Kubernetes for App Developers

Category: Infrastructure & IT Operations | **Vendor:** CNCF

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

In this vendor agnostic course, you will use Python to build, monitor and troubleshoot scalable applications in Kubernetes.

About This Course

In this vendor agnostic course, you will use Python to build, monitor and troubleshoot scalable applications in Kubernetes.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

In this course youll learn how to:

Containerize and deploy a new Python script

Configure the deployment with ConfigMaps, Secrets and SecurityContexts

Understand multi-container pod design

Configure probes for pod health

Update and roll back an application

Implement services and NetworkPolicies

Use PersistentVolumeClaims for state persistence

And more

Detailed Course Outline

Introduction

- Objectives
- Who You Are
- The Linux Foundation
- Linux Foundation Training
- Preparing Your System
- Course Registration
- Labs

Kubernetes Architecture

- What Is Kubernetes
- Components of Kubernetes
- Challenges
- The Borg Heritage
- Kubernetes Architecture
- Terminology
- Master Node
- Minion (Worker) Nodes
- Pods
- Services
- Controllers
- Single IP per Pod
- Networking Setup
- CNI Network Configuration File
- Pod-to-Pod Communication
- Cloud Native Computing Foundation
- Resource Recommendations
- Labs

Build

- Container Options
- Containerizing an Application
- Hosting a Local Repository
- Creating a Deployment
- Running Commands in a Container
- Multi-Container Pod
- readinessProbe
- livenessProbe
- Testing
- Labs

Design

- Traditional Applications: Considerations
- Decoupled Resources
- Transience
- Flexible Framework
- Managing Resource Usage
- Multi-Container Pods
- Sidecar Container
- Adapter Container
- Ambassador
- Points to Ponder
- Labs

Deployment Configuration

- Volumes Overview
- Introducing Volumes
- Volume Spec
- Volume Types
- Shared Volume Example
- Persistent Volumes and Claims
- Persistent Volume
- Persistent Volume Claim
- Dynamic Provisioning
- Secrets
- Using Secrets via Environment Variables
- Mounting Secrets as Volumes
- Portable Data with ConfigMaps
- Using ConfigMaps
- Deployment Configuration Status
- Scaling and Rolling Updates
- Deployment Rollbacks
- Jobs
- Labs

Security

- Security Overview
- Accessing the API
- Authentication
- Authorization
- ABAC
- RBAC
- RBAC Process Overview
- Admission Controller
- Security Contexts
- Pod Security Policies
- Network Security Policies
- Network Security Policy Example
- Default Policy Example
- Labs

Exposing Applications

- Service Types
- Services Diagram
- Service Update Pattern
- Accessing an Application with a Service
- Service without a Selector
- ClusterIP
- NodePort
- LoadBalancer
- ExternalName
- Ingress Resource
- Ingress Controller
- Labs

Troubleshooting

- Troubleshotting Overview
- Basic Troubleshooting Steps
- Ongoing (Constant) Change
- Basic Troubleshooting Flow: Pods
- Basic Troubleshooting Flow: Node and Security
- Basic Troubleshooting Flow: Agents
- Monitoring
- Logging Tools
- Monitoring Applications
- System and Agent Logs
- Conformance Testing
- More Resource
- Labs

Additional Course Details

Nexus Humans Kubernetes for App Developers training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Kubernetes for App Developers course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Kubernetes for App Developers?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Kubernetes for App Developers course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Kubernetes for App Developers training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Kubernetes for App Developers?

Yes, we provide corporate training, dedicated training, and closed classes for Kubernetes for App Developers. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: Why choose Nexus Human for Kubernetes for App Developers?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Kubernetes for App Developers training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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