TEAM LEAD VERSION (DevOps-Week-7)

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. Which command is used to download roles from the Galaxy server.(Ansible)

A. ansible-playbook
B. ansible-vault
C. ansible-galaxy
D. ansible-inventory

Answer: *C*

2. _____ encrypts variables and files so you can protect sensitive content such as passwords or keys rather than leaving it visible as plaintext in playbooks or roles. (Ansible)

A. Ansible Galaxy
B. Ansiible Playbook
C. Ansible Ad-Hoc
D. Ansible Vault

Answer: *D*

3. What will be happen after runing this command?

```
---
- name: Apache installation for ubuntuservers
  hosts: ubuntuservers
  tasks:
   - name: install the latest version of Apache
     yum:
        name: apache2
        state: latest
```

A. Installs latest version of Apache to all ubuntuservers

B. Installs latest version of Apache to all ubuntuservers and enables it

C. Installs Apache to all ubuntuservers and starts it

D. Gives Error

Answer: *D*

4. What kind of a repository do you need if you to connect to other repositories in order to obtain different binaries? (Nexus)

A. Proxy

B. Hosted

C. General

D. Dynamic

Answer: *A*

5. What is the main difference between an artifact repository manager and a version control system? (Nexus)

A. You store what you develop in a version control system and what you build in an artifact repository

B. Artifact repository can only be used by 1 person whereas version control systems are for teams

C. Artifact repositories give more memory for less price.

D. Version control systems are slower to obtain the code.

Answer: *A*

Interview/Certification Questions   20m

1. 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.*

2. 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.

3. You own a MySQL RDS instance in AWS Region us-east-1. The instance has a Multi-AZ instance in another availability zone for high availability. As business grows, there are more and more clients coming from Europe (eu-west-2) and most of the database workload is read-only. What is the proper way to reduce the load on the source RDS instance?

A. Create a snapshot of the instance and launch a new instance in eu-west-2.
B. Promote the Multi-AZ instance to be a Read Replica and move the instance to eu-west-2 region.
C. Configure a read-only Multi-AZ instance in eu-west-2 as Read Replicas cannot span across regions.
D. Create a Read Replica in the AWS Region eu-west-2.

Answer: *D*

Read Replica should be used to share the read workload of the source DB instance. Read Replica can also be configured in a different AWS region. Refer to [Link](#)

Option A is incorrect: Because Read Replica should be configured to share the read traffic. You should not launch a totally new instance.
Option B is incorrect: Because a Multi-AZ instance cannot be promoted to be a Read Replica.
Option C is incorrect: Because a Read Replica can be launched in another region for RDS MySQL.
Option D is CORRECT: Users can quickly configure a Read Replica in another region.

4. You work for a big company having multiple applications that are very different from each other. These applications are built using different programming languages. How could you deploy these applications as quickly as possible?

A. Develop all the apps in a single Docker container and deploy using Elastic Beanstalk.
B. Create a Lambda function deployment package consisting of code and any dependencies.
C. Develop each app in a separate Docker container and deploy using Elastic Beanstalk.
D. Develop each app in separate Docker containers and deploy using CloudFormation.

Answer: *C*

Elastic Beanstalk supports the deployment of web applications from Docker containers. With Docker containers, you can define your own runtime environment. You can choose your own platform, programming language, and any application dependencies (such as package managers or tools), that aren't supported by other platforms. Docker containers are self-contained and include all the configuration information and software your web application requires to run.

Option A is incorrect because the requirement is to deploy multiple apps that are very different from each other and developed with different programming languages.
Option B is ideally used for running code and not packaging the applications and dependencies.
Option D is incorrect as Deploying Docker containers using CloudFormation is also not an ideal choice.

5. 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.

Answer: *A*

Amazon Elastic Container Service for Kubernetes (Amazon EKS) is a managed service that makes it easy for you to run Kubernetes on AWS without the requirement of installing and operating your own Kubernetes clusters. Kubernetes is an open-source system for automating the deployment, scaling, and management of containerized applications. Operating Kubernetes for production applications presents a number of challenges. You need to manage the scaling and availability of your Kubernetes masters and persistence layer by ensuring that you have chosen appropriate instance types, running them across multiple Availability Zones, monitoring their health, and replacing unhealthy nodes. You need to patch and upgrade your masters and worker nodes to ensure that you are running the latest version of Kubernetes. All this requires expertise and a lot of manual work. With Amazon EKS, upgrades and high availability are managed for you by AWS. Amazon EKS runs three Kubernetes masters across three Availability Zones in order to ensure high availability. Amazon EKS automatically detects and replaces unhealthy masters, and provides automated version upgrades and patching for the masters.

For more information on ECS instances, [Link](#)

Article of the Week   10m

- How to Get AWS Certified: Tips From a DevOps Engineer?

Video of the Week   10m

- Using CloudFormation Intrinsic Functions

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

- Launch an EC2 instance Using Ansible Playbook

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-207: Web Page Application (Postgresql-Nodejs-React) deployed on EC2's with Ansible and Docker

Closing   5m

-Next week's plan

-QA Session