

Devops

COURSE TRAINING PROGRAM

DevOps Training Content

COURSE CONTENT

INTRODUCTION TO DEVOPS

- What is DevOps?
- Why DevOps?
- Benefits of DevOps
- Overview of DevOps

PROVISIONING

- Vagrant – What is Vagrant – compare with Terraform and Docker
- Installation and setup
- Vagrant commands

DEVOPS INSTALLATION AND SETUP

- Installation of DevOps Tools
- Installing the required tools Git, Jenkins, Ansible, Puppet, Docker
- Installing the Chef, Nagios, Maven

SOFTWARE VERSION CONTROL

- Basics of Software Version Control
- Complete concepts in Version Control Systems
- Study about SCM, Command Line, CI tool Jenkins, SVN, CVS, Clearcase
- Real time project study in Maven Project and Jenkins

AUTOMATING BUILD AND TEST

- Basics about the Automating Builds – Maven, Ant
- Overview of Jenkins Pipeline
- Setting up continuous Delivery Pipeline using Jenkins
- Building a continuous Delivery Pipeline Using Jenkins
- DevOps Test Automation tools and framework
- DevOps Testing Strategy

CONTINUOUS INTEGRATION(CI)

- Study about DevOps Continuous Integration
- DevOps Continuous Integration Tools Comparison
- DevOps Continuous Integration and Continuous Delivery
- DevOps Continuous Integration Pipeline, Jenkins, Testing
- Benefits of DevOps Continuous Integration

DOCKER

- What are Containers
- Difference between VM and Container, Docker Fundamentals
- Creating & Running Docker Images, Image Distribution
- Creating Docker Registry, Compose Scripts, Remote Docker Image

DOCKER COMMANDS AND BEST PRACTICES.

- Networking concepts in Docker
- Using Docker Volume
- Creation of a Dockerfile, a text file to contain the commands to create an image

CONTAINERIZATION WITH KUBERNETES

- Introduction to Kubernetes, the cluster architecture of Kubernetes
- creating a Kubernetes cluster
- what is YAML, creating YAML with Kubernetes deployment
- Kubernetes service, dashboard installation
- Kubernetes rolling updates, using an app with the dashboard

PUPPET CONFIGURATION MANAGEMENT TOOL

- Introduction to Puppet
- Architecture of Puppet
- Constructs of Puppet and the various terminologies in Puppet
- Configuring Puppet
- Using Puppet Manifests
- Puppet commands

CHEF

- Chef Fundamentals, Chef environment, Chef Cookbooks & Knife Commands
- Node Object & Search, Data-bags, Roles
- Deploying Nodes in Production and using the Open-Source Chef Server, Vagrant file

ANSIBLE

- Introduction to Ansible
- Configuration, Writing Ansible Playbooks
- Ansible based Configuration Management
- Different Roles
- Command Line usage.

NAGIOS – PERFORMANCE AND AUTOMATED MONITORING

- Introduction of Nagios
- Nagios Setup
- Commands, Objects, notifications,
Configure Nagios to monitor webserver, Load Balancer (HAProxy, NginX),
+ Project 1 & project 2

Course Completion Additional Benefits

- Resume Preparation Guidance
 - Certifications and Job Assistance
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