

# STUDENT VERSION (Week-12)

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CLARUSWAY  
WAY TO REINVENT YOURSELF

## Meeting Agenda

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

# Teamwork Schedule

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## Ice-breaking

10m

- 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. How can we rename a branch ?



- A. `git branch -m current-branch-name new-branch-name`
- B. `git branch checkout current-branch-name new-branch-name`
- C. `git checkout -b current-branch-name new-branch-name`
- D. `git clone current-branch-name new-branch-name`

### 2. Which of the following has highest priority for Ansible configuration settings?

- |  |   |
|--|---|
| A. <code>ansible.cfg</code> (in the current directory)   | ANSIBLE_CONFIG (ayarlanmışsa ortam değişkeni) |
| B. <code>.ansible.cfg</code> (in the home directory)     | <code>ansible.cfg</code> (mevcut dizinde)     |
| C. <code>ANSIBLE_CONFIG</code> (an environment variable) | <code>~/.ansible.cfg</code> (ana dizinde)     |
| D. <code>/etc/ansible/ansible.cfg</code>                 | <code>/etc/ansible/ansible.cfg</code>         |

### 3. The command to create Kubernetes service is \_\_\_\_\_.

- A. `kubectl expose`
- B. `kubectl set service`
- C. `kubectl run`
- D. `kubectl deploy`

#### 4. Can we run Junits as a part of Jenkins job?

- A. True
- B. False

##### How to create a Deployment in Kubernetes

- Using the REST API and a client such as client-go (this is what [OpenFaaS](#) does)
- By hand-crafting a YAML file, or more realistically, by copying and pasting from StackOverflow or a known example
- By `kubectl run` OR `kubectl run -o yaml --dry-run`

#### 5. Which command is used to create a new deployment in kubernetes?

- A. `kubernetes set deployment`
- B. `kubernetes get deployment`
- C. `kubectl run`
- D. `kubectl deploy`

##### Introducing Amazon EKS

Amazon Elastic Container Service for Kubernetes (Amazon EKS) is a fully managed service that makes it easy for you to use Kubernetes on AWS without having to be an expert in managing Kubernetes clusters. There are few things that we think developers will really like about this service. First, Amazon EKS runs the upstream version of the open-source Kubernetes software, so you can use all the existing plugins and tooling from the Kubernetes community. Applications running on Amazon EKS are fully compatible with applications running on any standard Kubernetes environment, whether running in on-premises datacenters or public clouds. This means that you can easily migrate your Kubernetes application to Amazon EKS with zero code changes. Second, Amazon EKS automatically runs K8s with three masters across three AZs to protect against a single point of failure. This multi-AZ architecture delivers resiliency against the loss of an AWS Availability Zone.

### Interview/Certification Questions

20m

1. A company requires an open-source system for automating the deployment, scaling, and management of containerized applications. Which of the following would be ideal for such a requirement?

- A. Use the Amazon Elastic Container Service for Kubernetes.
- B. Install a custom orchestration tool on EC2 Instances.
- C. Use SQS to orchestrate the messages between docker containers.
- D. Use AWS Lambda functions to embed the logic for container orchestration.

2. Your company has a legacy application that uses the monolithic architecture. You need to design a new microservices architecture for the application and host it in AWS. The application should be dockerized so that it can be easily deployed.

Which of the following AWS services would you choose to host the application?

- A. Elastic Kubernetes Engine
- B. Amazon Lambda
- C. Elastic Container Registry
- D. Elastic Container Service

3. You have launched an ECS cluster with 5 EC2 instances with its task definitions. However, ECS is not getting any status information back from the container agent in each ECS instance. What could be the reason? (choose 3 options)

- A. IAM role used to run ECS instance does not have `ecs:Poll` action in its policy
- B. Key-pair information is missing in ECS cluster.
- C. ECS Instance security groups' outbound rules are not allowing traffic to ECS service endpoint
- D. Interface VPC endpoint is not configured for ECS service.
- E. You are running ECS on t2.micro instance type which is not supported.

#### 4. What is a pod in Kubernetes?

**Pods** are the smallest deployable units of computing that you can create and manage in Kubernetes.

Kubernetes runs your workload by placing containers into Pods to run on Nodes. A **node** may be a virtual or physical machine, depending on the cluster. Each node contains the services necessary to run Pods, managed by the control plane.

#### 5. Do all of the nodes have to be at the same size in your cluster? (kubernetes)

There is no obligations.

### Video of the Week

5m

- [A Guide to the DevOps Technical Interview](#)

### 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?

### Coding Challenge

5m

- [Vote Count](#)

We assume that each group has two sub teams. Each week, one of the sub-teams will present their solution.

### Case study/Project

10m

**Case study should be explained to the students during the weekly meeting and has to be completed in one Sprint (2 weeks) by the students. Students should work in small teams to complete the case study.**

- [Project-203 : Microservice Architecture for Phonebook Web Application \(Python Flask\) with MySQL using Kubernetes.](#)

### Closing

5m

-Next week's plan

-QA Session