TEAM LEAD VERSION (Week-14)

TEAMWORK

CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

▶ Icebreaking

▶ Questions

▶ Interview/Certification Questions

▶ Coding Challenge

▶ Video of the week

▶ Retro meeting

▶ Case study / project

Teamwork Schedule

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. Which command is used to terminate the Terraform-managed infrastructure?

A. terraform terminate
B. terraform erase
C. terraform delete
D. terraform destroy

Answer: *D*

2. Which of the following is a log integration system of Grafana?

A. Prometheus
B. Loki
C. MySQL
D. Graphite

Answer: *B*

3. How does Prometheus collect its metrics?

A. By scraping HTTP endpoints based on pull mechanism
B. By using service discovery
C. By adding custom code to set which metrics will be monitored
D. Metrics are set through a YAML configuration file

Answer: *A*

4. What are the default ports for Prometheus and Grafana?

A. Prometheus: **8080** Grafana: **3306**
B. Prometheus: **9000** Grafana: **3030**
C. Prometheus: **9090** Grafana: **3000**
D. Prometheus: **3306** Grafana: **9090**

Answer: *C*

5. 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

Answer: *B*

Interview/Certification Questions 20m

1. 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.

2. 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

Answer: *D*

You can use roles to delegate access to users, applications, or services that don't normally have access to your AWS resources.

It is not a best practice to use IAM credentials for any production based application. It is always a good practice to use IAM Roles.

For more information on IAM Roles, please visit the Link

3. 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

Answer: *D*

ECS containers have access to permissions that are supplied to the container instance role. Details please check the ECS documentation in Link

Option A is incorrect: Because ECS cluster uses the container instance IAM role instead of environment variables to control its permissions.
Option B is incorrect: Because the IAM entity that creates the ECS cluster does not pass its permissions to the ECS cluster. You need to configure an IAM role and attach it to the ECS cluster.
Option C is incorrect: This is not the correct method to configure IAM permissions for an ECS cluster.
Option D is CORRECT: After the AmazonS3ReadOnlyAccess policy is attached to the IAM role, the ECS instances can use the role to get objects from S3.

4. What is “idempotency”?

Answer:

idempotency is an important Ansible feature. It prevents unnecessary changes in the managed hosts. With idempotency, you can execute one or more tasks on a server as many times as you need to, but it won’t change anything that’s already been modified and is working correctly. To put it in basic terms, the only changes added are the ones needed and not already in place.

5. How to Terraform work?

Answer:

Terraform produce an execution plan delineate, what it will do to reach the desired state, and then executes it to build the described infrastructure. As the configuration changes, Terraform is able to determine what changed and create incremental execution plans which can be applied.

Video of the Week 5m

- Terraform Explained

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

- Fibonacci

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 two Sprint (4 weeks) by the students. Students should work in small teams to complete the case study.

- Project-501 : Microservices CI/CD Pipeline

Closing 5m

-Next week's plan

-QA Session
