

PRODYNA

THE LEADER IN CLOUD NATIVE BUSINESS SOLUTIONS



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 our trainings on our premises, on your premises, or remote (live on-line)
- You can install the development environment directly onto your own laptop, or use 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 >= 1.20



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

Pricing

EUR 1800/day

For up to 10 persons on-site, or 6 persons remote

What You Get

Kubernetes crash course agenda (1 day)	Kubernetes fundamentals agenda (3 days)	Helm add-on (+1 day)
<ol style="list-style-type: none">1. Kubernetes high level architecture2. Introduction to Minikube3. Basic workload definition4. Enhanced configuration<ul style="list-style-type: none">➤ Resource request / limit➤ Container probes➤ Init-containers➤ Scheduling5. Deployment definition6. Networking<ul style="list-style-type: none">➤ Services➤ Ingress7. App configuration<ul style="list-style-type: none">➤ ConfigMap➤ Secret	<ol style="list-style-type: none">1. Software containers basics<ul style="list-style-type: none">➤ Properties of containers➤ Running containers➤ Networking➤ Persistence➤ Building and distributing containers2. Kubernetes high level architecture3. Setup of a three node Kubernetes clusters with kubeadm4. Basic workload definition5. Enhanced configuration<ul style="list-style-type: none">➤ Resource request / limit➤ Container probes➤ Init-containers➤ Scheduling6. Workload controllers<ul style="list-style-type: none">➤ Deployment➤ StatefulSets➤ DaemonSet7. Networking<ul style="list-style-type: none">➤ Services➤ Ingress➤ NetworkPolicies8. App configuration<ul style="list-style-type: none">➤ ConfigMap➤ Secret9. Persistence<ul style="list-style-type: none">➤ PersistentVolume➤ PersistentVolumeClaim➤ StorageClass10. Role-based access control (RBAC)11. Advanced YAML configuration<ul style="list-style-type: none">➤ Kustomize➤ Helm11. Pod Design-Patterns12. Quotas and default resource limits13. Kubernetes platform debugging14. Horizontal pod autoscaler (HPA)15. Static Pod configuration16. Etc backup	<ol style="list-style-type: none">1. Helm architecture and components2. Helm chart structure3. Setting up Helm4. Deploying Helm charts5. Helm chart development<ul style="list-style-type: none">➤ 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 Microsoft Gold Partner, a Kubernetes Certified Service Provider, a Certified Kubernetes Training Partner, and a member of the Cloud Native Computing Foundation.