### Devops Course

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### Module1: Introduction to DevOps and its Necessity

**Contents** -

* History of DevOps
* Configuration management
* What is DevOps
* Why DevOps
* Dev and Ops problem
* DevOps as a solution
* DevOps' Advantages
* Continuous Integration
* Continuous Testing
* Continuous Deployment
* Continuous Delivery
* DevOps Skills

### Module 2: Virtualization

**Contents** -

* Virtualization and Vagrant Concepts
* Hypervisors - Type 1 and Type 2 hypervisors
* Pros and Cons of virtualization
* Setting up and configuring VM using Oracle Virtual box and Vagrant.

### Module 3: Version Control Tools

**Contents** -

* Version Control tools - GIT
* Basics GIT commands
* Setting up github account.

### Module 4: Continuous Integration using Jenkins

**Contents** -

* Basic of Jenkins
* Installation of Jenkins
* Running Jenkins
* Authentication and Authorization with Jenkins
* Configuring github with Jenkins.
* Setting up Jenkins Pipeline.

### Module 5: Containerization using Docker

**Contents** -

* Introduction to containerization and Docker.
* Installing Docker on VM.
* Docker images and containers.
* Integrating Docker with Jenkins.
* CI/CD using Docker and Jenkins.

### Module 6: Configuration Management tools (Chef)

**Contents** -

* Introduction to Configuration management tools (Chef, Puppet and Ansible)
* Setting up Chef DK, Chef client and workstation,
* Chef commands, recipes, cookbooks, templates
* Bootstrapping chef client using knife

**Module 7: Cloud Computing – an overview**

* Cloud Computing at a glance
* DevOps on the cloud : IaaS, PaaS and SaaS
  + Types of cloud – private, public, hybrid
  + Introduction to AWS.