

DevOps Syllabus

Introduction to DevOps

- What is **DevOps**?
- History of DevOps
- **Dev and Ops**
- DevOps definitions, Software Development Life Cycle and main objectives of the DevOps
- Infrastructure As A Code
- Prerequisites for DevOps
- Tools (Jenkins, Chef, Docker, Vagrant and so on.)
- Continuous Integration and Development

Linux Concepts

- Linux Installation
- User Management
- Package Management
- Networking

Automation Concepts

- OS Basics
- Scripting Introduction
- Learn Shell Scripting
- Database Concepts
- Shell Variable, Decision Making and Shell Test Conditions
- Shell Loops, Re-directors, Exit status

Revision Controls System

- Subversion Controls/Git
- Working with local repositories, remote repositories
- branching
- merging
- cloning
- fetch/pull

- Installation of Git Server

Configuration Management

- Chef/Puppet/Ansible Introduction
- Chef server Hands-on, workstation setup, Chef Distribution Kit and Concepts

Environments

- Attributes
- Resources
- Cookbook
- Run list
- Recipes
- Supermarket

Build Automation

- Introduction with Maven
- Maven structure and Phases
- Installation of Maven
- Configuration
- jar/war project structure

Tomcat Web Server

- Installation and Configuration
- Tomcat Manager
- Application Management
- App Deployment Methods

Nexus Artifacts/Proxy Tool

- Introduction to Nexus
- Installation and Configuration
- Repository Management
- Proxy Management
- Integration with Maven

Jenkins Framework

- Introduction to Jenkins
- Jenkins Installation
- User Profile and Management
- Security and Plugins Management
- Builds Setup
- Integration with Git, Maven, Tomcat

LAMP Setup

Apache/HTTPD Web Service

- Installation of Apache
- Configuration of Apache
- Static Pages
- Dynamic Pages
- PHP Integration

MySQL Database

- Working with Database
- Introduction to MySQL Database
- Configuration
- User management
- Permission management
- Creating Database
- Data insertion/update
- MySQL Data Backup, Hands-on and MySQL GUI Tools

Installation of WordPress with LAMP

- Vagrant
- Introduction to Vagrant
- Vagrant Terminologies
- Installation of Vagrant
- Vagrant Proxy Project and hands-on

Working with Docker

- Introduction to Docker
- Docker Terminologies
- **Installation of Docker**
- Docker image creation and Docker hands-on

System Monitoring

- Introduction to Nagios
- Concepts behind Nagios
- Nagios Installation
- Hands-on

DevOps Project Work

- Project LAMP Setup
- Web layer
- DB Layer
- App Layer
- Monitoring