Technical Guftgu

(Established under Ministry of Micro, Small and Medium Enterprises, Govt. of India)
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✓ Certificate provided
✓ Recordings Provided
✓ Training In Hindi/Urdu
✓ Expert Trainers

HashiCorp Certified: Terraform Associate

Introduction - The Terraform Associate certification is for Cloud Engineers specializing in operations, IT or development who know the basic concepts and skills associated with open source HashiCorp Terraform. Candidates will be best prepared for this exam if they have professional experience using Terraform in production, but performing the exam objectives in a personal demo environment may also be sufficient. The person understands which enterprise features exist and what can and cannot be done using the open source offering.

Pre-requisite

- Basic Understanding of Cloud technology
- AWS/GCP Account
- Good if have basic scripting knowledge but not mandatory

Course Contents:

Getting Started
- What is infrastructure as code
- Choosing a right infrastructure as code
- Installation process of terraform
- Installing Terraform - Linux users
- Setting up AWS/GCP account

Deploy Infrastructure with Terraform
- Create VM instance with terraform
- Resource & Provider
- Understand Terraform state file
- Desired & Current State
- Terraform provider versioning

Read, Generate, Modify Configuration
- Attributes & Output Values
- Terraform Variables
- Data Types for variable
- Count & Count Index
- Conditional Expression
- Local values
- Terraform Function
- Data Source
- Terraform Format
- Debugging in Terraform
- Configuration validation

- Load order & semantics
- Dynamic Blocks
- Resource taint
- Splat Expression
- Terraform Graph
- Terraform Output
- Terraform Settings
- Dealing with Large Infrastructure

Terraform Provisioners
- Understanding Provisioners in Terraform
- Types of Provisioners
- Implementing remote-exec provisioners
- Implementing local-exec provisioners
- Creation-Time & Destroy-Time Provisioners
- Failure Behaviour for Provisioners

Module & Workspace
- Understanding DRY principle
- Implementing EC2 module with Terraform
- Variables and Terraform Modules
- Using Locals with Modules

- ➢ Referencing Module Outputs
- ➢ Terraform Registry
- ➢ Requirement for Publishing Modules in Terraform Registry
- ➢ Terraform Workspace
- ➢ Implementing Terraform Workspace

Remote State Management
- ➢ Integrating with GIT for team management
- ➢ Security Challenges in Committing TFState to GIT
- ➢ Module Sources in Terraform
- ➢ Terraform and .gitignore
- ➢ Terraform Backends
- ➢ Implementing S3 Backend
- ➢ State File locking
- ➢ Terraform State Management
- ➢ Implementing Remote States Connections
- ➢ Importing Existing Resources with Terraform Import

Security
- ➢ Handling Access & Secret Keys the Right Way in Providers
- ➢ Terraform Provider UseCase - Resources in Multiple Regions
- ➢ Handling Multiple AWS Profiles with Terraform Providers
- ➢ Terraform & Assume Role with AWS STS
- ➢ Sensitive Parameter
- ➢ Overview of HashiCorp Vault
- ➢ Terraform and Vault Integration

Terraform Cloud
- ➢ Overview of Terraform Cloud
- ➢ Creating Terraform Cloud Account
- ➢ Creating Infrastructure with Terraform Cloud
- ➢ Overview of Sentinel
- ➢ Overview of Remote Backends
- ➢ Implementing Remote Backend Operations
- ➢ Air Gapped Environments

Exam Preparation
- ➢ Overview of HashiCorp Exams
- ➢ Important Pointers for Exams

Practice Test