# INFOSOFT IT SOLUTIONS

## **Training | Projects | Placements**

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# **DOCKER COURSE CONTENT**

#### **Introduction to Docker**

- Overview of containerization and Docker ecosystem
- Understanding Docker architecture and components
- Installing Docker on different operating systems
- Getting started with Docker CLI (Command Line Interface)

#### **Docker Images and Containers**

- Understanding Docker images and containers
- Creating Docker images using Docker file
- Building, tagging, and versioning Docker images
- Running and managing Docker containers

#### **Containerizing Applications**

- Containerizing different types of applications (e.g., web applications, databases)
- Managing application dependencies and configurations in Docker containers

- Best practices for designing containerized applications
- Deploying multi-container applications with Docker Compose

### **Docker Networking**

- Understanding Docker networking concepts
- Configuring network settings for Docker containers
- Connecting containers to different network types (e.g., bridge, overlay)
- Implementing service discovery and load balancing with Docker Swarm

#### **Docker Volumes and Storage**

- Managing data persistence in Docker containers
- Using Docker volumes for persistent storage
- Configuring and managing Docker volume drivers
- Backing up and restoring data in Docker volumes

#### **Docker Orchestration with Kubernetes**

- Introduction to Kubernetes for container orchestration
- Deploying and managing Kubernetes clusters
- Deploying containerized applications with Kubernetes
- Scaling and updating applications with Kubernetes

## **Docker Security**

- Understanding Docker security considerations and best practices
- Configuring Docker security options (e.g., user namespaces, seccomp)
- Implementing container isolation and resource constraints
- Monitoring and auditing Docker containers for security compliance

#### **Docker in Production**

- Best practices for deploying Docker containers in production environments
- Implementing container lifecycle management and health checks
- Monitoring and logging Docker containers and environments
- Troubleshooting common issues and performance tuning