



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