

DEVOPS

DETAILED COURSE CONTENT

Duration: 25-30 Hours



Topics

- ▶ Introduction to DevOps
- ▶ Linux basics
- ▶ Shell Scripting
- ▶ Chef
- ▶ Puppet
- ▶ Ansible
- ▶ Nagios
- ▶ Git
- ▶ Maven
- ▶ Jenkins
- ▶ Dockers
- ▶ Cloud Computing
- ▶ AWS

Linux

- ▶ What is Operating system
- ▶ Types of Operating System
- ▶ Structure of Operating System
- ▶ History of Linux & Unix
- ▶ Difference between Linux and Unix
- ▶ Difference between Linux and Windows
- ▶ Linux Features
- ▶ Linux Flavours

- ▶ Redhat Linux Installation
- ▶ Linux File System Hierarchy
- ▶ Linux Bash Command Line Utilities
- ▶ GUI editors V/s CLI Editors
- ▶ Linux Partition Management
- ▶ Runlevels
- ▶ Linux Boot process
- ▶ VMware overview

Shell Scripting

- ▶ Need of scripting
- ▶ Scripting with schedulers
- ▶ Variables
- ▶ Loops
- ▶ grep
- ▶ Awk
- ▶ Sed
- ▶ Real time scripts

“

Configuration Management Tools

”

Chef

- ▶ Introduction to Chef
- ▶ What is chef
- ▶ Difference between Chef open source and enterprise
- ▶ Architecture Design of Chef
- ▶ Resources of Chef
- ▶ Overview of Chef server, Organisation and Starter-Kit
- ▶ Overview of Chef Workstation
- ▶ Overview of Chef Client

- ▶ Access to Chef Server
- ▶ Installation of Chef work station
- ▶ Installation of Chef clients
- ▶ Chef Boot strap
- ▶ Addition of chef client to chef server
- ▶ Introduction to cook book and recipe
- ▶ Cookbook creation and writing recipes
- ▶ Locating chef clients from server

- ▶ Knife commands
- ▶ Executing cookbooks on clients

Puppet

- ▶ Introduction to Puppet
- ▶ Difference between puppet open source and enterprise
- ▶ Architecture of Puppet
- ▶ Resources of Puppet
- ▶ Installation and configuration of Puppet Master
- ▶ Installation and configuration of Puppet Agent
- ▶ Addition of agents to Puppet Master
- ▶ Puppet manifests

- ▶ How to write basic manifests
- ▶ Executing manifests from Agents

Ansible

- ▶ Introduction to Ansible
- ▶ Architecture of Ansible
- ▶ Installation of Ansible Server
- ▶ SSH key generation on Ansible Server
- ▶ Key Based connection to Ansible Nodes
- ▶ Introduction to Playbooks
- ▶ Executing playbooks on Ansible nodes

Version Control Tools

- ▶ SVN v/s GIT
- ▶ Local Repository V/s Online Repository
- ▶ Installation of GIT
- ▶ GIT Initialization
- ▶ Tracked v/s Untracked files
- ▶ Git Commit
- ▶ Git Logs
- ▶ Branches in GIT

- ▶ GIT Merge
- ▶ Git Clone
- ▶ Git Push
- ▶ Git Pull

Build Tool

Maven

- ▶ Introduction to Maven
- ▶ Introduction to POM.xml
- ▶ Generating POM.xml
- ▶ Execution of Maven Life Cycle

Build Tool

Maven

- ▶ Introduction to Maven
- ▶ Introduction to POM.xml
- ▶ Generating POM.xml
- ▶ Execution of Maven Life Cycle

“

Continuous Integration Tools

”

Jenkins

- ▶ Introduction to Jenkins
- ▶ Installation and configuration of Jenkins
- ▶ Overview of Jenkins Dashboard
- ▶ Continuous Integration with Jenkins
- ▶ Creating jobs with Jenkins
- ▶ Maven integration with Jenkins
- ▶ Java integration with Jenkins
- ▶ Git integration with Jenkins

- ▶ Jenkins Plugins
- ▶ Jenkins Build Pipeline
- ▶ Jenkins Upstream and Downstream

Dockers

- ▶ Overview of Containers
- ▶ Containers v/s HyperVisors
- ▶ Installation of Docker
- ▶ Docker commands
- ▶ Managing DockerHub
- ▶ Introduction to Swarm Manager
- ▶ Installation of Docker Swarm manager
- ▶ Adding Docker Noders to Swarm Manager

“

Monitoring tools

”

PROJECT 1: OVERSEAS using NAGIOS

Knowledge Transfer:

- ▶ Definition of Monitoring, Benefits and types of Monitoring tool
- ▶ Process based concepts on Threshold value, Alerts, Priority levels and Escalation Format

Roles of Linux Engineer:

- ▶ Worked as a Linux Engineer in 24/7 team responsible to maintain servers and provide FCR at any point of time.

- ▶ Monitoring / Troubleshooting the following alerts / issues.
 1. CPU
 2. Load Average
 3. Memory Usage
 4. Network Issues
 5. Disk Space issues
 6. Service Status
 7. Website Blips

- ▶ Perform the TRIAGE with regards to the alerts by following SOP and find the RCA.
- ▶ Escalating the alerts to level-2 team incase unable to provide resolution.
- ▶ Creating a production ticket for each and every alert.
- ▶ Open trouble tickets with the 3rd party service provider for any network outages, site blips, database issues & Disk failed issues.

Cloud Computing

- ▶ Understanding of Cloud Computing
- ▶ Overview of On-Premises Data Centre
- ▶ Types of Cloud Computing
- ▶ Services of Cloud Computing

AWS Overview

EC2 INSTANCES and its types

- ▶ Spot Requests
- ▶ Reserved Instances
- ▶ Dedicated Hosts
- ▶ Scheduled Instances

IMAGES

- ▶ AMIs

ELASTIC BLOCK STORE

- ▶ Volumes
- ▶ Snapshots

NETWORK & SECURITY

- ▶ Security Groups
- ▶ Elastic IPs
- ▶ Placement Groups
- ▶ Key Pairs, Network Interfaces

LOAD BALANCING

- ▶ Load Balancers
- ▶ Target Groups

VPC

THANKS!

For more details, you can contact us



91 988 502 2027



info@svrtechnologies.com