

# Practice Exam2

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Question 1: **Incorrect**

Which of the following services allows you to run your application when needed, without having to own a server running all the time?

A. AWS EC2 instances

B. AWS Lambda

(Correct)

C. AWS LightSail

(Incorrect)

D. AWS RDS instances

## Explanation

AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume - there is no charge when your code is not running.

<https://aws.amazon.com/lambda/>

Question 2: **Incorrect**

What does Amazon ElastiCache provide?

A. A service by this name doesn't exist. Perhaps you mean Amazon CloudCache.



B. A virtual server with a huge amount of memory.

C. A managed In-memory cache service.

(Correct)

D. An Amazon EC2 instance with the Memcached software already pre-installed.

(Incorrect)

### Explanation

ElastiCache is a web service that makes it easy to set up, manage, and scale a distributed in-memory data store or cache environment in the cloud. It provides a high-performance, scalable, and cost-effective caching solution, while removing the complexity associated with deploying and managing a distributed cache environment. <https://docs.aws.amazon.com/AmazonElastiCache/latest/memug/WhatIs.html>

Question 3: **Incorrect**

You decided to pay a low upfront fee and get a significantly discounted hourly rate. What is the payment model you are going to use?

A. Pay as you go

(Incorrect)

B. Save when you reserve.

(Correct)

C. Pay less as AWS grows

D. Custom pricing

### Explanation



For certain products, like Amazon EC2 and Amazon RDS, you can invest in reserved capacity. In that case, you pay a low upfront fee and get a significantly discounted hourly rate, which results in overall savings up to 75% (depending on the type of instance you reserve) over equivalent on-demand capacity. [https://d1.awsstatic.com/whitepapers/aws\\_pricing\\_overview.pdf](https://d1.awsstatic.com/whitepapers/aws_pricing_overview.pdf)

#### Question 4: **Incorrect**

What makes Cloud computing better than traditional data centers? (Select all that apply)

A. Eliminating SPOFs.

(Correct)

B. Distributed infrastructure.

(Correct)

C. On-demand infrastructure for scaling applications or tasks.

(Correct)

D. Cost savings.

(Correct)

E. Reserved Compute Capacity.

(Incorrect)

#### Explanation

These are things that a traditional web host cannot provide. High-availability (eliminating SPOFs: single points of failure): AWS makes the process of designing a highly available system simple and easy. A system is highly available when it can withstand the failure of an individual component or multiple components, such as hard disks, servers, and network links. The best way to understand

#### Question 6: **Incorrect**

What is the feature provided by AWS that enables fast and secure transfer of files over long distances between your client and your Amazon S3 bucket?



A. Snowball

(Incorrect)

B. HTTP Snowball Transfer

C. S3 Transfer Acceleration

(Correct)

D. File transfer Accelerator

### Explanation

Amazon S3 Transfer Acceleration enables fast, easy, and secure transfers of files over long distances between your client and an S3 bucket. Transfer Acceleration takes advantage of Amazon CloudFront's globally distributed edge locations. As the data arrives at an edge location, data is routed to Amazon S3 over an optimized network path.

<https://docs.aws.amazon.com/AmazonS3/latest/dev/transfer-acceleration.html>

Question 7: **Incorrect**

A company currently uses VM Templates to spin up virtual machines on their on-premise infrastructure. Which of the following can be used in a similar way to spin up EC2 instances on the AWS Cloud?

A. EBS Volumes

B. Amazon Machine Images

(Correct)

C. EBS Snapshots

D. Amazon VMware

(Incorrect)

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## Explanation

An Amazon Machine Image (AMI) provides the information required to launch an instance, which is a virtual server in the cloud. You specify an AMI when you launch an instance, and you can launch as many instances from the AMI as you need. You can also launch instances from as many different AMIs as you need. <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

Question 8: **Incorrect**

Which of the following security features is associated with a subnet in a VPC to protect against incoming traffic requests?

A. AWS Inspector

B. Subnet Groups

C. NACL

(Correct)

D. Security Groups

(Incorrect)

## Explanation

A network access control list (ACL) is an optional layer of security for your VPC that acts as a firewall for controlling traffic in and out of one or more subnets. You might set up network ACLs with rules similar to your security groups in order to add an additional layer of security to your VPC. NOTE: Security Groups act as a firewall for associated Amazon EC2 instances, controlling both inbound and outbound traffic at the instance level, while ACLs act at the subnet level.

[https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_ACLs.html](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_ACLs.html)

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Question 9: **Incorrect**

Which of the following AWS Cloud services is designed according to the Multi-AZ principle? (Choose 2 answers)

A. Amazon DynamoDB

B. Amazon ElastiCache

C. Elastic Load Balancing

D. Amazon Virtual Private Cloud (Amazon VPC)

E. Amazon Simple Storage Service (Amazon S3)

**Explanation**

\*\* Amazon DynamoDB runs across AWS proven, high-availability data centers. The service replicates data across three AWS regions to provide fault tolerance in the event of a server failure or Availability Zone outage. \*\* Amazon S3 provides durable infrastructure to store important data and is designed for durability of 99.99999999% of objects. Your data is redundantly stored across multiple facilities and multiple devices in each facility. While Elastic Load Balancing and Amazon ElastiCache can be deployed across multiple Availability Zones, you must explicitly take such steps when creating them.

Question 13: **Correct**

Which of the following services can help protect your web applications from SQL injection and other vulnerabilities in application code?

A. Amazon Aurora

B. IAM

C. AWS Web Application Firewall

D. Amazon Cognito

(Correct)

(Incorrect)

(Correct)

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(Correct)

## Explanation

AWS web application firewall (AWS WAF) can help protect your web applications from SQL injection and other vulnerabilities in your application code. Reference: [https://d1.awsstatic.com/whitepapers/AWS\\_Cloud\\_Best\\_Practices.pdf](https://d1.awsstatic.com/whitepapers/AWS_Cloud_Best_Practices.pdf)

Question 14: **Incorrect**

Which of the following is your responsibility when dealing with the PCI DSS? (Select all that apply)

A. You are responsible for designing, building, and maintaining a compliant environment in AWS. (Correct)

B. You are responsible for validating compliance annually and document the results in an AOC document.

C. You are responsible for the network and firewall configuration. (Correct)

D. You are responsible for the identity and access management. (Correct)

E. You are responsible for Protecting Stored Cardholder Data (Correct)

## Explanation

Option A,C,D,E are the correct answers as stated in the PCI DSS white paper here:

[https://d1.awsstatic.com/whitepapers/compliance/AWS\\_Anitian\\_Workbook\\_PCI\\_Cloud\\_Compliance.pdf](https://d1.awsstatic.com/whitepapers/compliance/AWS_Anitian_Workbook_PCI_Cloud_Compliance.pdf) // However option B is correct because you are not responsible for creating such documents.

A. Reliability

B. Validity

C. Agility

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s not

(Correct)

(Incorrect)

D. Performance Efficiency

### Explanation

The 5 Pillars of the AWS Well-Architected Framework: 1. Operational Excellence: The operational excellence pillar includes the ability to run and monitor systems to deliver business value and to continually improve supporting processes and products. 2. Security: The security pillar includes the ability to protect information, systems, and assets while delivering business value. This is achieved through risk assessments and mitigation strategies. 3. Reliability: The reliability pillar includes the ability of a system to handle normal load, expected peak load, and unexpected events from infrastructure or service disruptions, dynamically acquire computing resources to meet demand, and mitigate disruptions such as misconfigurations or transient network issues. 4. Performance Efficiency: The performance efficiency pillar includes the ability to use computing resources efficiently to meet system requirements and to maintain that efficiency as demands and technologies evolve. 5. Cost Optimization: The cost optimization pillar includes the ability to avoid or eliminate unnecessary cost or suboptimal resources. // Creating a software system is a lot like constructing a building. If the foundation is not solid, structural problems can undermine the integrity and function of the building. When architecting technology solutions for Web Services (AWS), if you neglect the five pillars of operational excellence, security, reliability, performance efficiency, and cost optimization, it can become challenging to build a system that delivers on your expectations and requirements. Incorporating these pillars into your architecture helps produce stable and efficient systems. This allows you to focus on the other aspects of system design, such as functional requirements. The AWS Well-Architected Framework helps cloud architects build the most secure, performing, resilient, and efficient infrastructure possible for their applications. Retrieved from: <https://aws.amazon.com/blogs/apn/the-5-pillars-of-the-aws-well-architected-framework/>

D. Amazon EC2

### Explanation

All other services belong to the managed services. The only service that allows you to have complete control over your virtual infrastructure is the EC2 service. <https://aws.amazon.com/managed-services/> <https://aws.amazon.com/ec2/>

Question 23: **Incorrect**

Which of the following services allows you to run containerized applications on a cluster of EC2 instances?

A. Amazon Elastic Container Service.

B. Amazon Elastic Docker Service.

C. Amazon Elastic Compute Service.

(Correct)

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(Correct)

control over the underlying  
[com/ec2/faqs/](http://aws.amazon.com/ec2/faqs/)

(Correct)

(Incorrect)

- D. AWS Docker Manager.

### Explanation

Amazon Elastic Container Service (Amazon ECS) is a highly scalable, high-performance container orchestration service. It supports Docker containers and allows you to easily run and scale containerized applications on AWS. Amazon does not need for you to install and operate your own container orchestration software, manage and scale a cluster of virtual machines, or schedule containers on those virtual machines. <https://aws.amazon.com/ecs/>

### Question 24: **Incorrect**

You are trying to calculate the Total Cost of Ownership (TCO) for the AWS Cloud. Which of the following should you consider?

- A. The number of end users you are currently serving
- B. The number of applications migrated to AWS
- C. The number of active passwords.
- D. The number of servers migrated to AWS

### Explanation

The TCO Calculator provides directional guidance on possible realized savings when deploying AWS. This tool is based on a underlying calculation model, that generates a fair assessment of value that a customer may achieve given the details of the user which includes the number of servers migrated to AWS, the server type, the number of Processors and so on. <https://aws.amazon.com/tco-calculator/> <https://awstcocalculator.com/>

### Question 26: **Incorrect**

A company is hosting a web application in the AWS Cloud using a set of EC2 instances. Which of the following services protect them from DDoS attacks? (Select all that apply)

~~service that  
ECS eliminates the  
virtual machines, or~~

Id you provide?

(Incorrect)

(Correct)

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ng can help to

A. Using Security Groups

B. Using AWS Config

C. Using Network Access Control Lists

D. Using the Internet gateway

### Explanation

\*\* A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. \*\* A network access control list (ACL) acts as a firewall for controlling traffic in and out of one or more subnets. Therefore if they are correctly configured, they can protect your instances from DDoS attacks. <https://aws.amazon.com/answers/networking/aws-ddos-attack-prevention/>

B. EMR

C. Glacier

D. Storage gateway

### Explanation

Amazon EMR helps you analyze and process vast amounts of data by distributing the computational work across multiple virtual servers running in the AWS Cloud. The cluster is managed using an open-source framework called Hadoop, which lets you focus on crunching or analyzing your data without having to worry about time-consuming setup, management, and tuning of Hadoop clusters or the compute capacity they rely on. <https://aws.amazon.com/emr/>

B. AWS allows you to encrypt the file system on an EBS volume on EBS volume setup

(Correct)

(Correct)

(Incorrect)

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nfigured properly,  
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(Correct)

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loop. Amazon EMR  
management, and

(Correct)

C. Encryption can be done on the OS layer of the EBS volume

D. None of the above

### Explanation

Amazon Elastic Block Store (EBS) offers an encryption solution for your Amazon EBS volumes so you don't have to manage your own infrastructure for managing encryption keys for block storage. To get started, simply create a new EBS volume using the AWS Management Console, API, or CLI. Once you create an Amazon EBS volume, disk I/O, and snapshots created from the volume are all encrypted.

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html>

Question 32: **Incorrect**

You have developed a microservices application. Which of the following should you use to make sure that each service in a system gets the same amount of traffic?

A. Network Load Balancer.

B. Auto Scaling

C. Classic Load Balancer

D. Application Load Balancer

### Explanation

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon Lambda functions, containers, IP addresses, and Lambda functions. Elastic Load Balancing offers three types of load balancers: 1- Application Load Balancer, 2- Network Load Balancer, 3- Classic Load Balancer. Since you are working on a microservices application, then the best option is to use the Application Load Balancer which is best suited for load balancing HTTPS traffic and provides advanced request routing targeted at the delivery of modern application architecture.

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(Incorrect)

(Correct)

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This diagram provides advanced request routing targeted at the delivery of modern application architectures, microservices and containers. <https://d1.awsstatic.com/whitepapers/aws-overview.pdf>

#### Question 34: **Correct**

Which of the following services allows you to analyze EC2 Instances against pre-defined security templates to check for vulnerabilities?

A. AWS Trusted Advisor

B. AWS Inspector

C. AWS WAF

D. AWS Shield

#### Explanation

Amazon Inspector enables you to analyze the behavior of your AWS resources and helps you to identify potential security issues. Using Amazon Inspector, you can define a collection of AWS resources that you want to include in an assessment target, then create an assessment template and launch a security assessment run of this target.  
[https://docs.aws.amazon.com/inspector/latest/userguide/inspector\\_introduction.html](https://docs.aws.amazon.com/inspector/latest/userguide/inspector_introduction.html)

D. Amazon SQS

#### Explanation

Amazon Simple Queue Service (Amazon SQS) offers a reliable, highly-scalable hosted queue for storing messages between applications or microservices. It moves data between distributed application components and helps you to manage components. <https://aws.amazon.com/sqs/>

#### ★ Question 41: **Incorrect**

What does Amazon Elastic Beanstalk provide?

es, including

check for

(Correct)

security issues.  
target. You can

(Correct)

es as they travel  
you decouple these

A. A scalable storage appliance on top of Amazon Web Services.

B. An application container on top of Amazon Web Services.

C. A service by this name doesn't exist.

D. A scalable cluster of EC2 instances.

### Explanation

AWS Elastic Beanstalk makes it easier for developers to quickly deploy and manage applications in the AWS cloud. You simply upload your application, and Elastic Beanstalk automatically handles the deployment details of capacity management, load balancing, auto-scaling, and application health monitoring. <https://aws.amazon.com/elasticbeanstalk/faqs/>

Which of the following allows you to use a drag-and-drop interface to edit cloudFormation templates?

A. CloudFormation visualizer

B. CloudFormation Designer

★ Question 49: **Incorrect**

You have the following options for protecting data in transit in Amazon S3: (Choose two)

A. Use Server-Side Encryption

B. Use Client-Side Encryption

(Incorrect)

(Correct)

S Cloud. Developers  
capacity provisioning, load

ation templates?

(Incorrect)

(Correct)

C. Use SSL

★ Question 52: **Incorrect**

You can monitor the accepted and rejected IP traffic going to and from your VPC instances by creating:

A. Access Log

B. Monitor Log

C. Security Log

D. Flow Log

**Explanation**

You can monitor the accepted and rejected IP traffic going to and from your instances by creating a flow log for a VPC individual network interface. Flow log data is published to CloudWatch Logs, and can help you diagnose overly restrictive or overly permissive security group and network ACL rules.

[https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Security.html](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Security.html)

★ Question 55: **Incorrect**

Which of the following AWS services are free to use? (Choose 2)

A. Security Groups

(Correct)

(Incorrect)

(Correct)

PC, subnet, or  
jective or

B. Route53

C. Auto-scaling

Question 57: **Incorrect**

What service helps you to aggregate logs from your EC2 instance?

A. SQS

B. S3

C. Cloudtrail

D. Cloudwatch Logs

Question 59: **Incorrect**

A company needs to host a database for at least 1 year. Which of the following would be the most cost-effective solution?

A. Spot Instances

B. Partial Upfront costs Reserved

solution?

(Correct)

C. No Upfront costs Reserved

D. On-Demand

### Explanation

Since the database server will be hosted for a minimum period of one year then it is better to use Reserved Instances provides you with a significant discount (up to 75%) compared to On-Demand instance pricing. With the Partial Upfront you make a low upfront payment and are then charged a discounted hourly rate for the instance for the duration of the Instance term. The Partial Upfront option is more cost effective than the No upFront option( The more you spend upfront more you save). <https://aws.amazon.com/ec2/pricing/reserved-instances/pricing/>

Question 63: **Correct**

Your company wants to migrate their website to AWS. Security is a major concern to them, so they need to host their website on an exclusive hardware that is NOT shared with any other AWS customers. Which of the following EC2 instance types would be more appropriate?

A. Reserved instances

B. Independent instances

C. Distinct instances

D. Dedicated instances (Co)

### Explanation

Dedicated Instances are Amazon EC2 instances that run in a virtual private cloud (VPC) on hardware that's dedicated to a single customer. Dedicated Instances that belong to different AWS accounts are physically isolated at the hardware level. In addition, Dedicated Instances that belong to AWS accounts that are linked to a single payer account are also physically isolated at the hardware level. However, Dedicated Instances may share hardware with other instances from the same AWS account that belong to different accounts. <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/dedicated-instance.html>

Question 64: **Incorrect**

Which of the following AWS services can be used as a compute resource? (Choose two)

(Incorrect)

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A. Amazon S3

B. Amazon EC2

C. Amazon VPC

D. AWS Lambda

### **Explanation**

\*\* Although there is no servers to manage on AWS Lambda but this does not mean that there is no servers( or compute capacity) available. Every application needs compute capacity to run. With Lambda, AWS handles this compute capacity and manages it for you. In brief, AWS Lambda provides serverless computing in the AWS Cloud. \*\* Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. <https://aws.amazon.com/lambda/> <https://aws.amazon.com/ec2/>

(Correct)

(Incorrect)

(Correct)

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C2) is a web