**Training Objective:**

By attending this Online interactive session participants can gain basic understanding of Infrastructure Orchestration using Terraform. This course will be providing a detailed understanding on the concepts of Infrastructure orchestration, Infrastructure as a code, benefits of using Terraform in comparison with other IAC tools along with configuration of Terraform tools and some production examples.

**Participant Expectation:**

This is an Introductory course designed for participants who are new to Infrastructure as a code tool . The course provides a basic to intermediate level of understanding on the different concepts of Terraform as provided in the course outline. Participant will be doing hands-on. All hands-on will be instructed by the instructor during the training. This course is not intended for any Terraform certification.

**Participants Pre-requisite:**

Attendee of this course should be aware of.

* Operating Systems – Basic knowledge of Windows and Linux OS, SSH Access on Servers.
* Networking Concepts – IP Addresses, Basic Components of a Local Area Network
* Virtualization – Running virtual instances on a computer.
* Cloud – Basic understanding of Cloud services ( AWS or Azure)

**Course Coverage**

**Day1**

* Introduction to Infrastructure Orchestration
* Infrastructure as a Code Overview
* Terraform vs other IAC tools.
* Architecture and overview of Terraform.
* Terraform Workflow
* Installation , configuration of Terraform software.
* Maintaining Infrastructure using Terraform
* Types of Terraform Providers (AWS, Azure, etc.)
* Variables, resource dependency handling
* Lab - Creating AWS infrastructure using Terraform (EC2, VPC, s3 , etc.)
* Debugging , formatting Terraform config files.
* Creating, reproducing, destroying Infrastructure using Terraform

**Day2**

* Understanding DRY Principle
* Providers and Resources
* Terraform state files.
* Attributes and Output Values
* Terraform Variables, data types
* Count parameter, index.
* Conditional Expression
* Terraform functions.

**Day3**

* Packaging Configuration Files as Modules
* Terraform dynamic blocks.
* Terraform format, validation, graphs.
* Splat Expressions
* Terraform Registry
* Using the Module Registry to Build Reusable Templates
* Managing Servers from Multiple Infrastructure Providers (AWS, Azure, etc.)
* Handling multiple cloud profiles using Terraform
* Overview of Terraform cloud