BTECH TRAINING

Study Plan
Kubernetes Management Platform (K9-RCH)

boer technology

www.btech.id

About This Course

This course is ideal for developers looking to gain skills in Kubernetes application development especially using Rancher. Students should be familiar with the Linux command line and have a basic understanding of cloud-native application concepts and architectures. The course covered is directly aligned with the knowledge domains tested by the Cloud Native Computing Foundation Certified Kubernetes Application Developer (CKAD) Program and will substantially increase participants' certification ability.

Summary

Training Duration: 32 Hours (4 Days)

Course Main Subjects

- Introduction to Kubernetes
- Rancher as Kubernetes Management Tool
- Installing Kubernetes with kubeadm
- Deploy Rancher
- Application Build and Design
- Application Environment, Configuration, and Security
- Services & Networking
- Application Deployment
- Application Observability and Maintenance

Target Audience

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

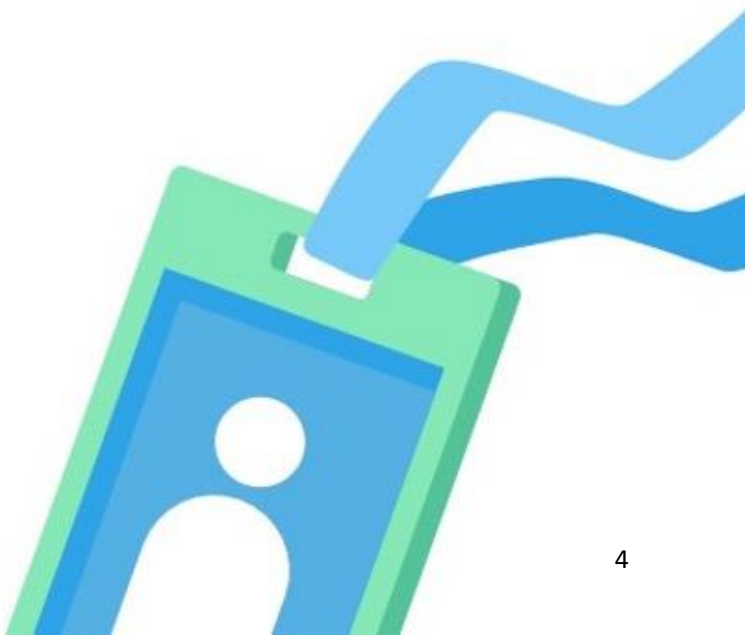
Prerequisites

- Docker Administration (DO-ADM)

Learning Output

The learning topics will assist participants in :

1. Understanding how to deploy Kubernetes Cluster.
2. Management Kubernetes Cluster with Rancher
3. Understanding how to manage Kubernetes Cluster



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
VPN (Optional)	https://client.pritunl.com/

Facilities

- Virtual machine (available until H+5 post training)
- Class materials (Access 1 years)
- 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

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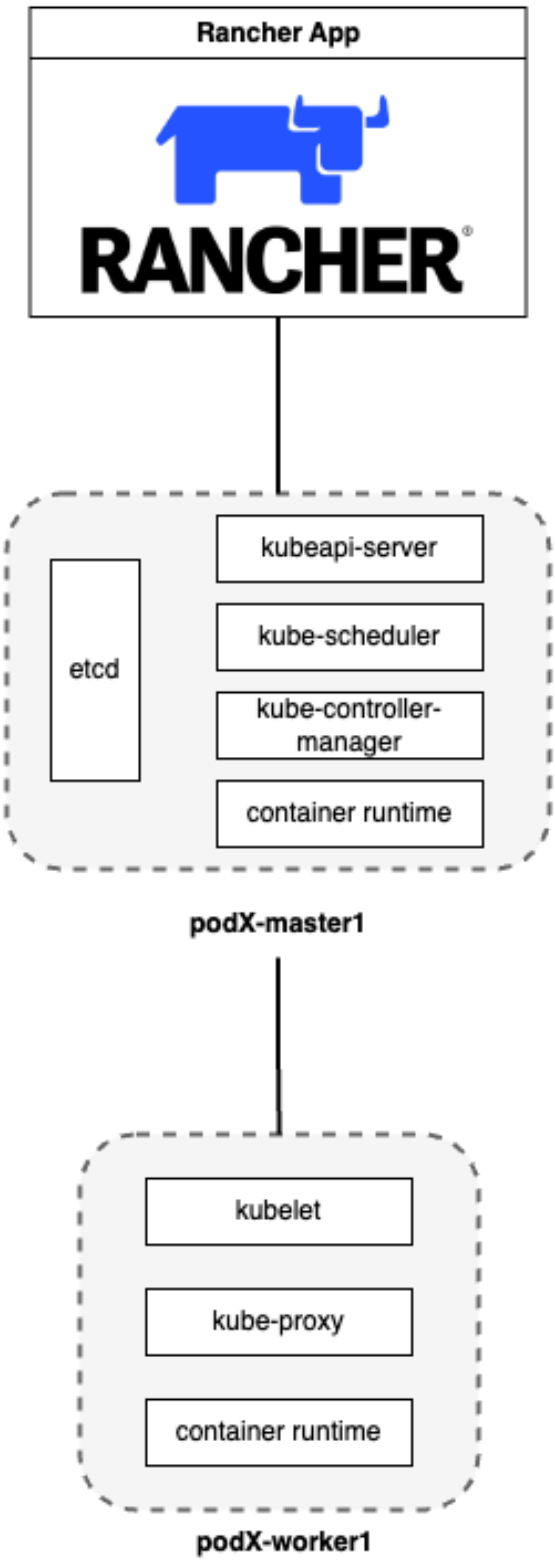

Learning Modules

Training Plan	
Topic	**Outcome**
Introduction Kubernetes	- Understand the concept of container and container orchestration - Understand the kubernetes terminology
Kubernetes Architecture	- Understand the kubernetes main components - Understand the master and worker function - Understand the kubernetes main objects
Kubernetes Installation and Configuration	- Understand how to build a kubernetes cluster - Deploy rancher - Understand how to manage kubernetes cluster using rancher
Application Design and Build	- Understand the container image and Dockerfile - Understand how to build container images - Understand how to store data persistently
Application Environment, Configuration, and Security	- Understand the RBAC - Understand the Kubernetes ConfigMap and Secrets - Understand how to manage kubernetes resources

Services & Networking	- Understand the kubernetes service types - How to expose the applications
Application Deployment	- Understand the concept of Blue/Green Deployments - How to implement Rolling Updates - Deploy kubernetes resources using Helm and Kustomize
Application Observability and Maintenance	- Can perform Health Check - Exploring kubernetes logs - Understand how to implement Horizontal Pod Autoscaling (HPA)

Thank You

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