

Certified Kubernetes Administrator

Structured technical training and certification preparation

A practical, student-friendly outline covering course Overview, kubernetes and Container Fundamentals, kubernetes Installation, working with Kuberne...

MODULES

13

LESSONS

105

FORMAT

Self-paced

Module Breakdown

MODULE 1

Course Overview

- 1.1 Course Overview
- 1.2 Course PreReqs

MODULE 2

Kubernetes and Container Fundamentals

- 2.1 Core Concepts
- 2.2 What is the CKA Exam
- 2.3 Why Get Certified
- 2.4 CKA Exam Domains
- 2.5 What is Kubernetes
- 2.6 What is a Container
- 2.7 What is Docker
- 2.8 Kubernetes Terminology
- 2.9 Kubernetes Components
- 2.10 Kubernetes Documentation
- 2.11 Whiteboard - Kubernetes Overview

Module Breakdown (continued)

<p>MODULE 3</p> <p>Kubernetes Installation</p> <ul style="list-style-type: none">3.1 Kubernetes Installation3.2 Installation Options3.3 MiniKube3.4 Demo - Install Minikube3.5 Demo - Clusters3.6 Kubectl Basics3.7 Demo - Install Kubectl	<p>MODULE 4</p> <p>Working with Kubernetes Clusters and Nodes</p> <ul style="list-style-type: none">4.1 Working with Kubernetes Clusters and Nodes4.2 Understanding the Architecture4.3 Understanding the nodes4.4 Core Objects4.5 API4.6 Create a Cluster4.7 Demo - Create a Cluster4.8 Demo - YAML4.9 Demo - Nodes4.10 Demo - Kubectl Client Config
<p>MODULE 5</p> <p>API Access and Commands</p> <ul style="list-style-type: none">5.1 API Access and Commands5.2 About the API5.3 Accessing the APIs5.4 Demo - Exploring APIS5.5 Kubectl5.6 Using YAML for API Objects5.7 Using Curl5.8 Labels and Annotations	<p>MODULE 6</p> <p>Running Pods and Deployments</p> <ul style="list-style-type: none">6.1 Running Pods and Deployments6.2 Pods and Deployments6.3 What is a Namespace6.4 Scalability Options6.5 Rolling Updates6.6 Apply Changes to a Pod6.7 Stateful Sets6.8 Demo - Manage Deployments
<p>MODULE 7</p> <p>Configuring Storage</p> <ul style="list-style-type: none">7.1 Configuring Storage7.2 Storage options with Kubernetes7.3 Configure Pod Volumes7.4 Configure Persistent Volumes7.5 Storage Classes7.6 Whiteboard - Persistent Volumes7.7 Demo - Configure Storage	<p>MODULE 8</p> <p>Kubernetes Networking</p> <ul style="list-style-type: none">8.1 Kubernetes Networking8.2 Understanding Networking8.3 Services8.4 Network Plugins8.5 DNS8.6 Network Policies8.7 Namespaces8.8 Demo - Networking8.9 Manage High Availability

Module Breakdown (continued)

<p>MODULE 9</p> <p>Managing Security</p> <ul style="list-style-type: none">9.1 Managing Security9.2 Kubernetes Security9.3 Container and Pod Security9.4 Certificates9.5 API Security9.6 Configmaps and Secrets9.7 Secure Images9.8 Security Context9.9 RBAC	<p>MODULE 10</p> <p>Managing Kubernetes In the Enterprise</p> <ul style="list-style-type: none">10.1 Managing Kubernetes In the Enterprise10.2 Cluster Management and Maintenance10.3 Demo - Scale Deployment10.4 Demo - Restart Cluster10.5 Demo - Add or Remove Nodes10.6 Demo - Create a Pod in the Background10.7 Kubelet Restarts and Drains10.8 UI Dashboard10.9 Demo - Describe Resources10.10 Kube-scheduler10.11 Demo - Set-Up Alias
<p>MODULE 11</p> <p>Kubernetes Monitoring and Troubleshooting</p> <ul style="list-style-type: none">11.1 Kubernetes Monitoring and Troubleshooting11.2 Monitoring Resources11.3 Monitoring Pods11.4 Demo - Monitoring Pods11.5 Logging11.6 Demo - Logging11.7 Troubleshooting11.8 Affinity and Taints	<p>MODULE 12</p> <p>CKA Practice Exams</p> <ul style="list-style-type: none">12.1 CKA Practice Exams12.2 Exam Preparation Must Know12.3 Question 1 - Create a Cluster, Deploy Pods and a Deployment12.4 Question 2 - Create a Pod and Verify12.5 Question 3 - Create a Pod with a Secret12.6 Question 4 - Get Logs on a Pod and Send to File12.7 Question 5 - Liveness Probe12.8 Question 6 - Use Labels12.9 Additional Questions
<p>MODULE 13</p> <p>Course Closeout</p> <ul style="list-style-type: none">13.1 Course Closeout13.2 Course Review13.3 Kubernetes Certifications13.4 Additional Resources13.5 Exam Readiness13.6 Course Closeout	