Course Duration: 08 hours (1 Day)

Terraform for AWS Professionals (Beginner Level)

This course provides a hands-on introduction to **Terraform**, an open-source Infrastructure as Code (IaC) tool, for automating cloud infrastructure deployment on **Amazon Web Services (AWS)**. It covers the fundamentals of Terraform, including writing configurations, managing resources, state management, and best practices for AWS deployments. By the end of this course, learners will be able to provision, modify, and manage AWS infrastructure efficiently using Terraform.

Course objectives

By the end of this course, participants will be able to:

- Understand the basics of **Infrastructure as Code (IaC)** and Terraform's role in AWS cloud automation.
- Install and configure **Terraform** on local machines.
- Write Terraform scripts to provision AWS resources like **EC2, S3, IAM, and VPC**.
- Use Terraform **modules and variables** for reusable and scalable configurations.
- Implement **Terraform state management** and workspaces for efficient infrastructure changes.
- Leverage **Terraform providers, data sources, and remote backends**.
- Apply best practices for **Terraform security, version control (Git), and collaboration**.
- Deploy infrastructure using **Terraform Cloud and AWS best practices**.

Prerequisites

- Completed AWS Cloud Practitioner Essentials, or AWS Technical Essentials
- Familiarity with the **Linux command line** and basic terminal commands
- Familiarity with general networking concepts
- Familiarity with IP addressing
- Familiarity with cloud computing concepts

Target Audience

- DevOps Engineers
- System Administrators
- Cloud Professionals

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step forward

Course outline

Module 1: Introduction to Terraform

- Why Change?
- What is Infrstructure as Code?
- Why Terraform vs. other tools?

Module 2: How Terraform Works

- Community Edition + Plugin Model
- Providers
- State & Remote backends
- Terraform Workflow

Module 3: Terraform Basics

- Folder structure
- Local values
- Input variables
- Output values
- Providers
- Resources
- Data sources
- State management

Module 4: Version Control

- What is a Version Control System (VCS)?
- HCP Terraform VCS Workflow
- Collaborating with VCS

Hands-on Exercises: -

1. Setting up Terraform on local and AWS Cloud9
2. Create Resources for IAM
3. Create Resources for Networking
4. Create Resources for Security
5. Create Resources for Application
6. Deploy an EC2 instance with IAM roles and an S3 bucket