



Quality Training For Better Career **Since 2001**

DevOps Course Details

Duration: 120 Hours

DevOps is a Software development methodology that combines software development (Dev) with information technology operations (Ops) participating together in the entire service lifecycle, from design through the development process to production support.

MODULE 1 - DevOps Introduction

Introduction to SDLC, Waterfall Model, Advantages of Waterfall Model, Dis-Advantages of Waterfall Model, Agile Methodology, Scrum, DevOps History, DevOps Lifecycle, Before DevOps and After DevOps, Advantages, Road Map, Add on Advantages

MODULE 2 - Introduction to Cloud Computing and AWS

Cloud computing and its Advantages, Service models in Cloud, What is the AWS?, Deployment models in AWS, How to work within free tier limits in AWS?, Cloud Market, Top 10 Cloud Provider's, Diff blw AWS, AZURE & GCP, Main Roles, Certifications

MODULE 3 - Linux

Linux Introduction, Flavours of Linux, Linux History, Linux Advantages, System Information, Hardware Information, File Commands, VIM Editor, Users, Groups, File Permissions, Networking, Compression/Archive, Disk usage, Package Installation, Scripting, FHS/Directory System, Linux Filters, Linux Man pages, SED Filters, GREP Filters, Project

MODULE 4 - AWS Services

What is the AWS?, AWS Global infrastructure, How to create AWS account?, How to work AWS within free tier limitations?, Identity and access management, Simple storage service(S3), Commandline interface (CLI), Virtual private cloud (VPC), Elastic Compute cloud (EC2), Route 53, CloudWatch, Relational Database Service (RDS), CI/CD, Key Management service (KMS), Elastic Beanstalk

MODULE 5 - GIT

VCS History, Revision Control System, Subversion, GIT Stages, Working Directory, Staging Area, Repository (Local, Central, Remote), GIT Installation, GIT Add, GIT Commit, GIT Status, Commit a file using GIT, Configuration of USER, Ignoring Content, GIT HUB, GIT REPO's (Private & Public), GIT PUSH, GIT PULL, GIT Cloning, GIT Branch, GIT Merge, GIT FORK, GIT STASH, GIT Revert, GIT HUB, File Add, Advantages & Disadvantages, Compare & Pull Request, Git Cherrypick, Git Tags, Git Merge, Conflicts, Git Rebase, Danger Zone Options, Making Public Repo As Private, Ownership Transfer, Archiving Repos, Deleting Repos, Accessing The Private Repos



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MODULE 6 - MAVEN

Introduction, JAVA Project Structure, Problems without MAVEN, What MAVEN does?, What is build tool?, POM.XML File, Requirements for build, MAVEN Architecture, MAVEN Build Lifecycle, MAVEN Compile, Problems without MAVEN, MAVEN Test, MAVEN package, MAVEN Deploy, MAVEN clear, MAVEN directory structure, Generating WAR file, Generating JAR file, MAVEN vs ANT

MODULE 7 - Jenkins

Introduction, Workflow, Advantages, Jenkins alternatives, Master-Slave Concept, Jenkins Setup, JAVA Installation, GIT Integration, MAVEN Integration, Jobs in Jenkins, Maven Job Task, Parameter Building, Choice Parameter, File Parameter, Branch Building, Schedule Project, CRON syntaxes, Webhooks, POLL SCM, Linked Projects, Up stream, Down stream, Pipelines workflow, Declarative Pipeline, Disabling the project, Console Output Views, Shell Executing, Plugin Management, Permalinks, Pipelines, Jenkins File, Jenkins Pipeline Components, Pipeline View, Scripted Pipeline, Declarative pipeline, Hello world pipeline, Integration pipeline, Editing Build Info, Labels, User Management, Local Variable, Global Variable, Timeout, Time Stamps, Custom Workspace, Workspace Access, Pipeline Logs, Plugin Management, Jenkins File, Pipeline As A Code, Paac Variables, Paac Parameters, Paac Input Parameter, Paac Postbuild, Blue Ocean, Build Pipeline View, Working with Ansible, Working with Docker, Terraform integration

MODULE 8 - Docker

Introduction, Docker Architecture, Docker Components, Docker Commands, Build image from container, Creating Custom Images, Docker File, Docker file components, Docker file creation, Docker volumes, Users of volumes, Creating volumes, Creating volumes by using commands, Volumes (Container-Container), Volumes (Host-Container), Creating a volume from file, Docker port mapping, Connecting Jenkins dashboard, Docker HUB, Docker Push, Up stream, Down stream, Docker Pull, Docker Login, Some advance commands, Docker Swarm Introduction, Docker Swarm architecture, Docker Swarm components, Docker Swarm manager nodes, Creating a service, Docker Swarm VS K8s, Advance Commands, Docker Compose, Docker Compose Advantages, Docker Compose Installation, Docker Compose File, Docker Compose File In Json, Docker Compose File In Yaml, Docker Compose Single Service, Docker Compose Multi Services, Docker Stack, Docker Deployment, Integration with Jenkins

MODULE 9 - NAGIOS

History, Why NAGIOS?, Features, Phases of Monitoring, NAGIOS Architecture, How it works?, Pre Requisites, Dashboard Overview, Installation of NAGIOS



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MODULE 10 - ANSIBLE

History, Advantages & Disadvantages, ANSIBLE workflow, Chef workflow, ANSIBLE Inventory Host Pattern, Host Pattern, Ad-Hoc Commands, ANSIBLE Modules, Playbooks, YAML, Variables, Handlers, Loops, Conditions, Vault Roles, Galaxy, ANSIBLE Tags, ANSIBLE with different tools, Ansible Multi-Tags, Ansible Dry Run, Ansible Raw Module, Ansible Shell, Ansible File Operations, Ansible Pip, Ansible Galaxy, Ansible Userinfo, Ansible Tower, Integration with Jenkins

MODULE 11 - KUBERNETES (K8s)

History, Online Platform for K8s, Cloud Based K8s, Installation Tools, Container Scaleup Problems, Features, Dockets Swarm vs K8s, Architecture, Master Components, Node Components, Working with K8s, Role of Master, Components of Control Plane, Node Components, POD, MINKUBE Installation, KUBECTL Installation, Deploying an APP, Kube-API Server, Etdc, Features, Kube-Scheduler, Control Manager, Kubelet, Container Engine, Kube-Proxy, Multi Container Pod, Limitations, Important Notations, Working, Kops Introduction, Cluster Setup By Kops, Pod Setup, Multipod Creation, Manifest Files, Name, Spaces, Scale up Problems, Features, Docker Swarm Vs K8S

MODULE 12 - TERRAFORM

Introduction, History, Uses, Advantages & Disadvantages, TERRAFORM Setup and Installation, TERRAFORM INIT, TERRAFORM Plan, TERRAFORM Apply, TERRAFORM Destroy, Creating a Terra file (MAIN.TF), Creating VPC, Creating EC2, Creating S3 Bucket, Creating Security Groups, Creating Subnets, Role Based Authentication, S3 backend setup, TERRAFORM variables, String, Number, Boolean List, TERRAFORM loops, TERRAFORM workspaces, TERRAFORM locals, TERRAFORM outputs, TERRAFORM multiple TFVAR files, Creating Efs, Terraform Modules, Terraform Alias, Terraform validate, Working with Files and folders, Meta arguments, Counting index