

# CN100: Docker Containerization Essentials

**Duration: 1 Day**

## Course description

In this course, you'll learn how to create and manage individual containers using the Docker Engine. We'll cover best practices in container image design and container deployment and auditing, as well as an introduction to single-node container networking and storage. This course is best practices focused and is designed to enable rapid successful adoption of containerization from first principles.

## Course Objectives

- Containerization motivations and implementation
  - Use cases
  - Comparison to virtual machines
- Creating, managing, and auditing containers
  - Container implementation from the Linux kernel
  - Container lifecycle details
  - Core container creation, auditing and management CLI
- Best practices in container image design
  - Layered filesystem implementation and performance implications
  - Creating images with Dockerfiles

- Optimizing image builds with multi-stage builds and image design best practices
- Single-host container networking
  - Docker native networking model
  - Software-defined networks for containers
  - Docker-native single-host service discovery and routing
- Provisioning external storage
  - Docker volume creation and management
  - Best practices and use cases for container-external storage.