TechyEdz Solutions

Training | Consulting | Developement | Outsourcing

Dockers

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Dockers Certification Training

Course Overview:

In this Docker training course teaches attendees how to leverage the core features of Docker including container creation and management, interacting with Docker hub, using Dockerfile to create and manage custom images, and much more. Students also learn best practices and build an application using Docker, Git, and a continuous integration server to automate the testing of containerized applications.

Course Outline:

Container Technology Overview

- Instructor Docker Demo
- Application Management Landscape
- Application Isolation
- Resource Measurement and Control
- Container Security
- OverlayFS Overview
- Container Security
- Open Container Initiative
- Docker Alternatives
- Docker Ecosystem
- Docker Ecosystem (cont.)

Installing Docker

- Installing Docker
- Docker Architecture
- Starting the Docker Daemon
- Docker Daemon Configuration
- Docker Control Socket
- Enabling TLS for Docker
- Validating Docker Install

Managing Containers

- Creating a New Container
- Listing Containers
- Managing Container Resources
- Running Commands in an Existing Container
- Interacting with a Running Container
- Stopping, Starting, and Removing Containers
- Copying files in/out of Containers
- Inspecting and Updating Containers
- Docker Output Filtering & Formatting

Managing Images

- Docker Images
- Listing and Removing Images
- Searching for Images
- Downloading Images
- Uploading Images
- Export/Import Images
- Save/Load Images
- Committing Changes

Creating Images with DOCKERFILE

- Dockerfile
- Caching
- docker image build
- Dockerfile Instructions
- ENV and WORKDIR
- Running Commands
- Getting Files into the Image
- Defining Container Executable
- HEALTHCHECK
- Best Practices
- Multi-Stage builds with Dockerfile

Docker Volumes

- Volume Concepts
- The docker volume Command

- Creating and Using Internal Volumes
- Internal Volume Drivers
- Removing Volumes
- Creating and Using External Volumes
- SELinux Considerations
- Mapping Devices

Docker Compose/SWARM

- Writing YAML Files
- Concepts
- Compose CLI
- Defining a Service Set
- Compose Versions
- Docker Engine Swarm Mode
- Docker Swarm Terms
- Docker Swarm Command Overview
- Creating a Swarm
- Creating Services
- Creating Secrets
- Stack Files
- Stack Command
- Swarm Placements
- Swarm Resource Limits & Reservations
- Swarm Networking
- Swarm Networking Troubleshooting

Docker Networking

- Overview
- Data-Link Layer Details
- Network Layer Details
- Hostnames and DNS
- Service Reachability
- Container to Container Communication
- Container to Container: Links (deprecated)
- Container to Container: Private Network
- Managing Private Networks
- Remote Host to Container

Docker Logging

- Docker Logging
- Docker Logging with json-file and journald
- Docker Logging with syslog
- Docker Logging with Graylog or Logstash
- Docker Logging with Fluentd
- Docker Logging with Amazon or Google
- Docker Logging with Splunk

- **Prerequisites:**

- Should have proficiency with the Linux CLI and a broad understanding of Linux system administration.

- **Who Can Attend:**

- All IT professionals who actively develop, test, and/or deploy code

- **Number of Hours: 30hrs**
- **Certification: Docker Certified Associate (DCA)**
- **Key Features:**

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification