# **DevOps Training**

# COURSE BROCHURE & SYLLABUS

#### **DevOps Overview**

- Devops roles have increased from 10% to 45% in 2018 and Nearly 70% of the system administrators are replaced with roles in devops.
- In short Devops is definitely a promising career for all IT professionals. In next few years 90% of the companies will adopt devops culture.
- In India average salary for a devops professionals is Rs 13,34,890 per year.
  Devops professionals have Hugh demand and potential in near future. To become a devops professional you should learn few automation tools like Chef, Puppet, Ansible, Jenkins and few other very useful tools like GIT, Nagios, Dockers.
- Apponix is dedicated to provide best learning experience for its students since 6 years.
  We offer the best DevOps training in Bangalore, we are proud to say we are the top DevOps training provider in Bangalore, we make sure all our students will get good training experience.
- All our DevOps instructors are working in MNC and have min 7 years of experience.
- Apponix DevOps Training course is designed by industry experts and to cover latest market cloud requirements.
- DevOps Certification Training Course which will prepare you for a career in a DevOps environment, the fastgrowing field that bridges the gap between software developers and operations.
- You will become an expert in deployment, automation of configuration management tools such as GIT, Docker, Jenkins, Puppet and Nagios.
- DevOps Training from Apponix will help you gain skills on tools which are used in devops environment.

In DevOps training course you will be equipped with latest technologies used in the DevOps environment The topics covered are very up to date and very much relevant to the devops, The skills you gain will be very helpful to work in either production support team, projects team or BAU Team.

### **DevOps Training course objectives:**

- In-depth knowledge on Continuous Development, Continuous Integration, and Continuous Testing by performing hands-on on GIT, Jenkins and Selenium
- Comprehensive knowledge on Configuration Management, and Continuous Deployment using Puppet, Ansible Working on Continuous Deployment stage by performing hands-on on popular tools like Docker and Kubernetes
- The exposure to the stage of continuous monitoring using Nagios
- The ability to automate all aspects of a modern code delivery and deployment pipeline using:
  Source code management tools



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Build & monitoring tools

Test automation tools

Containerization through Docker

Configuration management tools

### Why choose Apponix as a Top DevOps Training institute in Bangalore?

- Apponix has excellent trainers for Devops with rich experience in industry.
- 100% student satisfaction rate in DevOps training
- More than 1000 students completed training in devops since 2013
- Excellent Lab facility for DevOps Training
- We have excellent rating till date, overall 4.9 Rating in Google & Facebook.

**Course Duration: 40 Hours** 

## **DevOps Training Course Content**

### Infrastructure Setup

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



# • CI\CD - DISCUSSIONS, IMPLEMENTATION, LINUX and WINDOWS PRE-REQUISITES CT, CD, CODE PLAN, CODEBUILD

- Introduction to Cloud computing
- o What is Cloud Computing?
- o How Cloud Computing are helpful?
- Cloud's role in DevOps Orchestration
- o What is AWS?
- Use cases in AWS
- Companies using AWS and Market tends
- Different Services offered in AWS
- Use case: Highly available fault tolerant systems
- o Understanding availability zone region
- Creating your own account in AWS
- Creating a VPC
- o subnet
- o network gets way
- o Running your own EC2 instance
- o Connecting in EC2 and installing https in Ec2
- Over view of S3
- o SNS. Cloud watch
- o Introduction to Virtualization
- o What is Virtualization?
- o History of Virtualization
- o What is Hypervisor?
- Types of Server Virtualization
- o Benefits of Virtualization
- o Important Virtualization products

### SCM, VCS, GIT-SVN

- GIT: Version Control
- Introduction
- Version control systems
- Local, Centralized and distributed
- o Installing Git
- Installing on Linux
- o Installing on Windows
- Initial setup
- o Git Essentials
- Creating repository



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- Cloning, check-in and committing
- o Fetch pull and remote
- Branching
- Version control system
- Overview about version control system like SVN, Git/Github.
- Discussion on SVN vs. Github.

### Jenkins – Continuous Integration

- Introduction
- o Understanding continuous integration
- Introduction about Jenkins
- Build Cycle
- o Jenkins Architecture
- o Installation
- Obtaining and installing Jenkins
- o Installing and configuring GIT
- o Java installation and configuration
- Maven Installation
- Exploring Jenkins Dashboard

### Chef for configuration management

- Overview of Chef
- o Common Chef Terminology (Server, Workstation, Client, Repository etc.)
- Servers and Nodes
- Chef Configuration Concepts
- Workstation Setup
- o How to Configure knife?
- Execute some commands to test connection between knife and workstation
- Organization Setup
- o Create organization
- o Add yourself and node to organization
- Test Node Setup
- Create a server and add to organization
- o Check node details using knife
- Node Objects and Search
- o How to Add Run list to Node?
- Check node Details
- o Environments



- o How to create Environments?
- Add servers to environments
- Roles
- o Create roles
- Add Roles to organization
- o Data bags in chef
- Search criterion in Chef
- o Real time cookbooks
- o Creating Jobs
- Running the Jobs
- o Adding and updating Plugins
- o Disabling and deleting jobs
- o Build Deployments
- Understanding Deployment
- o Tomcat installation and Configuration
- Deployment Plugins
- Deploying a war □le from Jenkins to Tomcat
- o Securing Jenkins
- O How to integrate Jenkins with Ant?
- o How to integrate Jenkins with Maven?
- o Authentication
- o Jenkins Plugin
- o Authorization
- Confidentiality
- Creating users
- Best Practices for Jenkins
- Jenkins Parameterized build
- o Environment inject plugin
- Use of Jenkins environment variables
- o Deploying a specific revision
- Customizing the Jenkins UI
- o Project based Matrix plugin
- Parallel Execution
- Case Study
- o Real time implementation of Automated role back
- Multi branch Deployment



#### Docker- Containers

- Introduction
- What is a Docker
- Docker– Containers
- Introduction

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- o What is a Docker
- Use case of Docker
- o Platforms for Docker
- Dockers vs Virtualization
- Architecture
- Docker Architecture
- o Important Docker components
- o Understanding the Docker components
- o Installation
- o Installing Docker on Linux
- o Understanding Installation of Docker on Windows
- Some Docker commands
- o Provisioning
- o Docker Hub
- o Downloading Docker images
- o Running Docker images
- o Running commands in container
- o Running multiple containers
- Custom images
- Creating a custom image
- o Running a container from the custom image
- o Publishing the custom image
- o Docker Networking
- Accessing containers
- Linking containers
- o Exposing container ports
- o Container Routing

### Ansible:

- Introduction to Ansible
- o Ansible Architecture
- Ansible terminology
- Ansible commands
- How to add nodes to server



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- o Ansible installation and configuration
- o Installing ssh on nodes
- o Generating the keys
- o Components of Ansbile
- Inventory
- Configuration
- Modules
- o Playbooks
- Global Configuration
- Roles
- Tags

### Nagios: Monitoring

- o Introduction and Installation
- Obtaining Nagios
- Compiling and installing Nagios
- Basic configuration
- Creating a new host and service
- o Creating a new e-mail contact
- o Verifying configuration
- o Creating a host group and service group
- o Creating a new contact group
- o Creating a new time period
- o Plugins and commands
- o Finding and installation of a Plugin
- o Removing a plugin
- o Creating a new command
- o Customizing commands
- o Using Nagios GUI
- Scheduling downtimes
- Generating reports
- Configuring notification

