TEAM LEAD VERSION (Week-5)

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. What is the main use of AWS CLI?

A. Interact with AWS services
B. Accessing OS that is not possible with AWS services
C. To make only on-prem opreations
D. None of the above

Answer: *A*

2. What does the command `git branch` (without any options) do?

A. Shows you a list of your local branches
B. Creates a new branch
C. Renames a branch
D. Shows you a list of your remote branches

Answer: *A*

3. _____ shows the count of the arguments passed to the script? (Shell)

A. %$
B. $$
C. $#
D. %#

Answer: *C*

4. Which command is find out how long the system has been running?

A. Continue
B. Running
C. Uptime
D. Current

Answer: *C*

5. Given a file find the count of lines containing word “ABC”.

A. grep c- "ABC" file1
B. grep –c “ABC” file1
C. grep c “ABC” file1
D. grep “ABC” file1

Answer: *B*

Interview/Certification Questions 20m

1. A company is planning to migrate their existing on premise application to the AWS Cloud. The application currently runs on .Net and uses Microsoft SQL Server as the backend database. Your Company has some limitations as they don’t have the developers currently to make recent changes to the code and also they don’t have the Infrastructure team currently to manage the infrastructure on AWS. Which of the following data service would your Company choose on AWS for the best use?

A. AWS RDS
B. AWS DynamoDB
C. AWS Aurora
D. AWS Redshift

Answer: *A*

Option A is correct because one can use the AWS RDS service and choose the Microsoft SQL Server platform. Since the company does not have the developers available to make large code changes, they can just migrate the data and change the connection strings in the code. Also with the absence of an Infrastructure team, the AWS RDS service takes care of the Infrastructure.

Option B, C, D are incorrect because managing code and Infrastructure can’t be done.

2. Which of the following are benefits of the AWS's Relational Database Service (RDS)? Choose the 2 correct answers from the options below

A. Automated patches and backups
B. DB owner can resize the capacity accordingly
C. It allows you to store unstructured data
D. It allows you to store NoSQL data

Answer: *A and B*

Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need.

For more information on AWS RDS, please visit the Link

3. Your team had developed an online feedback application for the best image competition in AWS using CloudFormation. The application accepts high-quality images of each participant and stores them in S3 then records the information about the image as well as the participant's profile in RDS. After the competition, the CloudFormation stack is not used anymore and to save resources, the stack should be terminated to save the cost. Your manager instructed you to back up the RDS database and the S3 bucket so the data can still be used even after the CloudFormation template is deleted. Which of the following options will fulfill this requirement?

A. Set the DeletionPolicy for the RDS instance to snapshot and then enable S3 bucket replication on the source bucket to a destination bucket to maintain a copy of all the S3 objects.
B. Set the DeletionPolicy to retain on both the RDS and S3 resource types on the CloudFormation template.
C. Set the DeletionPolicy on the S3 bucket to snapshot
D. Set the DeletionPolicy on the RDS resource to snapshot and set the S3 bucket to retain.

Answer: *D*

Option A is incorrect because a replica of the S3 bucket is not required so we can directly retain it.

Option B is incorrect because we can retain a snapshot of RDS, not S3.

Option C is incorrect because RDS also needs to be backed up.

Option D is correct because The Retain option keeps the resource in the event of a stack deletion. The Snapshot option creates a snapshot of the resource before that resource is deleted. The Delete option deletes the resource along with the stack.

Refer: Link

4. A company wants to have a database hosted on AWS. As much as possible they want to have control over the database itself. Which of the following would be an ideal option for this.

A. Using the AWS DynamoDB service
B. Using the AWS RDS service
C. Hosting the database on an EC2 Instance
D. Using the Amazon Aurora service

Answer: *c*

If you want a self-managed database, that means you want complete control over the database engine and the underlying infrastructure. In such a case you need to host the database on an EC2 Instance.

5. A database is being hosted using the Amazon RDS service. This database is to be made into a production database and is required to have high availability. Which of the following could be used to achieve this requirement?

A. Use Multi-AZ for the RDS instance to ensure that a secondary database is created in another region.

B. Use the Read Replica feature to create another instance of the DB in another region.

C. Use Multi-AZ for the RDS instance to ensure that a secondary database is created in another Availability Zone.

D. Use the Read Replica feature to create another instance of the DB in another Availability Zone.

Answer: *C*

Option A is incorrect because the Multi-AZ feature allows high availability across Availability Zones, not regions.

Options B and D are incorrect because Read Replicas can be used to offload database reads. But if you want high availability then opt for the Multi-AZ feature.

AWS Documentation mentions the following: Amazon RDS Multi-AZ deployments provide enhanced availability and durability for Database (DB) Instances, making them a natural fit for production database workloads. When you provision a Multi-AZ DB Instance, Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ).

Video of the Week 5m

- AWS CloudFormation - Understanding Parameters and Outputs

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: Create Phonebook Application

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-002 : Milliseconds Converter Application (Python Flask) deployed on AWS Application Load Balancer with Auto Scaling Group using AWS Cloudformation

Closing 5m

-Next week's plan

-QA Session
