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Learning Style: Virtual Classroom

Technology:

Difficulty: Beginner

Course Duration: 2 Days

Getting Started with Kubernetes (TTDV7590)

About This Course:

Containerization has taken the IT world by storm, in the last few years. Large software houses, starting from Google and Amazon, are running significant portions of their production load in containers. Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.

Kubernetes groups containers that make up an application into logical units for easy management and discovery. Kubernetes builds upon 15 years of experience of running production workloads at Google, combined with best-of-breed ideas and practices from the community.

Getting Started with Kubernetes is a hands-on workshop style course that teaches participants core features and functionality of Kubernetes. Students will exit the course knowing how to build a Kubernetes cluster, and how to deploy and manage applications on that cluster.

Course Objectives:

- What a Kubernetes cluster is, and how to deploy and manage them on-premises and in the cloud.

- How Kubernetes fits into the cloud-native ecosystem, and how it interfaces with other important technologies such as Docker.

- The major Kubernetes components that let us deploy and manage applications in a modern cloud-native fashion.

- How to define and manage applications with declarative manifest files that should be version-controlled and treated like code.

Audience:

- This in an introductory-level class for intermediate skilled team members. Students should have prior software development experience or exposure, have some basic familiarity with containers, have experience working in Linux (as this course is Linux based) and should also be able to navigate the command line

Prerequisites:

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Course Outline:

Getting Started

https://www.quickstart.com/getting-started-with-kubernetes-ttdv7590.html

- Our sample application

- Kubernetes concepts

- Declarative vs imperative

- Kubernetes network model

- First contact with kubectl

- Setting up Kubernetes

Working with Containers

- Running our first containers on Kubernetes

- Exposing containers

- Shipping images with a registry

- Running our application on Kubernetes

Exploring the Kubernetes Dashboard

- The Kubernetes dashboard

- Security implications of kubectl apply

- Scaling a deployment

- Daemon sets

- Labels and selectors

- Rolling updates

Next Steps

- Accessing logs from the CLI

- Managing stacks with Helm

- Namespaces

- Next steps