

DevOps Course – Job Ready Training

Get placed in 2 or 3 months with top salaries

1. Introduction to DevOps

- a. What is DevOps?
- b. DevOps Responsibilities
- c. Continuous Integration
- d. Continuous Delivery & Deployments
- e. Configuration Management & Monitoring
- f. Microservices & Containerization
- g. Advantages of DevOps
- h. DevOps Jobs & Future

2. Introduction to Version Control System

- a. Git with GitHub/Bitbucket
- b. Benefits of SCM tools
- c. Installation & Configuration
- d. Matterring using git for DevOps activities
- e. Clone, Push, Fetch, Revert, Reset, HEAD, Diff
- f. Reviewing and Merging with “Pull Request”
- g. Managing Branches & Branching Strategies
- h. Managing Branch permissions
- i. Git Init & Git fork
- j. Resolving Merge Conflicts using diffmerge tool
- k. Merging Strategies
- l. Git Tags
- m. Stash, Rebase, Checkout & Cherry-Pick

3. Maven - Build Tool

- a. Introduction to build tools
- b. Importance of build tools
- c. Going through pom.xml
- d. Working with build commands
- e. Build life cycles, Maven Plugins
- f. Understanding artifacts

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- g. Maven Repositories
- h. Maven dependency management
- i. Integrating with Sonatype Nexus
- j. Integrating with Docker

4. Managing Artifacts

- a. Installing Sonatype Nexus
- b. Configuring Nexus as a Service
- c. Managing maven dependencies
- d. Storing Docker Images

5. Jenkins - Automation Tool

- a. Jenkins Installation & Configuration
- b. Creating Freestyle and Pipeline Jobs
- c. Advanced Jenkins Pipeline Jobs (Groovy DSL)
- d. Parameterized builds, Build Triggers
- e. Configuring GitHub Webhooks
- f. Running Parallel Tasks
- g. Master Slave Configurations
- h. Managing Users Permissions, Plugins
- i. Managing Credentials
- j. Managing Tools (Git, Maven, Docker, Ansible)
- k. Email & Slack Notifications
- l. Automating deployments to Kubernetes cluster.
- m. Implementing CI & CD using Docker, Ansible, Nexus & Kubernetes
- n. Git Maven & Docker Integration
- o. SonarQube Integration
- p. Maven Nexus Integration

6. Ansible - Configuration Management

- a. Introduction to Ansible
- b. Ansible vs Other tools
- c. Learning YAML & Writing Playbooks
- d. Writing reusable modules using Ansible roles
- e. Ansible Facts, Syntax checking, Exception Handling
- f. Ansible loops & Conditions
- g. Static & Dynamic inventory
- h. Hosts Groups Variables & Group Variables
- i. Ansible connection types

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- j. Encrypting sensitive data using Vault
- k. Ansible rolling deployments
- l. Ad-hoc commands
- m. Writing Playbooks
- n. Automating SQL deployments
- o. Limiting playbook executions by hosts and tags
- p. Writing reusable playbooks
- q. Ansible modules
- r. Dynamic includes
- s. Including plays and tasks
- t. Dry-runs tags, Conditions loops

7. Docker - Containerization

- a. Introduction to Dockers & Microservices
- b. Docker vs VMs
- c. Microservices Architecture
- d. Monolithic applications
- e. Why Dockers & benefits
- f. Dockerizing Applications using Docker Instructions
- g. Docker Architecture & Demons
- h. Volumes Environments
- i. Dockers in CI/CD workflow
- j. Integrating with Jenkins
- k. Docker Compose

8. Kubernetes In Production

- a. Introduction to Kubernetes
- b. Understanding Kubernetes architecture
- c. Setting Kubernetes cluster
- d. Kubernetes, Pod, Service, Deployment, Replica Set
- e. Kubernetes Managing Secrets
- f. Kubernetes Namespaces
- g. Using rolling deployments
- h. Liveness & Readiness probes
- i. Taints and tolerations
- j. Undoing rollouts
- k. Deploying to k8s through Jenkins
- l. Stateful and Stateless Applications

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- m. Using helm for package management
- n. Monitoring Kubernetes Nodes and Pods
- o. Networking and DNS
- p. Volumes, Persistent Volumes & Volume Claims

9. Nginx (reverse proxy and load balancer)

- a. Introduction to Nginx
- b. Installing Nginx
- c. Configuring Nginx as a reverser proxy
- d. Configuring Nginx as a load balancer
- e. SSL Certs configuration

10. Monitoring & Logging

- a. Installing & Configuring Prometheus and Grafana for monitoring
- b. Setting up ELK stack for centralized logging.

11. Linux Essentials for DevOps

- a. Linux fundamentals
- b. Linux important commands
- c. Managing Users Groups & Permissions
- d. Linux troubleshooting commands
- e. Password less Authentication
- f. Troubleshooting Issues
- g. ssh, scp, ps grep sed & find
- h. Package managers (RPM & YUM)
- i. top netstat vmstat & vi editors

12. Project Management Tools

- a. JIRA, Slack & Agile Methodology

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