TEAM LEAD VERSION (DevOps-Week-8)

Meeting Agenda

▶ Icebreaking

▶ Questions

▶ Interview/Certification Questions

▶ Coding Challenge

▶ 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. Replication Controller makes sure that a pod or a homogeneous set of pods is always up and available? (Kubernetes)

A. True
B. Flase

Answer: *A*

2. What are the two components Jenkins is mainly integrated with?

A. Version Control system like GIT,SVN
B. RDBS
C. Anaconda
D. Build tools like Apache Maven

Answer: *A and D*

3. You can remove a paused container from Docker.

A. True
B. False

Answer: *B*

4. What language is an Ansible playbooks are written

A. HTML
B. Python
C. YAML
D. JSON

Answer: *C*

5. Which of the following commands will merge `branch-a` into the `master` branch?

A. `git checkout branch-a` and `git merge master`
B. `git clone branch-a` and `git merge master`
C. `git checkout master` and `git merge branch-a`
D. `git branch branch-a` and `git merge master`

Answer: *C*

Interview/Certification Questions   20m

1. You lead a team to develop a new online game application in AWS EC2. The application will have a large number of users globally. For a great user experience, this application requires very low network latency and jitter. If the network speed is not fast enough, you will lose customers. Which tool would you choose to improve the application performance? (Select TWO.)

A. AWS VPN
B. AWS Global Accelerator
C. Direct Connect
D. API Gateway

Answer: *B and E*

This online game application has global users and needs low latency. Both CloudFront and Global Accelerator can speed up the distribution of contents over the AWS global network.

Option A is incorrect: AWS VPN links on-premise network to AWS network. However, no on-premise services are mentioned in this question.
Option B is CORRECT: AWS Global Accelerator works at the network layer and is able to direct traffic to optimal endpoints. Check Link for reference.
Option C is incorrect: Direct Connect links on-premise network to AWS network. However, no on-premise services are mentioned in this question.
Option D is incorrect: API Gateway is a regional service and cannot improve the application performance. API Gateway is suitable for serverless applications such as Lambda.

Option E is CORRECT: Because CloudFront delivers content through edge locations and users are routed to the edge location that has the lowest time delay.

2. Which of the following is a correct statement in relation to ECS instances when accessing Amazon ECS service endpoint? Choose 2 options.

A. Create an Interface VPC Endpoint for ECS service and attach to VPC subnet's route table in which ECS instances are running.
B. ECS instances are launched with ECS-optimized AMI which contains an inbuilt mechanism to communicate with ECS service endpoints through AWS network.
C. Create a NAT Gateway and attach it to VPC subnet's route table in which ECS instances are running.
D. AWS service endpoints are accessible internally across VPCs. You need to enable IAM role access on the service which needs to be accessed.

Answer: *A and C*

The container agent runs on each infrastructure resource within an Amazon ECS cluster. It sends information about the resource's current running tasks and resource utilization to Amazon ECS, and starts and stops tasks whenever it receives a request from Amazon ECS. Link

Option A is correct.ECS supports interface VPC endpoints. Link

Option B is not correct. Any network communication happening in/out of VPC must follow the rules defined on route tables, Network ACLs and Security Groups. Any external communication (internet facing or AWS service endpoints) must either go through Internet Gateway, NAT Gateway or VPC Endpoints (if applicable). Link

3. You are working for an organization which is actively using AWS. They have noticed that few AWS ECS clusters are running and they do not know who and when the clusters are created. They tasked you to find out the logs regarding this. What will you do?

A. Check CloudWatch event logs
B. Check CloudTrail logs.
C. Check CloudWatch metrics dashboard.
D. Check Trusted Advisor.

Answer: *B*

Amazon ECS is integrated with AWS CloudTrail, a service that provides a record of actions taken by a user, role, or an AWS service in Amazon ECS. CloudTrail captures all API calls for Amazon ECS as events, including calls from the Amazon ECS console and from code calls to the Amazon ECS APIs.

4. What is Ansible and what makes it stand out from the rest of the Configuration Management tools?

Answer:

Ansible is an open source IT Configuration Management, Deployment & Orchestration tool. It aims to provide large productivity gains to a wide variety of automation challenges.

Here's a list of features that makes Ansible such an effective Configuration Management and Automation tool:

- *Simple: Uses a simple syntax written in YAML called playbooks.*
- *Agentless: No agents/software or additional firewall ports that you need to install on the client systems or hosts which you want to automate.*
- *Powerful and Flexible: Ansible's capabilities allow you to orchestrate the entire application environment regardless of where it is deployed.*
- *Efficient: Ansible introduces modules as basic building blocks for your software. So, you can even customize it as per your needs.*

5. What is Ansible Galaxy?

Answer:

Ansible Galaxy is a storehouse of different Ansible roles through which you can share the content securely. It gets done through the Galaxy website, which lets the users find and share the content as per the role access. Ansible-Galaxy is the command that you can use to install the role, create a new role, remove the already existing role, and perform different tasks on the Galaxy website.

Video of the Week 10m

- [GitHub Workflow Strategies](#)

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: Cloning a Remote Repository Using Ansible Playbook

Case study/Project   10m

Project 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-206 : Microservice Architecture for Phonebook Web Application (Python Flask) with MySQL using Kubernetes.

Closing   5m

-Next week's plan

-QA Session

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