

Azure DevOps Course Content

Total Sessions 20

DevOps Introduction

Duration 1 Hr

What is DevOps

Different Phases of DevOps Pipeline and Tools

DevOps Principles

1 Session

DevOps Lifecycle

Various DevOps Automation Process

Different DevOps tools and their usage

Git

Duration 2.5 Hrs

What is SCM and Version Control System

What is Centralized and Distributed Version Control System

Git Installation in Windows and Linux

Demo

Git Commands (Init , add , commit , log , status , show)

Demo

Git Push

Demo

Creation of Remote Repository (Github account)

Demo

Creation of GitHub repo

Demo

2 Sessions

Generate Token in Github account

Demo

Git Pull , Fetch

Demo

Git Merge

Demo

Git Conflict

Demo

Git Rebase

Demo

Git CherryPick

Demo

Github Pull Request

Demo

Linux

Duration 1.5 Hr

Create VM from any cloud (AWS /AZURE)

Demo

Installation of Putty and Putty.gen -- Convert PEM to PPK

Demo

Brief about Public and Private IP address

Linux Basic Commads - pwd , cd , ls , ll , ls -ltrh

Demo

Directory Creation	Demo	
File Creation - touch , cat , vi	Demo	
Download a file and shortcut commands in file	Demo	1 Session
User creation	Demo	
Brief Mode of File Permission and Change Permission	Demo	
Package Installation and Services restart	Demo	
Check Running Processor and CPU utilization of Server	Demo	
Check Disk Filesystem and Disk Usage	Demo	
Create Shell scripting file	Demo	

Terraform	Duration 4 Hrs
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Terraform and its Benefits		
Terraform Installation and Setup	Demo	
Understand Terraform Registry and Create Terraform resources		
Terraform Providers and connecting to Azure	Demo	
Create Terraform Files, Resources, Variables and Outputs	Demo	
Usage of Meta Arguments(Count, Depends-on & for-each)	Demo	
Create Terraform Workspace for Multi Environment	Demo	3 Sessions
Create Terraform Modules and usage of Modules	Demo	
What is State File and Storing State File in Storage Account	Demo	
Terraform Import	Demo	
Terraform Refresh	Demo	
Usage of Terraform Data Source	Demo	
Usage of Terraform Commands	Demo	

Python	Duration 2 Hrs
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What is Programming lang	
Advantages of Python	
Python Installation	Demo
Create Python module using IDLE and VS code	Demo
Variables and Datatypes	Demo

Keywords	Demo	
Input from user	Demo	
Operators [Arithmetic , Assignment , Comparison , Membership]	Demo	2 Sessions
If..else condition and nested if	Demo	
While loop	Demo	
for loop	Demo	
Collections	Demo	
Dictionary	Demo	
Python automation	Demo	
function	Demo	
import modules	Demo	

Ansible	Duration 2.5 Hrs
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What is Configuration Management Tool		
Brief on CHEF , PUPPET , ANSIBLE , SALT		
Why Ansible		
Configuration Language		
Brief about agent-based and agent-less mechanism		
Brief about Machine should be CFG tools		
Configuring Controller and Hosted Nodes	Demo	
openssh in Controller Node	Demo	
Create Inventory file and ansible.cfg file	Demo	2 Sessions
Adhoc Commands	Demo	
What is Ansible modules		
Create ansible playbook	Demo	
Ansible Architecture		
Create playbook to install webserver and deploy applications	Demo	
What is jinja2 templates and create playbook using Jinja2	Demo	
What is Ansible-galaxy	Demo	
Create Ansible Role	Demo	

What is Ansible Tower

Docker **Duration 2.5 Hrs**

Virtualization and Containerization

Docker Intro

Docker Installation Demo

Docker Architecture

docker images Demo

Docker Container Demo

Dockerhub Registry Demo

Create Dockerfile Demo

Create Dockerfile for Creating SSH container Demo 2 Sessions

Create Dockerfile for Creating Apache Container Demo

Create Dockerfile for Nginx Container Demo

Docker Volumes and Volumes-From Demo

Docker Network Demo

Dockerfile Keywords - CMD ENTRYPOINT COPY ADD WORKDIR Demo

Install Docker-Compose Demo

Create Docker-Compose yaml file Demo

Containerization and Orchestration

Kubernetes **Duration 4 Hrs**

K8s Introduction

K8s Architecture & Components

K8s Cluster Creation in Azure Cloud Demo

Create POD Templates, understand different parameters Demo

Create Replica Set Templates, understand different parameters

Create Deployment Templates Demo 3 Sessions

Autoscaler, Rolling update & Recreate strategy Demo

Create Statefulset Demo

Create Daemonset Demo

Create Volume & VolumeMounts	Demo
Create Persistent Volume and Persistent Volume Claims	Demo
KubectI Installation and usage of various commands	Demo

Azure DevOps	Duration 4 Hrs
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Azure DevOps Introduction		
Create New Organization & Project	Demo	
Detailed view of Organization & Project	Demo	
Azure Boards	Demo	
Azure Repos	Demo	
Azure Pipeline	Demo	
Create Service Connections	Demo	3 Sessions
Create Self Hosted & Microsoft Hosted Agents	Demo	
Parallel Jobs Usage		
Library - Variable Groups	Demo	
Azure Release Pipeline	Demo	
Build & Deploy SpringBoot Application	Demo	
Integrate SonarQube in Build Pipeline	Demo	
Deploy Terraform & Kubernetes using Pipeline	Demo	

PowerShell	Duration 1 Hr
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PowerShell Introduction		
PowerShell IDE Usage	Demo	
Install Azure Module for PowerShell	Demo	1 Session
PowerShell Concepts		
Connect Azure Cloud using PowerShell	Demo	
Create PowerShell script to provision Azure Resource	Demo	