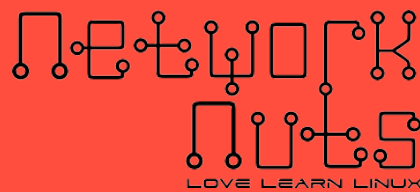




2020



DEVOPS MASTER PROGRAM

A R NETWORK NUTS PVT. LTD.
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Program Overview

Prepare for a career in the fast-growing field of DevOps, bridging the gap between software developers and operations, with this DevOps Master Program.

You'll become an expert in the principles of continuous development and deployment, automation of configuration management, inter-team collaboration, and IT service agility using modern DevOps tools such as Ansible, Puppet, Docker, GIT, Kubernetes & Jenkins.

01 Introduction To Devops

- Understanding Devops
- Devops Problems & Solutions
- Understanding Devops Infrastructure Layouts
- Challenges with the Traditional Approach
- Addressing Challenges Through DevOps
- DevOps Approach to the Challenges
- Overview of DevOps Tools
- Best Practices for DevOps
- Categories of DevOps Tools
- Devops Concepts at Enterprise Levels

DEVOPS

02 Automation with Ansible

- Introduction About Automation
- Understanding Ansible architecture
- Ansible Modules and Inventory
- Task Management with Ad-hoc commands
- How to write Playbooks
- Variables And Facts In Playbook
- Conditions & Loop in playbook
- Notify & Handlers In playbook
- Managing Templates with Jinja2
- Roles Structure and Ansible Galaxy
- Vault Encryption In Ansible for security

03 Configuration Management with Puppet

- Introduction to Puppet Architecture
- Ansible & Puppet Differences
- Installation Puppet Server and Client
- Puppet DSL Structure Introduction
- Creating Puppet Manifests
- Using Puppet classes
- Variables in Puppet Manifests
- Facter in Puppet
- Using Conditions in Puppet Manifests
- Templating in Puppet
- Understanding Puppet Modules
- Using Puppet Bolt

04 Version Control with GIT

- Introduction VCS
- Need of Version Control in Devops
- Type of Vcs Tools and working Style
- GIT Work Flow
- Working Locally with Git
- Working Remotely with GitHub
- Deploy the Files to GitHub via Git
- Branching and Merging
- Resolve merge Conflict
- GIT reset and Stash operation
- How to setup Git on Premises Hardware

05 Containerization with Docker

- Introduction to Docker
- Understanding Docker Components
- Installing Docker
- Managing Docker Images
- Working with Container Commands
- Using Dockerfile
- Understanding Docker Volume
- Backing Up Docker Images
- Restore Operations in Docker
- Understanding Docker Networking
- Working with Docker Swarm

06 Continuous Integration with Jenkins

- Introduction to Jenkins
- Install and Setup Jenkins
- Plugin Management in Jenkins
- Project Test and Auto deployment on Application Server
- Build Pipeline View Project
- Configure Remote tasks Using Jenkins
- Jenkins Slave Node Configuration
- Generate Reports & Enable Mail Notification
- Intregation With Ansible, Docker & GIT Server

07 Orchestration with Kubernetes

- Introduction to Kubernetes
- Kubernetes Cluster Architecture
- Installing Kubernetes Cluster
- Exploring your Cluster
- Creating a Deployment in Kubernetes
- Creating a Service in Kubernetes
- Understanding Pod in Kubernetes
- Replication & Deployment Configuration in Kubernetes
- Using Rolling Updates in Kubernetes