

K8S Advanced

Course 35669 – 24 Hours

Overview

In this course, we will cover the most advanced part of K8S. This course is for the veterans and for attendees that have already completed the Basic part of K8S and / or have proven experience in K8S.

We will cover and practice with - NGINX Ingress alongside different CNI's, resource management, advanced scheduling and the different methods to deliver your containers into K8S. We will also cover how to store Secrets and dynamic variables with Consul from Hashicorp and lastly how to build the perfect Charts using helm.

All of our materials are constantly being refactored, expanded and improved. We make sure to update and add more materials in order to keep providing the most relevant and updated information based on new releases from K8S and main cloud vendor providers.

Each student will work on a dedicated K8S Cluster for the length of each session along with an option to provide off session labs and environments to practice

We are committed to 60/40 hands on labs / theory split in each session!

Who Should Attend

- Developers & architectes
- Production Operation teams (devops)
- SRE
- IT Operators
- QA Teams

Prerequisites

- Docker basic to advanced Seminar OR real daily proven hands on experience with Docker
- K8S basic to advanced Seminar OR real daily proven hands on experience with K8S!
- Software design concepts
- Advanced networking concepts

Course Contents

Security

- NetworkPolicy using Calico CNI
 - Pods Policy
 - Pods Security

POD Scheduling

- Affinities / Anti-affinities
- Node selectors
- Taints & tolerations

Accessing Services

- K8S Services & Services types
 - INGRESS
 - NGINX Ingress
 - Load Balancing and Traffic shaping

Deployment & Upgrades using NGINX

- Canary
- Rolling updates and revisions
- A/B Testing, BlueGreen & Canary deployments

Resource Management

- Setting resources requests and limits
- Resource quotas
- HPA

The 12 Factor application design patterns K8S

HELM - Upgrade to latest and new Practices

- Overview
- Best practices
- Helm Workshop

CD Into K8S

- INTRO TO CD
- ARGOCD Intro
- CI/CD Into K8S Using Argo and containers Pipelines

Consul and Vault

- Discovery and Dynamic variables using Consul
- Secrets management using Vault