**DevOps (IT Operations)**

**Duration: 3 Days**

**Pre-Requisites:**

* Linux fundamentals
* Cloud Computing fundamentals
* DevOps Fundamentals

**Course Outline:**

**Day 1:**

**Module 1**

* Introduction to DevOps
* DevOps Practical use cases

**Module 2**

* Cloud Fundamentals and AWS overview
* AWS EC2 Overview
* AWS Security Groups, AMI’s access method etc
* Lab: Provision AWS cloud instances for Linux and Windows

**Module 3**

* Source Code Repository in GIT
* GIT Fundamentals
* Local Git repository management
* GIT setup, Various Git operations
* Lab: Working With GIT

**Day 2:**

**Module 4**

* Overview of Configuration Management
* Automation using Ansible
* Ansible Setup and Terminologies
* Ansible Modules
* Ansible ad-hoc operations
* Introduction to YAML files
* Ansible Playbooks
* Lab: Ansible Infrastructure Automation
* Lab: Various examples like NTP, Webserver or Docker setup using Ansible Automation

**Module 5**

* CI/CD Fundamentals with Jenkins
* Lab: Install and Configure Jenkins
* Lab: Create a Simple pipeline in Jenkins

**Day 3:**

**Module 6**

* Design and automate DevOps End to End
* Move the Code and Development to DevOps Model
* Create a DevOps Environment in Cloud
* Use Containers for Application building process
* Put Code and Containers in GIT
* Automate Configuration using Ansible
* Lab: Create a pipeline with Git, Jenkins and Simple infrastructure script on AWS environment
* Lab: Create a pipeline with Git, Jenkins and Docker containers on AWS environment
* Lab: Create a pipeline with Git, Jenkins and Ansible playbook on AWS environment
* Lab: Create a pipeline with Git, Jenkins, Ansible playbook and Docker containers on AWS environment