Pre-requisites for DevOps Course:

This training program is for someone who aspires to make a career as a DevOps Engineer or a Service Engineer in the Enterprise Infrastructure arena. With the basic understanding of Linux and Networking, anyone can go for this course. This training program is best suited for professionals like Project Managers, Testing Professionals, Software Developers, and Architects.

Introduction to DevOps:

- SDLC models, Lean, ITIL, Agile
- Why DevOps?
- History of DevOps
- DevOps Stakeholders
- DevOps Goals
- Important terminology
- DevOps perspective
- DevOps and Agile
- DevOps Tools
- Configuration management
- Continuous Integration and Deployment

Introduction to Cloud Computing

- Use case: Highly available fault tolerant systems
- Understanding availability zone
- region
- Creating your own account in AWS
- Creating a VPC
- subnet
- network gets way
- Running your own EC2 instance
- Connecting in EC2 and installing https in Ec2
- S3
- Over viewS3
- Cloud watch

What is Virtualization?

- History of Virtualization
- What is Hypervisor?
- Types of Server Virtualization
- Benefits of Virtualization
- Important Virtualization products

Vagrant

- Introduction
- Why and what is Vagrant?
- Uses of Vagrant in an environment
- Alternatives of Vagrant
- Vagrant versions
- Installation and Configuration
- Installing Virtual box
- How to install Vagrant on Windows
- Configuring Vagrant
- Other topics

GIT: Version Control

- Introduction
- Version control systems
- Local, Centralized and distributed
- Installing Git
- Installing on Linux
- Installing on Windows
- Initial setup
- Git Essentials
- Creating repository
- Cloning, check-in and committing
- Fetch pull and remote
- Branching

Puppet & Ansible

- Configuring Puppet Master and Agent
- Connecting Agents
- Puppet Master
- Puppet configuration tree
- Puppet configuration files
- Modules
- Playbooks
- Global Configuration
- Roles
- Tags
- How to write playbooks
- PYYAML overview

- How to write playbooks
- Ansible modules
- Ansible Roles
- Ansible Galaxy
- How to download playbooks from Galaxy
- Real-time playbooks

NAGIOS: Monitoring

Introduction and Installation

- Obtaining Nagios
- Compiling and installing Nagios

Basic configuration

- Creating a new host and service
- Creating a new e-mail contact
- Verifying configuration
- Creating a host group and service group
- Creating a new contact group
- Creating a new time period

Plugins and commands

- Finding and installation of a Plugin
- Removing a plugin
- Creating a new command
- Customizing commands

Using Nagios GUI

- Scheduling downtimes
- Generating reports
- Configuring notification
- Configuring checks
- Managing Flapping

NRPE Monitoring

- Enabling Remote Execution
- Monitoring local services on a remote machine with NRPE
- Setting the listening address for NRPE
- Setting allowed client hosts for NRPE

- Creating new NRPE command definitions securely
- Creating a custom NRPE scrip**t**

Jenkins -Continues Integration

- Understanding continuous integration
- Introduction about Jenkins
- Build Cycle
- Jenkins Architecture
- Installation
- Obtaining and installing Jenkins
- Installing and configuring GIT
- Java installation and configuration
- Maven Installation
- Exploring Jenkins Dashboard
- Creating Jobs
- Running the Jobs
- Adding and updating Plugins
- Disabling and deleting jobs
- Build Deployments
- Understanding Deployment
- Tomcat installation and configuration
- Deployment Plugins
- Deploying a war file from Jenkins to Tomcat
- Securing Jenkins
- How to integrate Jenkins with Ant
- How to integrate Jenkins with Maven
- Authentication
- Jenkins Plugin
- Authorization
- Confidentiality
- Creating users
- Best Practices for Jenkins
- Jenkins Parameterized build
- Environment inject plugin
- Use of Jenkins environment variables
- Deploying a specific revision
- Customizing the Jenkins UI
- Project-based Matrix plugin
- Parallel Execution
- Real-time implementation of Automated role back

- Multi-branch Deployment

Docker -Containers

- Understanding Installation of Docker on Windows
- Some Docker commands
- Provisioning
- Docker Hub
- Downloading Docker images
- Running Docker images
- Running commands in container
- Running multiple containers
- Custom images
- Creating a custom image
- Running a container from the custom image
- Publishing the custom image
- Docker Networking
- Accessing containers
- Linking containers
- Exposing container ports
- Container Routing

DevOps Advanced concepts like Kubernates,Docker-Swarm ,Sitescope and AppDynamics