

# Jenkins Administration (JK-ADM)





### **About This Course**

This course can benefit you in two ways. If you intend to pass the CompTIA Network+ (Exam N10-008) certification examination, this course can be a significant part of your preparation. But certification is not the only key to professional success in the field of IT infrastructure management. Today's job market demands individuals with demonstrable skills, and the information and activities in this course can help you build your network support skill set so that you can confidently perform your duties in any entry-level network administration role.



## Summary



Training Duration: 24 Hours (3 Days)

#### **Course Main Subjects**

- Introduction to Jenkins and CI/CD
- User Management and Security
- Plugins and Maintenance
- SCM Integration and Job Management
- Jenkins Agent Management
- Pipeline as Code
- Deployment to Docker Container
- Automation and Governance



# **Target Audience**

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

# **Prerequisites**

Participants are required to have the following before attending the course:

- Familiarity with the Linux command line.
- Basic Undestading of cloud-native application concepts.
- Completion of the Docker Administration (DO-ADM) course.

## **Learning Outcomes**

Participants will gain the following skills:

- 1. Understanding how to deploy Jenkins Master-Agent
- 2. Understanding Maintainance and Management Jenkins
- 3. Understanding how to deploy on pipeline Jenkins

# **Technical Requirements**

Participants must have a laptop or computer with the following minimum specifications and tools installed:

Specification	Details
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	Brave or Chrome



## **Facilities and Resources**

Participants will have access to the following resources on and after the training:

- **Virtual machine lab**: Available until H+5 post-training for hands-on practice and experimentation.
- **Discussion group**: Available until H+30 post-training for ongoing support and collaboration with peers.
- **Class materials**: Access to all class materials for 1 year (start day one training)
- **Certificate**: Participants will receive a certificate of completion upon finishing the course.
- Recording Class: Access to recorded sessions for review and reinforcement of learning.



## **Terms and Conditions**

#### **Course Purchase Rules**

#### Registration:

Participants must register through the official ADINUSA website and fill out the registration form with accurate and complete information.

#### • Payment:

Course payment must be made in full before access to training materials is granted. Accepted payment methods include bank transfer, credit card, and digital payment.

#### Purchase Confirmation:

After payment is received, participants will receive a confirmation email containing course details and instructions for accessing the materials.

#### Schedule Changes:

ADINUSA reserves the right to change the course schedule or replace instructors if necessary. Participants will be notified of such changes via email or whatsapp.



## **Terms and Conditions**

#### **Access Management**

#### Access License:

Each participant will be granted an access license for 1 year, starting from the date of registration. This license includes access to all relevant training materials.

#### Use of Materials:

Training materials may only be used for personal purposes and may not be distributed, sold, or published without written permission from ADINUSA.

#### Account Security:

Participants are responsible for maintaining the confidentiality of their account information. ADINUSA is not liable for any losses arising from unauthorized account use.

#### Access Termination:

ADINUSA reserves the right to terminate a participant's access to training materials if violations of the applicable terms and conditions are found, including but not limited to unauthorized distribution of materials.

For detailed information regarding our terms and conditions, please visit <u>Terms and Conditios</u>.

## Certification

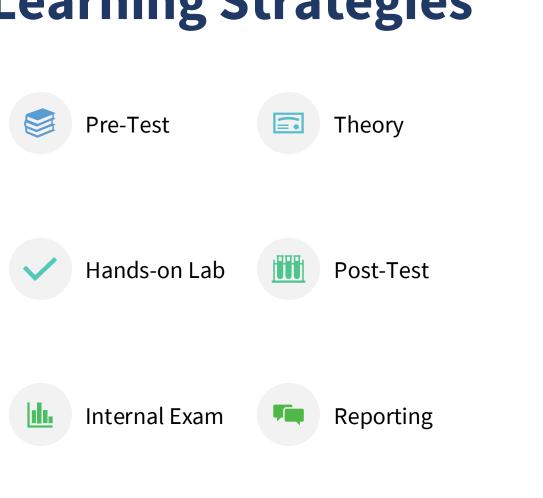
Upon successful completion of the course, participants will receive two certificates with validation 2 years:







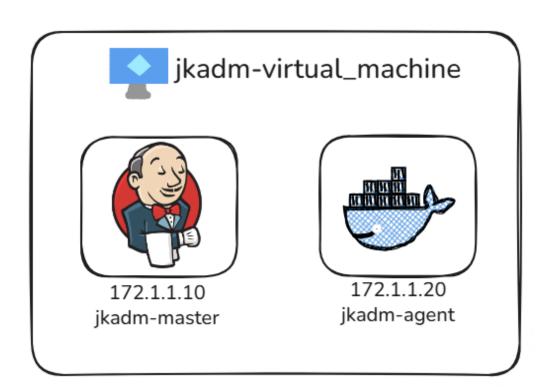
# **Learning Strategies**







# **Topologi Training**



# **Learning Modules**

Training Plan		
Module	Outcome	
Introduction to Jenkins and CI/CD	<ul> <li>Participants understand the fundamental concepts of CI/CD and the role of Jenkins in the DevOps ecosystem.</li> <li>Participants are able to install, manage, and explore the Jenkins interface and its CLI.</li> <li>Participants can use basic Git commands for source code integration in Jenkins pipelines.</li> </ul>	
User Management and Security	<ul> <li>Participants understand how to manage users, roles, and permissions in Jenkins using matrix-based authorization.</li> <li>Participants are able to configure credential and secret management securely within Jenkins.</li> <li>Participants can implement audit trails and structured folder-based access control for enhanced security.</li> </ul>	
Plugins and Maintenance	<ul> <li>Participants understand the plugin lifecycle and can identify essential plugins for Jenkins operations.</li> <li>Participants are able to monitor Jenkins performance and health using logs and metrics.</li> <li>Participants can perform backup and restore procedures to maintain Jenkins reliability and availability.</li> </ul>	
SCM Integration and Job Management	<ul> <li>Participants understand how to integrate Jenkins with SCM platforms such as GitLab, GitHub, and Bitbucket.</li> <li>Participants can create and manage different Jenkins job types, including Freestyle, Pipeline, and Multibranch.</li> <li>Participants are able to configure automatic build triggers using polling and webhooks.</li> </ul>	

Jenkins Agent Management	<ul> <li>Participants understand distributed build concepts and the role of Jenkins agents in scaling CI/CD workloads.</li> <li>Participants can set up and configure Jenkins agents via SSH, including Docker-based agents.</li> <li>Participants are able to label agents and target specific jobs to run on designated agents.</li> </ul>
Pipeline as Code	<ul> <li>Participants understand the differences between Declarative and Scripted Pipelines and their use cases.</li> <li>Participants can create optimized Jenkinsfiles following best practices, including parallel stages and shared libraries.</li> <li>Participants are able to implement error handling and troubleshoot issues within Jenkins pipelines.</li> </ul>
Deployment to Docker Container	<ul> <li>Participants understand how to create Dockerfiles and build container images within Jenkins pipelines.</li> <li>Participants can implement pipelines to build, deploy, and run Docker containers.</li> <li>Participants are able to deploy a web application to a Docker environment using Jenkins automation.</li> </ul>
Automation and Governance	<ul> <li>Participants understand how to manage Jenkins configuration using Jenkins Configuration as Code (JCasC) for consistent and automated setup.</li> <li>Participants can implement merge request (MR) builder workflows with validated merge processes in CI/CD pipelines.</li> <li>Participants are able to integrate Jenkins with Microsoft Teams for notifications and automate image building with registry uploads requiring GitLab approval.</li> </ul>

## **Thank You**

Explore our full course offerings in the training catalog:

https://adinusa.id/pro-training/catalogue

For further assistance, please contact us at:

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