



DEVOPS

Srinivas Maganti | cloudnetworks19@gmail.com | +91 9158564056
MAVERICK CLOUD TRAININGS | GOMED, MYHOME JEWEL, MADEENAGUDA HYDERABAD 500049

Course Content

- **Module:1**
 - Introduction and use cases of DevOps.
 - Understanding DevOps lab infrastructure on AWS.
 - Course overview.
 - Introduction to Linux Shell Scripting.
 - Creating shell scripts for day-to-day activities.
 - Understanding IF, WHILE and FOR statements in Shell Scripting.
 - Introduction to Powershell Scripting.
 - Understanding Noun-Verb usage in Powershell.
 - Installing Powershell modules and using them.
 - Understanding IF, WHILE and FOR statements in Powershell.
 - Creating scripts for regular user management and administration.

- **Module:2**
 - Version Controls and its significance
 - Introduction to Git version control application
 - Git Repositories & GitHub Authentication
 - Adding, Committing, Renaming & Deleting files
 - GitHub Branches, Merging & Webhooks
 - Understanding stash, diff, rebase, fetch, pull, push.
 - Overview about Continuous Integration with Jenkins.

- **Module:3**
 - Introduction to Infrastructure As A Code.
 - Differences between CloudFormation, Azure ARM & Terraform.
 - Basics of HashiCorp Terraform
 - Configuring Terraform Lab Platform
 - Understanding Terraform files
 - Terraform Providers, Variables & States
 - Configuring Remote state using AWS Simple Storage Service(S3)
 - Understanding Terraform Functions.
 - Introduction to Packer
 - Create AWS AMI using Packer.
 - Integration of GitHub, Packer & Terraform with Jenkins

- **Module:4**
 - Introduction to Containers & Docker
 - Docker architecture & Docker repositories

- Pull, Create & Upload Docker images
 - Using Dockerfile and Docker Compose
 - Understanding Docker Networks
 - Understanding Docker Volumes
 - Creating Docker cluster using Docker Swarm
 - Docker Swarm Stacks and Container Placement
 - Docker Swarm Node Availability
 - Docker Swarm Rolling Updates
 - Docker Swarm secrets and Container health check
 - Introduction to Kubernetes
 - Deploying PODS, Services, Deployments
- **Module:5**
- Introduction to Ansible
 - Differences between Ansible vs Puppet Vs Chef.
 - Differences between CloudFormation, Azure ARM & Terraform.
 - Configure Ansible Lab Platform.
 - Creating & Using Ansible Playbooks
 - Understanding & Using Ansible Roles
 - Using Ansible Variables & Templates
 - Leveraging Ansible Galaxy
- **Module:6**
- Introduction to Puppet
 - Puppet Architecture & Puppet components
 - Puppet Master & Client Installation & Configuration
 - Puppet Classes and Defined Types
 - Puppet manifests
 - Puppet Modules
 - AWS Puppet use cases
- **Module:7**
- Introduction to Jenkins
 - Install & Configure Jenkins
 - Features & Master-Slave Architecture of Jenkins.
 - Configuring Slaves in EC2 and Docker Containers.
 - Configure Jenkins Job, RBAC, Pulgins.
 - Creating and managing Scripted and Declarative Pipelines.
 - Creating multi branch pipelines with Jenkins Blue Ocean.
 - Configuring CI/CD Pipeline.
 - Integrating Jenkins with AWS, GitHub & Docker.

○ **Module:8**

- Introduction to Azure DevOps and Agile terminologies.
- Creating User Stories, Issues, Epics, Kanban Boards.
- Creating Repositories, Importing Code and Branching with Azure DevOps.
- Creating Build Pipelines and Integrating with Azure, AWS Storage.
- Creating and Pushing Docker Images using Azure DevOps.
- Azure DevOps Builds and Artifacts.
- CI/CD with Azure DevOps using Release Pipelines.
- Integrating Terraform with Azure DevOps.
- User Management for Azure DevOps using Azure Active Directory.
- Azure DevOps Custom agent pools & Deployment Groups.