TECHLAN

DOCKER: DOCKER FUNDAMENTALS

ACADEMY

DATE: January 15 – 16 – 17 **CONTACT: academy@techlan.it** **STUDY BOOK:** **PRICE: Request**

COURSE OBJECTIVE:

In this course students will get the foundational concepts and practices of containerization on a single Docker node, then learn the foundations of orchestration and scale out with Docker across multiple nodes in a swarm.

Upon completing this course, you will be able to:

- Understand what Docker is and how Docker can modernize the software supply-chain
- Conceptualize a mental model for Docker workflow
- Understand the foundations of Docker security and apply secrets management
- Understand the foundations of containerization on a single Docker node
- Ability to Dockerize and application by writing Dockerfiles
- Create and manage images
- Apply a basic continuous integration model for Docker
- Understand the usage of volumes
- Apply concepts of the Docker networking model
- Write stack-based compose files
- Understand how Swarm works
- Deploy a swarm application and scale it out
- Apply common Swarm operations
- Create, manage, and update Docker secrets

PREREQUISIT:

It is recommended, but not required, that students have the following knowledge and skills:

Working knowledge of the Windows operating system

Working knowledge of the Linux operating system

Basic IPv4 and IPv6 addressing knowledge

WHO SHOULD ATTEND

Students beginning a career in DevOps

TECHLAN

ACADEMY

COURSE CONTENT:

MODULE 1:
Introduction to Docker
Installing Docker
Docker Administration

MODULE 2:
Networking

MODULE 3:
Images and Repository

MODULE 4:
The Docker File

MODULE 5:
Construct applications with Docker

MODULE 5:
Construct applications with Docker

MODULE 6:
CI/CD

MODULE 7:
Security

MODULE 8:
Construct Applications with Docker

MODULE 9:
Support of AI integrated DEVOPS in Docker

LABS:

Lab 1. The Docker Story
Lab 2. Introduction to Images
Lab 3. Creating Images
Lab 4. Managing Images
Lab 5. Docker Continuous Integration
Lab 6. Volumes
Lab 7. Docker Networking Basics
Lab 8. Docker Compose
Lab 9. Scaling out with Swarm Mode
Lab 10. Swarm Operations
Lab 11. Managing Secrets