

BORGWARD TECHNOLOGY INDIA PVT LTD

DevOps Syllabus

Introduction to Devops

- What Is Devops
- History of Devops
- Devops definition
- DevOps Main Objectives

DevOps and Software Development Life Cycle

- Waterfall Model
- Agile Model

Continuous Integration & Deployment

- Jenkins

Containers and Virtual Development

- Docker
- Vagrant

Configuration Management Tools

- Ansible
- Puppet
- Chef

Cloud Computing

- What is Cloud?
- Evolution of Cloud Computing
- IAAS (Infrastructure as a Service)
- SAAS (Software as a Service)
- PAAS (Platform as a Service)
- Private, Public and Hybrid Cloud

Public Clouds

- Amazon Web Services
- Microsoft Azure
- Google Cloud Services

LINUX Basic and Admin

- Linux OS Introduction
- Importance of Linux in DevOps
- Linux Basic Command Utilities
- Linux Administration
- Environment Variables
- Networking
- Linux Server Installation
- RPM and YUM Installation

Shell Scripting

- Introduction
- Variables
- Flow Controls
- Loops
- Functions
- Lists
- Manipulating Strings
- Reading and Writing Files
- Positional Parameters

Continuous Integration – Jenkins

- Introduction to Jenkins
- Continuous Integration with Jenkins
- Configure Jenkins
- Jenkins Management

Scheduling build Jobs

- POLL SCM
- Build Periodically

Maven Build Scripts

Support for the GIT version control System

Different types of Jenkins Jobs

Jenkins Build Pipe Line

Parent and Child Builds

Sequential Builds

Jenkins Master & Slave Node Configuration

Jenkins Workspace Management

Securing Jenkins

- Authentication
- Authorization
- Confidentiality
- Creating Users

Jenkins Plugins

- Installing Jenkins Plugins
- SCM plugin
- Build and test

Version Control-GIT

- GIT Features
- 3-Tree Architecture
- GIT – Clone /Commit / Push
- GIT Hub Projects
- GIT Hub Management
- GIT Rebase & Merge
- GIT Stash, Reset, Checkout
- GIT Clone, Fetch, Pull

Build tool- Maven

- Maven Installation
- Maven Build requirements
- Maven POM Builds (pom.xml)
- Maven Build Life Cycle
- Maven Local Repository (.m2)
- Maven Global Repository 5
- Group ID, Artifact ID, Snapshot
- Maven Dependencies
- Maven Plugins

ANSIBLE

- Introduction to Ansible
- Ansible Server Configuration
- Infrastructure Management
- SSH Connection in Ansible Master
- YAML Scripts

Host Inventory

- Hosts and Groups
- Host Variables
- Group Variables
- Host and Group Specific Data

Ad-hoc Commands

Playbooks

- Variables
- Conditionals
- Loops
- Blocks
- Handlers
- Templates

Modules

- Core Modules
- Extra Modules

Ansible Roles

Docker

- How to get Docker Image?
- What is Docker Image
- Docker Installation

Working with Docker Containers

- What is Container
- Docker Engine
- Crating Containers with an Image
- Working with Images

Docker Command Line Interphase

Docker Compose

Docker Hub

Docker Trusted Registry

Docker swarm

Docker attach

Docker File & Commands