Study Plan

Kubernetes Administration (K9-ADM)

ADINUSA PRO

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PRO TRAINING
by Boer Technology

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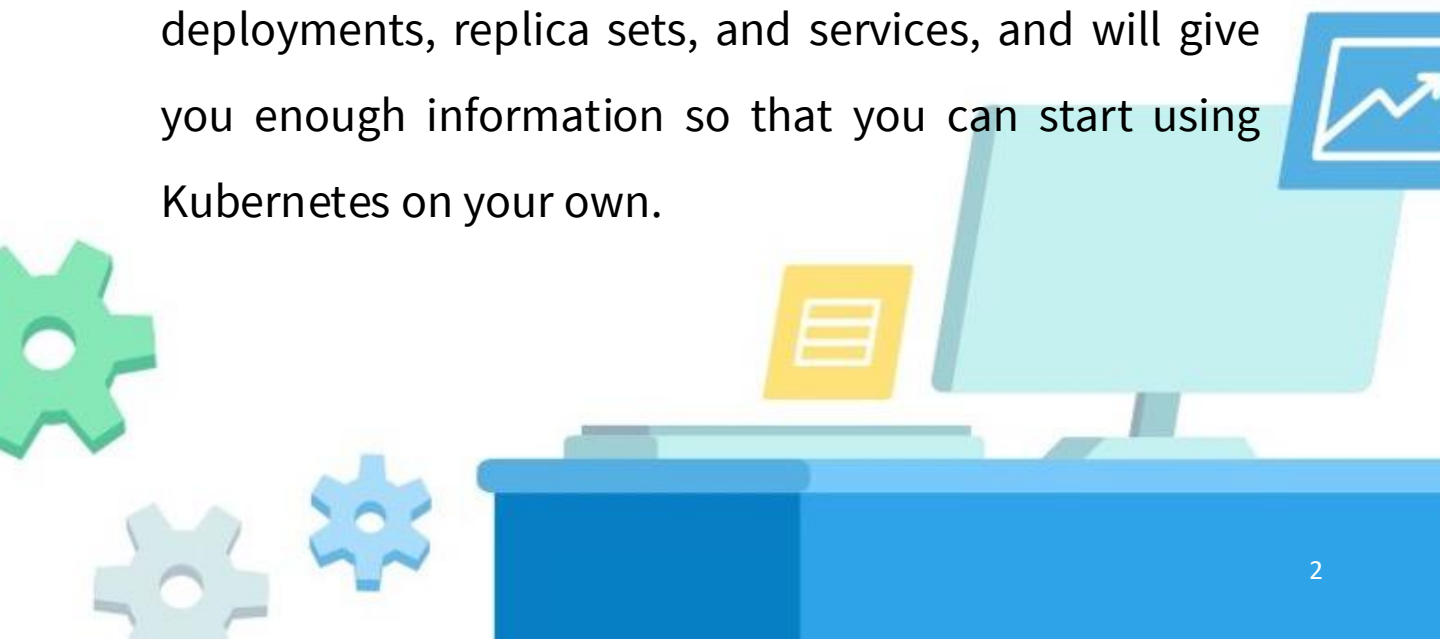
About This Course

This course will teach you how to use the container management platform used by companies like Google to manage their application infrastructure. This course covers the fundamentals needed to understand Kubernetes and get quickly up-to-speed, to start building distributed applications that will scale, be fault-tolerant, and be simple to manage.

This course takes you from nothing to being in a position to start building complex applications. This course will distill key principles, such as pods, deployments, replica sets, and services, and will give you enough information so that you can start using Kubernetes on your own.



Summary

Training Duration: 18 Hours

Course Main Subjects

- Introduction to Kubernetes
- Kubernetes Deployment
- How to access the cluster
- Kubernetes Services
- Kubernetes Advanced Scheduling
- Kubernetes deployments using the Helm package manage.
- Preparing Certified Kubernetes Administrator Exam

Target Audience

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

Prerequisites

- Linux Administration (LF-ADM)
- Docker for Administration (DO-ADM)

Learning Output

The learning topics will assist participants in :

1. Understand how to manage Kubernetes cluster.
2. Understand how to manage Kubernetes resources.

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

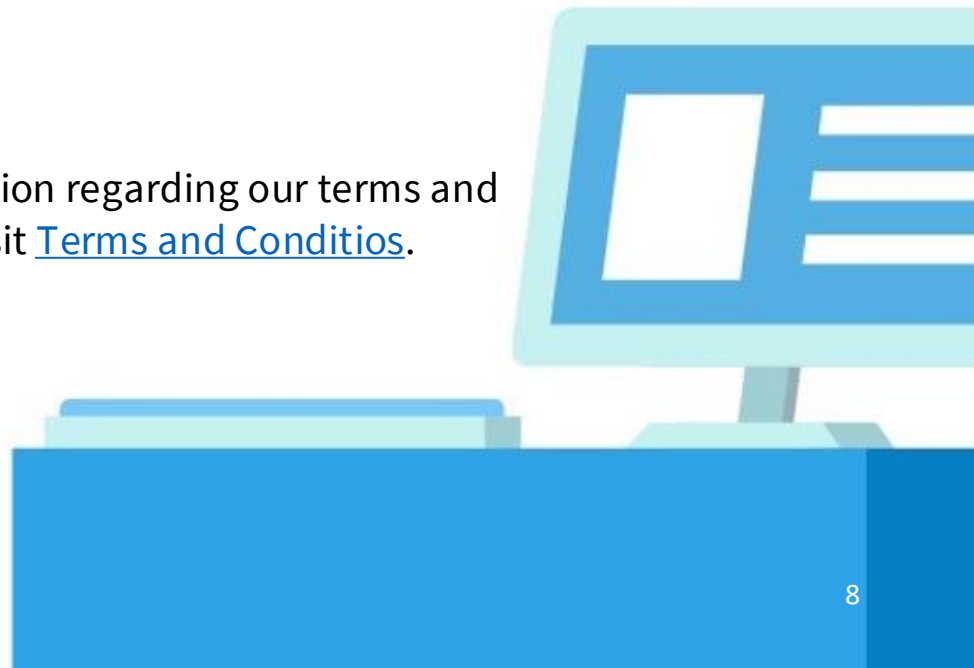
- **Registration**:
  Participants must register through the official ADINUSA website and fill out the registration form with accurate and complete information.
- **Payment**:
  Course payment must be made in full before access to training materials is granted. Accepted payment methods include bank transfer, 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 Terms and Conditios.



Certification

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

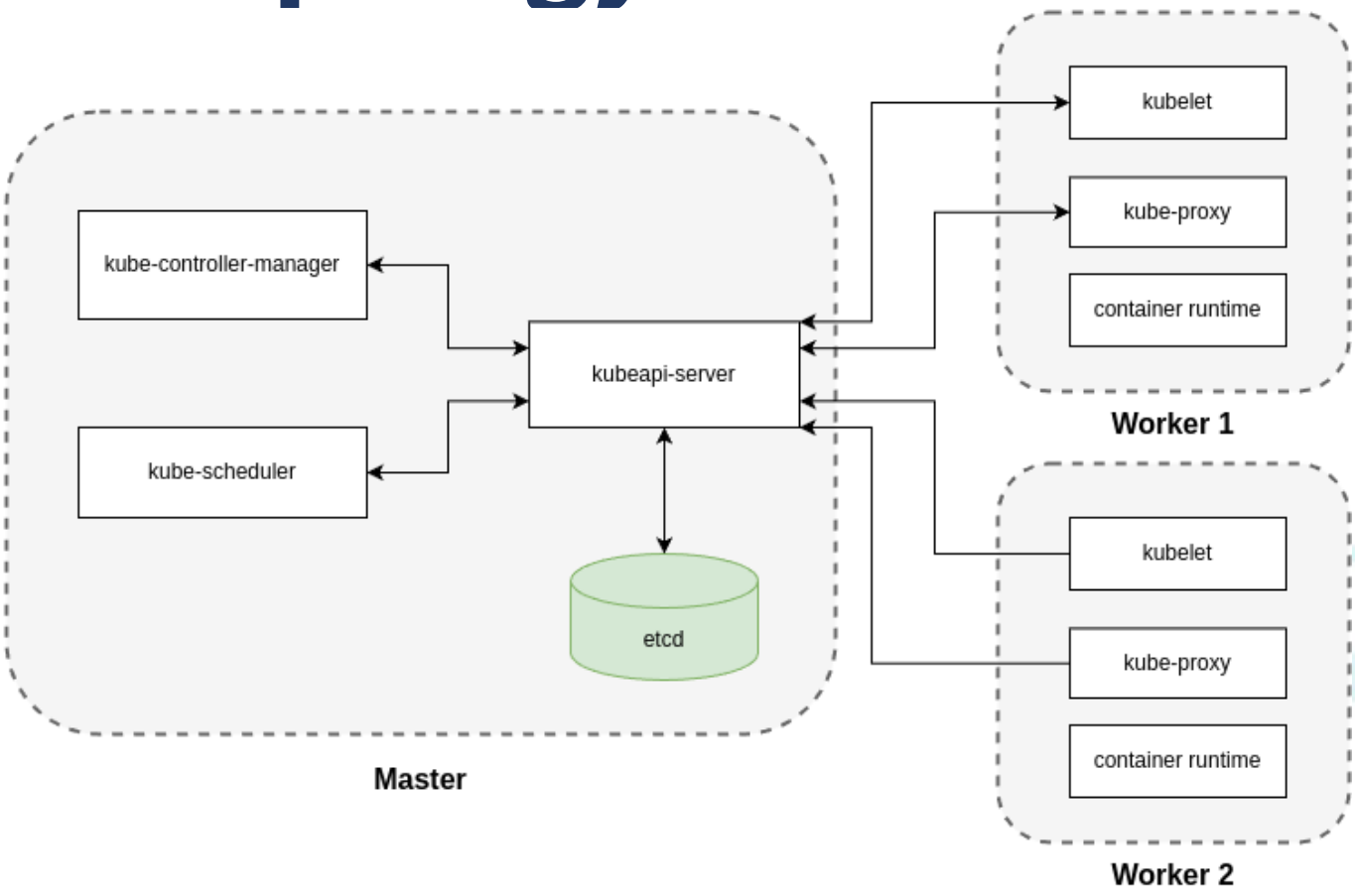
Physical Certificate

Digital Certificate

Learning Strategies

- Pre-Test
- Theory
- Hands-on Lab
- Post-Test
- Internal Exam
- Reporting
- Forum Discussion

Training Topology



Learning Modules

Training Plan	
Topic	**Outcome**
Introduction Kubernetes	• Understand the concept of microservices • technology in building applications • Understanding kubernetes technology
Kubernetes Architecture	• Understand the master and worker function • Understand the concepts of pods, containers, and nodes • Understanding network services on a Kubernetes cluster
Kubernetes installation and Configuration	• Understand about Kubernetes Installation Tools
Kubernetes APIs and Access	• Understand the Access API function on kubernetes • Create an isolation group on Kubernetes
API Objects	• Understanding the auto scaling function in kubernetes • Implement RBAC Authorization function on Kubernetes

Training Plan	
Topic	**Outcome**
Managing State with Deployments	• Understand the concept and types of • deployment pods in Kubernetes cluster • Understand how to apply replicasets and • daemonsets to deployments • Understand how to perform rolling • updates and rollbacks on deployments
Volumes and Data	• Understand the types of volumes that function as storage in pods • Understand how to create a volume that is added to a pod • Understand how to encrypt data using the secret service
Kubernetes Service	• Understand the concept of IP cluster service type and Load Balancer on kubernetes • Can implement ClusterIP in deployments • Can build Multi Tier Application on kubernetes • Can build stand alone applications on Kubernetes
Ingress	• Can understand the functions and rules of ingress • Can apply ingress to deployments

Training Plan	
Topic	**Outcome**
Scheduling	• Can understand the scheduling and labeling functions on pods • Can apply labels that function as categories to pods
Cluster & Security	• Understand the concept of cloud native security • Implementing auto scaling with HPA on clusters

Thank You

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

For further assistance, please contact us at:
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