

Docker – Course Outline

1 Duration

- 8 Hours

2 Objectives

At end of this workshop, participants will able to :

- Get understanding of Docker fundamentals, architecture, features and usage
- Containerize sample web application using Docker and publish into public registry

Note: *This course is designed for beginner level.*

3 Audience

Anyone who are interested to learn fundamentals of Docker and how to containerize web apps using Docker

4 Pre-requisite

- General knowledge on Virtualization
- General knowledge on Distributed Computing
- Familiarity on Application Packaging and Deployment

5 Hardware & Network Requirements

- Desktop/Laptop with minimum 8GB RAM
- Open Internet connection (minimum 1 Mbps per user)

6 Software Requirements

- Windows / Linux / Mac OS
- JDK 8
- Docker Desktop For Windows or Mac
- Eclipse / STS IDE

7 Outline

- Why is Docker?
- What is Docker?
- What is Container?
- Virtual Machines vs Containers
- Benefits and Limitations of Docker
- Docker Architecture
 - Docker Client
 - Docker Server (Daemon)
- Docker Ecosystem
 - Docker Engine
 - Docker Registry
 - Docker Compose
 - Docker File
 - Image
 - Container
- **Demo/Lab:** Verifying Docker Installation
- **Demo/Lab:** Pull and Run standard docker images
- **Demo/Lab:** Manage docker image and container life cycle
- **Demo/Lab:** Create Docker File for sample web application
- **Demo/Lab:** Build Docker Image for sample web application
- **Demo/Lab:** Run sample web application Docker Image locally
- **Demo/Lab:** Tag Docker Image build for sample web application
- **Demo/Lab:** Create DockerHub Account
- **Demo/Lab:** Upload (Push) Docker Image to DockerHub registry
- **Demo/Lab:** Download (Pull) Docker Image from DockerHub registry and run