**DevOps (Developer)**

**Duration: 5 Days**

**Pre-Requisites:**

* Linux fundamentals
* Cloud Computing fundamentals

**Course Outline:**

**Day 1:**

**DevOps Fundamentals**

* Introduction to DevOps
* DevOps Process
* DevOps Team
* Architecture application for DevOps
* DevOps Technology Reference Architecture

**Automate Cloud IaaS for DevOps**

* Automate Cloud IaaS for DevOps
* AWS EC2 Overview
* AWS Storage overview
* AWS Network Overview
* AWS Automation using Cloud formation
* Lab: Automating Infrastructure in Cloud
* DIY: Create a Reference Architecture Automation

**Day 2:**

**Source Code Repository in GIT**

* GIT Fundamentals
* GIT Benching and Merging
* Lab: Working With GIT
* Lab: GIT Branching and Merging
* Lab: Code Commit Private GITHub

**Docker Containers**

* Containers Fundamentals
* Why containers
* Containers VS VM’s
* Docker Architecture and Dataflow
* Docker Installation and Setup

**Day 3:**

**Docker Containers**

* Docker Container and Operations
* Docker Image and Operations
* Docker Hub
* Docker Custom Image creations
* Docker Network Fundamentals
* Persistent Volumes with Docker
* Converting your application into containers
* Lab: Various application docker containers for webservers like nginx, httpd and tomcat

**Day 4:**

**Automation using Ansible**

* Ansible Fundamentals
* Ansible setup and configuration
* Ansible Modules
* Ansible adhoc requests
* Introduction to YAML
* Ansible playbooks creations
* Automating Application setup using Ansible playbooks
* Lab: Managing Application config in Ansible
* Lab: Creating and Running Docker using Ansible

**Day 5:**

**Continuous Integration and Deployment**

* Continuous Integration Fundamentals
* Continuous Delivery Fundamentals
* CI/CD with Jenkins
* Lab: Install and Configure Jenkins
* Lab: Create a Simple pipeline in Jenkins
* Lab: Configuring Jenkins in CentOS server procured in Lab 1
* Lab: Integrating Jenkins with GIT
* Lab: Configuring Sample Maven Build in Jenkins
* Lab: Integrating Jenkins with Docker
* Lab: Integrating Jenkins with Ansible
* Lab: Configuring End to End Delivery Pipeline in Jenkins
* Lab: Running Continuous Deployment Using Jenkins