# Managing Container with Docker and Podman

## Course Overview

In this era of speed-based competition, one of the choices for a set of program development tools must be based on Container Technology. This eliminates the limitations of application development environments, the complexity of installing applications in large systems, and the challenges of application development in the microservices era, significantly improving system development efficiency. From an operations perspective, Container Technology also makes system installation convenient, easy, and fast, while reducing system resource usage. Furthermore, it enhances work efficiency and enables quick problem-solving.

Docker is the most popular Container Technology among system developers, with tools built upon Docker that make it convenient, easy to use, and capable of supporting large-scale systems in enterprise-level organizations. This has led to Docker's widespread popularity.

## Course Objectives

- Understand the principles and approaches of applying Docker in organizations
- Efficiently manage the container lifecycle
- Create images and package developed programs for use as containers
- Manage Docker networking and storage
- Remotely access Docker hosts over the network

## Prerequisites

- Basic knowledge of the Linux operating system
- Basic knowledge of networking

## Course Contents

**Day 1**

- Container Concept and Introduction
- Container Operation with Command
  - Run, Create, Exec etc.
- Container Image
- Container Image Operation
- Container Registry

**Day 2**

- Advanced Container Image
  - Building Containerized Application with Dockerfile
  - Reduce Container Image by Building Multi-stage Builds
- Container Networking
- Keep Persistent Data with Volume

**Day 3**

- Troubleshooting Container Application, Debugging and Logging
- Multi Container Application Stacks
- Container Orchestrator with Kubernetes
- Implement Docker Security and API

## Course Length:

3 Days