STUDENT VERSION (DevOps-Week-4)

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ 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. _____ runs on each node and ensures containers are running in a pod. (Kubernetes)

A. Kubelet
B. Etcd
C. Scheduler
D. Pod

2. Which one is used to help restricting the service within the cluster? (Kubernetes)

A. LoadBalancer
B. NodePort
C. ClusterIP
D. kubectl

3. What is a Kubernetes volume?

A. The software within an OS that controls capacity allocation for nodes
B. A directory for the data accessible to containers in a pod
C. Layering software that puts apps into compartments for easier deployment
D. Code that enables two software programs to communicate

4. Which is the intended use for etcd? (Kubernetes)

A. To store all the cluster data, maintain its state and provide access to critical data
B. To link a unique identifier to a value
C. To encrypt cluster data and send it to a secrets manager
D. To authenticate cluster data

5. Generally, what is a proxy service used for? (Kubernetes)

A. To supplant an authentic webpage in a search engine's index and search page results
B. To connect external parties and route data between internal and external containers
C. To act as an intermediary between an endpoint device and another server
D. To relay connection requests for inbound network traffic

Interview/Certification Questions 20m

1. Your company is planning on hosting an application that will be based on Docker containers. They need to setup an orchestration service that would automatically scale based on the load. As much as possible , the company does not want the burden of managing the underlying infrastructure. Which of the following can assist in this scenario?

A. AWS ECS with service Auto Scaling
B. Use an Elastic Load Balancer in front of an EC2 Instance. Use Docker containers on the EC2 Instance.
C. Use Auto Scaling with Spot Instances for the Orchestration Service.
D. Install and use Kubernetes on the EC2 Instance

2. You are launching the AWS ECS instance. You would like to set the ECS container agent configuration during the ECS instance launch. What should you do?

A. Set configuration in the ECS metadata parameter during cluster creation.
B. Set configuration in the user data parameter of ECS instance.
C. Define configuration in the task definition.
D. Define configuration in the service definition.

3. Your development team has just finished developing an application on AWS. This application is created in .NET and is hosted on an EC2 instance. The application currently accesses a DynamoDB table and is now going to be deployed to production. Which of the following is the ideal and most secure way for the application to access the DynamoDB table?

A. Pass API credentials to the instance using instance user data.
B. Store API credentials as an object in Amazon S3.
C. Embed the API credentials into your JAR files.
D. Assign an IAM role to the EC2 Instances

4. You have an application that has been dockerized. You plan to deploy the application in an AWS ECS cluster. As the application gets configuration files from an S3 bucket, the ECS containers should have the AmazonS3ReadOnlyAccess permission. What is the correct method to configure the IAM permission?

A. Add an environment to the ECS cluster configuration to allow the S3 read only access.
B. Add the AmazonS3ReadOnlyAccess permission to the IAM entity that creates the ECS cluster.
C. Modify the user data of ECS instances to assume an IAM role that has the AmazonS3ReadOnlyAccess permission.
D. Attach the AmazonS3ReadOnlyAccess policy to the ECS container instance IAM role. Attach this role when creating the ECS cluster

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A. Add an environment to the ECS cluster configuration to allow the S3 read only access.
B. Add the AmazonS3ReadOnlyAccess permission to the IAM entity that creates the ECS cluster.
C. Modify the user data of ECS instances to assume an IAM role that has the AmazonS3ReadOnlyAccess permission.
D. Attach the AmazonS3ReadOnlyAccess policy to the ECS container instance IAM role. Attach this role when creating the ECS cluster

Article of the Week 10m

- How Can We Easily and Visually Explain Docker-Compose?

Video of the Week 10m

- Kubernetes in 5 mins

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

- Coding Challenge: Vote Count

Case study/Project 10m

Case study should be explained to the students during the weekly meeting and has to be completed in one week by the students. Students should work in small teams to complete the case study.

- Project-204: Docker Swarm Deployment of Phonebook Application (Python Flask) with MySQL

Closing 5m

-Next week's plan

-QA Session
