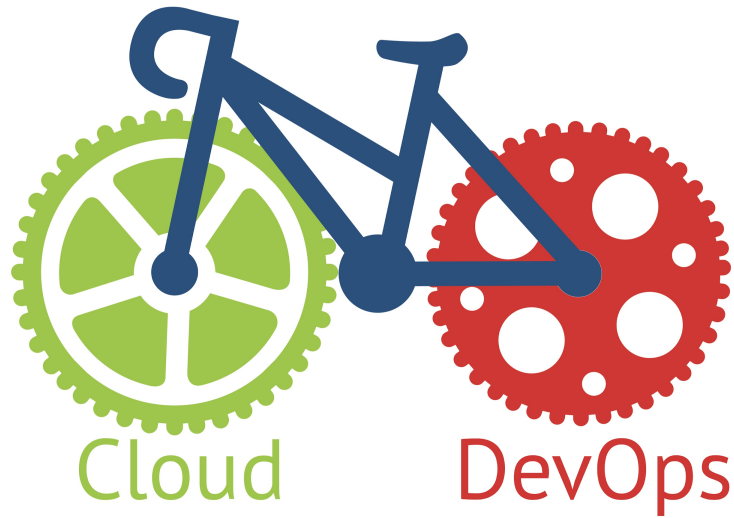


DevOps Training in Real Time : Phase - I



Duration of course: 60 Hours(50 Days)

by SREEHARSHA VEERAPALLI

Training Available in Telugu and English.

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Syllabus:

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 healthcheck
- 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.