

# Certified Kubernetes Administrator (CKA)

**Course Duration : 32 Hours**

**Course code : CKA**

## 1. Course Overview

The **Certified Kubernetes Administrator (CKA)** course prepares learners to manage, configure, and maintain Kubernetes clusters in production environments. This course focuses on core Kubernetes administration tasks such as cluster setup, workload management, networking, storage, security, and troubleshooting, aligned with the official CKA certification objectives.

## 2. What you'll learn?

- Kubernetes architecture and components
- Cluster installation and configuration
- Workload scheduling and management
- Networking and service configuration
- Storage and persistent volumes
- Security and troubleshooting

## 3. Target Audience

- Kubernetes administrators
- DevOps engineers
- Cloud engineers
- System administrators
- IT professionals working with containers

## 4. Pre-Requisites

- Basic Linux administration knowledge
- Understanding of containers and Docker
- Familiarity with networking concepts

## 5. Course Content (Modules)

### **Module 1: Kubernetes Architecture**

- Control plane and worker nodes
- Core components overview

### **Module 2: Cluster Installation and Configuration**

- Cluster setup methods
- Node management

### **Module 3: Workload Management**

- Pods, Deployments, and Services
- Scheduling and scaling

### **Module 4: Networking in Kubernetes**

- Services and Ingress
- Network policies

### **Module 5: Storage Management**

- Persistent Volumes and Claims
- Storage classes

### **Module 6: Security and Troubleshooting**

- RBAC and security contexts
- Cluster troubleshooting techniques