



## Docker Certified Associate (DCA)

Master containerization with Docker and prepare for the Docker Certified Associate certification. Learn to build, deploy, and manage containerized applications with industry best practices and hands-on experience.

### Prerequisites

- ◆ Basic Linux command line experience
- ◆ Understanding of software development lifecycle
- ◆ Familiarity with virtualization concepts
- ◆ Basic networking knowledge



## Course Syllabus

### Module 1: Docker Fundamentals

- ◆ Containerization concepts and benefits
- ◆ Docker architecture and components
- ◆ Docker installation and configuration
- ◆ Container lifecycle management
- ◆ Docker CLI commands and operations

### Module 2: Images and Containers

- ◆ Docker image fundamentals
- ◆ Dockerfile creation and best practices
- ◆ Multi-stage builds
- ◆ Image registries and repositories
- ◆ Container runtime configuration



## Course Syllabus

### Module 3: Docker Networking

- ▲ Docker networking models
- ▲ Bridge, host, and overlay networks
- ▲ Port mapping and exposure
- ▲ Network troubleshooting
- ▲ Service discovery

### Module 4: Storage and Volumes

- ▲ Docker storage drivers
- ▲ Volume management
- ▲ Bind mounts and tmpfs
- ▲ Storage troubleshooting
- ▲ Data persistence strategies



## Course Syllabus

### Module 5: Docker Swarm Orchestration

- ◆ Swarm mode architecture
- ◆ Service creation and management
- ◆ Rolling updates and rollbacks
- ◆ Load balancing and routing
- ◆ Swarm security and secrets

### Module 6: Security and Best Practices

- ◆ Container security fundamentals
- ◆ Image scanning and vulnerability management
- ◆ Runtime security
- ◆ Access control and authentication
- ◆ Production deployment strategies