**What is DevOps?**

* What is DevOps, Acronym What is Dev & Ops?
* Acronym: Dev + Ops – misconceptions.
* DevOps Tools overview
* End-to-End DevOps work-flow
* Roles and Responsibilities of DevOps Resource
* Who can learn DevOps?
* Pre-requisites for DevOps
* Importance of DevOps Practices in Software Development.
* DevOps in Realtime and it’s goals.
* SDLC models, Agile and DevOps
* Opportunities, Trends and Future of DevOps
* Overview of: Version Control mechanism, Build and Deployment Process, Continuous Integration and Deployment, Configuration management, Containerization, Virtualization, AWS Cloud platform, etc.
* Role of Cloud platforms in DevOps
* DevOps and Cloud. Is Cloud + something is DevOps?

**1. Source Code Management**

* What is Version Control System
* Git:
* Installation
* Configuration
* Basic Commands
* Branches
* Repositories
* Tracking

**2. Build Tool**

* Automated Build Process
* Maven
* Introduction
* Maven Structure
* Maven Dependencies
* Maven Repositories
* Maven Plugins
* Integrated Maven Build

**3. Continuous-Integration**

* Jenkins
* What is Jenkins
* Best Practices
* Installation and configuration
* Managing Jenkins
* Creating Application Builds
* Plugins
* Continuous Testing and Continuous Integration and Testing
* Finding and Managing Plugins
* Building Continuous Delivery Pipeline

**4. Configuration Management - Ansible**

* Introduction
* Setup and Configuration
* Use both static and dynamic inventories to define groups of hosts
* Ansible Playbooks
* Ansible Modules
* Create and use templates to create customized configuration files
* Working with Ansible facts and variables.
* Roles
* Download roles from Ansible Galaxy and use them
* Ansible Command Line Usage
* Managing Parallelism
* Using ansible-vault in playbooks to protect sensitive data
* Install ansible tower and use it to manage systems
* Use cases

**5. Containerization - Docker**

1. Introduction
2. Installing Docker
3. Installing Docker on Windows
4. Installing Docker on Linux
5. Working with Containers
6. What is container
7. Docker run command
8. Theory of pulling and Running Containers
9. Working with images
10. Container Life cycle
11. Creating & Managing Container Images
12. Data Volumes & System Management
13. Single Host Networking
14. Multi Host Networking

6. Additional Concepts

1. Linux With Shell Scripting
2. Agile Methodology
3. Jira Tool
4. Monitoring Tools
5. Artifactory Tools
6. Amazon Web Services (AWS)