

DevOps Online Training

DURATION : 2 Months

MODE OF TRAINING: Online

LEVEL : Advanced

DevOps Introduction

DevOps refers to an organization's mix of tools and practices, which is targeted at increasing applications, software and service delivery. The model incorporates the application development and information technology operations teams together to work as one synchronized unit. This is also where the DevOps name is derived from. Through the application development lifecycle, therefore, the teams can function in a way that promotes fast and easy development, security and quality assurance.

DevOps limits downtime that would normally occur through the phases of each stage of the application's lifecycle, such for instance between development and testing. More so, using numerous DevOps tools, the teams can automate processes that would normally be manual, which increases efficiency and cuts down on time and resources used through the development process.

The DevOps Online Training Program AnnexIT will offer you an in-depth understanding of numerous DevOps equipment inclusive of Git, Jenkins, Docker, Ansible, Puppet, Kubernetes and Nagios. This training is completely arms-on and designed in a manner that will help you turn out to be an avowed practitioner through fine practices in non-stop development, non-stop trying out, Configuration control, and non-stop Integration, and in the end, continuous tracking of software throughout its improvement existence cycle.

Pre Requisites to learn DevOps

- Basic understanding of Linux/Unix system concepts
- Familiarity with Command Line Interface (CLI)
- Familiarity with a Text Editor
- Experience with managing systems/applications/infrastructure

DevOps Course Curriculum

DevOps Introduction

- Understanding Development
- Development SDLC : WaterFall & Agile
- Understanding Operations
- Dev vs Ops
- DevOps to the rescue
- What is DevOps

- DevOps SDLC
- Continuous Delivery model
- DevOps tools for DevOps SDLC
- DevOps Roles & Responsibilities

OS, Virtualization & Networking

Linux Quickstart

- Linux Introduction, Principles & Linux distros
- Command line utilities & Basic commands
- Linux Filesystem
- Text Editors (VIM)
- Filters & I/O Redirections
- Users & Group administration
- File permissions & Ownerships
- Sudo
- Software Management: Redhat & Ubuntu
- Useful tools: ssh, telnet, scp, rsync, disk utils, backups etc
- Service & Process management
- Systems and HW stats

Networking fundamentals Part 1

- Components of computer networks
- Classification: LAN, WAN, Peer to Peer network, Server based
- Switches
- Routers
- Network Architecture
- Protocols
- Port numbers
- DNS
- DHCP
- IP Addresses

Vprofile Web Application Architecture.

- Infrastructure
- Network layout
- Services & Components
- Databases
- Datastores
- Architecture from a DevOps perspective

- Virtualization, Implementing Vprofile on VM's

Cloud computing

- Introduction to cloud computing.
- DevOps & Cloud
- Public, Private & Hybrid cloud
- IAAS, PAAS & SAAS
- Cloud computing & DevOps

AWS part 1

- Introduction to Public cloud with AWS
- Setup your own account and Manage it
- IAM: Manage users, groups, roles & policies
- Secure your AWS account
- Ec2 services: Instances, AMI, EIP, Security groups, key pairs
- EBS: Manage Volumes for ec2, backups & restores
- ELB: Load balance your own website
- S3: Use S3 to host websites & as a centralised storage
- RDS: Setup & Manage your own Highly available Database

Vprofile on AWS cloud

- Create multiple Ec2 instances for setting up Nginx and Tomcat
- Setup and use Elaticache, ElasticSearch, SQS, RDS, S3 for Vprofile backend services.
- Setup AWS Elastic Load balancer in front of Nginx or Tomcat for High Availability.
- Monitor everyting with AWS Cloudwatch.

Automation, Orchestration & Config Managment

Version control system with Git

- What is VCS & why it is needed
- DevOps use cases
- Setup your own repo with git
- Manage your code base/source code with GIT & GITHUB
- Continous Integration with Jenkins
- Introduction to continous integration.
- Build & Release and relation with DevOps
- Understanding developement and developers
- Why Continous integration
- Jenkins introduction and setup
- Jenkins projects/jobs

- Jenkins plugins
- Jenkins administration

Dockers & Containers

- What are containers
- Difference between VM's & Containers
- Hypervisor Vs Docker Engine
- Docker Introduction
- Docker installation
- Images & containers basics
- Images

Security & High Availability

Networking fundamentals Part 2

- Ip Addresses & Subnet Masks
- IP Address Ranges
- Subnetting
- Private Vs Public networks
- High Availability
- Firewalls & NACL

More DevOps tools (Optional)

Chef

- Chef Overview and comparison with Ansible & Puppet
- Understanding chef concepts.
- Writing chef recipes
- Creating cookbooks
- Hosted chef server
- Knife
- Bootstrapping/ adding nodes
- Roles
- Berkshelf
- Setting up your own chef server
- Managing chef from Chef UI
- Databags
- Chef supermarket