



BTECH TRAINING

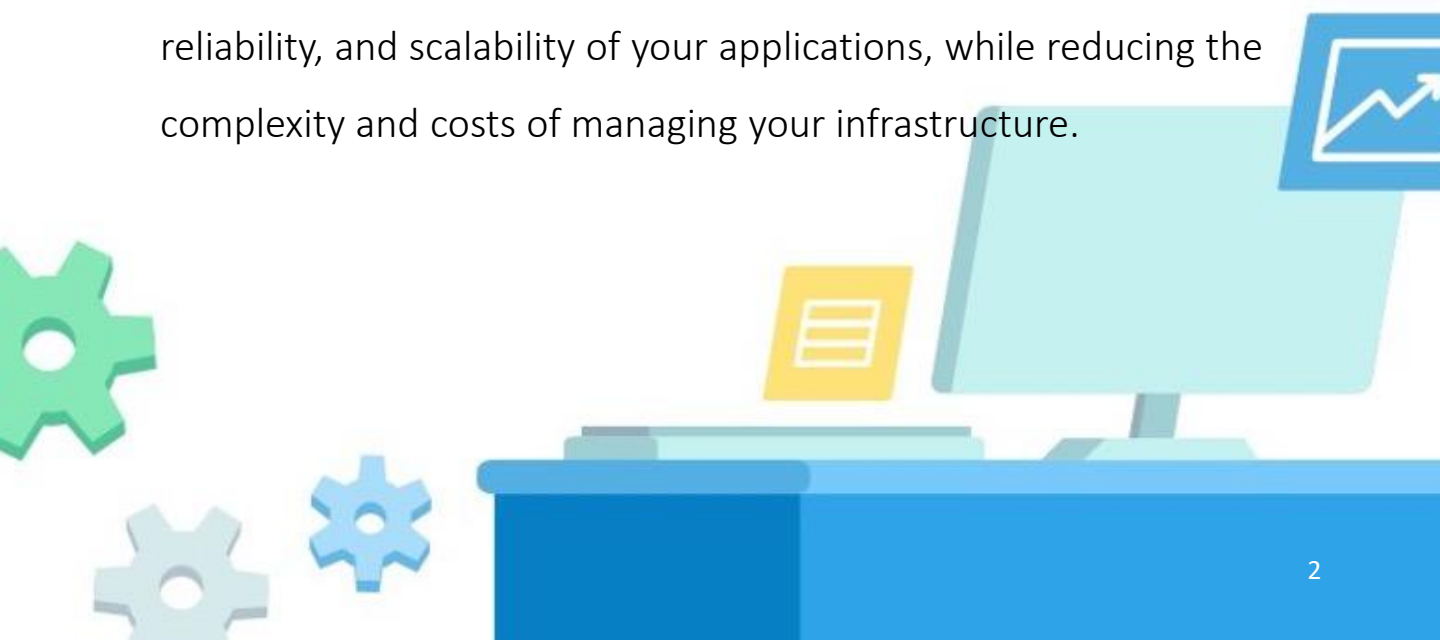
# Study Plan Docker Administration (DO-ADM)



# About This Course

This course will teach you how to use Docker, an open-source platform for developing, shipping, and running applications in containers. You will learn the fundamentals needed to understand Docker and quickly become proficient in using it to manage your software development process. The course covers everything from setting up and configuring Docker, to creating and managing Docker images, to deploying and scaling Docker containers.

By the end of the course, you will be able to use Docker to package your applications into containers, making them portable and easy to deploy across different environments. You will also be able to use Docker to improve the efficiency, reliability, and scalability of your applications, while reducing the complexity and costs of managing your infrastructure.



# Summary



**Training Duration: 32 Hours (4 Days)**

## Course Main Subjects

- Introduction Of Container
- Introduction to Docker
- Managing Docker Container
- Creating Custom Docker Container Image
- Docker Compose
- Docker Continuous Integration (CI)
- Logging and Error Handling
- Logging Driver
- Health Check
- Security
- Storage Driver
- Portainer



# Target Audience

System Administrators, Cloud Administrators, Developers, Site Reliability Engineer.

# Prerequisites

- Linux System Administration (LF-ADM)

# Learning Output

The learning topics will assist participants in :

- Install and configure Docker on multiple platforms
- Manage Docker containers, nodes, and agents, including scaling and load balancing
- Implement security measures and troubleshoot common issues in Docker environments
- Utilize Docker containers for efficient deployment of applications and services.

# Requirements

Have a laptop/computer with min. specifications and installed tools:

Operating System	Windows, Linux, or MacOs
Processor	Intel Core i3
Memory	4 GB RAM
SSH Client	Termius / Putty / MobaXTerm
Text Editor	Sublime Text / VSCode
Browser	Chrome and Firefox

## Facilities

- Virtual machine (available until H+3 post training)
- Class materials
- Certificate
- Recording (VITL)

# Certification

- Certificate of Course Completion
- Btech Internal Exam (optional)

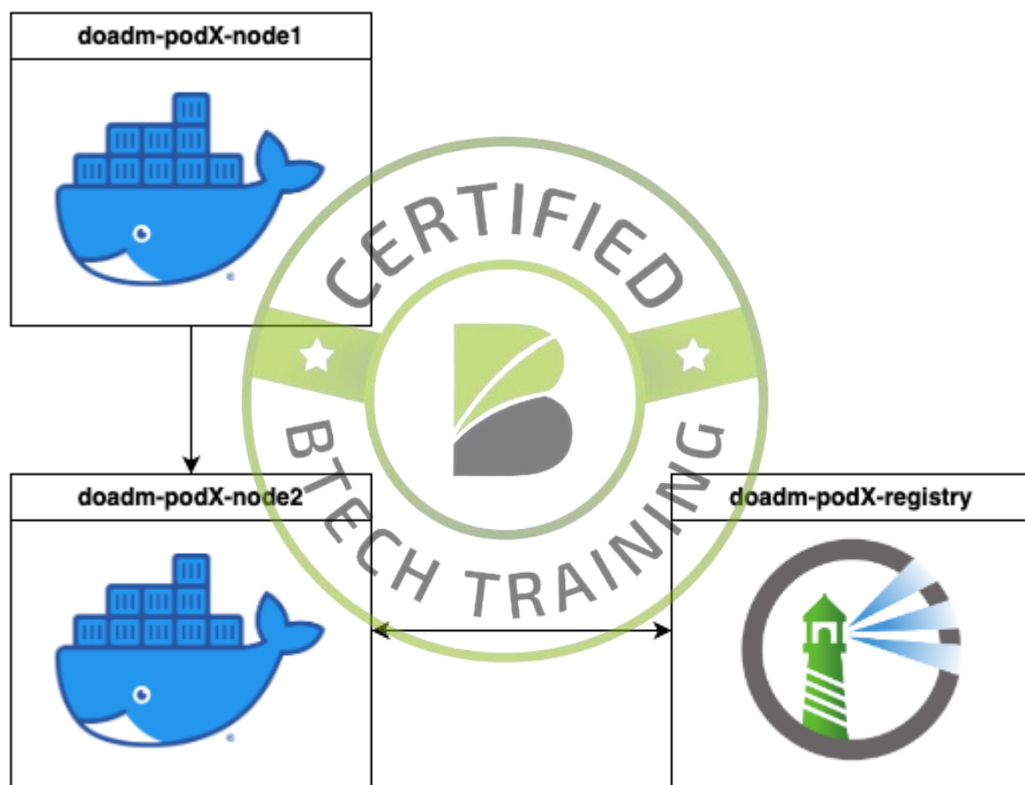


# Learning Strategies

- Theory
- Study Case
- Pre-Test & Post-Test
- Quiz / Internal Exam
- Hands-on Lab



# Training Topology





# Learning Modules

Training Plan	
Topic	Outcome
Introduction of Container	<ul style="list-style-type: none"> <li>Understand the concept of containers and their importance.</li> <li>Differentiate between host, virtual machine, and container.</li> </ul>
Introduction to Docker	<ul style="list-style-type: none"> <li>Understand the concept of Docker and its products.</li> <li>Familiarize with the Docker release cycle.</li> <li>Understand the basic usage of the Docker Run command.</li> </ul>
Managing Docker Container	<ul style="list-style-type: none"> <li>Understand how to manage the life cycle of Docker containers.</li> <li>Familiarize with Docker volumes and networks.</li> <li>Learn how to mount volumes in Docker and work with different types of networks.</li> <li>Understand how to use different Docker volume drivers and network modes.</li> </ul>
Creating Custom Docker Container Image	<ul style="list-style-type: none"> <li>Understand the concept of Docker images and Docker Registry.</li> <li>Learn how to manipulate Docker images and create custom images using Dockerfile.</li> <li>Familiarize with the structure of Dockerfile and its components.</li> <li>Learn how to review and analyze Dockerfile.</li> </ul>

<p>Docker Compose</p>	<ul style="list-style-type: none"> <li>• Understand the concept of Docker Compose and its benefits.</li> <li>• Learn how to create and run a multi-service application using Docker Compose.</li> <li>• Familiarize with building images and running applications using Docker Compose.</li> <li>• Learn how to scale a service using Docker Compose.</li> <li>• Gain hands-on experience in using Docker Compose through labs.</li> </ul>
<p>Docker Continuous Integration (CI)</p>	<ul style="list-style-type: none"> <li>• Understand the concept of Continuous Integration (CI) and how Docker can be used for CI.</li> <li>• Learn how to set up a CI pipeline using Docker.</li> <li>• Familiarize with Docker Hub Automated Build feature and its benefits.</li> </ul>
<p>Logging and Error Handling</p>	<ul style="list-style-type: none"> <li>• Understand the importance of logging and error handling in Docker applications.</li> <li>• Learn how to access and manage logs generated by Docker containers.</li> </ul>
<p>Logging Driver</p>	<ul style="list-style-type: none"> <li>• Understand the concept of logging driver in Docker and its importance.</li> <li>• Learn about various logging drivers supported by Docker and their use cases.</li> </ul>
<p>Health Check</p>	<ul style="list-style-type: none"> <li>• Understand the concept of health checks in Docker and their importance.</li> <li>• Learn how to define and configure health checks for Docker containers.</li> </ul>

<p>Security</p>	<ul style="list-style-type: none"> <li>• Understand the importance of security in Docker containers and the risks associated with container vulnerabilities.</li> <li>• Learn about various security measures provided by Docker, such as container isolation, Docker security tools, and CIS Docker Benchmark.</li> </ul>
<p>Storage Driver</p>	<ul style="list-style-type: none"> <li>• Understand the role of Docker storage drivers in managing storage for Docker containers.</li> <li>• Learn about different storage drivers provided by Docker and their features, such as AUFS, Overlay, and ZFS.</li> </ul>
<p>Portainer</p>	<ul style="list-style-type: none"> <li>• Understand the role of Portainer as a Docker management interface and tool.</li> <li>• Learn about the key features and capabilities of Portainer, such as container management, image management, and user management.</li> <li>• Gain hands-on experience in using Portainer to manage Docker containers and images, and to monitor Docker resources and performance.</li> </ul>

# Thank You

Another Course :

<https://adinusa.id/pro-training>