

STUDENT VERSION (DevOps-Week-3)



CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ Microlearning
- ▶ Questions
- ▶ Interview/Certification Questions
- ▶ Coding Challenge
- ▶ Article of the week
- ▶ Video of the week
- ▶ Retro meeting
- ▶ Case study / project

Teamwork Schedule

Ice-breaking

5m

- Personal Questions (Stay at home & Corona, Study Environment, Kids etc.)
- Any challenges (Classes, Coding, AWS, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Team work

10m

- Ask what exactly each student does for the team, if they know each other, if they care for each other, if they follow and talk with each other etc.

Ask Questions

15m

1. What is the primary purpose of Kubernetes in container orchestration ?

- A. Managing virtual machines
- B. Automating deployment and scaling of containerized applications
- C. Monitoring network traffic
- D. Creating database backups

Answer: B

2. How does Kubernetes networking facilitate communication between pods ?

- A. Through direct IP address assignment
- B. Via virtual private networks (VPN)
- C. Using a service mesh for routing
- D. By assigning each pod a unique DNS name

Answer: D

3. What is the purpose of Kubernetes Secrets and ConfigMaps ?

- A. To manage cluster nodes
- B. To store and manage sensitive information and configuration data

- C. To monitor resource utilization
- D. To automate deployment workflows

Answer: B

4. Which of the following is NOT a Kubernetes resource type ?

- A. Pods
- B. Deployments
- C. Containers
- D. Services

Answer: C

5. Which Kubernetes object is used to manage multiple replicated instances of a pod ?

- A. Deployment
- B. Pod
- C. ReplicaSet
- D. StatefulSet

Answer: A

Interview/Certification Questions

20m

1. Describe the significance of networking in Kubernetes clusters and how it facilitates communication between pods.

Answer:

Networking in Kubernetes is crucial for enabling communication between pods running on different nodes within a cluster. Kubernetes networking ensures that pods can discover and communicate with each other using IP addresses and DNS names. It also handles network policies for controlling traffic between pods, enhancing security within the cluster.

2. Explain the purpose of Kubernetes Secrets and ConfigMaps, and how they are utilized in managing sensitive information and configuration data.

Answer:

Kubernetes Secrets are used to store sensitive data, such as passwords, API keys, and certificates, securely within the cluster. ConfigMaps, on the other hand, store configuration data in key-value pairs. Both Secrets and ConfigMaps can be mounted into pods as environment variables or files, allowing applications to access their configuration and sensitive data securely.

3. Explain the concept of pod in Kubernetes and its significance in deploying and managing applications.**Answer:**

A pod is the smallest deployable unit in Kubernetes, consisting of one or more containers that share the same network namespace and storage volumes. Pods are used to deploy and manage applications in Kubernetes clusters. They provide a logical grouping of containers that share resources, such as networking and storage, and are scheduled and managed as a single entity by Kubernetes.

4. Discuss the importance of labels and selectors in Kubernetes and how they are used to organize and manage resources.

Answer: *Labels and selectors are key concepts in Kubernetes used for organizing and managing resources within a cluster. Labels are key-value pairs attached to Kubernetes objects (such as pods, services, deployments) to identify and categorize them. Selectors are used to query and filter objects based on their labels. Labels and selectors enable flexible grouping, querying, and management of resources, facilitating automation, and operational tasks in Kubernetes.*

5. What role does etcd play in Kubernetes, and how does it contribute to maintaining the cluster's state ?

Answer: *etcd is a distributed key-value store used by Kubernetes to store and manage the cluster's state, configuration, and metadata. etcd serves as the source of truth for the cluster's current state, storing information about objects such as pods, services, nodes, and configuration settings. Kubernetes components read and write data to etcd to maintain consistency and synchronization across the cluster, ensuring that the cluster operates as intended.*

Article of the Week**10m**

- [What is Kubernetes?](#)

Video of the Week**10m**

- [What is Kubernetes ?](#)

Coding Challenge**5m**

- [Coding Challenge 003 : Find the Largest Number](#)

Retro Meeting on a personal and team level

10m

Ask the questions below:

- What went well?
- What could be improved?
- What will we commit to do better in the next week?

Closing

5m

-Next week's plan

-QA Session