Feedback Good job!

Question 1

Correct

Mark 0.50 out of 0.50

⚑ Flag question

Software can be automatically installed during the provisioning of the EC2 instance through [User Data ▼] ✔ which is composed of

[A series of shell commands ▼] ✔ .

Your answer is correct.

Question 2

Correct

Mark 0.50 out of 0.50

⚑ Flag question

An EC2 instance can be secured by using [security groups ▼] ✔ which [control the inbound and outbound traffic ▼] ✔ .
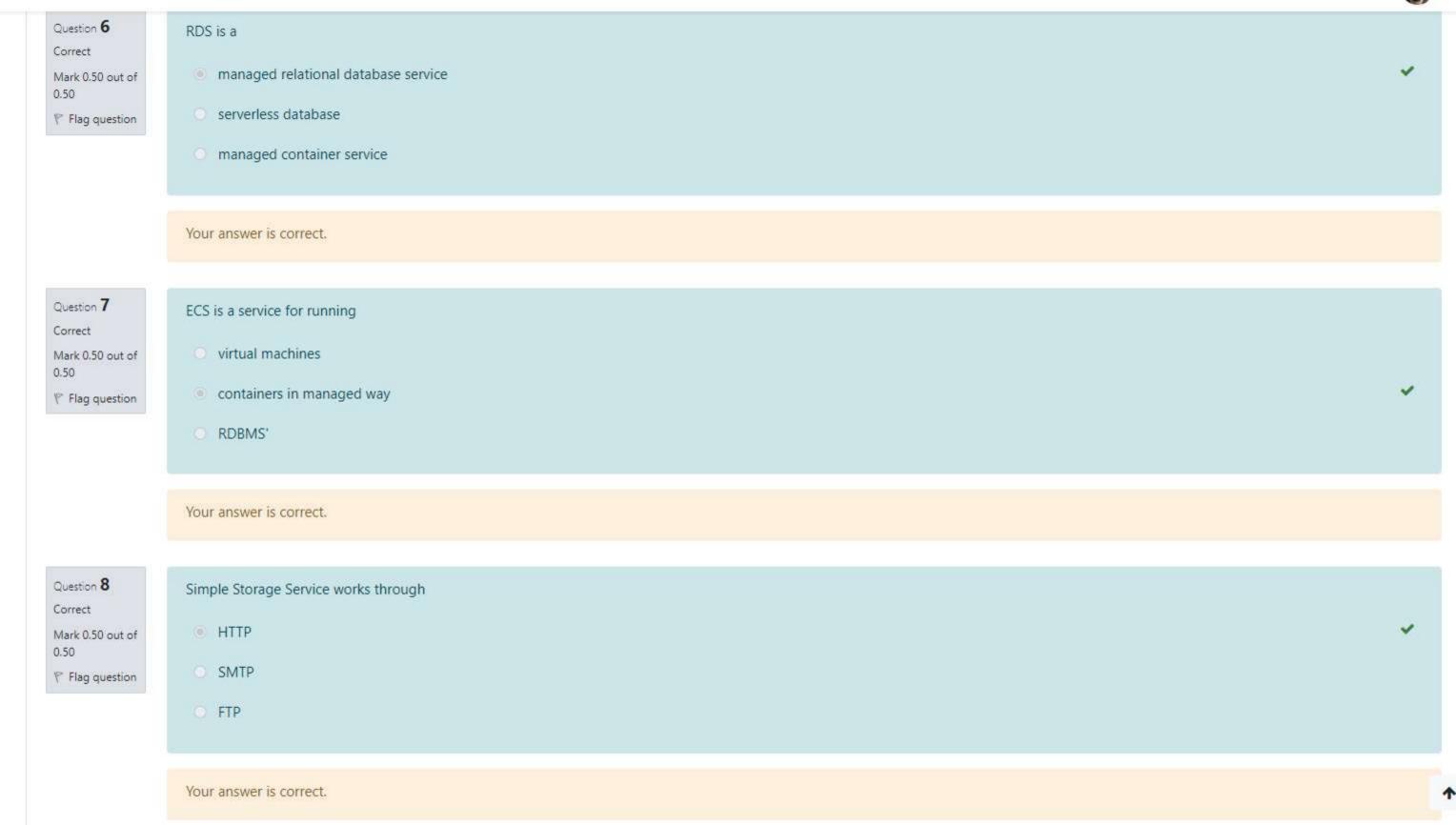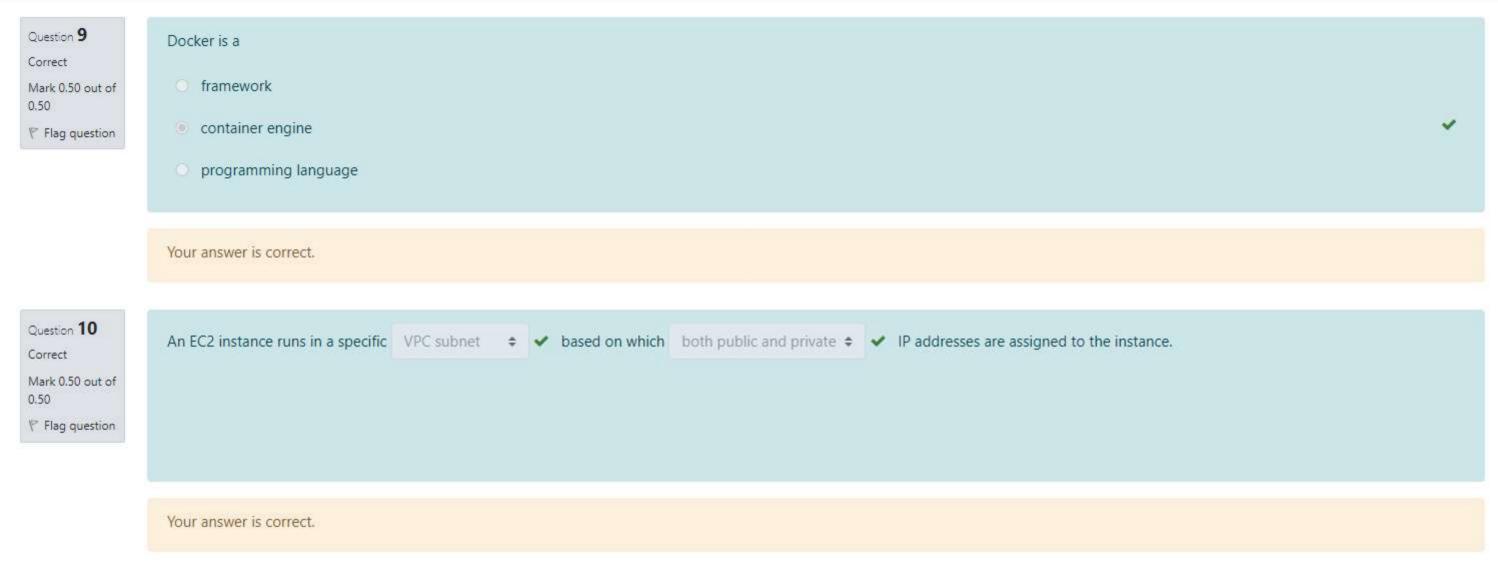
Your answer is correct.

Question 3

Correct

Mark 0.50 out of 0.50

⚑ Flag question

An EC2 instance is deployed in a specific AZ

Select one:

- ◉ True ✔
- ○ False

Your answer is correct.

Question 4

Correct

Mark 0.50 out of 0.50

⚑ Flag question

An AWS availability zone is:

- ◉ An isolated location, part of a specific region, in which resources can be deployed ✔
- ○ A geographical area in which AWS services are available
- ○ A feature of EC2 that increases the availability

Your answer is correct.

Question 5

Correct

Mark 0.50 out of 0.50

⚑ Flag question

Simple Storage Service (S3) helps us

Select one:

- ○ Host web applications
- ◉ Store and serve an infinite amount of objects such as images, documents, and videos ✔
- ○ Create bootable virtual disks that can be attached to EC2 instances

Your answer is correct.

Question 6

Correct

Mark 0.50 out of 0.50

⚑ Flag question

RDS is a

- ⦿ managed relational database service ✔
- ○ serverless database
- ○ managed container service

Your answer is correct.

Question 7

Correct

Mark 0.50 out of 0.50

⚑ Flag question

ECS is a service for running

- ○ virtual machines
- ⦿ containers in managed way ✔
- ○ RDBMS'

Your answer is correct.

Question 8

Correct

Mark 0.50 out of 0.50

⚑ Flag question

Simple Storage Service works through

- ⦿ HTTP ✔
- ○ SMTP
- ○ FTP

Your answer is correct.

Docker is a

○ framework

◉ container engine ✔   ✔

○ programming language

Your answer is correct.

An EC2 instance runs in a specific [VPC subnet ⇕] ✔ based on which [both public and private ⇕] ✔ IP addresses are assigned to the instance.

Your answer is correct.

You are designing a three-tier web application and want to restrict access to the database tier (remember PostgreSQL instance) to accept traffic from the application servers only (Spring Java app). However, these application servers are in an Auto Scaling group and may vary in quantity.

How should you configure the database servers to meet the requirements?

○ Configure the database subnet network ACL to allow inbound database traffic from the application-tier subnet.

○ Configure the database subnet network ACL to deny all inbound non-database traffic from the application-tier subnet.

◉ Configure the database security group to allow database traffic from the application server security group. ✔

○ Configure the database security group to allow database traffic from the application server IP addresses.

Your answer is correct.

Content stored on S3 can be restricted such that it's accessible only through CloudFront by using

◉ Origin Access Identity ✔

○ Signed URLs

○ S3 Bucket Settings

Your answer is correct.

Question 13

Correct

Mark 0.50 out of 0.50

⚑ Flag question

The connection times out while trying to access an EC2 instance via SSH on the standard port. What is the most likely issue?

○ The instance type is misconfigured

○ The instance is not reachable via the internet

◉ The security group does not explicitly allow traffic on port 22 ✔

Your answer is correct.

Question 14

Correct

Mark 0.50 out of 0.50

⚑ Flag question

Your application tier is running in an Auto Scaling Group and you need to change the instance type. In which of the following area can this be achieved?

○ Auto scaling policy configuration

◉ Auto scaling launch template/configuration ✔

○ Auto scaling tags configuration

○ Auto scaling AMI

Your answer is correct.

Your organization is running a business-critical learning management system (LMS) on its own infrastructure on-premises. Since the platform has been growing exponentially, the stakeholders decided to migrate it to AWS. You are part of the development team and you are responsible for choosing the right services and designing the solution.

The system enables teachers and experts to market, sell, and present their courses to people willing to learn from all around the world. Each course might contain written documents (mostly PDFs and PowerPoint presentations), videos, and images/diagrams. Moreover, students can be notified via email, each course goes through a review process before being published, and teachers have access to the API of the system enabling them to publish the courses on their own websites.

The LMS is composed out of several backend modules written in Java and Node.js which store data in MySQL databases, while the frontend is built with React. Your team has been struggling lately to run the system locally due to its distributed nature and increasing number of dependencies. Another important consideration is that the system transcodes the videos before the course is published in order to optimize bandwidth and playback.

Since this is the core product of your organization, the main focus of the design must be the availability of the system and reducing operational/maintenance overhead. Of course, cost must be optimized whenever possible.

Describe your solution below. Mention which AWS services you would choose, how they communicate to each other, and, equally important, why you have chosen a particular service. Be as explicit as possible.

Optionally, you can upload images to illustrate your design (feel free to use any drawing or diagram tool you wish; images don't have to be pretty).