



# Container Technology for Everyone

## Docker · Kubernetes · Cloud-Native Foundations

Container technologies like Docker and Kubernetes have become the building blocks of modern cloud-native architecture, and they are now used across industries — from internet and finance to healthcare. They matter just as much to a startup that needs to iterate and ship quickly as to a large enterprise working through a digital transformation. To make that shift smoothly, IT teams need the right culture, processes and toolchain in place.

This course builds a solid grounding in container technology, beginning with the technical principles behind Docker. From there it moves into how containers are orchestrated and managed, with Kubernetes at the center — covering cluster architecture, workloads, service discovery, and how container clusters support AI model training. Along the way, learners see both the benefits and the trade-offs of going container-native, so they can judge where it fits and speak the same language as their technical teams.

**Duration : 6 hours**

## Course Objectives

By the end of this training, learners will be able to:

1. Get comfortable with the core concepts of container technology and the advantages it brings.
2. Understand the key technologies behind containers and container-cluster orchestration.
3. Explore where the field is heading — microservices, CI/CD, and AI model-training scenarios.

## LEVEL Foundational

## Course Content :

**MODULE 00** Container Technology Course Overview

## **MODULE 01 Introducing Container Technology**

- 1.1** How Container Technology Evolved
- 1.2** The Core Technologies Behind Containers

## **MODULE 02 Container Images**

- 2.1** How Container Images Work
- 2.2** Working with Image Repositories

## **MODULE 03 Managing the Container Lifecycle**

- 3.1** The Container Lifecycle in Practice
- 3.2** Setting Resource Quotas
- 3.3** Isolating Container Resources

## **MODULE 04 Container Networking**

- 4.1** Container Networking Models
- 4.2** How Containers Communicate

## **MODULE 05 Kubernetes Core Architecture**

- 5.1** Core Kubernetes Concepts
- 5.2** Inside the Kubernetes Architecture

## **MODULE 06 Kubernetes Pods and Workload Management**

- 6.1** Understanding Kubernetes Pods
- 6.2** Scheduling Resources in Kubernetes
- 6.3** Managing Kubernetes Workloads

## **MODULE 07 Kubernetes Service Discovery**

- 7.1** Introducing Kubernetes Services
- 7.2** Service Discovery in Kubernetes

## **MODULE 08 Kubernetes in Advanced Application Scenarios**

- 8.1** Microservices: Definition and Evolution
- 8.2** Building CI/CD Pipelines
- 8.3** Integrating AI/ML Workloads