

WINTER INDUSTRIAL TRAINING/INTERNSHIP 2019

BASH 102-19 DevOps Specialization with AWS Duration: 30 Days

Introduction to DevOps

- o What is DevOps?
- History of DevOps
- Dev and Ops
- o DevOps Definitions
- DevOps and Software Development Life Cycle
- DevOps main Objectives
- o Infrastructure As A Code
- Prerequisites for DevOps
- o Tools (Kubernetes, Ansible, Jenkins, Chef, Docker, Vagrant and so on)
- Continuous Integration and Continuous Development

Version Controls Systems

- Subversion Controls/Git
- Working with Local Repositories
- Working with Remote Repositories
- Branching
- Merging
- Cloning
- o Fetch/pull
- Rebase and Tag
- Collaboration
- o Multi Project

Tomcat Web Server

- o Installation and Configuration
- Tomcat Manager
- o Application Management
- o App Deployment



Jenkins Frameworks

- Introduction to Jenkins
- Jenkins Installation
- User Profile
- User Management
- o Security Management
- Plugins Management
- o Builds Setup
- Integration with Git
- Integration with Maven
- Integration with Tomcat
- Integration with Maven

Lamp Setup

- o Apache/HTTPD Web Service
- Installation of Apache
- Configuration of Apache
- Static Pages
- Dynamic Pages
- o PHP Integration

Capstone Project: Installation of Word Press with LAMP using Ansible

- Introduction to Vagrant
- Vagrant Terminologies
- Installation of Vagrant
- Vagrant Proxy Project

Docker

- Introduction to Docker
- Docker Terminologies
- Docker Orchestration
- Installation of Docker
 - Installing and managing Docker Engine
 - Execution Driver: libcontainers vs LXCAUFS
 - OverlayFS, Device Mapper



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QdHOC NETWORKS

- o Introduction and difference between docker, docker-engine and docker-machine
- Installation of docker in Linux and windows.
- Docker Image creation
 - Docker run
 - Docker inspect
 - Docker images
 - Docker union mounts and layering
- Docker Networking
 - Understanding docker bridge networking
 - Creating networking bridge
 - Service discovery using docker
 - Accessing docker from remote host
- o Docker Basic Operation
 - Docker export and import
 - Committing and creating docker images
 - Creating base image
 - Docker hub and public and private registry
 - Extended docker builds
- Docker Volume and Docker file
 - Understanding docker sharing with docker volume
 - Managing docker with Docker file
- Introduction to CoreOS and Atomic host
 - Basic introduction and its service to Core OS
 - Understanding project atomic host
- Docker advanced topics
 - Docker clustering with swarm
 - Docker compose and docker linking
 - Docker clustering and orchestration with Google Kubernetes
 - Discussion about docker vs rocket
 - Basic idea and discussion about AWS containers server

Certified Kubernetes Administrator (CKA)

- Scheduling
- Logging/Monitoring
- Application Lifecycle Management
- Cluster Maintenance
- Security
- Storage





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adhoc networks

- o Troubleshooting
- o Core Concept
- o Networking
- o Installation, Configuration & Validation