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## **Docker & Container**

Docker & Container course will help you master the key concepts of Docker and how data can be containerized into a single or multiple containers, architecture of Docker, containerization and various operations performed on it. You will also learn about Docker Hub and ways to create a Docker Image. This course also introduces you to several tools that leverage Docker to ease application deployment, continuous integration, service discovery, and orchestration. Finally, learn to deploy various Container based Applications on the Cloud.

### **Course Outline:**

#### **Unit 1. Overview of Docker & Container**

- ✓ Shipping Transportation Challenges
- ✓ Introducing Docker
- ✓ Architecture of Docker
- ✓ Understanding images and containers
- ✓ Running Hello World in Docker
- ✓ Introduction to Container
- ✓ Container Life Cycle
- ✓ Sharing and Copying

#### **Unit 2. Image Creation and Sharing**

- ✓ Base Image
- ✓ Docker File
- ✓ Working with containers
- ✓ Optimization of Docker File
- ✓ Publishing Image on Docker Hub
- ✓ Private Registry

#### **Unit 3. Docker Ecosystem**

- ✓ Introduction to Docker Ecosystem
- ✓ Docker Compose
- ✓ Docker Swarm
- ✓ Managing Containers
- ✓ Running Containers

#### **Unit 4. Docker Configuration, Developing and Networking**

- ✓ Managing and Configuring Docker Daemon
- ✓ Introduction to nsenter
- ✓ Introduction to runc
- ✓ Secure Remote Access
- ✓ Introduction to Docker Networking
- ✓ Network Types

#### **Unit 5. Docker Networking Implementation and deploying to Cloud**

- ✓ Introduction to Docker Networking: Hands-on
- ✓ Network Types: Hands-on
- ✓ Network Namespace
- ✓ Docker Container Networking
- ✓ Custom Bridge
- ✓ Weave Network
- ✓ Accessing Public Cloud to run Docker
- ✓ Docker Host on AWS EC2
- ✓ Docker Host on AWS using Docker Machine
- ✓ EC2 Container Service

