Kubernetes Master Workshop (FI-KMT-WS)

Course Description

This Workshop is intended for system administrators and application developers who are interested in deploying and orchestrating container applications at scale and have a basic understanding of containers, mainly docker, and want to understand the basic concepts of Kubernetes and it is internal processes.

The Workshop starts with a small refresher on what containers are and afterwards it goes and presents the Kubernetes architecture, and its main components. Next, each student will create its own Kubernetes cluster and also submit workloads under a common cluster across all students simulating a more production like environment. Kubernetes resource like pod, deployment, services, volumes, and many more are presented alongside with their major features and each student will have the chance to create and use them in the hands-on laboratories which are at the end of each chapter. Also, some more advanced Kubernetes resources like Job, Corn Job, Daemoset, ConfigMap, and Secrets.

It also covers the Ingress Resources alongside with the Ingress Controller. Helm is a widely use package manager for installing, upgrading, and managing Kubernetes application and the students will have the chance to understand the concepts and use it. Next, the course covers the basic concepts the basic concepts of Kubernetes Security and RBAC mechanism cluster: Centralized Logging and Monitoring. The students will be able to see how can centralized logging be achieved by using ELK stack and also monitoring by using Promethrus and Grafana dashboards

Course Duration:

4 days

Objectives:

After completing this Workshop students will have a firm understanding of the main components of a Kubernetes cluster and also on some Kubernetes resource like pod, deployment, services, volumes. Students will have a profound understanding on more advanced Kubernetes Resources, how can a Kubernetes cluster be monitored and also how the logs are stored in a centralized manner.

Who should attend:

- DevOps engineers
- Linus system administrators
- System design engineers
- Architects