

## Day - 1

- **What is DevOps Vs DevSecOps Vs SRE?**
- **Tool sets in DevOps Vs DevSecOps Vs SRE?**
- **Overview of infrastructure during SDLC?**
- **Problems with many infrastructure tools?**
- **Introducing Infrastructure as Code**
- **Declarative vs. Imperative**
- **Introduction of Terraform**
- **Advantage & Disadvantage of Terraform**
- **How Terraform works for Infrastructure as Code?**
- **Alternative of Terraform**
- **Terraform Use cases**
- **How to install Terraform?**
  - Introductions of Terraform Components?
  - - Terraform Providers
  - - Terraform Registry
  - - Terraform Resources
  - - Terraform Resources Argument Reference
- **Deploying Your First Terraform Configuration**
- **Terraform Basics Workflow using Terraform CLI**
  - - terraform validate
  - - terraform init
  - - terraform plan
  - - terraform apply
  - - terraform show
  - - terraform destroy
- **Updating Your Configuration with More Resources**
- **Configuring a Resource After Creation**
- **Adding a New Provider to Your Configuration**
- **Understanding Terraform state file**
- **Terraform Resource Behavior & Lifecycle**
- **Understanding Terraform HCL syntax & Style**
  - Terraform Resources Meta-Argument
    - - depends\_on
    - - count
    - - for\_each
    - - provider
    - - lifecycle
- **Using Terraform for Create Cloud Provider Compute Resources**

- **Introduction of Terraform Variables & Values**
- - Input Variables
- - Output Values
- - Local Values
- **Where to declare a Terraform Input Variables?**
- **Deep dive into Types of Terraform Input Variables**
  - - string
  - - number
  - - bool
  - - list
  - - set
  - - map
  - - object
  - - tuple
- **How to access Terraform Input Variables value?**
- **Terraform Input Variables precedence & Scope**
- **Working with Terraform Output Values**
- **Working with Terraform Local Values**
- **Introduction of Terraform Data sources?**
- **Accessing Terraform Data sources?**
- **Working with Terraform HCL Operators**
- **Overview of Terraform Functions**
- **Working with Terraform Functions**
  - - Numeric Functions
  - - String Functions
  - - Collection Functions
  - - Encoding Functions
  - - Filesystem Functions
  - - Date and Time Functions
  - - Hash and Crypto Functions
  - - IP Network Functions
  - - Type Conversion Functions
  - Introducing Terraform Provisioners
  - Working with Terraform Provisioners
  - - file
  - - local-exec
  - - remote-exec
- **Using Terraform for Create Cloud Provider Storage & Networking Resources**

## Day - 3

- **Working with Terraform Templates**
- **Working with Workspaces for multiple environments**
- **Working with Remote Backend for managing State file for team**
- - artifactory
- - s3
- - azurerm
- - gcs
- **Understanding Terraform State locking**

- **Terraform Troubleshooting using logs & common errors**
- **Introducing Terraform Module**
- **Using with Terraform Module from Registry**
- **Developing Custom Terraform Module**
- **Publishing Modules on the Terraform Registry**
- **Introducing Terraform Console**
- **Introducing Terraform Tags**
- **Introducing Terraform Cloud**
- **Using Terraform for use Multiple providers for CI/CD**