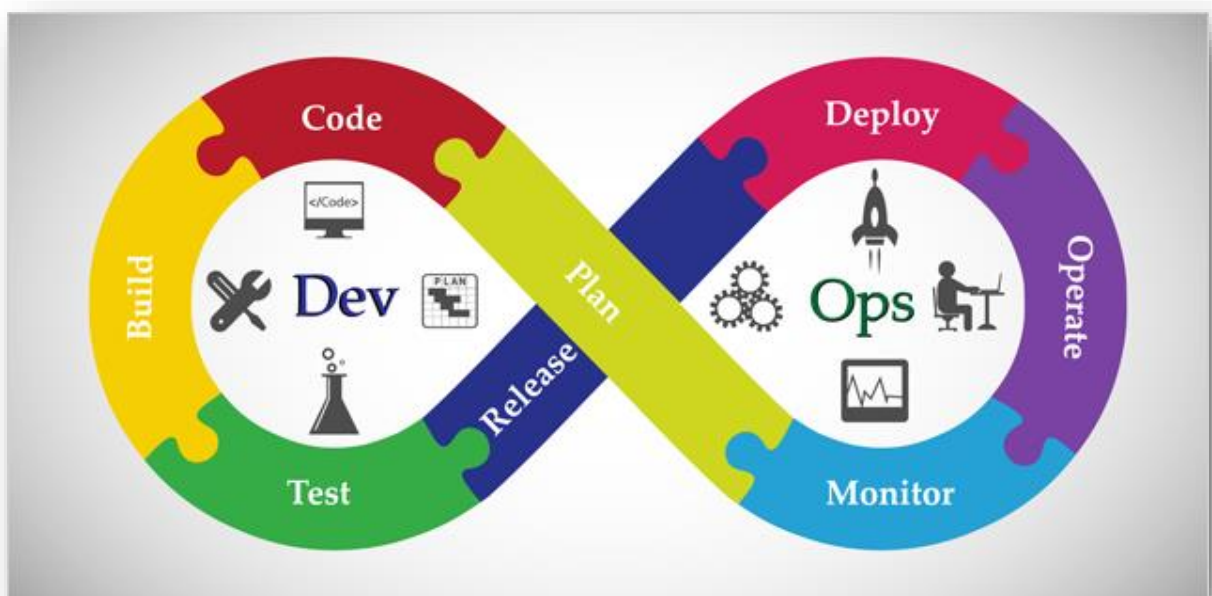




AWS-DevOps



Prerequisites:

- Preferred server configuration
- Data Centres
- Connectivity Tools
- Environments
- DevOps relation with Development

Methodologies:

- Agile Model
- Project Development Model
- DevOps relation with agile

Cloud (AWS):

- Physical Servers vs Cloud
- IAAS, PAAS and SAAS
- Advantages of Managing servers on cloud
- Supporting Peak usage with cloud
- DevOps relation with Cloud

Linux:

- Advantages of Linux over Windows
- Linux distribution
- Understanding RPM`s/Packages
- Linux Commands
- Shell Scripting

DevOps Advantages:

- DevOps Relation with Current IT Industry
- Automation
- Activities can be automated
- Traditional approach over Automation
- different tools supporting DevOps

SCM-GIT:

- Managing source code with SCM Tools
- Difference between Trunk, Branch, Tag
- Branching Strategy
- Merging Strategy
- Resolving conflicts
- Managing Hooks

Build Tools:

- Maven
- Setting Maven on Linux and Windows
- Running Maven for Build
- Understanding POM.XML
- Understanding Settings.xml
- Understanding POM dependencies
- Managing dependencies
- Different Repositories
- Maven Targets / Goals
- Understanding Profiles

Nexus:

- Remote Repositories
- Managing Dependencies with Nexus
- Integrate Maven with Nexus

SonarQube:

- Install and configure SonarQube with different Databases
- Perform code analysis
- Upload analysis report
- Analyse code analysis result

Fortify:

- Install and Configure Fortify
- Integrate Fortify with different databases
- Perform code Analysis
- Upload analysis report
- Analyse code analysis result

Selenium:

- Integrate Selenium with Jenkins
- Invoke test cases
- Analyse test results

Continues Integration /Automation:

- Introduction to Jenkins
- Jenkins Setup
- Configure Distributed Environment
- Managing Plug-ins
- Integrate Jenkins with different tool like Nexus, SonarQube, Tomcat, Web logic, Junit, Selenium, Ansible and Docker
- Configuring Jenkins to Perform CI/CD
- Configure jobs with Parameters
- Creating Jobs with Jenkins
- Scheduling Build Automation
- Deployment Automation with Jenkins
- Scheduling Build Automation
- Deployment Automation with Jenkins
- Plug-in and Jenkins file

Application Server:

- Understanding Application Server
- Installation
- Configuration
- Understanding Clusters logging
- Deployment / Release

Configuration Management (Ansible):

- Introduction to Configuration management tools
- Understanding Ansible Architecture
- Advantages of Ansible
- Different concepts of Ansible
- Understanding the Inventory to manage the clients
- Working with modules / Ad-Hoc Commands
- Working with Ansible Playbooks
- Working with Roles
- Understanding Ansible Tower
- Integrate Jenkins with Ansible
- Project with Ansible

Infrastructure As A Code (IAAC) – Terraform:

- Overview of Terraform
- Overview of Infrastructure As A Code
- Setup of Terraform
- Understand the Structure of Terraform Templates
- Write Terraform Template to Configure Resources on Cloud
- How to Map different Cloud Providers with Terraform

Docker:

- User of Containers
- Docker as Container
- Setup Docker
- Create Docker Images
- Creating Containers
- Docker CLI
- Docker as Stand-alone
- Docker Swarm (Single node and multi node Swarm)
- Docker Machine
- Docker on Cloud
- Integrate Jenkins with Docker

Kubernetes:

- What is Orchestration
- Orchestration Containers using Kubernetes
- Install Kubernetes (Minikube)
- Understanding Single and Multi-Node Kubernetes Cluster
- Different Components of Kubernetes
- Working on Cluster, Deployment, Namespace, Replica set, POD, Kubeproxy, Kubelet, Kubeadm, API server, etcd, Scheduler, Auto Scaling with PodScaler and Config Maps

Monitoring:

- Advantages of Monitoring Tools
- Install Nagios
- Monitoring additional nodes with Nagios
- Configure Service / Hosts and Host Groups
- Configure Notifications

Amazon Web Services (AWS):

- What is Cloud
- Types of Cloud
- Cloud As A Service
- Different Cloud Providers
- Regions / Zones
- Billing Information
- Introduction at AWS Services
- Amazon Elastic Compute cloud (EC2)
- Amazon Simple Storage Service (S3)
- Elastic Block Storage (EBS)
- Elastic Load Balancer (ELB)
- Amazon Relational Database Services (RDS)
- Amazon Dynamo DB
- Auto Scaling
- Amazon Elastic Cache
- Identity And Access Management (IAM)
- Virtual Private Cloud (VPC)
- Cloud Formation
- Simple Email Service (SES)
- Simple Queue Services (SQS)
- Simple Notification Services (SNS)
- Server less Computing (Lambda)
- Import / Export (Snowball)
- Code Commit
- Cloud Trail
- Elastic Beanstalk
- Cloud Front
- Route-53
- Glacier
- Key Management Service (KMS)