HANDS-ON KUBERNETES TRAINING

Motivation

The demand for short development cycles, massive scalability, and increased reliability is driving the cloud native revolution with containers and Kubernetes at its heart. Our training offering will give your company the knowledge and skill to successfully leverage the potential containers and Kubernetes offer.

What We Bring

As Kubernetes Training Partner as well as Kubernetes Certified Service Provider with recognized credentials from the Cloud Native Computing Foundation (CNCF) we combine a proven training program with extensive practical know-how to bridge the gap between theory and practice. All our trainings are conducted by Certified Kubernetes Administrators (CKA) and/or Certified Kubernetes Application Developers (CKAD) with active involvement in realizing cloud native projects for our customers. The agenda, as well as the setup of the training, can be tailored to exactly meet your companies individual needs:

One day Kubernetes crash course	Three days Kubernetes fundamentals + add-ons (e.g. Helm)

- We offer both trainings on-site or in our PRODYNA offices
- You can use your own laptop or a PRODYNA hosted training environment

What You Need

Participants should have basic knowledge of IP networking and know their way around the Linux command-line. If the training is to be conducted on the participants laptops, following requirements apply:

- min. 16Gb RAM
- Required software
  - VirtualBox 6.x
  - Vagrant 2.x
  - kubectl >= 1.14

Duration

1 - 4 days depending on desired content

Benefits

- **Quick start** due to instructor lead theory and hands-on exercises
- **Best practices** based on extensive practical experience
- **Fully functional Kubernetes environment** for further self-education
- **Running examples** for all treated topics

Get started

To learn about pricing and how to get started, please contact info@prodyna.com

What You Get

Kubernetes crash course agenda (1 day)

1. Kubernetes high level architecture
2. Introduction to Minikube
3. Basic workload definition
4. Enhanced configuration
   - Resource request / limit
   - Container probes
   - Init-containers
   - Scheduling
5. Deployment definition
6. Networking
   - Services
   - Ingress
7. App configuration
   - ConfigMap
   - Secret

Kubernetes fundamentals agenda (3 days)

1. Software containers basics
   - Properties of containers
   - Running containers
   - Networking
   - Persistence
   - Building and distributing containers
2. Kubernetes high level architecture
3. Setup of a three node Kubernetes clusters with kubeadm
4. Basic workload definition
5. Enhanced configuration
   - Resource request / limit
   - Container probes
   - Init-containers
   - Scheduling
6. Workload controllers
   - Deployment
   - StatefulSets
   - DaemonSet
7. Networking
   - Services
   - Ingress
   - NetworkPolicies
8. App configuration
   - ConfigMap
   - Secret
9. Persistence
   - PersistentVolume
   - PersistentVolumeClaim
   - StorageClass
10. Security
    - Role-based access control (RBAC)
    - PodSecurityPolicies
11. Pod Design-Patterns
12. Quotas and default resource limits
13. Kubernetes platform debugging
14. Horizontal pod autoscaler (HPA)
15. Static Pod configuration
16. Etcd backup

Helm 2 add-on (+1 day)

1. Helm 2 architecture and components
2. Helm chart structure
3. Setting up Helm
4. Deploying Helm charts
5. Helm chart development
   - Templates and values
   - Dependencies
   - Testing
   - Lifecycle hooks
   - Chart publication

About PRODYNA

PRODYNA is an innovative IT consultancy specializing in the creation of custom software solutions and serving the needs of corporate enterprises across the European continent. PRODYNA is a Kubernetes Certified Service Provider, Kubernetes Training Partner, and a member of the Cloud Native Computing Foundation.