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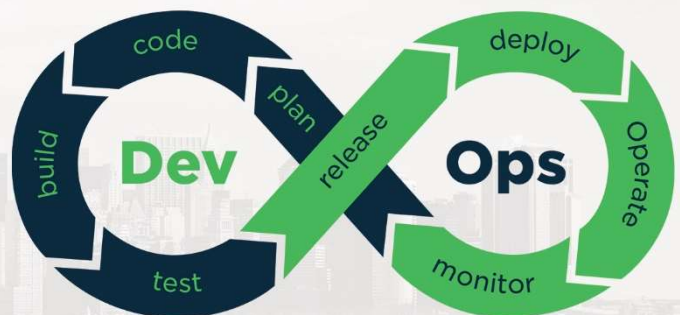
#### Experienced Trainers

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#### Flexible Timings

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#### Quick Contact

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## DevOps Training Syllabus

What is Cloud Computing  
How Cloud Computing are helpful  
Cloud's role in DevOps orchestration  
What is AWS  
Use cases in AWS  
Companies using AWS and Market trends  
Different Services offered in AWS  
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 view S3  
SNS. Cloud watch  
Understanding the Serverless (Lambda)  
DevOps History and evolution of DevOps  
What is the market trend of DevOps  
Which back ground people can switch to DevOps  
Some typical tool stack for DevOps Jobs  
How to get maximum from the course  
Client-Server and Distributed Version control system  
Advantages of Git over SVN  
Git User trends



- Different Git tools (GitDesktop. Kraken)
- Git Installation and Configuration
- Setting up Git Bash and Git UI
- Creating first repository: Local
- Git commands: add
- commit
- push
- status
- history
- Branch why what? Understanding Master
- Creating a Branch
- Merging a Branch
- Resolving Merge conflicts
- checking the difference
- Understanding the tags: Modifying
- undoing
- deleting and discarding
- Use Case of Unit Testing
- Different kind of Unit Testing
- What is JUnit
- Writing a Simple JUnit Test
- TesNG introduction
- Write a Unit Testing Case in your Favourite language.
- Use Case in Maven
- Ant vs Maven
- Maven installation and Configuration What is Maven Central
- Dependency Management why and How
- Introduction to POM
- Build lifecycle



- Maven repositories Maven plugins
- Using a POM file to run unit testing(Jenkins)
- Multi-module POM
- dependency hierarchy
- Artifactory management
- Maven Release and Snapshot
- Assignment- Create a Maven Hello world Java Project
- Run the Unit testing and and create the artifact for that
- Use Case (How Artifactories are managed)
- Artifact Lifecycle
- Basic use of Sonatype Nexus
- Artifactory Live demo
- Use Case WebServer Deployment in DevOps
- Architecture
- Different types of Webserver
- Proxy servers
- Mail Server
- Installation of Tomcat
- Manual Deployment
- Deploying a Web application using Maven
- Idea about Automated Deployment using Continuous Integration
- Create a Tomcat Server and Deploy the application manually
- Create a Tomcat Server and Deploy the Application Using Maven
- Benefits of Code Profiling tool
- Use case of Code Profiling tool
- Different kind of Code quality tools
- Over view of Sonar
- Installation of SonarQube
- Installation fo Code Analyser



- Sonar profiles
- Running Sonar for a project
- Configuring SonarQube for one Sample Java project.
- Why Jenkins?
- What is Continuous Integration and Continuous Deployment (Use Case1)
- Jenkins installation and Configuration
- Running Jenkins as windows service
- Deploying Jenkins in Tomcat Server
- Jenkins Global Configuration
- Building your first Hello world job
- Jenkins User Management
- Jenkins Plugin management
- Jenkins SCM configuration (Git SVN)
- Understanding the Jenkins workspace
- Build
- pre build and post build job
- Jenkins Unit testing
- Automation testing
- Mail notification
- Jenkins Reporting
- Matrix and trend
- Jenkins remote executor
- Master Slave configuration in Jenkins
- Jenkins Most used plugin
- Advanced Reference
- Jenkins pipeline plugin
- Groovy scripting
- Scriptler



- 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
- Configuring Jenkins Hub and Node in the cloud (AWS)
- Configuring a Selenium Desktop node with a Linux Server (AWS)
- Case Study
- Real time implementation of Automated role back
- Multi branch Deployment.
- What is Virtual Machine
- Why we need it
- What is Container
- Difference between Containers and Virtual Machine
- Docker Installation and Configuration
- Major Docker Components
- Container Management Running Containers
- Dockerfile
- Working with Registries
- Docker Port Forwarding
- What is Configuration Management
- Configuration Management Challenges
- Configuration Management in DevOps Ecosystem
- Some tools
- Trends
- What is Ansible
- Advantages of Ansible



- Environment Provisioning
- Configuration Deployment
- Installation of Ansible (AWS)
- Modules
- Playbooks and Writing a Playbook
- What is Monitoring
- Why we need monitoring
- Different tools of monitoring
- What is Nagios
- Nagios Architecture
- Different components of Nagios
- A typical Nagios Dashboard
- Installation and Configuration
- What is Container and Containerization
- Different types of Containers
- DOCKER: What why how ?
- Use Case 1 (Why Docker)
- Docker installation
- Docker VS Vagrant
- Docker Run commands
- Advanced Docker
- run commands
- Docker volume persistence
- Overview of Docker Compose
- Docker Hub
- Creating your own image
- Advanced reference
- Create a Docker container to run Jenkins
- Create a Docker container to run a CI/CD pipeline



- Use case 1 (Why puppet)
- Puppet installation and configuration
- Resource implementation
- Managing files and executing programs
- Testing your code Using Puppet Languages
- Variables Numbers and Strings
- Facts
- control flow
- Regex
- Loops
- Resource Processing
- Advanced Course
- Puppet Modules
- Define QA environment
- Changing Base Module path
- Separation of Data from Code
- Introduction to Hiera
- Hiera Backend creation in Puppet
- Variables and Function lookups
- Using Puppet modules
- Puppet Forge-Server- GitHub repo.





## Other Activities

### Assessments

- Objective Assessments

- Syntactical based

- Scenario based

**Note: At least 2 objective based assessments in each module**

- Hands On – Practical Assessments

- Scenario based

**Note: At least 2 Hands on assessments in each module**

### Assignments

- Hands On – Practical Assignments

**Note: At least 4 Hands on assignments in each module**

### Tasks – Home Work

- Regular tasks on each module

**Note: Tasks are focused more to improve self learning**

### Resume Support & Interview Preparation

- Work on one or two mini projects

- Discuss and convert the current working project into DevOps to add in resume & to explain DevOps experience in interviews