using Docker Swarm

CONFIGURATION MANAGEMENT WITH PUPPET

10.1 Need of configuration management

10.2 Configuration management tools

10.3 What is Puppet?

10.4 Puppet architecture

10.5 Setting up Master Slave using Puppet

10.6 Puppet Manifests

10.7 Puppet Modules

10.8 Applying configuration using Puppet

10.9 Puppet File Server

Hands-on Exercise: Setting up Master Slave, testing the connection of nodes with Puppet, creating a Manifest, deploying the Manifest on a node, creating a Module, deploying sample software on nodes using Puppet Modules and Manifests, and implementing a File Server Module on Puppet

CONFIGURATION MANAGEMENT WITH ANSIBLE

11.1 What is Ansible?

11.2 Ansible vs Puppet

11.3 Ansible architecture

11.4 Setting up Master Slave using Ansible

11.5 Ansible Playbook

11.6 Ansible Roles

11.7 Applying configuration using Ansible

Hands-on Exercise: Installing Ansible, creating a Playbook using YAML, creating an Ansible Role, and using the Roles in the Playbook

CONTINUOUS TESTING

12.1 What is continuous testing?

12.2 What is Maven?

12.3 Running test cases on Chromium WebDriver

12.4 What is the headless mode?

Hands-on Exercise: Using Maven to import dependencies in Eclipse, implementing a headless test using Chrome WebDriver

CONTINUOUS INTEGRATION USING JENKINS

13.1 Introduction to continuous integration

13.2 Jenkins Master Slave architecture

13.3 Understanding CI/CD pipelines

13.4 Creating an end-to-end automated CI/CD pipeline

CONTINUOUS ORCHESTRATION USING KUBERNETES

14.1 Introduction to Kubernetes

14.2 Docker Swarm vs Kubernetes

14.3 Kubernetes architecture

14.4 Deploying Kubernetes using kubeadms

14.5 Alternate ways of deploying Kubernetes

14.6 YAML files

14.7 Creating a deployment in Kubernetes using YAML

14.8 Services in Kubernetes

14.9 Ingress in Kubernetes

Case Study: Kubernetes architecture

CONTINUOUS MONITORING USING NAGIOS

15.1 What is continuous monitoring?

15.2 Introduction to Nagios

15.3 Nagios architecture

15.4 Monitoring services in Nagios

15.5 What are NRPE plugins?

15.6 Monitoring system info using NRPE plugins

AZURE WITH DEVOPS

16.1 Overview of Azure on DevOps

16.2 Introduction to Azure Boards

16.3 Understanding Azure Repos

16.4 Using Azure Pipelines

16.5 Implementing a code workflow in your build pipeline by using Git and GitHub

16.6 Running quality tests in your build pipeline by using Azure Pipelines

16.7 Managing build dependencies with Azure Artifacts

16.8 Hosting your own build agent in Azure Pipelines

16.9 Automating Docker and multi-container Kubernetes deployments with Azure Pipelines

16.10 Extending pipelines to add support for different deployment targets, such as Azure Functions

DEPLOYING INFRASTRUCTURE WITH TERRAFORM

17.1 Installing Terraform – For Windows users

17.2 Installing Terraform – For Linux users

17.3 Choosing the right IDE for Terraform IAC development

17.4 Creating the first EC2 instance with Terraform

17.5 Terraform Code – First EC2 Instance

17.6 Understanding resources and providers

17.7 Destroying an infrastructure with Terraform

17.8 Destroying a specific resource

17.9 Understanding Terraform state files

17.10 Understanding desired and current states

17.11 Challenges with the current state on computed values

17.12 Terraform commands – State files

17.13 Terraform provider versioning

17.14 Types of Terraform providers

17.15 Understanding attributes and output values in Terraform

17.16 Attribute resource (Document)

17.17 Referencing cross-account resource attributes

17.18 Terraform variables

17.19 Data types for variables

17.20 Fetching data from maps and lists in a variable

17.21 Terraform format

17.22 Validating Terraform configuration files

Hands-on Exercise: Implementing remote-exec provisioners, implementing local-exec provisioners, and integrating Ansible with Terraform

TERRAFORM MODULES & WORKSPACES

18.1 What is Infrastructure-as-Code?

18.2 IaC vs configuration management

18.3 Introduction to Terraform

18.4 Installing Terraform on AWS

18.5 Basic operations in Terraform

- init
- plan
- apply
- destroy

18.6 Terraform code basics

18.7 Deploying an end-to-end architecture on AWS using Terraform

Hands- on Exercise: Installing Terraform, initializing AWS Terraform Provider, creating an EC2 instance using Terraform, updating changes to EC2 using Terraform, destroying EC2 using Terraform, and deploying EC2 inside a custom VPC using Terraform

REGISTRATIONS ARE OPEN FOR NEW BATCHES

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