



Technical Guftgu

Established Under Ministry of Micro, Small and Medium Enterprises, Govt. of India)

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Website: www.technicalguftgu.in

- ✓ Certification provided
- ✓ Recordings Provided
- ✓ In Hindi
- ✓ Expert Trainers

Docker and Kubernetes -Zero to Hero course

Course Name	Docker & Kubernetes Training
Duration	45 Hours
Prerequisite	Linux System Administration (CentOS7 / RHEL7 preferred)
Qualification	B. Tech / MCA / M.Sc. (IT or CS) / BCA / Others
Software Used	Docker , Kubernetes (K8s), AWS Cloud
Operating System	CentOS 7
Job role	DevOps Engineer

Note: The preferable platform for Docker and K8s will be AWS cloud

Module 2: Basic Linux essentials commands

1. Copy, paste, move, creation of files, Editing using vim
2. User management: create, delete manage user
3. Permission in Linux, installation of packages using rpm and yum

Module 3: GIT – A version control tool

1. Knowing about Version control
2. Git – A CLI
3. Essentials of GIT in industry
4. How to setup GIT
 - Installing Git
 - First-Time Git Setup
 - Getting a Git Repository
5. Working with various commands in GIT

6. Recording Changes to the Repository

- How to check the Status of Your Files
- How to track New Files
- Staging our modified files
- Ignoring Files from GIT
- Viewing Your Unstaged and Staged Changes
- How to commit Your Changes
- Skipping the Staging Area and commit
- Removing Files from GIT

7. Viewing the Commit History

- Limiting Log Output
- Using a GUI to Visualize History

8. Undoing Things

- Changing Your Last Commit
- Unstaging a Staged File
- Unmodifying a Modified File

9. Working with Remotes

- Showing Your Remotes
- Adding Remote Repositories
- Fetching and Pulling from Your Remotes
- Pushing to Your Remotes
- Inspecting a Remote
- Removing and Renaming Remotes

10. Branching and Merging in Git

- What a Branch Is
- Basic in Branching and Merging
- Branch Management in GIT
- Branching Workflows and its usage
- Remote Branches – create and delete
- Rebasing

11. Git workflows

Module 4: Jenkins – Continuous integration

1. Essentials of Continuous Integration
2. An example scenario where CI is used
3. Know about Jenkins and its architecture in detail
4. Jenkins tool Management in detail
5. Installing Jenkins
6. Post-installation setup wizard
 - Unlocking Jenkins
 - Customizing Jenkins with plugins
 - Creating the first administrator user
7. Know about User management in Jenkins
8. Authentication
 - Jenkins own database user creation
 - Options to enable integration with LDAP
9. Authorization
 - Matrix based authorization
 - Project based authorization
10. Creating jobs and automatic build settings
 - What is Jenkins Pipeline?
 - Why Pipeline?
 - Integration with GIT
 - How to enable project based authorization for a job
 - Source code management while creating jobs
 - Triggering automated build
 - Know about post build options for jobs like notifications, trigger another build, publishing reports, etc.
 - Adding a slave node to Jenkins
 - Building Delivery Pipeline
 - Notification settings in Jenkins

- Plugin management in Jenkins

Module 5: Docker – A containerization technology

1. Docker Containers Introduction

- What is a Docker
- Use case of Docker
- Platforms for Docker
- Dockers vs. Virtualization Architecture

2. Docker Architecture

- Understanding the Docker components

3. Installation

- Installing Docker on Linux
- Docker commands
- Provisioning

4. Docker Hub

- Downloading Docker images by syncing with local system
- Custom configuration of Docker images
- Uploading the images in Docker Registry
- Understanding the containers
- Running commands in container
- Running multiple containers.

5. Create Custom images

- Creating a custom image
- Running a container from the custom image. Publishing the custom image.

6. Docker Networking

- Accessing containers
- Linking containers
- Exposing container ports
- Container Routing

7. Docker Volume

8. Docker Compose

- Installing The Docker compose

- Terminology in Docker compose
- Setup and Configure wordpress site using Docker compose

Module 6 : Kubernetes Administrator

1. Kubernetes Architecture
2. Kubernetes Installation (Master Node and Worker Node)
 - Working on manual installation of Kubernetes cluster
3. POD strategy
4. Replication Controller & Deployment
5. Scalability of Application
6. Volume management
7. Networking
8. Resource Management
9. Monitoring and Security

Module 7: Nagios monitoring setup

Module 8:

- Prometheus with Grafana installation on centos 7

KEY HIGHLIGHTS OF THIS TRAINING PROGRAM:

- ✓ Entire training programme is in Hindi Language for Better understanding.
- ✓ Special focus on Non technical and Fresher candidates.
- ✓ Provides Recording of each live session which you can access from anywhere anytime for One year.
- ✓ Interview Cracking tips during live sessions.
- ✓ Doubt clearing session will be provided.
