

TEAM LEAD VERSION (Week-15)



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

- A. Proxy
- B. Hosted
- C. General
- D. Dynamic

Answer: A

2. 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

3. Which command is used to list of the resources in state in Terraform?

- A. terraform state --list
- B. terraform show list
- C. terraform state list
- D. terraform ls state

Answer: C

4. What is the name of the way to organize data to be easily queried and shown back to the Terraform user?

- A. implicit variables
- B. explicit variables
- C. output variables
- D. input variables

Answer: C

5. How can we delete a local git repository?

- A. `git rm --cached filename`
- B. `git diff --staged`
- C. `rm -rf .git`
- D. You can not delete a local repository

Answer: C

Interview/Certification Questions

20m

1. In a fully managed service such as Amazon Aurora, what are the implications of the Shared Responsibility Model?

- A. Amazon is responsible for only the physical infrastructure on which the user's data resides.
- B. Amazon is responsible for the RDS instances, the operating system updates, patching of software and its maintenance .
- C. The user is responsible for the operating system updates, patching of software and its maintenance.
- D. The user is responsible for the security of the EC2 instances on which the relational database resides

Answer: B

In fully managed service such as Amazon Aurora, the user does not have access to the backend EC2 instances where the relational database resides. Backups, software updates and patches are administered by Amazon.

Option A. is INCORRECT because the service in the scenario is a fully managed service, so this slightly skews the Shared Responsibility Model

Option C. is INCORRECT because in a fully managed service such as Amazon Aurora, the user does not have access to the EC2 instances where the database resides.

Option D. is INCORRECT because in a fully managed service such as Amazon Aurora, the user does not have access to the EC2 instances where the database resides therefore is not responsible for their security.

2. When designing a highly available architecture, what is the difference between vertical scaling (scaling up) and horizontal scaling (scaling out)?

- A. Scaling up provides for high availability whilst scaling out brings fault-tolerance
- B. Scaling out is not cost-effective compared to scaling up
- C. Scaling up adds more resources to an instance, scaling out adds more instances
- D. Autoscaling groups require scaling up whilst launch configurations use scaling out

Answer: C

In high availability architectures, Autoscaling is used to give elasticity to the design where horizontal scaling (scaling out) uses Autoscaling groups to increase processing capacity in response to changes in preset threshold parameters. It could involve adding more EC2 instances of a web server. Vertical scaling (scaling up), which can create a single point of failure, involves adding more resources to a particular instance to meet demand.

Option A. is INCORRECT because scaling up does not provide high availability, adding more resources to one instance is often not a best-practice in architecture design.

Option B. is INCORRECT because scaling out is actually cost-effective since it involves only adding more resources in response to demand and reducing resources (scaling down) when demand is low.

Option D. is INCORRECT because all Autoscaling groups require a launch configuration as the basis of what resources would be provisioned or deprovisioned to meet predefined parameters.

3. Which of the following can be used to increase the fault tolerance of an application.

- A. Deploying resources across multiple edge locations
- B. Deploying resources across multiple VPC's
- C. Deploying resources across multiple Availability Zones
- D. Deploying resources across multiple AWS Accounts

Answer: C

Each AZ is a set of one or more data centers. By deploying your AWS resources to multiple Availability zones , you are designing with failure with mind. So if one AZ were to go down , the other AZ's would still be up and running and hence your application would be more fault tolerant. For more information on AWS Regions and AZ's.

4. Which of the following can be used as an additional layer of security to using a user name and password when logging into the AWS Console.

- A. Multi-Factor Authentication (MFA)
- B. Secondary password
- C. Root access privileges
- D. Secondary user name

Answer: A

The AWS Documentation mentions the following AWS Multi-Factor Authentication (MFA) is a simple best practice that adds an extra layer of protection on top of your user name and password.

5. Why is Amazon DynamoDB service best-suited for implementation in mobile, Internet of Things (IoT) and gaming applications?

- A.** DynamoDB is a fully-managed database instance with no infrastructure overheads
- B.** DynamoDB has a flexible data model and single-digit millisecond latency
- C.** Whilst in operation, DynamoDB instances are spread across at least three geographically distinct centers, AWS Regions
- D.** DynamoDB supports eventual and strongly consistent reads

Answer: B

The use cases mentioned in the scenario have unstructured data in common, therefore, the most appropriate attribute of Amazon DynamoDB is its flexible data model and single-digit millisecond latency.

Option A. is INCORRECT because being fully-managed and having no infrastructure overheads does not distinguish DynamoDB as the best-suited solution for the given use cases.

Option C. is INCORRECT because the aspect of fault-tolerance, disaster recovery and high availability is also present in Amazon Relational Databases (RDS), this feature does not distinguish the service in accordance with the described use cases.

Option D. is INCORRECT because this attribute of DynamoDB does not fully justify its exclusive choice over other instances when considered for implementation in the use cases mentioned in the question

Video of the Week**5m**

- [GitHub Professional Guides: 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

- [Morse Translator](#)

We assume that each group has two sub teams. Each week, one of the sub-teams will present their solution.

Closing

5m

-Next week's plan

-QA Session
