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Training is withdrawn

Training program:

Kubernetes - microservices deployment

Info:

Name:	**Kubernetes - microservices deployment**
Code:	**Arch-Tools-Kuber**
Category:	Tools
Target audience:	architects developers admins devops
Duration:	2 days
Format:	50% lecture / 50% workshop

Modern development environments hardly exist without containers these days. They are ubiquitous and are used especially with microserevices.

During the training we will focus on using containers, describing best practices on building custom images and embedding applications within them.

Exercises are designed to be performed on local participants' workstations and also in the cloud (AWS, Azure or GCP).

During this workshop participants will learn how to deploy containers from private registries, scale applications running inside containers, manage their configuration, and store data on persistent volumes.

Participant after the training will:

- Know what is container and what are the benefits of using this technology
- Be able to run a container from an available image
- Be able to expose services from a container
- Be able to build a container image with an application according to best practices
- Be able to connect (link) many containers together and use external volumes for data
- Be able to publish container images in a private container registry
- Know Kubernetes architecture and the most important resources: Pod, Service, ReplicaSet, Namespace, ConfigMap, Secret, Ingress, Deployment
- Be able to run a container from their own custom image in many instances on a Kubernetes cluster

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- Be able to use rolling update feature to minimize the downtime during the application deployment process
- Be able to use Helm to deploy a ready application or a service on a Kubernetes cluster

It's all about the content.

- Practical approach to managing infrastructure for microservices
- Use Kubernetes to build DevOps processes which enable collaboration and workin together on code
- Best practices ready to apply in production environments

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Training program

1. Kubernetes

1.1. Basics

- 1.1.1. Basic components and architecture of Kubernetes cluster
- 1.1.2. Running a local cluster
- 1.1.3. Managing resources using web dashboards and command line tools
- 1.1.4. Container within a Pod and its features
- 1.1.5. Scaling applications running in a Pod
- 1.1.6. Delivering configuration to an application running on Kubernetes
- 1.1.7. Storing data on a persistent storage (Persistent Volumes)

1.2. Managing applications

- 1.2.1. Exposing applications internally and externally using Service resource
- 1.2.2. Exposing web services with Ingress
- 1.2.3. Managing deployments from code with Deployment resources and its features
- 1.2.4. Leveraging Namespace resources to manage multiple environments
- 1.2.5. Using Helm Charts to deploy a service from a published packages