

# TEAM LEAD VERSION (DevOps-Week-10)

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CLARUSWAY  
WAY TO REINVENT YOURSELF

## Meeting Agenda

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- ▶ Icebreaking
- ▶ Questions
- ▶ Interview/Certification Questions
- ▶ Coding Challenge
- ▶ Article of the week
- ▶ Video of the week
- ▶ Retro meeting
- ▶ Case study / project

# Teamwork Schedule

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## 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. Can we run Junits as a part of Jenkins job?

- A. True
- B. False

**Answer:** A

### 2. Which variable contains the directory which contains logs, jobs, users and other configurations of jenkins?

- A. HOME
- B. HOME\_JENKINS
- C. JENKINS\_HOME
- D. JENKINS

**Answer:** C

### 3. Declarative pipeline starts with which tag?

- A. node
- B. pipeline
- C. stage
- D. step

**Answer: B**

**4. Which scripting language is used in Jenkins?**

- A. bash
- B. python
- C. groovy
- D. perl

**Answer: C**

**5. Which function is used in pipeline to get the secrets/credentials?**

- A. withCredentials
- B. withData
- C. withSecret
- D. withPassword

**Answer: A**

**Interview/Certification Questions**

**20m**

**1. A company is planning to build a 2-tier architecture with a web server and a database server with separate environments for development and testing. The architecture will be hosted on EC2 Instances accordingly, and the database server would require more than 10,000 IOPS per volume. Which of the following EBS volumes are optimum for the underlying EC2 Instances? (Select Two)**

- A. General Purpose SSD for the web server
- B. Provisioned IOPS for the web server
- C. General Purpose SSD for the database server
- D. Provisioned IOPS for the database server

**Answer: A and C**

*The General Purpose SSD would be suitable for development and test environments and the IOPS SSD for business critical applications*

*For more information on EBS Volume types, please visit the following [Link](#)*

**2. 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.*

**3. You have an EC2 instance in the AWS us-east-1 region. The application in the instance needs to access a DynamoDB table that is located in the AWS us-east-2 region. The connection must be private without leaving the Amazon network and the instance should not use any public IP for communication. How would you configure this?**

- A.** Configure an inter-region VPC endpoint for the DynamoDB service.
- B.** Configure inter-region VPC peering and create a VPC endpoint for DynamoDB in us-east-2.
- C.** Create an inter-region VPC peering connection between us-east-1 and us-east2.
- D.** There is no way to setup the private inter-region connections.

**Answer: B**

*For the private connections between regions, VPC peering should be used. Then VPC endpoint allows users to privately access the DynamoDB service. Please check the reference in [Link](#)*

*Option A is incorrect: Because you cannot configure an inter-region VPC endpoint directly.*

*Option B is CORRECT: With inter-region VPC peering and VPC endpoint (PrivateLink), the EC2 instance can communicate with the DynamoDB table privately even if they belong to different regions.*

*Option C is incorrect: This option does not mention the usage of VPC endpoint.*

*Option D is incorrect: Because VPC peering supports the inter-region connections.*

**4. You have an application developed in .NET. This applications works with the S3 buckets in a particular region. The application is hosted on an EC2 Instance.**

**Which of the following should ideally be used to ensure that the EC2 Instance has the appropriate access to the S3 buckets?**

- A.** AWS Users
- B.** AWS Groups
- C.** AWS IAM Roles
- D.** AWS IAM Policies

**Answer: C**

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

*Groups are collections of Users which will not be appropriate for the EC2 Instance so A and B are incorrect. The creation of a new policy cannot ensure appropriate access. They must be attached to a User, Group or Role. Therefore D is incorrect.*

**5. 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](#)*

## Video of the Week

10m

- [Continuous Deployment vs. Continuous Delivery](#)

## 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 : Caesar Cipher](#)

## Case study/Project

10m

**Case study should be explained to the students during the weekly meeting and has to be completed in two week by the students. Students should work in small teams to complete the case study.**

- [Project-208: Jenkins Pipeline for Web Page Application \(Postgresql-Nodejs-React\) deployed on EC2's with Ansible and Docker](#)

## Closing

5m

-Next week's plan

-QA Session

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