

# AWS Certified Cloud Practitioner (CLF-C01)

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## Practice Questions

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**IMPORTANT NOTE:** This document covers the AWS Certified Cloud Practitioner exam (CLF-C01), however there is a new version of the exam out now (CLF-C02). I think these questions will still remain useful even for CLF-C02, tho it's worth checking out other resources for CLF-C02 too, just to ensure you cover all the bases. Good luck in the exam – Cathal :) 15 July 2024

## Practice Questions

### Intro

I have included questions mainly taken from [this website](#) but also from other sources (such as [this website](#)).

The answers on the above websites were often incorrect and the discussion sections contained confusing and conflicting information, so I think it is a good idea to compile the correct answers, along with reasoning of why they are the correct answers.

I think a good way of revising for any exam is going over past paper questions, for me when I studied for this exam, I'd do 50 questions a day and it eventually stuck after a few weeks.

I think I have gotten the correct answers for all the questions, though if you notice any errors or otherwise have any ideas for improvements just let me know at [cathalmcg@gmail.com](mailto:cathalmcg@gmail.com)

I have also removed most of the duplicate questions I could find, there are definitely some duplicates remaining though but I do not have enough time to search for them all. In some cases I've left some very similar though not identical questions in place, they may be a bit redundant but I think it is worth getting very familiar with the topics they cover e.g. shared responsibility model, basics of cloud computing and best practices.

I've included quoted text often in answers, these are normally directly from some AWS literature but not always, sometimes they are from external sources. I have double-checked any non-AWS sources to ensure they are reliable however.

Occasionally I may update this document with the most recent information so if you do save your own copy of the document be sure to download a new copy every once in a while.

I have also created a guide for the AWS Cloud Practitioner exam, [it can be accessed here](#)

Click on the comment icon beside the question to see the answers and explanations:

Thanks,

Cathal

Example comment icon →

Commented [MC1]: Answers that are correct will be shown in a green outline like this

Answers that are incorrect will be shown in a red outline like this

Further information will be shown in a blue outline like this

1. Under the shared responsibility model, which of the following is the customer responsible for?

- A. Ensuring that disk drives are wiped after use.
- B. Ensuring that firmware is updated on hardware devices.
- C. Ensuring that data is encrypted at rest.
- D. Ensuring that network cables are category six or higher.

Commented [MC2]: C

**"Data configuration (i.e. encrypting data at rest and in transit) is responsibility of the customer"**

2. Which allows companies to track and categorize spending on a detailed level?

- A. Cost allocation tags
- B. Consolidated billing
- C. AWS Budgets
- D. AWS Marketplace

Commented [MC3]: A

"After you activate cost allocation tags, AWS uses the cost allocation tags to organize your resource costs on your cost allocation report, **to make it easier for you to categorize and track your AWS costs**"

3. Stores objects, provides real-time access to those objects, and offers versioning and lifecycle capabilities:

- A. Amazon Glacier
- B. AWS Storage Gateway
- C. Amazon S3
- D. Amazon EBS

Commented [MC4]: C

Compared to block storage, object storage is much newer. **With object storage, data is bundled with customizable metadata tags and a unique identifier to form objects.** The metadata tags are a key advantage with object storage — they allow for much better identification and classification of data.

Example of object storage: Amazon S3

**Versioning in Amazon S3 is a means of keeping multiple variants of an object in the same bucket.** You can use the S3 Versioning feature to preserve, retrieve, and restore every version of every object stored in your buckets. With versioning you can recover more easily from both unintended user actions and application failures. After versioning is enabled for a bucket, if Amazon S3 receives multiple write requests for the same object simultaneously, it stores all of those objects.

4. What AWS team assists customers with accelerating cloud adoption through paid engagements in any of several specialty practice areas?

- A. AWS Enterprise Support
- B. AWS Solutions Architects
- C. AWS Professional Services
- D. AWS Account Managers

Answer is NOT EBS because it stores blocks, not objects

Block storage is the oldest and simplest form of data storage. Block storage stores data in fixed-sized chunks

Commented [MC5]: C

**"The AWS Professional Services organization is a global team of experts that can help you realize your desired business outcomes when using the AWS Cloud."** We work together with your team and your chosen member of the AWS Partner Network (APN) to execute your enterprise cloud computing initiatives.

Our team provides assistance through a collection of offerings which help you achieve specific outcomes related to enterprise cloud adoption. We also deliver

Commented [MC6]: C

**"APN Consulting Partners are professional services firms that help customers of all types and sizes design, architect, build, migrate, and manage their workloads and applications on AWS, accelerating their journey to the cloud."**

--INCORRECT ANSWERS--

6. Distributing workloads across multiple Availability Zones supports which cloud architecture design principle?

- A. Implement automation.
- B. Design for agility.
- C. Design for failure.
- D. Implement elasticity.

7. Which AWS services can host a Microsoft SQL Server database? (choose two)

- A. Amazon EC2
- B. Amazon Relational Database Service (Amazon RDS)
- C. Amazon Aurora
- D. Amazon Redshift
- E. Amazon S3

8. Which of the following inspects AWS environments to find opportunities that can save money for users and also improve system performance?

- A. AWS Cost Explorer
- B. AWS Trusted Advisor
- C. Consolidated billing
- D. Detailed billing

9. Which of the following Amazon EC2 pricing models allow customers to use existing server-bound software licenses?

- A. Spot Instances
- B. Reserved Instances
- C. Dedicated Hosts
- D. On-Demand Instances

10. Which AWS characteristics make AWS cost effective for a workload with dynamic user demand? (Choose two.)

- A. High availability
- B. Shared security model
- C. Elasticity
- D. Pay-as-you-go pricing
- E. Reliability

Commented [MC7]: C

Using multiple-AZs removes single points of failure, which is part of design for failure (part of Reliability Design Principles and Best Practices')

Each Availability Zone is engineered to be independent from failures in other Availability Zones.

An example of a implementation designed for failure: A fleet of application servers can be distributed across multiple Availability Zones and be attached to ELB.

When the EC2 instances of a particular Availability Zone fail their health checks, ELB stops sending traffic to those nodes.

Commented [MC8]: A, B

EC2 can run any database

RDS can use Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle Database, and **Microsoft SQL Server**.

--INCORRECT ANSWERS--

Aurora only supports MySql and PostgreSQL

Commented [MC9]: B

"AWS Trusted Advisor is an application that draws upon best practices learned from AWS' aggregated operational history of serving hundreds of thousands of AWS customers. Trusted Advisor inspects your AWS environment and makes recommendations for saving money, improving system performance, or closing security gaps."

Commented [MC10]: C

"A Dedicated Host is a physical EC2 server dedicated for your use. Dedicated Hosts can help you reduce costs by allowing you to use your existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server (subject to your license terms), and can also help you meet compliance requirements."

Commented [MC11]: C, D

"6 Advantages of Cloud Computing

--Trade capital expense for variable expense (Pay-as-you-go model - make payment based on usage only)

--Benefit from massive economies of scale

--Stop guessing about capacity (i.e. elasticity makes it feasible to add/remove required resources as needed)

--Increased speed and agility

--Stop spending money running and maintaining data centres

11. Which service enables risk auditing by continuously monitoring and logging account activity, including user actions in the AWS Management Console and AWS SDKs?

- A. Amazon CloudWatch
- B. AWS CloudTrail
- C. AWS Config
- D. AWS Health

12. Which of the following are characteristics of Amazon S3? (Choose two.)

- A. A global file system
- B. An object store
- C. A local file store
- D. A network file system
- E. A durable storage system

13. Which services can be used across hybrid AWS Cloud architectures? (Choose two.)

- A. Amazon Route 53
- B. Virtual Private Gateway
- C. Classic Load Balancer
- D. Auto Scaling
- E. Amazon CloudWatch default metrics

14. What costs are included when comparing AWS Total Cost of Ownership (TCO) with on-premises TCO?

- A. Project management
- B. Antivirus software licensing
- C. Data center security
- D. Software development

15. A company is considering using AWS for a self-hosted database that requires a nightly shutdown for maintenance and cost-saving purposes. Which service should the company use?

- A. Amazon Redshift
- B. Amazon DynamoDB
- C. Amazon Elastic Compute Cloud (Amazon EC2) with Amazon EC2 instance store
- D. Amazon EC2 with Amazon Elastic Block Store (Amazon EBS)

Commented [CMG12]: B

"CloudTrail - Track user activity and API usage. Helps you enable governance, compliance, and operational and risk auditing of your AWS account. Actions taken by a user, role, or an AWS service are recorded as events in CloudTrail. Events include actions taken in the AWS Management Console, AWS Command Line Interface, and AWS SDKs and APIs."

--INCORRECT ANSWERS--

--CloudWatch Logs - reports on application logs.

Commented [MC13]: B, E

"S3 is a "global" service (available on every region however it is not truly global because while you can replicate your buckets/objects across regions for reliability & disaster recovery purposes, by default S3 objects sit only in one region though they are stored on multiple devices across multiple Availability Zones.

S3 provides developers and IT teams with secure, durable, highly-scalable binary object storage.

Commented [MC14]: A, B

Route 53: Inbound query capability is provided by Route 53 Resolver Endpoints, allowing DNS queries that originate on-premises to resolve AWS hosted domains.

Virtual Private Gateway: Its the anchor of a VPN connection on AWS side. This making it possible for a VPN connection to be established between AWS and on-premises.

Commented [MC15]: C

"Security and Compliance is a shared responsibility between AWS and the customer.

This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates.

Commented [MC16]: D

"Amazon Elastic Block Store (EBS) is an easy to use, high-performance, block-storage service designed for use with Amazon Elastic Compute Cloud (EC2) for both throughput and transaction intensive workloads at any scale. A broad range of workloads, such as relational and non-relational databases, enterprise applications, containerized applications, big data analytics engines, file systems, and media workflows are widely deployed on Amazon EBS."

16. Which of the following is a correct relationship between regions, Availability Zones, and edge locations?

- A. Data centers contain regions.
- B. Regions contain Availability Zones.
- C. Availability Zones contain edge locations.
- D. Edge locations contain regions.

17. Which AWS tools assist with estimating costs? (Choose three.)

- A. Detailed billing report
- B. Cost allocation tags
- C. AWS Pricing Calculator
- D. AWS Total Cost of Ownership (TCO) Calculator
- E. Cost Estimator

18. Which of the following are advantages of AWS consolidated billing? (Choose two.)

- A. The ability to receive one bill for multiple accounts
- B. Service limits increasing by default in all accounts
- C. A fixed discount on the monthly bill
- D. Potential volume discounts, as usage in all accounts is combined
- E. The automatic extension of the master account's AWS support plan to all accounts

19. Which of the following Reserved Instance (RI) pricing models provides the highest average savings compared to On-Demand pricing?

- A. One-year, No Upfront, Standard RI pricing
- B. One-year, All Upfront, Convertible RI pricing
- C. Three-year, All Upfront, Standard RI pricing
- D. Three-year, No Upfront, Convertible RI pricing

20. Compared with costs in traditional and virtualized data centers, AWS has:

- A. greater variable costs and greater upfront costs.
- B. fixed usage costs and lower upfront costs.
- C. lower variable costs and greater upfront costs.
- D. lower variable costs and lower upfront costs.

Commented [MC17]: B

Region is a geographical area that has two or more Availability Zones. Each Region is completely independent.

Availability Zone (AZ) is an area with either one or more discrete Data Centres (building filled with servers), each with redundant power, networking, and connectivity, housed in separate facilities. If there are more than one data centre, they are counted as one AZ because they are located close together. Each Availability Zone is isolated, but the Availability Zones in a Region are connected through low-latency links.

--NOTES--

--Edge Locations are endpoints used for caching content. They are located in most of the major cities around the world.

Commented [MC18]: B, C, D

B - To forecast your costs, use the AWS Cost Explorer. Use cost allocation tags to divide your resources into groups, and then estimate the costs for each group.

C - To estimate a bill, use the AWS Pricing Calculator (formerly AWS Simply Monthly Calculator)

Commented [MC19]: A, D

AWS Organizations is an account management service that lets you consolidate multiple AWS accounts into an organization that you create and centrally manage.

Allows you to:

--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements

Commented [MC20]: C

"Standard Reserved Instances provide you with a significant discount compared to On-Demand Instance pricing, and can be purchased for a 1-year or 3-year term. Customers have the flexibility to change the Availability Zone, the instance size, and networking type of their Standard Reserved Instances.

Purchase Convertible Reserved Instances if you need additional flexibility, such as the ability to use different

Commented [CMG21]: D

"The cloud allows you to trade high initial CapEx (such as data centers and physical servers) for a variable OpEx model, and only pay for IT as you consume it. Plus, the variable OpEx expenses are much lower than what you would pay to do it yourself because of the massive economies of scale that AWS has created."

21. A characteristic of edge locations is that they:

- A. host Amazon EC2 instances closer to users.
- B. help lower latency and improve performance for users.
- C. cache frequently changing data without reaching the origin server.
- D. refresh data changes daily.

22. Which of the following can limit Amazon Storage Service (Amazon S3) bucket access to specific users?

- A. A public and private key-pair
- B. Amazon Inspector
- C. AWS Identity and Access Management (IAM) policies
- D. Security Groups

23. Which of the following security-related actions are available at no cost?

- A. Calling AWS Support
- B. Contacting AWS Professional Services to request a workshop
- C. Accessing forums, blogs, and whitepapers
- D. Attending AWS classes at a local university

24. Which of the Reserved Instance (RI) pricing models can change the attributes of the RI as long as the exchange results in the creation of RIs of equal or greater value?

- A. Dedicated RIs
- B. Scheduled RIs
- C. Convertible RIs
- D. Standard RIs

25. Which AWS feature will reduce the customer's total cost of ownership (TCO)?

- A. Shared responsibility security model
- B. Single tenancy
- C. Elastic computing
- D. Encryption

Commented [MC22]: B

The edge locations help to improve performance for your users while lowering the operational burden and cost of scaling your origin resources.

"Edge Locations are endpoints used for caching content. They are located in most of the major cities around the world and are specifically used by CloudFront to distribute AWS content closer to end-users to reduce latency."

Commented [MC23]: C

You manage access in AWS by creating policies and attaching them to IAM identities (users, groups of users, or roles) or AWS resources.

A policy is an object in AWS that, when associated with an identity or resource, defines their permissions. AWS evaluates these policies when an IAM principal (user or role) makes a request.

Permissions in the policies determine whether the request is allowed or denied. Most policies are stored in AWS as JSON documents.

Incorrect answers:

Commented [MC24]: C

Free Basic support only provides:

--Customer Service and Communities - 24x7 access to customer service, documentation, whitepapers, and support forums.

--AWS Trusted Advisor - Access to the 7 core Trusted Advisor checks and guidance to provision your resources following best practices to increase performance and improve security.

--AWS Personal Health Dashboard

Commented [MC25]: C

Convertible RIs provide a discount and the capability to change the attributes of the RI as long as the exchange results in the creation of Reserved Instances of equal or greater value. Like Standard RIs, Convertible RIs are best suited for steady-state usage."

Commented [MC26]: C

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible."

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain

26. Which of the following services will automatically scale with an expected increase in web traffic?

- A. AWS CodePipeline
- B. Elastic Load Balancing
- C. Amazon EBS
- D. AWS Direct Connect

27. Where are AWS compliance documents, such as an SOC 1 report, located?

- A. Amazon Inspector
- B. AWS CloudTrail
- C. AWS Artifact
- D. AWS Certificate Manager

28. Under the AWS shared responsibility model, which of the following activities are the customer's responsibility? (Choose two.)

- A. Patching operating system components for Amazon Relational Database Server (Amazon RDS)
- B. Encrypting data on the client-side
- C. Training the data center staff
- D. Configuring Network Access Control Lists (ACL)
- E. Maintaining environmental controls within a data center

29. Which is a recommended pattern for designing a highly available architecture on AWS?

- A. Ensure that components have low-latency network connectivity.
- B. Run enough Amazon EC2 instances to operate at peak load.
- C. Ensure that the application is designed to accommodate failure of any single component.
- D. Use a monolithic application that handles all operations.

30. According to best practices, how should an application be designed to run in the AWS Cloud?

- A. Use tightly coupled components.
- B. Use loosely coupled components.
- C. Use infrequently coupled components.
- D. Use frequently coupled components.

Commented [MC27]: B

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, Lambda functions, and virtual appliances. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones. Elastic Load Balancing offers four types of load balancers that all feature the high availability, **automatic scaling**, and robust security necessary to make your applications fault tolerant.

Incorrect answers:

--A & C -- has nothing to do with web traffic  
--D-- Direct Connect is a network connection, which is more about just enabling private network traffic between AWS and an on-premises location in the first place

Commented [MC28]: C

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements. [Reports available in AWS Artifact include our Service Organization Control \(SOC\) reports](#), Payment Card Industry (PCI) reports, and certifications from accreditation bodies across geographies and compliance verticals that validate the implementation and operating effectiveness of AWS security controls. Agreements available in AWS Artifact include the Business Associate Addendum (BAA) and the Nondisclosure Agreement ...

Commented [MC29]: B, D

--B--  
[Data configuration is the responsibility of the customer \(i.e. encrypting data at rest and in transit\)](#)

--D--  
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 ...

Commented [MC30]: C

Highly available systems are reliable in the sense that [they continue operating even when critical components fail](#). They are also resilient, meaning that they are able to simply handle failure without service disruption or data loss, and seamlessly recover from such failure.

Commented [MC31]: B

["Loose coupling - As application complexity increases, a desirable attribute of an IT system is that it can be broken into smaller, loosely coupled components. This means that IT systems should be designed in a way that reduces interdependencies—a change or a failure in one component should not cascade to other components."](#)

31. AWS supports which of the following methods to add security to Identity and Access Management (IAM) users? (Choose two.)

- A. Implementing Amazon Rekognition
- B. Using AWS Shield-protected resources
- C. Blocking access with Security Groups
- D. Using Multi-Factor Authentication (MFA)
- E. Enforcing password strength and expiration

32. Which AWS services should be used for read/write of constantly changing data? (Choose two.)

- A. Amazon Glacier
- B. Amazon RDS
- C. AWS Snowball
- D. Amazon Redshift
- E. Amazon EFS

33. What is one of the advantages of the Amazon Relational Database Service (Amazon RDS)? (choose three)

- A. It simplifies relational database administration tasks.
- B. It provides 99.999999999% reliability and durability.
- C. It automatically scales databases for loads.
- D. It enabled users to dynamically adjust CPU and RAM resources.

34. A customer needs to run a MySQL database that easily scales. Which AWS service should they use?

- A. Amazon Aurora
- B. Amazon Redshift
- C. Amazon DynamoDB
- D. Amazon ElastiCache

35. Which of the following components of the AWS Global Infrastructure consists of one or more discrete data centers interconnected through low latency links?

- A. Availability Zone
- B. Edge location
- C. Region
- D. Private networking

Commented [MC32]: D, E

"IAM Best Practices - To help secure your AWS resources, follow these recommendations for the AWS Identity and Access Management (IAM) service:  
--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
--Grant least privilege  
--Get started using permissions with AWS managed policies  
--Use customer managed policies instead of inline policies  
--Use access levels to review IAM permissions  
--Configure a strong password policy for your users  
--Enable MFA – These are not physical MFA tokens typically  
--Use roles for applications that run on Amazon EC2 instances  
--Use roles to delegate permissions  
--Do not share access keys  
--Rotate credentials regularly  
--Remove unnecessary credentials  
--Use policy conditions for extra security  
--Monitor activity in your AWS account

Commented [MC33]: B, E

"Data that must be updated very frequently might be best served by a storage solution with lower read/write latencies, such as Amazon EBS, Amazon RDS, Amazon EFS, Amazon DynamoDB, or relational databases running on Amazon EC2."

--RDS is a managed service for relational databases like MySQL and MariaDB. Simple and fast to setup and scale.

Commented [MC34]: A, C, D

A - 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.

C - Amazon RDS now supports Storage Auto Scaling

D - You can scale the compute and memory resources powering your deployment up or down, up to a

Commented [MC35]: A

"Amazon Aurora supports MySQL and will automatically grow the size of your database volume as your database storage needs grow, up to a maximum of 64 TB or a maximum you define."

Commented [MC36]: A

"An Availability Zone (AZ) is one or more discrete data centers with redundant power, networking, and connectivity in an AWS Region."

36. Which of the following is a shared control between the customer and AWS?

- A. Providing a key for Amazon S3 client-side encryption
- B. Configuration of an Amazon EC2 instance
- C. Environmental controls of physical AWS data centers
- D. Awareness and training

Commented [MC37]: D

AWS trains AWS employees, but a customer must train their own employees.

37. How many Availability Zones should compute resources be provisioned across to achieve high availability?

- A. A minimum of one
- B. A minimum of two
- C. A minimum of three
- D. A minimum of four or more

Commented [MC38]: B

"Most providers of real-time communications align with service levels that provide availability from 99% to 99.999%. Depending on the degree of high availability (HA) that you want, you must take increasingly sophisticated measures along the full lifecycle of the application. We recommend following these guidelines to achieve a robust degree of high availability:  
--Design the system to have no single point of failure. Use automated monitoring, failure detection, and failover mechanisms for both stateless and stateful components  
--Single points of failure (SPOF) are commonly eliminated with an N+1 or 2N redundancy configuration, where N+1 is achieved via load balancing among active-active nodes, and 2N is achieved by a pair of nodes in active-standby configuration.  
--AWS has several methods for achieving HA through both approaches, such as through a scalable, load balanced cluster or assuming an active-standby pair.  
--Correctly instrument and test system availability.  
--Prepare operating procedures for manual mechanisms to respond to, mitigate, and recover from the failure."

38. One of the advantages to moving infrastructure from an on-premises data center to the AWS Cloud is:

- A. it allows the business to eliminate IT bills.
- B. it allows the business to put a server in each customer's data center.
- C. it allows the business to focus on business activities.
- D. it allows the business to leave servers unpatched.

Commented [MC39]: C

"Stop spending money running and maintaining datacenters – Focus on projects that differentiate your business, not the infrastructure. Cloud computing lets you focus on your own customers, rather than on the heavy lifting of racking, stacking, and powering servers."

39. What is the lowest-cost, durable storage option for retaining database backups for immediate retrieval?

- A. Amazon S3
- B. Amazon Glacier
- C. Amazon EBS
- D. Amazon EC2 Instance Store

Commented [MC40]: A

"Amazon Simple Storage Service (Amazon S3) provides developers and IT teams secure, durable, highly scalable object storage at a very low cost. You can store and retrieve any amount of data, at any time, from anywhere on the web through a simple web service interface. You can write, read, and delete objects containing from zero to 5 TB of data. Amazon S3 is highly scalable, allowing concurrent read or write access to data by many separate clients or application threads"

40. Which AWS IAM feature allows developers to access AWS services through the AWS CLI?

- A. API keys
- B. Access keys
- C. User names/Passwords
- D. SSH keys

Commented [MC41]: B

"IAM users can be assigned an access key ID and secret access key for programmatic access to the AWS API (Application Programme Interface), CLI (Command Line Interface), SDK (Software Development Kit), and other development tools."

Access keys consist of an access key ID and secret access key, which are used to sign programmatic requests that you make to AWS. If you don't have access keys, you can create them from the AWS Management Console. The

41. Which of the following is a fast and reliable NoSQL database service?

- A. Amazon Redshift
- B. Amazon RDS
- C. Amazon DynamoDB
- D. Amazon S3

Commented [MC42]: C

"Amazon DynamoDB is a **fast and flexible NoSQL database** service for any scale. It is a key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multiregion, multimaster, **durable database** with built-in security, backup and restore, and in-memory caching for internet-scale applications"

42. What is an example of agility in the AWS Cloud?

- A. Access to multiple instance types
- B. Access to managed services
- C. Using Consolidated Billing to produce one bill
- D. Decreased acquisition time for new compute resources

Commented [MC43]: D

"**Agility** is the practice of “building in” the ability to change quickly and inexpensively.

The cloud not only makes these other practices practical but provides agility on its own. Infrastructure can be provisioned in minutes instead of months, and de-provisioned or changed just as quickly."

43. Which service should a customer use to consolidate and centrally manage multiple AWS accounts?

- A. AWS IAM
- B. AWS Organizations
- C. AWS Schema Conversion Tool
- D. AWS Config

Commented [MC44]: B

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements  
--simplify billing by centralising it and using a single payment method for all of your account. These account management and consolidated billing capabilities enable you to better meet the budgetary, security, and compliance needs of your business.  
--control access, manage compliance, coordinate security mechanisms (including restricting the AWS services,

44. What approach to transcoding a large number of individual video files adheres to AWS architecture principles?

- A. Using many instances in parallel
- B. Using a single large instance during off-peak hours
- C. Using dedicated hardware
- D. Using a large GPU instance type

Commented [MC45]: A

A is correct because it is aligned with the **Reliability Design Principles and Best Practices** of scaling horizontally.

"Reliability Design Principles and Best Practices

...  
**Scale horizontally:** to increase aggregate workload availability. Replace one large resource with multiple small resources to reduce the impact of a single failure on the overall workload. Distribute requests across

45. For which auditing process does AWS have sole responsibility?

- A. AWS IAM policies
- B. Physical security
- C. Amazon S3 bucket policies
- D. AWS CloudTrail Logs

Commented [MC46]: B

AWS responsibility “Security of the Cloud” - AWS is responsible for protecting the infrastructure that runs all of the services offered in the AWS Cloud. This infrastructure is composed of the **physical hardware**, software, networking, and facilities that run AWS Cloud services.

46. Which feature of the AWS Cloud will support an international company's requirement for low latency to all of its customers?

- A. Fault tolerance
- B. Global reach
- C. Pay-as-you-go pricing
- D. High availability

47. Which of the following is the customer's responsibility under the AWS shared responsibility model?

- A. Patching underlying infrastructure
- B. Physical security
- C. Patching Amazon EC2 instances
- D. Patching network infrastructure

48. A customer is using multiple AWS accounts with separate billing. How can the customer take advantage of volume discounts with minimal impact to the AWS resources?

- A. Create one global AWS account and move all AWS resources to that account.
- B. Sign up for three years of Reserved Instance pricing up front.
- C. Use the consolidated billing feature from AWS Organizations.
- D. Sign up for the AWS Enterprise support plan to get volume discounts.

49. Which of the following is an AWS managed Domain Name System (DNS) web service?

- A. Amazon Route 53
- B. Amazon Neptune
- C. Amazon SageMaker
- D. Amazon Lightsail

50. A customer is deploying a new application and needs to choose an AWS Region. Which of the following factors could influence the customer's decision? (Choose two.)

- A. Reduced latency to users
- B. The application's presentation in the local language
- C. Data sovereignty compliance
- D. Cooling costs in hotter climates
- E. Proximity to the customer's office for on-site visits

Commented [MC47]: B

"The AWS Global Infrastructure is built for performance. **AWS Regions offer low latency, low packet loss, and high overall network quality.** This is achieved with a fully redundant 100 GbE fiber network backbone, often providing many terabits of capacity between Regions. AWS Local Zones and AWS Wavelength, with our telco providers, provide performance for applications that require single-digit millisecond latencies by delivering AWS infrastructure and services closer to end-users and 5G connected devices. Whatever your application needs, you can quickly spin up resources as you need them, deploying hundreds or even thousands of servers in minutes."

Commented [MC48]: C

"Customer responsibility will be determined by the AWS Cloud services that a customer selects. This determines the amount of configuration work the customer must perform as part of their security responsibilities. For example, a service such as Amazon Elastic Compute Cloud (Amazon EC2) is categorized as Infrastructure as a Service (IaaS) and, as such, requires the customer to perform all of the necessary security configuration and management tasks. **Customers that deploy an Amazon EC2 instance are responsible for management of the guest operating system.**"

Commented [MC49]: C

**AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources.** As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to: --programmatically create new AWS accounts and allocate resources --group accounts to organize your workflows --apply policies to accounts or groups for governance --define central configurations and audit requirements

Commented [MC50]: A

**Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service.** It is designed to give developers and businesses an extremely reliable and cost effective way to route end users to Internet applications by translating names like www.example.com into the numeric IP addresses like 192.0.2.1 that computers use to connect to each other."

Commented [MC51]: A, C

-- Costs of the AWS Services can be different for each region because the cost, taxes, manpower, etc for the physical infrastructure and data centers are different from Region to Region.  
-- **Latency depends on physical location. When your application is being accessed by your users, it should be blazing fast. So you need to identify the locations of your target audience and choose the region having a smaller latency for your customers.**

51-100

51. Which storage service can be used as a low-cost option for hosting static websites?

- A. Amazon Glacier
- B. Amazon DynamoDB
- C. Amazon Elastic File System (Amazon EFS)
- D. Amazon Simple Storage Service (Amazon S3)

Commented [MC52]: D

**You can use Amazon S3 to host a static website.** On a static website, individual webpages include static content. They might also contain client-side scripts.

By contrast, a dynamic website relies on server-side processing, including server-side scripts such as PHP, JSP, or ASP.NET. Amazon S3 does not support server-side scripting, but AWS has other resources for hosting dynamic websites."

52. Which Amazon EC2 instance pricing model can provide discounts of up to 90%?

- A. Reserved Instances
- B. On-Demand
- C. Dedicated Hosts
- D. Spot Instances

Commented [MC53]: D

**Spot - Up to 90% discount**

Reserved - Up to 75% discount

On-demand – Full price

Dedicated hosts – Higher cost than on-demand

53. What is the AWS customer responsible for according to the AWS shared responsibility model?

- A. Physical access controls
- B. Data encryption
- C. Secure disposal of storage devices
- D. Environmental risk management

Commented [MC54]: B

"The customer:

--assumes responsibility and management of the guest operating system (including updates and security patches), other associated application software as well as the configuration of the AWS provided security group firewall.  
--should carefully consider the services they choose as their responsibilities vary depending on the services used, the integration of those services into their IT environment, and applicable laws and regulations.

--**is responsible for data configuration (i.e. encrypting data at rest and in transit)**"

54. Which of the following AWS Cloud services can be used to run a customer-managed relational database?

- A. Amazon EC2
- B. Amazon Route 53
- C. Amazon ElastiCache
- D. Amazon DynamoDB

Commented [MC55]: A

Key phrase is '**customer-managed**'

**EC2 can be used to run a relational database on whatever operating system the EC2 instance is using e.g. Microsoft SQL Server running on Microsoft Windows Server 2016.**

Incorrect Answers:

--DynamoDB is NOSQL type, not a relational database and so is not a correct answer

--Route 53 is a DNS service, nothing related to databases

55. A company is looking for a scalable data warehouse solution. Which of the following AWS solutions would meet the company's needs?

- A. Amazon Simple Storage Service (Amazon S3)
- B. Amazon DynamoDB
- C. Amazon Kinesis
- D. Amazon Redshift

Commented [MC56]: D

**"With Redshift, you can query and combine exabytes of structured and semi-structured data across your data warehouse,** operational database, and data lake using standard SQL. Redshift lets you easily save the results of your queries back to your S3 data lake using open formats, like Apache Parquet, so that you can do additional analytics from other analytics services like Amazon EMR, Amazon Athena, and Amazon SageMaker."

56. Which statement best describes Elastic Load Balancing?

- A. It translates a domain name into an IP address using DNS.
- B. It distributes incoming application traffic across one or more Amazon EC2 instances.
- C. It collects metrics on connected Amazon EC2 instances.
- D. It automatically adjusts the number of Amazon EC2 instances to support incoming traffic.

57. Which of the following are valid ways for a customer to interact with AWS services? (Choose two.)

- A. Command line interface
- B. On-premises
- C. Software Development Kits
- D. Software-as-a-service
- E. Hybrid

58. The AWS Cloud's multiple Regions are an example of:

- A. agility.
- B. global infrastructure.
- C. elasticity.
- D. pay-as-you-go pricing.

59. Which of the following AWS services can be used to serve large amounts of online video content with the lowest possible latency? (Choose two.)

- A. AWS Storage Gateway
- B. Amazon S3
- C. Amazon Elastic File System (EFS)
- D. Amazon Glacier
- E. Amazon CloudFront

60. Web servers running on Amazon EC2 access a legacy application running in a corporate data center. What term would describe this model?

- A. Cloud-native
- B. Partner network
- C. Hybrid architecture
- D. Infrastructure as a service

Commented [MC57]: B

"Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, Lambda functions, and virtual appliances. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones. Elastic Load Balancing offers four types of load balancers that all feature the high availability, automatic scaling, and robust security necessary to make your applications fault tolerant. Elastic Load Balancing scales with web traffic."

Incorrect answers:

--D-- This is related to AutoScaling and not Load Balancing

Commented [MC58]: A, C

There are three ways to interact with AWS Services:

--AWS Management Console - Graphical interface to access AWS features)

--Command Line Interface (CLI) - Lets you control AWS services from command line

--Software Development Kits (SDK) - Enable you to access AWS using a variety of popular programming languages

Commented [MC59]: B

Global infrastructure > Regions > Availability Zones

"The AWS Global Cloud Infrastructure is the most secure, extensive, and reliable cloud platform, offering over 200 fully featured services from data centers globally.

Whether you need to deploy your application workloads across the globe in a single click, or you want to build and deploy specific applications closer to your end-users with single-digit millisecond latency, AWS provides you the cloud infrastructure where and when you need it.

With millions of active customers and tens of thousands of partners globally, AWS has the largest and most dynamic...

Commented [MC60]: B, E

"Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment.

CloudFront offers the most advanced security capabilities, including field level encryption and HTTPS support, seamlessly integrated with AWS Shield, AWS Web Application Firewall and Route 53 to protect against...

Commented [MC61]: C

"Hybrid cloud - Mix of public and private cloud"

61. What is the benefit of using AWS managed services, such as Amazon ElastiCache and Amazon Relational Database Service (Amazon RDS)?

- A. They require the customer to monitor and replace failing instances.
- B. They have better performance than customer-managed services.
- C. They simplify patching and updating underlying OSs.
- D. They do not require the customer to optimize instance type or size selections.

62. Which service provides a virtually unlimited amount of online highly durable object storage?

- A. Amazon Redshift
- B. Amazon Elastic File System (Amazon EFS)
- C. Amazon Elastic Container Service (Amazon ECS)
- D. Amazon S3

63. Which of the following Identity and Access Management (IAM) entities is associated with an access key ID and secret access key when using AWS Command Line Interface (AWS CLI)?

- A. IAM group
- B. IAM user
- C. IAM role
- D. IAM policy

64. Which of the following security-related services does AWS offer? (Choose two.)

- A. Multi-factor authentication physical tokens
- B. AWS Trusted Advisor security checks
- C. Data encryption
- D. Automated penetration testing
- E. Amazon S3 copyrighted content detection

65. Which AWS managed service is used to host databases?

- A. AWS Batch
- B. AWS Artifact
- C. AWS Data Pipeline
- D. Amazon RDS

Commented [MC62]: C

"AWS Managed Services takes care of all of your patching and backup activities to help keep your resources current and secure. When updates or patches are released by OS vendors, AWS Managed Services applies them in a timely and consistent manner to minimize the impact on your business"

Critical security patches are applied immediately, while others are applied based on the patch schedule you request. Backups of Stacks are automated using Amazon Elastic Block Store (EBS) and RDS snapshots, and can be restored in the event of a failure or outage, ensuring business continuity." (<https://aws.amazon.com/managed-services/features/>)

Commented [MC63]: D

"Amazon S3 is object storage built to store and retrieve any amount of data from anywhere on the Internet. It's a simple storage service that offers an extremely durable, highly available, and infinitely scalable data storage infrastructure at very low costs."

...  
Size limit is for individual item (5TB) not for the whole S3 capacity, which is unlimited"

Commented [MC64]: B

"Access keys are long-term credentials for an IAM user or the AWS account root user. You can use access keys to sign programmatic requests to the AWS CLI or AWS API (directly or using the AWS SDK)."

Incorrect Answers:

Commented [MC65]: B, C

--B--

Trust Advisor gives recommendations on performance, service quotas, cost optimisation, security and fault tolerance

--C--

"AWS offers you the ability to add a layer of security to your data at rest in the cloud, providing scalable and efficient encryption features. These include:

Commented [MC66]: D

"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."

66. Which AWS service provides a simple and scalable shared file storage solution for use with Linux-based AWS and on-premises servers?

- A. Amazon S3
- B. Amazon Glacier
- C. Amazon EBS
- D. Amazon EFS (need low latency, which this provides for linux workloads)

67. When architecting cloud applications, which of the following are a key design principle?

- A. Use the largest instance possible
- B. Provision capacity for peak load
- C. Use the Scrum development process
- D. Implement elasticity

68. Which AWS service should be used for long-term, low-cost storage of data backups?

- A. Amazon RDS
- B. Amazon Glacier
- C. AWS Snowball
- D. AWS EBS

69. Under the shared responsibility model, which of the following is a shared control between a customer and AWS?

- A. Physical controls
- B. Patch management
- C. Zone security
- D. Data center auditing

70. Which AWS service allows companies to connect an Amazon VPC to an on-premises data center?

- A. AWS VPN
- B. Amazon Redshift
- C. API Gateway
- D. Amazon Connect

Commented [MC67]: D

"Amazon Elastic File System (Amazon EFS) provides a simple, scalable, fully managed elastic NFS file system for use with AWS Cloud services and on-premises resources. It is built to scale on demand to petabytes without disrupting applications, growing and shrinking automatically as you add and remove files, eliminating the need to provision and manage capacity to accommodate growth.

[Amazon EFS is designed to provide the throughput, IOPS, and low latency needed for Linux workloads.](#) Throughput and IOPS scale as a file system grows and can burst to higher throughput levels for short periods of time to support the unpredictable performance needs of file

Commented [MC68]: D

AWS encourages elasticity and not specifically provisioning for peak traffic.

"6 Advantages of Cloud Computing:  
--Trade capital expense for variable expense  
--Benefit from massive economies of scale  
--Stop guessing about capacity (i.e. elasticity)  
--Increased speed and agility  
--Stop spending money running and maintaining data centres

Commented [MC69]: B

[Amazon S3 Glacier is a secure, durable, and low-cost storage class of S3 for data archiving and long-term backup.](#) Customers can store large or small amounts of data for as little as \$0.004 per gigabyte per month. The S3 Glacier storage class is ideal for archives where data is regularly retrieved and some of the data may be needed in minutes."

Incorrect Answers:

Commented [MC70]: B

"Shared Controls:

--Controls which apply to both the infrastructure layer and customer layers, but in completely separate contexts or perspectives. In a shared control, AWS provides the requirements for the infrastructure and the customer must provide their own control implementation within their use of AWS services. Examples include:

Commented [MC71]: A

There are two ways to connect on-premises to cloud.  
[Over internet using VPN connection](#)  
Over physical fiber cable using DirectConnect

[AWS Virtual Private Network \(VPN\) solutions establish secure connections via the public internet between your on-premises networks, remote offices, client devices, and the AWS global network.](#)

71. A company wants to reduce the physical compute footprint that developers use to run code. Which service would meet that need by enabling serverless architectures?

- A. Amazon Elastic Compute Cloud (Amazon EC2)
- B. AWS Lambda
- C. Amazon DynamoDB
- D. AWS CodeCommit

72. Which AWS service provides alerts when an AWS event may impact a company's AWS resources?

- A. AWS Personal Health Dashboard
- B. AWS Service Health Dashboard
- C. AWS Trusted Advisor
- D. AWS Infrastructure Event Management

73. Which of the following are categories of AWS Trusted Advisor? (Choose two.)

- A. Fault Tolerance
- B. Instance Usage
- C. Infrastructure
- D. Performance
- E. Storage Capacity

74. Which task is AWS responsible for in the shared responsibility model for security and compliance?

- A. Granting access to individuals and services
- B. Encrypting data in transit
- C. Updating Amazon EC2 host firmware
- D. Updating operating systems

75. Where should a company go to search software listings from independent software vendors to find, test, buy and deploy software that runs on AWS?

- A. AWS Marketplace
- B. Amazon Lumberyard
- C. AWS Artifact
- D. Amazon CloudSearch

Commented [MC72]: B

"AWS Lambda is a compute service that lets you run code without provisioning or managing servers. Lambda runs your code only when needed and scales automatically, from a few requests per day to thousands per second. You pay only for the compute time that you consume—there is no charge when your code is not running. With Lambda, you can run code for virtually any type of application or backend service, all with zero administration. Lambda runs your code on a high-availability compute infrastructure and performs all of the administration of the compute resources, including server and operating system maintenance, capacity provisioning and automatic scaling, code monitoring and logging."

Commented [MC73]: A

"AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you."

Incorrect answers:

While the Service Health Dashboard displays the general status of AWS services, Personal Health Dashboard gives you a personalized view into the performance and

Commented [MC74]: A, D

"Like your customized cloud expert, AWS Trusted Advisor analyzes your AWS environment and provides best practice recommendations in five categories: cost optimization, performance, security, fault tolerance and service limits."

Commented [MC75]: C

Host firmware is the full responsibility of AWS as it is part of the host OS on EC2 that AWS manages

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates."

Commented [MC76]: A

"The AWS Marketplace enables qualified partners to market and sell their software to AWS Customers. AWS Marketplace is an online software store that helps customers find, buy, and immediately start using the software and services that run on AWS."

AWS Marketplace is designed for Independent Software Vendors (ISVs), Value-Added Resellers (VARs), and Systems Integrators (SIs) who have software products they want to offer to customers in the cloud. Partners use AW...

76. Which of the following is a benefit of using the AWS Cloud?

- A. Permissive security removes the administrative burden.
- B. Ability to focus on revenue-generating activities.
- C. Control over cloud network hardware.
- D. Choice of specific cloud hardware vendors.

Commented [MC77]: B

"AWS does the heavy lifting of data center operations like racking, stacking, and powering servers. It also removes the operational burden of managing operating systems and applications with managed services. This allows you to focus on your customers and business projects rather than on IT infrastructure."

77. When performing a cost analysis that supports physical isolation of a customer workload, which compute hosting model should be accounted for in the Total Cost of Ownership (TCO)?

- A. Dedicated Hosts
- B. Reserved Instances
- C. On-Demand Instances
- D. No Upfront Reserved Instances

Commented [MC78]: A

"Use Dedicated Hosts to launch Amazon EC2 instances on physical servers that are dedicated for your use. Dedicated Hosts give you additional visibility and control over how instances are placed on a physical server, and you can reliably use the same physical server over time. As a result, Dedicated Hosts enable you to use your existing server-bound software licenses like Windows Server and address corporate compliance and regulatory requirements."

78. Which AWS service provides the ability to manage infrastructure as code?

- A. AWS CodePipeline
- B. AWS CodeDeploy
- C. AWS Direct Connect
- D. AWS CloudFormation

Commented [MC79]: D

"AWS CloudFormation provides a common language for you to describe and provision all the infrastructure resources in your cloud environment. CloudFormation allows you to use a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This file serves as the single source of truth for your cloud environment."

79. If a customer needs to audit the change management of AWS resources, which of the following AWS services should the customer use?

- A. AWS Config
- B. AWS Trusted Advisor
- C. Amazon CloudWatch
- D. Amazon Inspector

Commented [MC80]: A

"AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations. With Config, you can review changes in configurations and relationships between AWS resources, dive into detailed resource configuration histories, and determine your overall compliance against the configurations specified in your internal guidelines. This enables you to simplify compliance auditing, security analysis, change management, and operational troubleshooting."

80. What is Amazon CloudWatch?

- A. A code repository with customizable build and team commit features.
- B. A metrics repository with customizable notification thresholds and channels.
- C. A security configuration repository with threat analytics.
- D. A rule repository of a web application firewall with automated vulnerability prevention features.

Incorrect Answers:

Commented [MC81]: B

"Amazon CloudWatch is a monitoring and observability service built for DevOps engineers, developers, site reliability engineers (SREs), and IT managers.

CloudWatch provides you with data and actionable insights to monitor your applications, respond to system-wide performance changes, optimize resource utilization, and get a unified view of operational health.

81. Which service allows a company with multiple AWS accounts to combine its usage to obtain volume discounts?

- A. AWS Server Migration Service
- B. AWS Organizations
- C. AWS Budgets
- D. AWS Trusted Advisor
- E. Amazon Quicksight
- F. Amazon Forecast

82. Which of the following services could be used to deploy an application to servers running on-premises? (Choose two.)

- A. AWS Elastic Beanstalk
- B. AWS OpsWorks
- C. AWS CodeDeploy
- D. AWS Batch
- E. AWS X-Ray

83. Which Amazon EC2 pricing model adjusts based on supply and demand of EC2 instances?

- A. On-Demand Instances
- B. Reserved Instances
- C. Spot Instances
- D. Convertible Reserved Instances

84. Which design principles for cloud architecture are recommended when re-architecting a large monolithic application? (Choose two.)

- A. Use manual monitoring.
- B. Use fixed servers.
- C. Implement loose coupling.
- D. Rely on individual components.
- E. Design for scalability.

85. Which is the MINIMUM AWS Support plan that allows for one-hour target response time for support cases?

- A. Enterprise
- B. Business
- C. Developer
- D. Basic

Commented [MC82]: B

"Use the consolidated billing feature in AWS Organizations to consolidate billing and payment for multiple AWS accounts. Every organization in AWS Organizations has a master account that pays the charges of all the member accounts. Consolidated billing has the following benefits:

- ⇒ One bill - You get one bill for multiple accounts.
- ⇒ Easy tracking - You can track the charges across multiple accounts and download the combined cost and usage data.

⇒ Combined usage - You can combine the usage across all accounts in the organization to share the volume

Commented [MC83]: B, C

"AWS OpsWorks: lets you use Chef and Puppet to automate how servers are configured, deployed, and managed across your Amazon EC2 instances or on-premises compute environments."

"AWS CodeDeploy: is a fully managed deployment service that automates software deployments to a variety of compute services such as Amazon EC2, AWS Fargate, AWS Lambda, and your on-premises servers."

Commented [MC84]: C

"With Spot Instances, you pay the Spot price that's in effect for the time period your instances are running. Spot Instance prices are set by Amazon EC2 and adjust gradually based on long-term trends in supply and demand for Spot Instance capacity."

Spot Instances are available at a discount of up to 90% off compared to On-Demand pricing."

Commented [MC85]: C, E

"Cloud-native technologies empower organizations to build and run scalable applications in modern, dynamic environments such as public, private and hybrid clouds. Containers, service meshes, microservices, immutable infrastructure and declarative APIs exemplify this approach.

These techniques enable loosely coupled systems that are resilient, manageable and observable. Combined with robust automation, they allow engineers to make high-

Commented [MC86]: B

Enterprise: As little as 15 mins

Business: As little as 1 hour

Developer: As little as 12 hours

Notes: These times are for the most urgent cases for each support level. See (<https://aws.amazon.com/premiumsupport/plans/>) for more information.

86. Where can AWS compliance and certification reports be downloaded?

- A. AWS Artifact
- B. AWS Concierge
- C. AWS Certificate Manager
- D. AWS Trusted Advisor

Commented [MC87]: A

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS's security and compliance reports and select online agreements."

87. Which AWS service provides a customized view of the health of specific AWS services that power a customer's workloads running on AWS?

- A. AWS Service Health Dashboard
- B. AWS X-Ray
- C. AWS Personal Health Dashboard
- D. Amazon CloudWatch

Commented [MC88]: C

Keyword is "customized" here. Service Health dashboard doesn't allow you to customize view.

The difference between Personal and Health dashboards is that the "Service Health Dashboard" provides the "generic status of overall AWS services, whereas the "Personal Health Dashboard" provides status of services pertaining to "subscribed" AWS services. Hence the name "Personal"

"(AWS) Personal Health Dashboard (PHD) - All customers can use this, it is powered by the AWS Health API. A personalized view of the health of AWS services, and alerts when your resources are impacted. It provides alerts and remediation guidance when AWS is experiencing events that may impact you. Personal Health Dashboard gives you a personalized view into the performance and availability of the AWS services underlying your AWS resources. The dashboard requires ...

88. Which of the following is an advantage of consolidated billing on AWS?

- A. Volume pricing qualification
- B. Shared access permissions
- C. Multiple bills per account
- D. Eliminates the need for tagging

Commented [MC89]: A

"If you have multiple standalone accounts, your charges might decrease if you add the accounts to an organization. AWS combines usage from all accounts in the organization to qualify you for volume pricing discounts."

89. Which of the following steps should be taken by a customer when conducting penetration testing on an AWS?

- A. Conduct penetration testing using Amazon Inspector, and then notify AWS support.
- B. Request and wait for approval from the customer's internal security team, and then conduct testing.
- C. Notify AWS support, and then conduct testing immediately.
- D. Request and wait for approval from AWS support, and then conduct testing.

Commented [MC90]: B

No need prior approval from AWS for below services.  
Once approval received from internal security team the testing can go ahead (as long as the service is on this list, otherwise see 'Notes' section below)

=====

"Permitted Services."

=====

Amazon EC2 instances, NAT Gateways, and Elastic Load Balancers

Amazon RDS

Commented [MC91]: B

"An Amazon Machine Image is a special type of virtual appliance that is used to create a virtual machine within the Amazon Elastic Compute Cloud. It serves as the basic unit of deployment for services delivered using EC2."

"An Amazon Machine Image (AMI) provides the information required to launch an instance. You must specify an AMI when you launch an instance. You can launch multiple instances from a single AMI when you need multiple instances with the same configuration. You ...

91. How would an AWS customer easily apply common access controls to a large set of users?

- A. Apply an IAM policy to an IAM group.
- B. Apply an IAM policy to an IAM role.
- C. Apply the same IAM policy to all IAM users with access to the same workload.
- D. Apply an IAM policy to an Amazon Cognito user pool.

92. What technology enables compute capacity to adjust as loads change?

- A. Load balancing
- B. Automatic failover
- C. Round robin
- D. Auto Scaling

93. Which AWS services are defined as global instead of regional? (Choose two.)

- A. Amazon Route 53
- B. Amazon EC2
- C. Amazon S3
- D. Amazon CloudFront
- E. Amazon DynamoDB

94. Under the shared responsibility model, which of the following tasks are the responsibility of the AWS customer? (Choose two.)

- A. Ensuring that application data is encrypted at rest
- B. Ensuring that AWS NTP servers are set to the correct time
- C. Ensuring that users have received security training in the use of AWS services
- D. Ensuring that access to data centers is restricted
- E. Ensuring that hardware is disposed of properly

95. Which AWS service can be used to manually launch instances based on resource requirements?

- A. Amazon EBS
- B. Amazon S3
- C. Amazon EC2
- D. Amazon ECS

Commented [MC92]: A

Instead of defining permissions for individual IAM users, it's usually more convenient to:

--create IAM groups that relate to job functions (administrators, developers, accounting, etc.).  
--Next, define the relevant permissions for each group.  
--Assign IAM users to those groups.  
--All the users in an IAM group inherit the permissions assigned to the group. That way, you can make changes for everyone in a group in just one place.  
--As people move around in your company, you can simply change what IAM group their IAM user belongs to.

Notes:

--User: Permanent named operator (human or machine)  
--Group: Collection of users  
--Role: Authentication method, not permissions. A role is an operator (human or machine). Credentials are temporary

Commented [MC93]: D

"Load balancers distribute workloads across several instances , it only distribute to instances available (it doesn't add or change) but with auto scaling when the traffic gets too high it automatically add more instances to handle the traffic and vice versa"

Commented [MC94]: A, D

--A--

"Using a global anycast network of DNS servers around the world. Amazon Route 53 is designed to automatically route your users to the optimal location depending on network conditions. As a result, the service offers low query latency for your end users, as well as low update latency for your DNS record management needs."

--D--

"Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos,

Commented [MC95]: A, C

--A--

"The customer:  
--assumes responsibility and management of the guest operating system (including updates and security patches), other associated application software as well as the configuration of the AWS provided security group firewall.  
--should carefully consider the services they choose as their responsibilities vary depending on the services used, the integration of those services into their IT environment, and applicable laws and regulations.

Commented [MC96]: C

Keyword is instances.

"Customer can launch from a huge variety of EC2 instance types depending on exactly what they require, e.g. OS, RAM, storage space, security controls, etc..."

96. A company is migrating an application that is running non-interruptible workloads for a three-year time frame. Which pricing construct would provide the MOST cost-effective solution?

- A. Amazon EC2 Spot Instances
- B. Amazon EC2 Dedicated Instances
- C. Amazon EC2 On-Demand Instances
- D. Amazon EC2 Reserved Instances

97. The financial benefits of using AWS are: (Choose two.)

- A. reduced Total Cost of Ownership (TCO).
- B. increased capital expenditure (capex).
- C. reduced operational expenditure (opex).
- D. deferred payment plans for startups.
- E. business credit lines for startups.

98. Which AWS Cost Management tool allows you to view the most granular data about your AWS bill?

- A. AWS Cost Explorer
- B. AWS Budgets
- C. AWS Cost and Usage report
- D. AWS Billing dashboard

99. Which of the following can an AWS customer use to launch a new Amazon Relational Database Service (Amazon RDS) cluster? (Choose two.)

- A. AWS Concierge
- B. AWS CloudFormation
- C. Amazon Simple Storage Service (Amazon S3)
- D. Amazon EC2 Auto Scaling
- E. AWS Management Console

100. Which of the following is an AWS Cloud architecture design principle?

- A. Implement single points of failure.
- B. Implement loose coupling.
- C. Implement monolithic design.
- D. Implement vertical scaling.

Commented [MC97]: D

"A Reserved Instance is a reservation of resources and capacity, for either one or three years, for a particular Availability Zone within a region. When you purchase a reservation, you commit to paying for all of the hours of the 1- or 3-year term; in exchange, the hourly rate is lowered significantly.

Amazon EC2 Reserved Instances (RI) provide a significant discount (up to 72%) compared to On-Demand pricing and provide a capacity reservation when used in a specific Availability Zone. AWS Billing automatically applies your RI's discounted rate when attributes of EC2 instance usage match attributes of an active RI."

Incorrect answers:

Commented [MC98]: A, C

"CapEx (capital expenditure) is defined as business expenses incurred in order to create long-term benefits in the future, such as purchasing fixed assets like a building or equipment. Some examples of IT items that fall under this category would be whole systems and servers, printers and scanners, or air conditioners and generators. You buy these items once and they benefit your business for many, many years. Maintenance of such items is also considered CapEx, as it extends their lifetime and

Commented [MC99]: C

"The Cost & Usage Report is your one-stop-shop for accessing the most granular data about your AWS costs and usage. You can also load your cost and usage information into Amazon Athena, Amazon Redshift, AWS QuickSight, or a tool of your choice."

Commented [MC100]: B, E

--B--  
Cloudformation - "Speed up cloud provisioning with infrastructure as code. Gives you an easy way to model a collection of related AWS and third-party resources, provision them quickly and consistently, and manage them throughout their lifecycles, by treating infrastructure as code (IaC)."

--E--

Commented [MC101]: B

Loose coupling is a part of the 'Reliability Design Principles and Best Practices'

"In computing and systems design a loosely coupled system is one in which each of its components has, or makes use of, little or no knowledge of the definitions of other separate components. Subareas include the coupling of classes, interfaces, data, and services.  
..."

101-150

101. Which of the following security measures protect access to an AWS account?  
(Choose two.)

- A. Enable AWS CloudTrail.
- B. Grant least privilege access to IAM users.
- C. Create one IAM user and share with many developers and users.
- D. Enable Amazon CloudFront.
- E. Activate multi-factor authentication (MFA) for privileged users.

102. Which service provides a hybrid storage service that enables on-premises applications to seamlessly use cloud storage?

- A. Amazon Glacier
- B. AWS Snowball
- C. AWS Storage Gateway
- D. Amazon Elastic Block Storage (Amazon EBS)

103. Which of the following services falls under the responsibility of the customer to maintain operating system configuration, security patching, and networking?

- A. Amazon RDS
- B. Amazon EC2
- C. Amazon ElastiCache
- D. AWS Fargate

104. Which of the following is an important architectural design principle when designing cloud applications?

- A. Use multiple Availability Zones.
- B. Use tightly coupled components.
- C. Use open source software.
- D. Provision extra capacity.

105. Amazon Relational Database Service (Amazon RDS) offers which of the following benefits over traditional database management?

- A. AWS manages the data stored in Amazon RDS tables.
- B. AWS manages the maintenance of the operating system.
- C. AWS automatically scales up instance types on demand.
- D. AWS manages the database type.

Commented [MC102]: B, E

"If you decided to create service accounts (that is, accounts used for programmatic access by applications running outside of the AWS environment) and generate access keys for them, you should create a dedicated service account for each use case. This will allow you to restrict the associated policy to only the permissions needed for the particular use case, limiting the blast radius if the credentials are compromised. For example, if a monitoring tool and a release management tool both require access to your AWS environment, create two separate service accounts with two separate policies that define the minimum set of permissions for each tool."

"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. With MFA enabled, when a user signs in to an AWS Management Console, they will be prompted for their user name and password (the first factor—what they know), as well as for an authentication code from their AWS MFA device (the second factor—what they have). Taken together, these multiple factors ..."

Commented [MC103]: C

"AWS Storage Gateway is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage. Customers use Storage Gateway to simplify storage management and reduce costs for key hybrid cloud storage use cases. These include moving tape backups to the cloud, reducing on-premises storage with cloud-backed file shares, providing low latency access to data in AWS for on-premises applications, as well as ..."

Commented [MC104]: B

"The customer is responsible for managing, support, patching and control of the guest operating system and AWS services provided like EC2."

Commented [MC105]: A

This relates to 'Reliability Design Principles and Best Practices'

Each availability zone runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure in one availability zone, the provision of resources other than multiple availability zones will minimise impact of the failure and ..."

Commented [MC106]: B

"AWS Managed Services (such as AWS RDS) automates common activities, such as change requests, monitoring, patch management, security, and backup services, and provides full-lifecycle services to provision, run, and support your infrastructure."

Incorrect Answers:

106. Which service is best for storing common database query results, which helps to alleviate database access load?

- A. Amazon Machine Learning
- B. Amazon SQS
- C. Amazon ElastiCache
- D. Amazon EC2 Instance Store

107. Which of the following is a component of the shared responsibility model managed entirely by AWS?

- A. Patching operating system software
- B. Encrypting data
- C. Enforcing multi-factor authentication
- D. Auditing physical data center assets

108. Which options does AWS make available for customers who want to learn about security in the cloud in an instructor-led setting? (Choose two.)

- A. AWS Trusted Advisor
- B. AWS Online Tech Talks
- C. AWS Blog
- D. AWS Forums
- E. AWS Classroom Training

109. Which of the following features can be configured through the Amazon Virtual Private Cloud (Amazon VPC) Dashboard? (Choose two.)

- A. Amazon CloudFront distributions
- B. Amazon Route 53
- C. Security Groups
- D. Subnets
- E. Elastic Load Balancing

110. If each department within a company has its own AWS account, what is one way to enable consolidated billing?

- A. Use AWS Budgets on each account to pay only to budget.
- B. Contact AWS Support for a monthly bill.
- C. Create an AWS Organization from the payer account and invite the other accounts to join.
- D. Put all invoices into one Amazon Simple Storage Service (Amazon S3) bucket, load data into Amazon Redshift, and then run a billing report.

Commented [MC107]: C

"ElastiCache can serve frequently requested items at sub-millisecond response times, and enables you to easily scale for higher loads without growing the costlier backend databases. Database query results caching, persistent session caching, and full-page caching are all popular examples of caching."

Commented [MC108]: D

"Amazon is responsible for auditing physical data center assets and resources since it is the property of Amazon Inc. Customers have no access to physical sites, hence they are not responsible for maintaining physical data center assets."

Commented [MC109]: B, E

Key term is instructor-led

--B--

"Join us for online presentations led by AWS solutions architects and engineers. AWS Online Tech Talks cover a range of topics and expertise levels, and feature technical deep dives, demonstrations, customer examples, and live Q&A with AWS experts."

--E--

"Amazon offer both digital and classroom training including private on-site training. You can choose to learn online at your own pace or learn from an accredited AWS instructor. Whether you're just starting out, building on existing IT skills, or sharpening your cloud knowledge, AWS Training and Certification can help you be more effective and do more in the cloud."

Commented [MC110]: C, D

"Amazon Virtual Private Cloud (Amazon VPC) lets you provision a logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define. You have complete control over your virtual networking environment, including selection of your own IP address range, creation of subnets, and configuration of route tables and network gateways. You can use both IPv4 and IPv6 in your VPC for secure and easy access to resources and applications."

Commented [MC111]: C

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements"

111. How do customers benefit from Amazon's massive economies of scale?
- A. Periodic price reductions as the result of Amazon's operational efficiencies
  - B. New Amazon EC2 instance types providing the latest hardware
  - C. The ability to scale up and down when needed
  - D. Increased reliability in the underlying hardware of Amazon EC2 instances

Commented [MC112]: A

"Benefit from massive economies of scale – By using cloud computing, you can achieve a lower variable cost than you can get on your own. Because usage from hundreds of thousands of customers is aggregated in the cloud, providers such as AWS can achieve higher economies of scale, which translates into lower pay-as-you-go prices."

112. Which AWS services can be used to gather information about AWS account activity?  
(Choose two.)
- A. Amazon CloudFront
  - B. AWS Cloud9
  - C. AWS CloudTrail
  - D. AWS CloudHSM
  - E. Amazon CloudWatch

Commented [MC113]: C, E

--C--  
AWS CloudTrail - track user activity and API usage. Helps you enable governance, compliance, and operational and risk auditing of your AWS account. Actions taken by a user, role, or an AWS service are recorded as events in CloudTrail. Events include actions taken in the AWS Management Console, AWS Command Line Interface, and AWS SDKs and APIs."

--E--  
"You can use CloudWatch queries to search API history beyond the last 90 days."

113. Which of the following common IT tasks can AWS cover to free up company IT resources? (Choose two.)
- A. Patching databases software
  - B. Testing application releases
  - C. Backing up databases
  - D. Creating database schema
  - E. Running penetration tests

Commented [MC114]: A, C

If taking RDS as example, both patching and backups are covered.

"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

114. In which scenario should Amazon EC2 Spot Instances be used?
- A. A company wants to move its main website to AWS from an on-premises web server.
  - B. A company has a number of application services whose Service Level Agreement (SLA) requires 99.999% uptime.
  - C. A company's heavily used legacy database is currently running on-premises.
  - D. A company has a number of infrequent, interruptible jobs that are currently using On-Demand Instances.

Commented [MC115]: D

Amazon EC2 Spot Instances let you take advantage of unused EC2 capacity in the AWS cloud. Spot Instances are available at up to a 90% discount compared to On-Demand prices. You can use Spot Instances for various stateless, fault-tolerant, or flexible applications such as big data, containerized workloads, CI/CD, web servers, high-performance computing (HPC), and test & development workloads. Because Spot Instances are tightly integrated with AWS services such as Auto Scaling, EMR, ECS, CloudFormation, Data Pipeline and AWS Batch

115. Which AWS feature should a customer leverage to achieve high availability of an application?
- A. AWS Direct Connect
  - B. Availability Zones
  - C. Data centers
  - D. Amazon Virtual Private Cloud (Amazon VPC)

Commented [MC116]: B

"This is to achieve High Availability for any web application deployed in AWS. The following features will be present:  
⇒ High availability across multiple instances/multiple availability zones.

⇒ Auto Scaling of instances (scale up and scale down) based on number of requests coming in  
⇒ Additional Security to the instances/database that are in production

116. Which is the minimum AWS Support plan that includes Infrastructure Event Management without additional costs?

- A. Enterprise
- B. Business
- C. Developer
- D. Basic

Commented [MC117]: A

**Enterprise support: Infrastructure Event Management included as standard.**

117. Which AWS service can serve a static website?

- A. Amazon S3
- B. Amazon Route 53
- C. Amazon QuickSight
- D. AWS X-Ray

Incorrect answers:

--Business support: Access to Infrastructure Event Management for additional fee.

118. How does AWS shorten the time to provision IT resources?

- A. It supplies an online IT ticketing platform for resource requests.
- B. It supports automatic code validation services.
- C. It provides the ability to programmatically provision existing resources.
- D. It automates the resource request process from a company's IT vendor list.

Commented [MC118]: A

**You can host a static website on Amazon Simple Storage Service (Amazon S3).** On a static website, individual webpages include static content. They might also contain client-side scripts. By contrast, a dynamic website relies on server-side processing, including server-side scripts such as PHP, JSP, or ASP.NET. Amazon S3 does not support server-side scripting."

119. What can AWS edge locations be used for? (Choose two.)

- A. Hosting applications
- B. Delivering content closer to users
- C. Running NoSQL database caching services
- D. Reducing traffic on the server by caching responses
- E. Sending notification messages to end users

Commented [MC119]: C

**"AWS CloudFormation gives you an easy way to model a collection of related AWS and third-party resources, provision them quickly and consistently, and manage them throughout their lifecycles, by treating infrastructure as code.** A CloudFormation template describes your desired resources and their dependencies so you can launch and configure them together as a stack. You can use a template to create, update, and delete an entire stack as a single unit, as often as you need to, instead of managing resources individually. You can manage and provision stacks across multiple AWS accounts and AWS Regions."

In this same regard, AWS Lambda can fulfil this same requirement -

<https://aws.amazon.com/blogs/mt/automate-account->

120. Which of the following can limit Amazon Simple Storage Service (Amazon S3) bucket access to specific users?

- A. A public and private key-pair
- B. Amazon Inspector
- C. AWS Identity and Access Management (IAM) policies
- D. Security Groups

Commented [MC120]: B, D

**"Edge Locations are endpoints used for caching content.** They are located in most of the major cities around the world and are specifically used by CloudFront to distribute AWS content closer to end-users to reduce latency."

Incorrect answers:

C

Commented [MC121]: C

**"To allow users to perform S3 actions on the bucket from the VPC endpoints or IP addresses, you must explicitly grant those user-level permissions. You can grant user-level permissions on either an AWS Identity and Access Management (IAM) policy or another statement in the bucket policy."**

121. A solution that is able to support growth in users, traffic, or data size with no drop in performance aligns with which cloud architecture principle?

- A. Think parallel
- B. Implement elasticity
- C. Decouple your components
- D. Design for failure

122. A company will be moving from an on-premises data center to the AWS Cloud. What would be one financial difference after the move?

- A. Moving from variable operational expense (opex) to upfront capital expense (capex).
- B. Moving from upfront capital expense (capex) to variable capital expense (capex).
- C. Moving from upfront capital expense (capex) to variable operational expense (opex).
- D. Elimination of upfront capital expense (capex) and elimination of variable operational expense (opex)

123. How should a customer forecast the future costs for running a new web application?

- A. Amazon Aurora Backtrack
- B. Amazon CloudWatch Billing Alarms
- C. AWS Pricing Calculator
- D. AWS Cost and Usage report

124. Which is the MINIMUM AWS Support plan that provides technical support through phone calls?

- A. Enterprise
- B. Business
- C. Developer
- D. Basic

125. Which of the following tasks is the responsibility of AWS?

- A. Encrypting client-side data
- B. Configuring AWS Identity and Access Management (IAM) roles
- C. Securing the Amazon EC2 hypervisor
- D. Setting user password policies

Commented [MC122]: B

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible"

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain conditions, like when your cloud solution is running out of processing power."

Commented [MC123]: C

"The cloud allows you to trade high initial CapEx (such as data centers and physical servers) for a variable OpEx model, and only pay for IT as you consume it. Plus, the variable OpEx expenses are much lower than what you would pay to do it yourself because of the massive economies of scale that AWS has created."

Commented [MC124]: C

"AWS Pricing Calculator - Configure a cost estimate that fits your unique business or personal needs with AWS products and services. Previously known as Simply Monthly Calculator. Transparent pricing lets you see the math behind the price for your service configurations. View prices per service or per group of services to analyse your architecture costs."

Configure services, or groups of services, in multiple AWS Regions. Prices and availability of AWS services vary per Region.

See and analyse service costs grouped by different parts of your architecture."

Commented [MC125]: B

**Business: 24x7 phone, email, and chat access to Cloud Support Engineers**

Incorrect Answers:

Enterprise: Also provides the above services (and additional services such as AWS Concierge and a Designated Technical Account Manager), however at a much higher cost.

Commented [MC126]: C

**In EC2, everything from the physical servers to the hypervisor is AWS's responsibility.** A customer's has responsibility for the applications, operating systems, and other software running on the hypervisor.

126. One benefit of On-Demand Amazon Elastic Compute Cloud (Amazon EC2) pricing is:
- A. the ability to bid for a lower hourly cost.
  - B. paying a daily rate regardless of time used.
  - C. paying only for time used.
  - D. pre-paying for instances and paying a lower hourly rate.

127. An administrator needs to rapidly deploy a popular IT solution and start using it immediately where can the administrator find assistance?
- A. AWS Well-Architected Framework documentation
  - B. Amazon CloudFront
  - C. AWS CodeCommit
  - D. AWS Quick Start reference deployments

128. Which of the following services is in the category of AWS serverless platform?
- A. Amazon EMR
  - B. Elastic Load Balancing
  - C. AWS Lambda
  - D. AWS Mobile Hub

129. Which services are parts of the AWS serverless platform?
- A. Amazon EC2, Amazon S3, Amazon Athena
  - B. Amazon Kinesis, Amazon SQS, Amazon EMR
  - C. AWS Step Functions, Amazon DynamoDB, Amazon SNS
  - D. Amazon Athena, Amazon Cognito, Amazon EC2

130. According to the AWS shared responsibility model, what is the sole responsibility of AWS?
- A. Application security
  - B. Edge location management
  - C. Patch management
  - D. Client-side data

Commented [MC127]: C

"**On-Demand Instances let you pay for compute capacity by the hour or second (minimum of 60 seconds) with no long-term commitments.** You have full control over its lifecycle—you decide when to launch, stop, hibernate, start, reboot, or terminate it. This frees you from the costs and complexities of planning, purchasing, and maintaining hardware and transforms what are commonly large fixed costs into much smaller variable costs."

Commented [MC128]: D

"**Quick Starts are built by AWS solutions architects and partners to help you deploy popular technologies on AWS, based on AWS best practices for security and high availability. These accelerators reduce hundreds of manual procedures into just a few steps, so you can build your production environment quickly and start using it immediately.**"

Commented [CM129]: C

"AWS provides a set of fully managed services that you can use to build and run serverless applications. Serverless applications don't require provisioning, maintaining, and administering servers for backend components such as compute, databases, storage, stream processing, message queueing, and more. You also no longer need to worry about ensuring application fault tolerance and availability. Instead, AWS handles all of these capabilities for you. Serverless platform includes:

--**AWS Lambda**, Amazon S3, Amazon Athena, DynamoDB, API gateway, Amazon SNS, Amazon SQS, AWS step functions, Amazon kinesis and developing tools and services."

Commented [CM130]: C

"AWS provides a set of fully managed services that you can use to build and run serverless applications. Serverless applications don't require provisioning, maintaining, and administering servers for backend components such as compute, databases, storage, stream processing, message queueing, and more. You also no longer need to worry about ensuring application fault tolerance and availability. Instead, AWS handles all of these capabilities for you. Serverless platform includes:

Commented [CM131]: B

Edge location management - this out of the control of the customer, AWS is responsible for it as it is part of their physical infrastructure.

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as **AWS operates, manages and controls the components from the host operating system and virtualization layer down** ...

131. Which AWS IAM feature is used to associate a set of permissions with multiple users?

- A. Multi-factor authentication
- B. Groups
- C. Password policies
- D. Access keys

Commented [CM132]: B

"An IAM group is a collection of IAM users. You can use groups to specify permissions for a collection of users, which can make those permissions easier to manage. For example, you could have a group called Admins and give that group the types of permissions that administrators typically need."

132. Which of the following are benefits of the AWS Cloud? (Choose two.)

- A. Unlimited uptime
- B. Elasticity
- C. Agility
- D. Colocation
- E. Capital expenses

Commented [CM133]: B, C

--B--  
"The most celebrated benefit of AWS cloud is elasticity since you can expand the services when you experience more traffic."

In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible"

--C--  
"Agile developments in AWS Cloud through strategies are day by day becoming more established within the enterprises across the world. With so much improvement and call for optimization in the cloud, it is necessary that these strategies get established from the ground up within the organizations."

133. Which of the following can a customer use to enable single sign-on (SSO) to the AWS Console?

- A. Amazon Connect
- B. AWS Directory Service
- C. Amazon Pinpoint
- D. Amazon Rekognition

Commented [CM134]: B

"Single sign-on only works when used on a computer that is joined to the AWS Directory Service directory. It cannot be used on computers that are not joined to the directory."

134. What are the multiple, isolated locations within an AWS Region that are connected by low-latency networks called?

- A. AWS Direct Connects
- B. Amazon VPCs
- C. Edge locations
- D. Availability Zones

Commented [CM135]: D

"Each Region is completely independent. Each Availability Zone is isolated, but the Availability Zones in a Region are connected through low-latency links."

135. Which of the following benefits does the AWS Compliance program provide to AWS customers? (Choose two.)

- A. It verifies that hosted workloads are automatically compliant with the controls of supported compliance frameworks.
- B. AWS is responsible for the maintenance of common compliance framework documentation.
- C. It assures customers that AWS is maintaining physical security and data protection.
- D. It ensures the use of compliance frameworks that are being used by other cloud providers.
- E. It will adopt new compliance frameworks as they become relevant to customer workloads.

Commented [CM136]: After reading quite a lot of information I have surmised the gist is:

--AWS continuously tries to audit and improve their compliance with many, many compliance frameworks, laws and such...

--This will help customers' to trust AWS's ability to maintain physical security and data protection (as well as meet a lot of other compliance and legal requirements) a...

136. Which of the following services provides on-demand access to AWS compliance reports?

Commented [MC137]: B

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements. Reports available in AWS Artifact include our Service Organization Control (SOC) reports, Payment Card

- A. AWS IAM
- B. AWS Artifact
- C. Amazon GuardDuty
- D. AWS KMS

137. As part of the AWS shared responsibility model, which of the following operational controls do users fully inherit from AWS?

- A. Security management of data center
- B. Patch management
- C. Configuration management
- D. User and access management

138. When comparing AWS Cloud with on-premises Total Cost of Ownership, which expenses must be considered? (Choose two.)

- A. Software development
- B. Project management
- C. Storage hardware
- D. Physical servers
- E. Antivirus software license

139. Under the shared responsibility model, which of the following tasks are the responsibility of the customer? (Choose two.)

- A. Maintaining the underlying Amazon EC2 hardware.
- B. Managing the VPC network access control lists.
- C. Encrypting data in transit and at rest.
- D. Replacing failed hard disk drives.
- E. Deploying hardware in different Availability Zones.

140. Which scenarios represent the concept of elasticity on AWS? (Choose two.)

- A. Scaling the number of Amazon EC2 instances based on traffic.
- B. Resizing Amazon RDS instances as business needs change.
- C. Automatically directing traffic to less-utilized Amazon EC2 instances.
- D. Using AWS compliance documents to accelerate the compliance process.
- E. Having the ability to create and govern environments using code.

Commented [CM138]: A

"AWS presumes that users "inherit" the physical security attributes of its data centers. AWS manages these variables, which include physical controls, such as locked doors and video surveillance, and environmental controls, such as temperature and humidity."

Commented [MC139]: D

Storage hardware and physical server TCO will vary depending on the hosting environment that is chosen.

"CapEx (capital expenditure) is defined as business expenses incurred in order to create long-term benefits in the future, such as purchasing fixed assets like a building or equipment. Some examples of IT items that fall under this category would be whole systems and servers, printers and scanners, or air conditioners and generators. You buy these items once and they benefit your business for many, many years. Maintenance of such items is also considered CapEx, as it extends their lifetime and usefulness. Capex can also be defined as Total Cost of Ownership (TCO)."

Incorrect answers:

--Regardless of where you host your workload you will still need software development, project management and (most likely) an antivirus software license.

Commented [MC140]: C

--B--

VPC network access control lists is something a customer has to do himself to secure the applications.

"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."

--C--

"Encrypting data in transit and at rest is a shared responsibility in which both customer and AWS play a part."

Commented [MC141]: A, B

In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible."

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain conditions, like when your cloud solution is has too many resources of which some are being under-utilised or if yo...

141. When is it beneficial for a company to use a Spot Instance?
- A. When there is flexibility in when an application needs to run
  - B. When there are mission-critical workloads.
  - C. When dedicated capacity is needed.
  - D. When an instance should not be stopped.

142. A company is considering moving its on-premises data center to AWS. What factors should be included in doing a Total Cost of Ownership (TCO) analysis? (Choose two.)
- A. Amazon EC2 instance availability
  - B. Power consumption of the data center
  - C. Labor costs to replace old servers
  - D. Application developer time
  - E. Database engine capacity

143. How does AWS charge for AWS Lambda?
- A. Users bid on the maximum price they are willing to pay per hour.
  - B. Users choose a 1-, 3- or 5-year upfront payment term.
  - C. Users pay for the required permanent storage on a file system or in a database.
  - D. Users pay based on the number of requests and consumed compute resources.

144. What function do security groups serve related Amazon Elastic Compute Cloud (Amazon EC2) instance security?
- A. Act as a virtual firewall for the Amazon EC2 instance.
  - B. Secure AWS user accounts with AWS Identity and Access Management (IAM) policies.
  - C. Provide DDoS protection with AWS Shield.
  - D. Use Amazon CloudFront to protect the Amazon EC2 instance.

145. Which disaster recovery scenario offers the lowest probability of down time?
- A. Backup and restore
  - B. Pilot light
  - C. Warm standby
  - D. Multi-site active-active

Commented [MC142]: A

"Spot Instance prices are set by Amazon EC2 and adjust gradually based on long-term trends in supply and demand for Spot Instance capacity. When you request Spot Instances, we recommend that you use the default maximum price (the On-Demand price). When your request is fulfilled, your Spot Instances launch at the current Spot price, not exceeding the On-Demand price. If you want to specify a maximum price, we recommend that you first review the Spot price history."

"Rather than allowing these computing resources to go to waste, AWS offers them at a substantially discounted rate, with the understanding that if someone needs those resources for running a normal EC2 instance, that instance...

Commented [MC143]: C

The idea behind this question is what costs to consider if the company leaves its IT resources on-premises. **B & C are exclusively on-premises expenses that will not be incurred when using AWS services.**

Incorrect answers:

--A-- EC2 instance availability will not be a concern for customers, AWS handles provisioning new hardware to ensure there is always adequate EC2 capacity

Commented [MC144]: D

"AWS Lambda is charging its users by the number of requests for their functions and by the duration, which is the time the code needs to execute. When code starts running in response to an event, AWS Lambda counts a request. It will charge the total number of requests across all of the functions used. Duration is calculated by the time when your code started executing until it returns or until it is terminated, rounded up near to 100ms. The AWS Lambda pricing depends on the amount of time spent executing. ..."

Commented [MC145]: A

"AWS Security Groups act like a firewall for your Amazon EC2 instances controlling both inbound and outbound traffic. When you launch an instance on Amazon EC2, you need to assign it to a particular security group. After that, you can set up ports and protocols, which remain open for users and computers over the internet.

AWS Security Groups are very flexible. You can use the default security group and still customize it according to your liking (although we don't recommend this practice)

Commented [MC146]: D

"Backup and Restore: a simple, straightforward, cost-effective method that backs up and restores data as needed. Keep in mind that because none of your data is on standby, this method, while cheap, can be quite time-consuming.

Pilot Light: This method keeps critical applications and data at the ready so that it can be quickly retrieved if needed. ..."

146. What will help a company perform a cost benefit analysis of migrating to the AWS Cloud?

- A. Cost Explorer
- B. AWS Total Cost of Ownership (TCO) Calculator
- C. AWS Pricing Calculator
- D. AWS Trusted Advisor

147. Which of the following provides the ability to share the cost benefits of Reserved Instances across AWS accounts?

- A. AWS Cost Explorer between AWS accounts
- B. Linked accounts and consolidated billing
- C. Amazon Elastic Compute Cloud (Amazon EC2) Reserved Instance Utilization Report
- D. Amazon EC2 Instance Usage Report between AWS accounts

148. A company has multiple AWS accounts and wants to simplify and consolidate its billing process. Which AWS service will achieve this?

- A. AWS Cost and Usage Reports
- B. AWS Organizations
- C. AWS Cost Explorer
- D. AWS Budgets

149. A company is designing an application hosted in a single AWS Region serving end-users spread across the world. The company wants to provide the end-users low latency access to the application data. Which of the following services will help fulfill this requirement?

- A. Amazon CloudFront
- B. AWS Direct Connect
- C. Amazon Route 53 global DNS
- D. Amazon Simple Storage Service (Amazon S3) transfer acceleration

150. Which of the following deployment models enables customers to fully trade their capital IT expenses for operational expenses?

- A. On-premises
- B. Hybrid
- C. Cloud
- D. Platform as a service

Commented [MC147]: B

The question is talking about a company trying to understand what their cost benefit would be by moving from on premise IT infrastructure over to the AWS cloud. The TCO calculator is the tool that will perform this function so B is the correct answer.

[The TCO \(Total Cost of Ownership\) tool makes a comparison between On Premise IT infrastructure expense the equivalent expense that would exist in the AWS cloud.](#) It then lets the customer know what their cost savings would be if they decided to move their existing IT infrastructure to the AWS cloud."

Incorrect answers:

Commented [MC148]: B

[The way that Reserved Instance discounts apply to accounts in an organization's consolidated billing family depends on whether Reserved Instance sharing is turned on or off for the account. By default, Reserved Instance sharing for all accounts in an organization is turned on. You can change this setting by Turning Off Reserved Instance Sharing for an account.](#)

...  
The capacity reservation for a Reserved Instance applies only to the account the Reserved Instance was purchased

Commented [MC149]: B

**AWS Organizations** helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements

Commented [MC150]: A

[Cloudfront enables low-latency delivery to the end users by caching the frequently used data to the edge locations](#)

Incorrect answers:

AWS Direct Connect lets you establish a dedicated network connection between your network and one of the AWS Direct Connect locations.

Commented [MC151]: C

The cloud allows you to trade capital expenses (such as data centers and physical servers) for variable expenses, and only pay for IT as you consume it. [Plus, the variable expenses are much lower than what you would pay to do it yourself because of the economies of scale.](#)

151. How is asset management on AWS easier than asset management in a physical data center?

- A. AWS provides a Configuration Management Database that users can maintain.
- B. AWS performs infrastructure discovery scans on the customer's behalf.
- C. Amazon EC2 automatically generates an asset report and places it in the customer's specified Amazon S3 bucket.
- D. Users can gather asset metadata reliably with a few API calls.

152. What feature of Amazon RDS helps to create globally redundant databases?

- A. Snapshots
- B. Automatic patching and updating
- C. Cross-Region read replicas
- D. Provisioned IOPS

153. Which methods can be used to identify AWS costs by departments? (Choose two.)

- A. Enable multi-factor authentication for the AWS account root user.
- B. Create separate accounts for each department.
- C. Use Reserved Instances whenever possible.
- D. Use tags to associate each instance with a particular department.
- E. Pay bills using purchase orders.

154. Under the AWS shared responsibility model, customer responsibilities include which one of the following?

- A. Securing the hardware, software, facilities, and networks that run all products and services.
- B. Providing certificates, reports, and other documentation directly to AWS customers under NDA.
- C. Configuring the operating system, network, and firewall.
- D. Obtaining industry certifications and independent third-party attestations.

155. Which managed AWS service provides real-time guidance on AWS security best practices?

- A. AWS X-Ray
- B. AWS Trusted Advisor
- C. Amazon CloudWatch
- D. AWS Systems Manager

Commented [MC152]: A

**"AWS assets are centrally managed through an inventory management system that stores and tracks owner, location, status, maintenance, and descriptive information for AWS-owned assets. Following procurement, assets are scanned and tracked, and assets undergoing maintenance are checked and monitored for ownership, status, and resolution"**

...  
To build your own asset management database on AWS here are the prerequisites:  
--Configure AWS System Manager to start collecting the software inventory and store in designated Amazon S3 bucket.

Commented [MC153]: C

**"Read Replicas - You can use this feature to implement a cross-region disaster recovery model, scale out globally, or migrate an existing database to a new region"**

**"Improve Disaster Recovery – You can operate a read replica in a region different from your master database region. In case of a regional disruption, you can promote the replica to be the new master and keep your business in operation."**

Commented [MC154]: B, D

--B--  
**Create separate accounts and join them together using AWS Organizations.**

--D--  
**"Tags are key-value pairs that allow you to organize your AWS resources into groups. You can use tags to: ☺ Visualize information about tagged resources in one place, in conjunction with Resource Groups."**

Commented [MC155]: C

**"In EC2, everything from the physical servers to the hypervisor is AWS's responsibility. A customer's assumes responsibility and management of the guest operating system (including updates and security patches), other associated application software as well as the configuration of the AWS provided security group firewall."**

Incorrect answers:

Commented [MC156]: B

**"AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices." Trusted Advisor checks help optimize your AWS infrastructure, increase security and performance, reduce your overall costs, and monitor service limits. Whether establishing new workflows, developing applications, or as part of ongoing improvement, take advantage of the recommendations"**

156. Which feature adds elasticity to Amazon EC2 instances to handle the changing demand for workloads?

- A. Resource groups
- B. Lifecycle policies
- C. Application Load Balancer
- D. Amazon EC2 Auto Scaling

157. Under the AWS shared responsibility model, customers are responsible for which aspects of security in the cloud? (Choose two.)

- A. Visualization management
- B. Hardware management
- C. Encryption management
- D. Facilities management
- E. Firewall management

158. Which AWS hybrid storage service enables on-premises applications to seamlessly use AWS Cloud storage through standard file-storage protocols?

- A. AWS Direct Connect
- B. AWS Snowball
- C. AWS Storage Gateway
- D. AWS Snowball Edge

159. What is a responsibility of AWS in the shared responsibility model?

- A. Updating the network ACLs to block traffic to vulnerable ports.
- B. Patching operating systems running on Amazon EC2 instances.
- C. Updating the firmware on the underlying EC2 hosts.
- D. Updating the security group rules to block traffic to the vulnerable ports.

160. Which architectural principle is used when deploying an Amazon Relational Database Service (Amazon RDS) instance in Multiple Availability Zone mode?

- A. Implement loose coupling.
- B. Design for failure.
- C. Automate everything that can be automated.
- D. Use services, not servers.

Commented [MC157]: D

"Amazon EC2 Auto Scaling helps you maintain application availability and allows you to automatically add or remove EC2 instances according to conditions you define. You can use the fleet management features of EC2 Auto Scaling to maintain the health and availability of your fleet."

Commented [MC158]: E

"With the basic Cloud infrastructure secured and maintained by AWS, the responsibility for what goes into the cloud falls on you. This covers both client and server side encryption and network traffic protection, security of the operating system, network, and firewall configuration, followed by application security and identity and access management."

...  
Firewall configuration remains the responsibility of the end user, which integrates at the platform and application management level. For example, RDS utilizes security groups, which you would be responsible for configuring and implementing."

Commented [MC159]: C

"The AWS Storage Gateway service enables hybrid cloud storage between on-premises environments and the AWS Cloud. It seamlessly integrates on-premises enterprise applications and workflows with Amazon's block and object cloud storage services through industry standard storage protocols. It provides low-latency performance by caching frequently accessed data on premises, while storing data securely and durably in Amazon cloud storage services. It provides an optimized data transfer mechanism and bandwidth management,

Commented [MC160]: C

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The customer assumes responsibility and management of the guest operating system (including updates and security patches), other associated

Commented [MC161]: B

"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). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure, Amazon RDS performs an automatic failover to the standby (or to a read replica in the case of Amazon Aurora), so that you can resume database operations as soon as the failover is complete"

161. What does it mean to grant least privilege to AWS IAM users?

- A. It is granting permissions to a single user only.
- B. It is granting permissions using AWS IAM policies only.
- C. It is granting Administrator Access policy permissions to trustworthy users.
- D. It is granting only the permissions required to perform a given task.

Commented [MC162]: D

"When you create IAM policies, follow the standard security advice of granting least privilege, or granting only the permissions required to perform a task."

Determine what users (and roles) need to do and then craft policies that allow them to perform only those tasks."

162. A director has been tasked with investigating hybrid cloud architecture. The company currently accesses AWS over the public internet. Which service will facilitate private hybrid connectivity?

- A. Amazon Virtual Private Cloud (Amazon VPC) NAT Gateway
- B. AWS Direct Connect
- C. Amazon Simple Storage Service (Amazon S3) Transfer Acceleration
- D. AWS Web Application Firewall (AWS WAF)

Commented [MC163]: B

"Amazon VPC provides multiple network connectivity options for you to leverage depending on your current network designs and requirements. These connectivity options include leveraging either the internet (VPN) or a dedicated private AWS Direct Connect connection as the network backbone and terminating the connection into either AWS or user-managed network endpoints.

Additionally, with AWS, you can choose how network routing is delivered between Amazon VPC and your networks, leveraging either AWS or user-managed network equipment and routes."

163. A company's web application currently has tight dependencies on underlying components, so when one component fails the entire web application fails. Applying which AWS Cloud design principle will address the current design issue?

- A. Implementing elasticity, enabling the application to scale up or scale down as demand changes.
- B. Enabling several EC2 instances to run in parallel to achieve better performance.
- C. Focusing on decoupling components by isolating them and ensuring individual components can function when other components fail.
- D. Doubling EC2 computing resources to increase system fault tolerance.

Commented [MC164]: C

"Loose coupling - IT systems should ideally be designed in a way that reduces inter-dependencies. Your components need to be loosely coupled to avoid changes or failure in one of the components from affecting others.

Your infrastructure also needs to have well defined interfaces that allow the various components to interact with each other only through specific, technology-agnostic interfaces. Modifying any underlying operations without affecting other components should be made possible."

164. How can a customer increase security to AWS account logons? (Choose two.)

- A. Configure AWS Certificate Manager
- B. Enable Multi-Factor Authentication (MFA)
- C. Use Amazon Cognito to manage access
- D. Configure a strong password policy
- E. Enable AWS Organizations

Commented [MC165]: D

--B--

"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. With MFA enabled, when a user signs in to an AWS Management Console, they will be prompted for their user name and password (the first factor—what they know), as well as for an authentication code from their AWS MFA device (the second factor—what they have). Taken together, these multiple factors ...

Commented [MC166]: D

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements ...

166. Which AWS service can a customer use to set up an alert notification when the account is approaching a particular dollar amount?

- A. AWS Cost and Usage reports
- B. AWS Budgets
- C. AWS Cost Explorer
- D. AWS Trusted Advisor

167. What can users access from AWS Artifact?

- A. AWS security and compliance documents
- B. A download of configuration management details for all AWS resources
- C. Training materials for AWS services
- D. A security assessment of the applications deployed in the AWS Cloud

168. Which of the following is an AWS Well-Architected Framework design principle related to reliability?

- A. Deployment to a single Availability Zone
- B. Ability to recover from failure
- C. Design for cost optimization
- D. Perform operations as code

169. Which type of AWS storage is ephemeral and is deleted when an instance is stopped or terminated?

- A. Amazon EBS
- B. Amazon EC2 instance store
- C. Amazon EFS
- D. Amazon S3

170. What is an advantage of using the AWS Cloud over a traditional on-premises solution?

- A. Users do not have to guess about future capacity needs.
- B. Users can utilize existing hardware contracts for purchases.
- C. Users can fix costs no matter what their traffic is.
- D. Users can avoid audits by using reports from AWS.

Commented [MC167]: B

"AWS Budgets gives you the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define."

Commented [MC168]: A

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements. Reports available in AWS Artifact include our Service Organization Control (SOC) reports, Payment Card Industry (PCI) reports, and certifications from accreditation bodies across geographies and compliance verticals that validate the implementation and operating effectiveness of AWS security controls. Agreements available in AWS Artifact include the Business Associate Addendum (BAA) and the Nondisclosure Agreement (NDA)."

Commented [MC169]: B

"There are five design principles for reliability in the cloud:  
--Automatically recover from failure  
--Scale horizontally to increase aggregate system availability  
--Stop guessing capacity  
--Manage change in automation  
--Test recovery procedures - Use automation to simulate different failures or to recreate scenarios that led to failures before"

Commented [MC170]: B

"When you stop or terminate an EC2 instance, every block of storage in the instance store is reset. Therefore, your data cannot be accessed through the instance store of another instance."

Commented [MC171]: A

"6 Advantages of Cloud Computing:  
--Trade capital expense for variable expense  
--Benefit from massive economies of scale  
--Stop guessing about capacity (i.e. elasticity)  
--Increased speed and agility  
--Stop spending money running and maintaining data centres  
--Go global in minutes"

171. Which of the following is an AWS-managed compute service?

- A. Amazon SWF
- B. Amazon EC2
- C. AWS Lambda
- D. Amazon Aurora

172. Which of the following is an important architectural principle when designing cloud applications?

- A. Store data and backups in the same region.
- B. Design tightly coupled system components.
- C. Avoid multi-threading.
- D. Design for failure

173. Which mechanism allows developers to access AWS services from application code?

- A. AWS Software Development Kit
- B. AWS Management Console
- C. AWS CodePipeline
- D. AWS Config

174. Which Amazon EC2 pricing model is the MOST cost efficient for an uninterrupted workload that runs once a year for 24 hours?

- A. On-Demand Instances
- B. Reserved Instances
- C. Spot Instances
- D. Dedicated Instances

175. Which of the following services allows running of a MySQL-compatible database that automatically grows storage as needed? (Choose two)

- A. Amazon Elastic Compute Cloud (Amazon EC2)
- B. Amazon Relational Database Service (Amazon RDS) for MySQL
- C. Amazon Lightsail
- D. Amazon Aurora

Commented [MC172]: C

"AWS Managed Services is a set of services and tools that automate infrastructure management tasks for Amazon Web Services (AWS) deployments."

"AWS Lambda is a serverless compute service that lets you run code without provisioning or managing servers, creating workload-aware cluster scaling logic, maintaining event integrations, or managing runtimes."

With Lambda, you can run code for virtually any type of application or backend service - all with zero administration. Just upload your code as a ZIP file or container image, and Lambda automatically and precisely allocates compute execution power and runs your code based on the incoming request or event, for any scale of traffic. You can set up your code to automatically trigger from 140 AWS services or call it directly from any web or mobile app. You can write Lambda functions in your favorite language (Node.js, Python, Go, Java, and more) and use both serverless and container tools, such as AWS...

Commented [MC173]: D

"There are six design principles for operational excellence in the cloud:

- ⇒ Perform operations as code
- ⇒ Annotate documentation
- ⇒ Make frequent, small, reversible changes
- ⇒ Refine operations procedures frequently
- ⇒ Anticipate failure
- ⇒ Learn from all operational failures"

Commented [MC174]: A

"With SDKs access and manage AWS services with your preferred development language or platform"

Commented [MC175]: A

Question states 24 hours once a year meaning just one specific day of the year so 1 year reserved instance will make 364 days a waste.

"Uninterruptible workload" so the answer can't be spot instances.

Dedicated instances are more expensive than on-demand instances

Commented [MC176]: B,D

--B--

RDS MySQL has an autoscaling option enabled by default at 1TB (Max 64TB)

--D--

Aurora storage automatically grows in increments of 10GB, up to 64 TB.

176. Which Amazon Virtual Private Cloud (Amazon VPC) feature enables users to connect two VPCs together?

- A. Amazon VPC endpoints
- B. Amazon Elastic Compute Cloud (Amazon EC2) ClassicLink
- C. Amazon VPC peering
- D. AWS Direct Connect

177. Which service's PRIMARY purpose is software version control?

- A. Amazon CodeStar
- B. AWS Command Line Interface (AWS CLI)
- C. Amazon Cognito
- D. AWS CodeCommit

178. A company is considering migrating its applications to AWS. The company wants to compare the cost of running the workload on-premises to running the equivalent workload on the AWS platform. Which tool can be used to perform this comparison?

- A. AWS Pricing Calculator
- B. AWS Total Cost of Ownership (TCO) Calculator
- C. AWS Billing and Cost Management console
- D. Cost Explorer

179. Which AWS service provides a secure, fast, and cost-effective way to migrate or transport exabyte-scale datasets into AWS?

- A. AWS Batch
- B. AWS Snowball
- C. AWS Migration Hub
- D. AWS Snowmobile

180. Which of the following BEST describe the AWS pricing model? (Choose two.)

- A. Fixed-term
- B. Pay-as-you-go
- C. Colocation
- D. Planned
- E. Variable cost

Commented [MC177]: C

"A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them using private IPv4 addresses or IPv6 addresses. Instances in either VPC can communicate with each other as if they are within the same network. You can create a VPC peering connection between your own VPCs, or with a VPC in another AWS account. The VPCs can be in different regions (also known as an inter-region VPC peering connection)."

Commented [MC178]: D

"AWS CodeCommit is a version control service hosted by Amazon Web Services that you can use to privately store and manage assets (such as documents, source code, and binary files) in the cloud."

Commented [MC179]: B

"TCO calculator compare the cost of running your applications in an on-premises or colocation environment to AWS."

Commented [MC180]: D

"AWS Snowmobile is an exabyte-scale data transfer service that can move extremely large amounts of data to AWS in a fast, secure, and cost-effective manner."

You can transfer up to 100PB per Snowmobile, a 45-foot long ruggedized shipping container, pulled by a semi-trailer truck. Snowmobile makes it easy to move massive volumes of data to the cloud, including video libraries, image repositories, or even a complete data center migration. All data is encrypted with 256-bit encryption and you can manage your encryption keys with AWS Key Management Service (AWS KMS). Snowmobile includes GPS tracking, alarm monitoring, 24/7 video surveillance and an optional escort security vehicle while in transit."

Commented [MC181]: B, E

Pricing that is used by AWS is pay for what you use which is pay as you go.

Variable cost refers to the cost that changes based on quantity of service consumed

181. Which load balancer types are available with Elastic Load Balancing (ELB)? (Choose two.)

- A. Public load balancers with AWS Application Auto Scaling capabilities
- B. F5 Big-IP and Citrix NetScaler load balancers
- C. Classic Load Balancers
- D. Cross-zone load balancers with public and private IPs
- E. Application Load Balancers

Commented [MC182]: C, E

"Elastic Load Balancing supports the following types of load balancers: [Application Load Balancers](#), Network Load Balancers, and [Classic Load Balancers](#)."

182. Why should a company choose AWS instead of a traditional data center?

- A. AWS provides users with full control over the underlying resources.
- B. AWS does not require long-term contracts and provides a pay-as-you-go model.
- C. AWS offers edge locations in every country, supporting global reach.
- D. AWS has no limits on the number of resources that can be created.

Commented [MC183]: B

"[AWS offers you a pay-as-you-go approach for pricing](#) for over 160 cloud services. With AWS you pay only for the individual services you need, for as long as you use them, and without requiring long-term contracts or complex licensing. AWS pricing is similar to how you pay for utilities like water and electricity. You only pay for the services you consume, and once you stop using them, there are no additional costs or termination fees."

183. Which solution provides the FASTEST application response times to frequently accessed data to users in multiple AWS Regions?

- A. AWS CloudTrail across multiple Availability Zones
- B. Amazon CloudFront to edge locations
- C. AWS CloudFormation in multiple regions
- D. A virtual private gateway over AWS Direct Connect

Commented [MC184]: B

"[You can deliver content and decrease end-user latency of your web application using Amazon CloudFront](#). CloudFront speeds up content delivery by leveraging its global network of data centers, known as edge locations, to reduce delivery time by caching your content close to your end users."

CloudFront fetches your content from an origin, such as an Amazon S3 bucket, an Amazon EC2 instance, an Amazon Elastic Load Balancing load balancer or your own web server, when it's not already in an edge location. CloudFront can be used to deliver your entire website or application, including dynamic, static, streaming, and interactive content."

184. Which of the following AWS services can be used to run a self-managed database?

- A. Amazon Route 53
- B. AWS X-Ray
- C. AWS Snowmobile
- D. Amazon Elastic Compute Cloud (Amazon EC2)

Commented [MC185]: D

"[Customers can use EC2 instances to install their DB of choice and self-manage it](#).

Commented [MC186]: B

TAM (technical account manager) - it's a feature unique to the Enterprise support.

"With Enterprise Support, you get 24x7 technical support from high-quality engineers, tools and technology to automatically manage health of your environment, consultative architectural guidance delivered in the context of your applications and use-cases, [and a designated Technical Account Manager \(TAM\) to coordinate access to proactive / preventative programs and AWS subject matter experts](#)"

Incorrect answers:

--Access to support engineers is as well provided with the Business support plan

186. How can a user protect against AWS service disruptions if a natural disaster affects an entire geographic area?

- A. Deploy applications across multiple Availability Zones within an AWS Region.
- B. Use a hybrid cloud computing deployment model within the geographic area.
- C. Deploy applications across multiple AWS Regions.
- D. Store application artifacts using AWS Artifact and replicate them across multiple AWS Regions.

187. How does AWS MOST effectively reduce computing costs for a growing start-up company?

- A. It provides on-demand resources for peak usage.
- B. It automates the provisioning of individual developer environments.
- C. It automates customer relationship management.
- D. It implements a fixed monthly computing budget.

188. A startup is working on a new application that needs to go to market quickly. The application requirements may need to be adjusted in the near future. Which of the following is a characteristic of the AWS Cloud that would meet this specific need?

- A. Elasticity
- B. Reliability
- C. Performance
- D. Agility

189. Which AWS Support plan provides a full set of AWS Trusted Advisor checks?

- A. Business and Developer Support
- B. Business and Basic Support
- C. Enterprise and Developer Support
- D. Enterprise and Business Support

190. Which of the following services have Distributed Denial of Service (DDoS) mitigation features through Amazon Shield Standard? (Choose two.)

- A. AWS WAF
- B. Amazon DynamoDB
- C. Amazon EC2
- D. Amazon CloudFront
- E. Amazon Inspector

Commented [MC187]: C

"Disaster Recovery (DR) Using AWS regions: Most organizations try to implement High Availability (HA) instead of DR to guard them against any downtime of services. In case of HA, we ensure there exists a fallback mechanism for our services. The service that runs in HA is handled by hosts running in different availability zones but in the same geographical region. This approach, however, does not guarantee that our business will be up and running in case the entire region goes down. DR takes things to a completely new level, wherein you need to be able to recover from a different region that's separated by over 250 miles. Our DR implementation is an Active/Passive model, meaning that we always have

Commented [MC188]: A

"The cloud allows you to trade fixed expenses (such as data centers and physical servers) for variable expenses, and only pay for IT as you consume it. And, because of the economies of scale, the variable expenses are much lower than what you would pay to do it yourself"

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the

Commented [MC189]: D

"Agile is a time boxed, iterative approach to software delivery that builds software incrementally from the start of the project, instead of trying to deliver it all at once near the end."

The requirements might need to change. We are not talking about growth here but a change of way of doing things. May be they started with a static webpage and it turned out they now need a database instead. This is no

Commented [MC190]: D

"AWS Basic Support and AWS Developer Support customers get access to 6 security checks (S3 Bucket Permissions, Security Groups - Specific Ports Unrestricted, IAM Use, MFA on Root Account, EBS Public Snapshots, RDS Public Snapshots) and 50 service limit checks. AWS Business Support and AWS Enterprise Support customers get access to all 115 Trusted Advisor checks (14 cost optimization, 17 security, 24 fault tolerance, 10

Commented [MC191]: A, D

"AWS provides flexible infrastructure and services that help customers implement strong DDoS mitigations and create highly available application architectures that follow AWS Best Practices for DDoS Resiliency. These include services such as Amazon Route 53, Amazon CloudFront, Elastic Load Balancing, and AWS WAF to control and absorb traffic, and deflect unwanted requests. These services integrate with AWS Shield, a managed DDoS protection service that provides always-on detection and automatic inline mitigations to safeguard

191. When building a cloud Total Cost of Ownership (TCO) model, which cost elements should be considered for workloads running on AWS? (Choose three.)

- A. Compute costs
- B. Facilities costs
- C. Storage costs
- D. Data transfer costs
- E. Network infrastructure costs
- F. Hardware lifecycle costs

192. What time-savings advantage is offered with the use of Amazon Rekognition?

- A. Amazon Rekognition provides automatic watermarking of images.
- B. Amazon Rekognition provides automatic detection of objects appearing in pictures.
- C. Amazon Rekognition provides the ability to resize millions of images automatically.
- D. Amazon Rekognition uses Amazon Mechanical Turk to allow humans to bid on object detection jobs.

193. When comparing AWS with on-premises Total Cost of Ownership (TCO), what costs are included?

- A. Data center security
- B. Business analysis
- C. Project management
- D. Operating system administration

194. According to the AWS shared responsibility model, what is AWS responsible for?

- A. Configuring Amazon VPC
- B. Managing application code
- C. Maintaining application traffic
- D. Managing the network infrastructure

195. Which service should be used to estimate the costs of running a new project on AWS?

- A. AWS TCO Calculator
- B. AWS Pricing Calculator
- C. AWS Cost Explorer API
- D. AWS Budgets

Commented [MC192]: A, C, D

Compute costs, storage costs and data transfer costs are all charges that are incurred by using AWS

"**There are three fundamental drivers of cost with AWS: compute, storage, and outbound data transfer.** These characteristics vary somewhat, depending on the AWS product and pricing model you choose. In most cases, there is no charge for inbound data transfer or for data transfer between other AWS services within the same Region. There are some exceptions, so be sure to verify data transfer rates before beginning. Outbound data transfer is aggregated across services and then charged at the outbound data transfer rate. This charge appears on the monthly statement as AWS Data Transfer Out. The more data you transfer, the less you pay per GB. For compute resources, you pay hourly from the time you launch a resource until the time you terminate it, unless you have made a reservation for which the cost is agreed upon beforehand. For data storage and transfer, you typically pay per GB."

Incorrect answers:

Commented [MC193]: B

"**Amazon Rekognition is an image recognition service that detects objects, scenes, and faces; extracts text; recognizes celebrities; and identifies inappropriate content in images.** It also allows you to search and compare faces. Rekognition Image is based on the same proven, highly scalable, deep learning technology developed by Amazon's computer vision scientists to analyze billions of images daily for Prime Photos."

Commented [MC194]: A

"**AWS provides Data centre security included in the price, while the other 3 options are customers' costs (regardless if on AWS or on-premises)**

Commented [MC195]: D

"**AWS is responsible for protecting the infrastructure that runs all of the services offered in the AWS Cloud.** This infrastructure is composed of the hardware, software, networking, and facilities that run AWS Cloud services."

Commented [MC196]: B

"**AWS Pricing Calculator lets you explore AWS services and create an estimate for the cost of your use cases on AWS.** You can model your solutions before building them, explore the price points and calculations behind your estimate, and find the available instance types and contract terms that meet your needs. This enables you to make informed decisions about using AWS. You can plan your AWS costs and usage or price out setting up a new set of instances and services."

196. Which AWS tool will identify security groups that grant unrestricted Internet access to a limited list of ports?

- A. AWS Organizations
- B. AWS Trusted Advisor
- C. AWS Usage Report
- D. Amazon EC2 dashboard

197. Which AWS service can be used to generate alerts based on an estimated monthly bill?

- A. AWS Config
- B. Amazon CloudWatch
- C. AWS X-Ray
- D. AWS CloudTrail

198. Which Amazon EC2 pricing model offers the MOST significant discount when compared to On-Demand Instances?

- A. Partial Upfront Reserved Instances for a 1-year term
- B. All Upfront Reserved Instances for a 1-year term
- C. All Upfront Reserved Instances for a 3-year term
- D. No Upfront Reserved Instances for a 3-year term

199. Which of the following is the responsibility of AWS?

- A. Setting up AWS Identity and Access Management (IAM) users and groups
- B. Physically destroying storage media at end of life
- C. Patching guest operating systems
- D. Configuring security settings on Amazon EC2 instances

200. Which of the following is an advantage of using AWS?

- A. AWS audits user data.
- B. Data is automatically secure.
- C. There is no guessing on capacity needs.
- D. AWS manages compliance needs.

Commented [MC197]: B

"Trusted advisor...Checks security groups for rules that allow unrestricted access (0.0.0.0/0) to specific ports.  
Unrestricted access increases opportunities for malicious activity (hacking, denial-of-service attacks, loss of data). The ports with highest risk are flagged red, and those with less risk are flagged yellow. Ports flagged green are typically used by applications that require unrestricted access, such as HTTP and SMTP"

Commented [MC198]: B

"You can monitor your estimated AWS charges by using Amazon CloudWatch. When you enable the monitoring of estimated charges for your AWS account, the estimated charges are calculated and sent several times daily to CloudWatch as metric data.

Billing metric data is stored in the US East (N. Virginia) Region and represents worldwide charges. This data includes the estimated charges for every service in AWS that you use, in addition to the estimated overall total of your AWS charges."

Commented [MC199]: C

Reserved instances savings (up to):  
-Standard one-year  
--all upfront = approx. 41%  
--partial upfront = approx. 40%  
--no upfront = approx. 37%  
  
-Standard three-years:  
--all upfront = approx. 62%  
--partial upfront = approx. 60%  
--no upfront = approx. 57%

Commented [MC200]: B

"Media storage devices used to store customer data are classified by AWS as Critical and treated accordingly, as high impact, throughout their life-cycles. AWS has exacting standards on how to install, service, and eventually destroy the devices when they are no longer useful. When a storage device has reached the end of its useful life, AWS decommissions media using techniques detailed in NIST 800-88. Media that stored customer data..."

Commented [MC201]: C

"6 Advantages of Cloud Computing:  
--Trade capital expense for variable expense  
--Benefit from massive economies of scale  
--Stop guessing about capacity (i.e. elasticity)  
--Increased speed and agility  
--Stop spending money running and maintaining data centres  
--Go global in minutes"

200-250

201. Which AWS service would a customer use with a static website to achieve lower latency and high transfer speeds?

- A. AWS Lambda
- B. Amazon DynamoDB Accelerator
- C. Amazon Route 53
- D. Amazon CloudFront

202. Which services manage and automate application deployments on AWS? (Choose two.)

- A. AWS Elastic Beanstalk
- B. AWS CodeCommit
- C. AWS Data Pipeline
- D. AWS CloudFormation
- E. AWS Config

203. Which principles are used to architect applications for reliability on the AWS Cloud? (Choose three.)

- A. Design for automated failure recovery
- B. Use multiple Availability Zones
- C. Manage changes via documented processes
- D. Test for moderate demand to ensure reliability
- E. Backup recovery to an on-premises environment

204. What tasks should a customer perform when that customer suspects an AWS account has been compromised? (Choose two.)

- A. Rotate passwords and access keys.
- B. Remove MFA tokens.
- C. Move resources to a different AWS Region.
- D. Delete AWS CloudTrail Resources.
- E. Contact AWS Support.

205. What is an example of high availability in the AWS Cloud?

- A. Consulting AWS technical support at any time day or night
- B. Ensuring an application remains accessible, even if a resource fails
- C. Making any AWS service available for use by paying on demand
- D. Deploying in any part of the world using AWS Regions

Commented [MC202]: D

"Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment."

"Amazon CloudFront can speed up the delivery of your websites, whether its static objects (e.g., images, style sheets, JavaScript, etc.) or dynamic content (e.g., videos, audio, motion graphics, etc.), to viewers across the globe."

Commented [MC203]: A, B

--A--

--AWS Elastic Beanstalk - as the deployment target for the sample app. Your completed pipeline will be able to detect changes made to the source repository containing the sample app and then automatically update your live sample app.

--B--

--AWS CodeStar services - enables you to quickly develop, build, and deploy applications on AWS by providing a unified user interface, enabling you to easily manage your software development activities in one place. You can se...

Commented [MC204]: A, B, C

--A--

"There are five design principles for reliability in the cloud:  
--Automatically recover from failure  
--Scale horizontally to increase aggregate system availability  
--Stop guessing capacity  
--Manage change in automation  
--Test recovery procedures - Use automation to simulate different failures or to recreate scenarios that led to failures before"

Commented [MC205]: E

"-Change your AWS account root user password.  
-Rotate and delete all root and AWS Identity and Access Management (IAM) access keys.  
-Delete any potentially unauthorized IAM users, and then change the password for all other IAM users.  
-Delete any resources on your account that you didn't create, such as Amazon Elastic Compute Cloud (Amazon EC2) instances and AMIs, Amazon Elastic Block Store (Amazon EBS) volumes and snapshots, and IAM users.

Commented [MC206]: B

Deploying application redundancy in multiple AZ is enough to keep the app available should one resource fail.

Anytime you read about "availability" in a question, the first thing to look for in your answer should be related to "failure" and vice versa.

206. Which AWS security service protects applications from distributed denial of service attacks with always-on detection and automatic inline mitigations?

- A. Amazon Inspector
- B. AWS Web Application Firewall (AWS WAF)
- C. Elastic Load Balancing (ELB)
- D. AWS Shield

207. A company wants to monitor the CPU usage of its Amazon EC2 resources. Which AWS service should the company use?

- A. AWS CloudTrail
- B. Amazon CloudWatch
- C. AWS Cost and Usage report
- D. Amazon Simple Notification Service (Amazon SNS)

208. What is an AWS Identity and Access Management (IAM) role?

- A. A user associated with an AWS resource
- B. A group associated with an AWS resource
- C. An entity that defines a set of permissions for use with an AWS resource
- D. An authentication credential associated with a multi-factor authentication (MFA) token

209. What are the advantages of Reserved Instances? (Choose two.)

- A. They provide a discount over on-demand pricing.
- B. They provide access to additional instance types.
- C. They provide additional networking capability.
- D. Customers can upgrade instances as new types become available.
- E. Customers can reserve capacity in an Availability Zone.

210. How do Amazon EC2 Auto Scaling groups help achieve high availability for a web application?

- A. They automatically add more instances across multiple AWS Regions based on global demand of the application.
- B. They automatically add or replace instances across multiple Availability Zones when the application needs it.
- C. They enable the application's static content to reside closer to end users.
- D. They are able to distribute incoming requests across a tier of web server instances.

Commented [MC207]: D

"**AWS Shield** is a managed **Distributed Denial of Service (DDoS)** protection service that safeguards applications running on AWS. AWS Shield provides always-on detection and automatic inline mitigations that minimize application downtime and latency, so there is no need to engage AWS Support to benefit from DDoS protection. There are two tiers of AWS Shield - Standard and Advanced."

Commented [MC208]: B

"**CloudWatch** collects monitoring and operational data in the form of logs, metrics, and events, and visualizes it using automated dashboards so you can get a unified view of your AWS resources, applications, and services that run in AWS and on-premises"

"With Basic monitoring you get data on your CloudWatch metrics every 5 minutes. Enabling detailed monitoring, you will get the data every one minute."

To check if detailed monitoring is enabled, on your EC2 Console, Select the instance, on the lower pane, Select Monitoring."

Commented [MC209]: C

"An IAM role is an IAM entity that defines a set of permissions for making AWS service requests. IAM roles are not associated with a specific user or group. Instead, trusted entities assume roles, such as IAM users, applications, or AWS services such as EC2"

Commented [MC210]: A, E

--A--  
"A Reserved Instance is a reservation of resources and capacity, for either one or three years, for a particular Availability Zone within a region. When you purchase a reservation, you commit to paying for all of the hours of the 1- or 3-year term; in exchange, the hourly rate is lowered significantly."

**Amazon EC2 Reserved Instances (RI)** provide a significant discount (up to 72%) compared to On-Demand pricing and provide a capacity reservation when used in a specific Availability Zone. AWS Billing automatically...

Commented [MC211]: B

"Amazon EC2 Auto Scaling can detect when an instance is unhealthy, terminate it, and launch an instance to replace it. You can also configure Amazon EC2 Auto Scaling to use multiple Availability Zones. If one Availability Zone becomes unavailable, Amazon EC2 Auto Scaling can launch instances in another one to compensate."

211. How can one AWS account use Reserved Instances from another AWS account?
- A. By using Amazon EC2 Dedicated Instances
  - B. By using AWS Organizations consolidated billing
  - C. By using the AWS Cost Explorer tool
  - D. By using AWS Budgets

212. A customer runs an On-Demand Amazon Linux EC2 instance for 3 hours, 5 minutes, and 6 seconds. For how much time will the customer be billed?
- A. 3 hours, 5 minutes
  - B. 3 hours, 5 minutes, and 6 seconds
  - C. 3 hours, 6 minutes
  - D. 4 hours

213. Which of the following AWS services provide compute resources? (Choose two.)
- A. AWS Lambda
  - B. Amazon Elastic Container Service (Amazon ECS)
  - C. AWS CodeDeploy
  - D. Amazon Glacier
  - E. AWS Organizations

214. Which AWS service enables users to deploy infrastructure as code by automating the process of provisioning resources?
- A. Amazon GameLift
  - B. AWS CloudFormation
  - C. AWS Data Pipeline
  - D. AWS Glue

215. Which AWS services provide a way to extend an on-premises architecture to the AWS Cloud? (Choose two.)
- A. Amazon EBS
  - B. AWS Direct Connect
  - C. Amazon CloudFront
  - D. AWS Storage Gateway
  - E. Amazon Connect
  - F. AWS VPN
  - G. CloudHSM

Commented [MC212]: B

"For billing purposes, the consolidated billing feature of **AWS Organizations** treats all the accounts in the organization as one account. This means that all accounts in the organization can receive the hourly cost benefit of **Reserved Instances** that are purchased by any other account."

The account that originally purchased the Reserved Instance receives the discount first. If the purchasing account doesn't have any instances that match the terms of the Reserved Instance, the discount for the Reserved Instance is assigned to any matching usage on another account in the organization."

Commented [MC213]: B

"Pricing is per instance-hour consumed for each instance, from the time an instance is launched until it is terminated or stopped. **Each partial instance-hour consumed will be billed per-second for Linux Instances** and as a full hour for all other instance types."

Commented [MC214]: B

"Here is a full list of Compute Services:

Amazon EC2

Amazon EC2 Auto Scaling

Amazon Elastic Container Registry

**Amazon Elastic Container Service**

Amazon Elastic Kubernetes Service

Amazon Lightsail

AWS Batch

AWS Elastic Beanstalk

AWS Fargate

**AWS Lambda**

Commented [MC215]: B

"**AWS CloudFormation** provides a common language for you to model and provision AWS and third party application resources in your cloud environment. **AWS CloudFormation** allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This gives you a single source of truth for your AWS and third party resources."

Commented [MC216]: B, D

--B--

"**AWS Direct Connect** is a cloud service solution that makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than Internet-based connections."

216. Which services use AWS edge locations? (Choose two.)

- A. Amazon CloudFront
- B. AWS Shield
- C. Amazon EC2
- D. Amazon RDS
- E. Amazon ElastiCache

217. Which service would provide network connectivity in a hybrid architecture that includes the AWS Cloud?

- A. Amazon VPC
- B. AWS Direct Connect
- C. AWS Directory Service
- D. Amazon API Gateway

218. What is the value of using third-party software from AWS Marketplace instead of installing third-party software on Amazon EC2? (Choose two.)

- A. Users pay for software by the hour or month depending on licensing.
- B. AWS Marketplace enables the user to launch applications with 1-Click.
- C. AWS Marketplace data encryption is managed by a third-party vendor.
- D. AWS Marketplace eliminates the need to upgrade to newer software versions.
- E. Users can deploy third-party software without testing.

219. Which of the following is a cloud architectural design principle?

- A. Scale up, not out.
- B. Loosely couple components.
- C. Build monolithic systems.
- D. Use commercial database software.

220. Under the shared responsibility model; which of the following areas are the customer's responsibility? (Choose two.)

- A. Firmware upgrades of network infrastructure
- B. Patching of operating systems
- C. Patching of the underlying hypervisor
- D. Physical security of data centers
- E. Configuration of the security group

Commented [MC217]: A, B

--A--

"[Amazon CloudFront can be used to deliver your entire website, including dynamic, static, streaming, and interactive content using a global network of edge locations](#). Requests for your content are automatically routed to the nearest edge location, so content is delivered with the best possible performance"

--B--

"[AWS Shield Advanced is available globally on all Amazon CloudFront, AWS Global Accelerator, and Amazon Route 53 edge locations](#)"

Incorrect answers:

--ElastiCache is improving the performance of your application, where the cached data is stored in memory data stores on the original server, which are not located at edge locations

Commented [MC218]: B

Hybrid architecture may include VPC and VPC has to rely on something else to get connected to the on-premises data. That connectivity can be realized by VPN or Direct Connect.

"AWS has more compute, networking, storage, security and identity, data integration, management, monitoring, and operations services than any other cloud provider to help companies build hybrid cloud architectures for their specific use cases and requirements. Services, like Amaz...

Commented [MC219]: A, B

"[Customers can quickly launch pre-configured software with just a few clicks](#), and choose software solutions in Amazon Machine Images (AMIs) and software as a service (SaaS) formats, as well as other formats. Additionally, you can browse and subscribe to data products. Flexible pricing options include free trial, [hourly, monthly](#), annual, multi-year, and BYOL (Bring Your Own License), and get billed from one source. AWS handles billing and payments, and charges appear on customers' AWS bill."

Commented [MC220]: B

"[Loosely coupled architectures reduce interdependencies](#), so that a change or failure in a component does not cascade to other components."

Commented [MC221]: B, E

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. [The customer assumes responsibility and management of the guest operating system \(including updates and security patches\)](#), other associated...

221. Which AWS service identifies security groups that allow unrestricted access to a user's AWS resources?

- A. AWS CloudTrail
- B. AWS Trusted Advisor
- C. Amazon CloudWatch
- D. Amazon Inspector

222. According to the AWS shared responsibility model, who is responsible for configuration management?

- A. It is solely the responsibility of the customer.
- B. It is solely the responsibility of AWS.
- C. It is shared between AWS and the customer.
- D. It is not part of the AWS shared responsibility model.

223. Which AWS service is a content delivery network that securely delivers data, video, and applications to users globally with low latency and high speeds?

- A. AWS CloudFormation
- B. AWS Direct Connect
- C. Amazon CloudFront
- D. Amazon Pinpoint

224. Which benefit of the AWS Cloud supports matching the supply of resources with changing workload demands?

- A. Security
- B. Reliability
- C. Elasticity
- D. High availability

225. A user is running an application on AWS and notices that one or more AWS-owned IP addresses is involved in a distributed denial-of-service (DDoS) attack. Who should the user contact FIRST about this situation?

- A. AWS Premium Support
- B. AWS Technical Account Manager
- C. AWS Solutions Architect
- D. AWS Trust & Safety Team

Commented [MC222]: B

"Trusted Advisor - AWS Basic Support and AWS Developer Support customers get access to 6 security checks (S3 Bucket Permissions, **Security Groups - Specific Ports Unrestricted**, IAM Use, MFA on Root Account, EBS Public Snapshots, RDS Public Snapshots)"

Incorrect answers:  
--Amazon Inspector assesses vulnerabilities of the applications, not the infrastructure.

Commented [MC223]: C

**AWS maintains the configuration of its infrastructure devices, but a customer is responsible for configuring their own guest operating systems, databases, and applications.**

Commented [MC224]: C

"**Amazon CloudFront** is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment. CloudFront is integrated with AWS \*\*\* both physical locations that are directly connected to the AWS global infrastructure, as well as other AWS services."

Commented [MC225]: C

"In cloud computing, **elasticity** is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible"

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain conditions, like when your cloud solution is running out of processing power."

Commented [MC226]: D

"If you suspect that AWS resources are used for abusive purposes, contact the **AWS Trust & Safety Team** (formerly AWS Abuse team) using the Report Amazon AWS abuse form"

226. Which of the following are benefits of hosting infrastructure in the AWS Cloud?  
(Choose two.)

- A. There are no upfront commitments.
- B. AWS manages all security in the cloud.
- C. Users have the ability to provision resources on demand.
- D. Users have access to free and unlimited storage.
- E. Users have control over the physical infrastructure.

Commented [MC227]: A, C

--There are no upfront commitments (AWS is on-demand)

--Users can provision resources as and how they see fit.

"6 Advantages of Cloud Computing:

--Trade capital expense for variable expense

--Benefit from massive economies of scale

--Stop guessing about capacity (i.e. elasticity)

--Increased speed and agility

--Stop spending money running and maintaining data centres

--Go global in minutes"

227. What is AWS Trusted Advisor?

- A. It is an AWS staff member who provides recommendations and best practices on how to use AWS.
- B. It is a network of AWS partners who provide recommendations and best practices on how to use AWS.
- C. It is an online tool with a set of automated checks that provides recommendations on cost optimization, performance, and security.
- D. It is another name for AWS Technical Account Managers who provide recommendations on cost optimization, performance, and security.

Incorrect answers:

--AWS does not manage all security in the cloud, it is a shared responsibility model

Commented [MC228]: C

"AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices. Whether establishing new workflows, developing applications, or as part of ongoing improvement, take advantage of the recommendations provided by Trusted Advisor on a regular basis to help keep your solutions provisioned optimally."

Checks are for:

--Performance

Commented [MC229]: B

"AWS Cost Explorer has an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time."

Commented [MC230]: B

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements.

Reports available in AWS Artifact include our Service Organization Control (SOC) reports, Payment Card Industry (PCI) reports, and certifications from accreditation bodies across geographies and compliance verticals that validate the implementation and operating effectiveness of AWS security controls. Agreements

Commented [MC231]: D, E

"CloudWatch Logs Features:

- Query Your Log Data
- Monitor Logs from Amazon EC2 Instances
- Monitor AWS CloudTrail Logged Events

**- Log Retention – By default, logs are kept indefinitely and never expire. You can adjust the retention policy for each log group, keeping the indefinite retention, or choosing a retention period between 10 years and one day.**

- Archive Log Data
- Log Route 53 DNS Queries"

228. Which AWS service or feature allows a company to visualize, understand, and manage AWS costs and usage over time?

- A. AWS Budgets
- B. AWS Cost Explorer
- C. AWS Organizations
- D. Consolidated billing

229. Which AWS service offers on-demand access to AWS security and compliance reports?

- A. AWS CloudTrail
- B. AWS Artifact
- C. AWS Health
- D. Amazon CloudWatch

230. Which of the following are features of Amazon CloudWatch Logs? (Select TWO.)

- A. Summaries by Amazon Simple Notification Service (Amazon SNS)
- B. Free Amazon Elasticsearch Service analytics
- C. Provided at no charge
- D. Real-time monitoring
- E. Adjustable retention

231. Which of the following are valid ways for a customer to interact with AWS services? (Select TWO.)

- A. Command line interface
- B. On-premises
- C. Software Development Kits
- D. Software-as-a-service
- E. Hybrid

232. Which of the following AWS services can be used to serve large amounts of online video content with the lowest possible latency? (Select TWO.)

- A. AWS Storage Gateway
- B. Amazon S3
- C. Amazon Elastic File System (EFS)
- D. Amazon Glacier
- E. Amazon CloudFront

233. Which of the following security-related services does AWS offer? (Select TWO.)

- A. Multi-factor authentication physical tokens
- B. AWS Trusted Advisor security checks
- C. Data encryption
- D. Automated penetration testing
- E. Amazon S3 copyrighted content detection

234. Which of the following are categories of AWS Trusted Advisor? (Select TWO.)

- A. Fault Tolerance
- B. Instance Usage
- C. Infrastructure
- D. Performance
- E. Storage Capacity

235. Which of the following services could be used to deploy an application to servers running on-premises? (Select TWO.)

- A. AWS Elastic Beanstalk
- B. AWS OpsWorks
- C. AWS CodeDeploy
- D. AWS Batch
- E. AWS X-Ray

Commented [MC232]: A, C

You can access the AWS platform in 3 ways:  
--Using the Console - Graphical interface to access AWS features  
--Using the CLI (command line interface) - Lets you control AWS services programmatically from command line  
--Using the SDK - Enable you to access AWS using a variety of popular programming languages

Commented [MC233]: B, E

You can configure your application to deliver static content and decrease the end-user latency using Amazon S3 and Amazon CloudFront. High-resolution images, videos, and other static files can be stored in Amazon S3. CloudFront speeds up content delivery by leveraging its global network of data centers, known as edge locations, to reduce delivery time by caching your content close to your end-users.

CloudFront fetches your content from an origin, such as an Amazon S3 bucket, an Amazon EC2 instance, an Amazon Elastic Load Balancing load balancer or your own web server, when it's not already in an edge location. CloudFront can be used to deliver your entire website or application, including dynamic, static, streaming, and ...

Commented [MC234]: B, C

--B--  
"AWS Trusted Advisor is an application that draws upon best practices learned from AWS' aggregated operational history of serving hundreds of thousands of AWS customers. Trusted Advisor inspects your AWS environment and makes recommendations for saving money, improving system performance, or closing security gaps."

--C--

Commented [MC235]: A, D

Trusted advisor categories:  
--Cost optimization  
--Performance  
--Security  
--Fault tolerance  
--Service limits

Commented [MC236]: B, C

--B--  
"AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet. OpsWorks lets you use Chef and Puppet to automate how servers are configured, deployed, and managed across your Amazon EC2 instances or on-premises compute environments."

--C--

236. Which design principles for cloud architecture are recommended when re-architecting a large monolithic application? (Select TWO.)

- A. Use manual monitoring.
- B. Use fixed servers.
- C. Implement loose coupling.
- D. Rely on individual components.
- E. Design for scalability.

237. Which AWS services are defined as global instead of regional? (Select TWO.)

- A. Amazon Route 53
- B. Amazon EC2
- C. Amazon S3
- D. Amazon CloudFront
- E. Amazon DynamoDB

238. The financial benefits of using AWS are: (Select TWO.)

- A. reduced Total Cost of Ownership (TCO).
- B. increased capital expenditure (capex).
- C. reduced operational expenditure (opex).
- D. deferred payment plans for startups.
- E. business credit lines for startups.

239. Which of the following can an AWS customer use to launch a new Amazon Relational Database Service (Amazon RDS) cluster? (Select TWO.)

- A. AWS Concierge
- B. AWS CloudFormation
- C. Amazon Simple Storage Service (Amazon S3)
- D. Amazon EC2 Auto Scaling
- E. AWS Management Console

240. Which of the following security measures protect access to an AWS account? (Select TWO.)

- A. Enable AWS CloudTrail.
- B. Grant least privilege access to IAM users.
- C. Create one IAM user and share with many developers and users.
- D. Enable Amazon CloudFront.
- E. Activate multi-factor authentication (MFA) for privileged users.

Commented [MC237]: C, E

"Loose coupling - is one of the key cloud design principles. Your components need to be loosely coupled to avoid changes or failure in one of the components from affecting others."

"Being adaptive and elastic - is one of the key cloud design principles. The AWS cloud architecture should be such that it support growth of users, traffic, or data size with no drop in performance. It should also allow for linear scalability when and where an additional resource is added. The system needs to be able to adapt and proportionally serve additional load. Whether the AWS cloud architecture includes vertical scaling, horizontal scaling or both; it is up to the designer, depending on the type of application or data to be stored. But your design should be equipped to take maximum advantage of the

Commented [MC238]: A, D

--Route53 – Global - Route53 services are offered at AWS edge locations and are global

--CloudFront – Global - CloudFront is the global content delivery network (CDN) services are offered at AWS edge locations

Incorrect answers:

Commented [MC239]: A, C

"A pay-as-you-go model reduces investments in large capital expenditures. In addition, you can reduce the operating expense (OpEx) costs involved with the management and maintenance of data, this is partly due to the large economies of scale AWS can take advantage of."

Commented [MC240]: B, E

--B--

"AWS CloudFormation gives you an easy way to model a collection of related AWS and third-party resources, provision them quickly and consistently, and manage them throughout their lifecycles, by treating infrastructure as code. A CloudFormation template describes your desired resources and their dependencies so you can launch and configure them together as a stack. You can use a template to create, update, and delete an entire stack as a single unit, as often as you need to,

Commented [MC241]: B, E

--B--

Granting least privilege minimises 'blast radius' in event of a security breach.

"The Principle of Least Privilege states that a subject should be given only those privileges needed for it to complete its task. If a subject does not need an access right, the subject should not have that access right.

...

241. Which of the following features can be configured through the Amazon Virtual Private Cloud (Amazon VPC) Dashboard? (Select TWO.)

- A. Amazon CloudFront distributions
- B. Amazon Route 53
- C. Security Groups
- D. Subnets
- E. Elastic Load Balancing

242. Which AWS services can be used to gather information about AWS account activity? (Select TWO.)

- A. Amazon CloudFront
- B. AWS Cloud9
- C. AWS CloudTrail
- D. AWS CloudHSM
- E. Amazon CloudWatch

243. What can AWS edge locations be used for? (Select TWO.)

- A. Hosting applications
- B. Delivering content closer to users
- C. Running NoSQL database caching services
- D. Reducing traffic on the server by caching responses
- E. Sending notification messages to end users

244. Access keys in AWS Identity and Access Management (IAM) are used to:

- A. log in to the AWS Management Console.
- B. 806
- C. log in to Amazon EC2 instances.
- D. authenticate to AWS CodeCommit repositories.

245. What are the benefits of using the AWS Cloud for companies with customers in many countries around the world? (Choose two.)

- A. Companies can deploy applications in multiple AWS Regions to reduce latency.
- B. Amazon Translate automatically translates third-party website interfaces into multiple languages.
- C. Amazon CloudFront has multiple edge locations around the world to reduce latency.
- D. Amazon Comprehend allows users to build applications that can respond to user requests in many languages.
- E. Elastic Load Balancing can distribute application web traffic to multiple AWS Regions around the world, which reduces latency.

Commented [MC242]: C, D

"Amazon Virtual Private Cloud (Amazon VPC) lets you provision a logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define. You have complete control over your virtual networking environment, including selection of your own IP address range, **creation of subnets**, and configuration of route tables and network gateways. You can use both IPv4 and IPv6 in your VPC for secure and easy access to resources and applications."

You can easily customize the network configuration for your Amazon VPC. For example, you can create a **public-facing subnet** for your web servers that has access to the Internet, and place your backend systems such as databases or application servers in a **private-facing subnet** with no Internet access. You can leverage multiple layers of security, including **security groups** and network access ...

Commented [MC243]: C, E

--C--  
"AWS offers a solution that uses AWS CloudTrail to log account activity, Amazon Kinesis to compute and stream metrics in real-time, and Amazon DynamoDB to durably store the computed data. Metrics are calculated for create, modify, and delete API calls for more than 60 supported AWS services. The solution also features a dashboard that visualizes your account activity in real-time."

Commented [MC244]: B, D

--B--  
"CloudFront delivers your content through a worldwide network of data centers called edge locations which are **closer to the end users than the original servers** where the content is permanently hosted."

--D--  
"Because when you use CloudFront, it caches your content at AWS Edge locations to serve them to your users faster. For example, this blog's original AWS region is Europe ..."

Commented [MC245]: B

"Access keys are long-term credentials for an IAM user or the AWS account root user. You can use access keys to sign programmatic requests to the AWS CLI or AWS API (directly or using the AWS SDK)."

Commented [MC246]: A, C

--A--  
"Multi-region deployments reduce latency by allowing closer processing and serving non-static data without incurring the overhead of long network hops." (<https://aws.amazon.com/blogs/apn/architecting-multi-region-saas-solutions-on-aws/>)

--C--

246. Which AWS service handles the deployment details of capacity provisioning, load balancing, Auto Scaling, and application health monitoring?

- A. AWS Config
- B. AWS Elastic Beanstalk
- C. Amazon Route 53
- D. Amazon CloudFront

247. Which AWS service provides inbound and outbound network ACLs to harden external connectivity to Amazon EC2?

- A. AWS IAM
- B. Amazon Connect
- C. Amazon VPC
- D. Amazon API Gateway

248. When a company provisions web servers in multiple AWS Regions, what is being increased?

- A. Coupling
- B. Availability
- C. Security
- D. Durability

249. The pay-as-you-go pricing model for AWS services (choose two):

- A. reduces capital expenditures.
- B. requires payment up front for AWS services.
- C. is relevant only for Amazon EC2, Amazon S3, and Amazon RDS.
- D. reduces operational expenditures.

250. Under the AWS shared responsibility model, AWS is responsible for which security-related task?

- A. Lifecycle management of IAM credentials
- B. Physical security of global infrastructure
- C. Encryption of Amazon EBS volumes
- D. Firewall configuration

Commented [MC247]: B

"Upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. At the same time, you retain full control over the AWS resources powering your application and can access the underlying resources at any time."

Commented [MC248]: C

"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."

Commented [MC249]: B

High availability - In the event of resources failing unexpectedly, protect against regional, data center, availability zone, server, network and storage subsystem single points of failure to keep your business running without downtime.

"Each AWS Region consists of multiple, isolated, and physically separate AZ's within a geographic area. Unlike other cloud providers, who often define a region as a single data center, the multiple AZ design of every AWS Region offers advantages for customers. Each AZ has independent power, cooling, and physical security and is connected via redundant, ultra-low-latency networks. AWS customers focused on high availability can design their applications to run in multiple AZ's to achieve even greater fault-tolerance. AWS infrastructure Regions meet the highest levels of security, compliance, and data protection."

Commented [MC250]: D

Capex (capital expenditures) reduced to practically zero as AWS owns the datacentres, network infrastructure and other expenses.

Opex (operational expenditures) reduced generally as AWS enables savings through huge economies of scale.

Commented [MC251]: B

Only AWS can provide access to its physical infrastructure.

"AWS provides physical data center access only to approved employees. All employees who need data center access must first apply for access and provide a valid business justification. These requests are granted based on the principle of least privilege, where requests must specify to which layer of the data center the individual needs access, and are time-bound. Requests are reviewed and approved by authorized personnel, and ..."

251-300

251. Under the AWS shared responsibility model, which of the following is an example of security in the AWS Cloud?

- A. Managing edge locations
- B. Physical security
- C. Firewall configuration
- D. Global infrastructure

252. How can an AWS user with an AWS Basic Support plan obtain technical assistance from AWS (choose two)?

- A. AWS Senior Support Engineers
- B. AWS Technical Account Managers
- C. AWS Trusted Advisor
- D. AWS Discussion Forums

253. Which of the following are pillars of the AWS Well-Architected Framework? (Choose two.)

- A. Multiple Availability Zones
- B. Performance efficiency
- C. Security
- D. Encryption usage
- E. High availability

254. After selecting an Amazon EC2 Dedicated Host reservation, which pricing option would provide the largest discount?

- A. No upfront payment
- B. Hourly on-demand payment
- C. Partial upfront payment
- D. All upfront payment

255. What is an advantage of deploying an application across multiple Availability Zones?

- A. There is a lower risk of service failure if a natural disaster causes a service disruption in a given AWS Region.
- B. The application will have higher availability because it can withstand a service disruption in one Availability Zone.
- C. There will be better coverage as Availability Zones are geographically distant and can serve a wider area.
- D. There will be decreased application latency that will improve the user experience.

Commented [MC252]: C

'Security in the Cloud' relates to customer security like configuring firewalls.

'Security of the Cloud' relates to AWS security such as physical access to infrastructure.

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The customer assumes responsibility and management of the guest operating system (including updates and security patches), other associated application software as well as the configuration of the AWS provided security group firewall. Customers should carefully consider the services they choose as their responsibilities vary depending on the services used, the ...

Commented [MC253]: D

Basic Support is included for all AWS customers and includes:

--Customer Service and Communities - 24x7 access to customer service, documentation, whitepapers, and support forums.

--AWS Trusted Advisor - Access to the 7 core Trusted Advisor checks and guidance to provision your resources following best practices to increase performance and improve security.

Commented [MC254]: C

5 basic pillars according to AWS are:

- 1- Operational excellence
- 2- Security
- 3- Reliability
- 4- Performance efficiency
- 5- Cost optimization

Commented [MC255]: D

"You can choose between three payment options when you purchase a Standard or Convertible Reserved Instance. With the All Upfront option, you pay for the entire Reserved Instance term with one upfront payment. This option provides you with the largest discount compared to On-Demand Instance pricing"

Commented [MC256]: B

"Unlike other technology infrastructure providers, each AWS Region has multiple AZ's. As we've learned from running the leading cloud infrastructure technology platform since 2006, customers who care about the availability and performance of their applications want to deploy these applications across multiple AZ's in the same region for fault tolerance and low latency. AZ's are connected to each other with fast, private fiber-optic networking, enabling you to easily architect applications ...

256. A Cloud Practitioner is asked how to estimate the cost of using a new application on AWS. What is the MOST appropriate response?

- A. Inform the user that AWS pricing allows for on-demand pricing.
- B. Direct the user to the AWS Pricing Calculator for an estimate.
- C. Use Amazon QuickSight to analyze current spending on-premises.
- D. Use Amazon AppStream 2.0 for real-time pricing analytics.

257. A company wants to migrate its applications to a VPC on AWS. These applications will need to access on-premises resources. What combination of actions will enable the company to accomplish this goal? (Choose two.)

- A. Use the AWS Service Catalog to identify a list of on-premises resources that can be migrated.
- B. Build a VPN connection between an on-premises device and a virtual private gateway in the new VPC.
- C. Use Amazon Athena to query data from the on-premises database servers.
- D. Connect the company's on-premises data center to AWS using AWS Direct Connect.
- E. Leverage Amazon CloudFront to restrict access to static web content provided through the company's on-premises web servers.

258. A web application running on AWS has been spammed with malicious requests from a recurring set of IP addresses. Which AWS service can help secure the application and block the malicious traffic?

- A. AWS IAM
- B. Amazon GuardDuty
- C. Amazon Simple Notification Service (Amazon SNS)
- D. AWS WAF

259. Treating infrastructure as code in the AWS Cloud allows users to:

- A. automate migration of on-premises hardware to AWS data centers.
- B. let a third party automate an audit of the AWS infrastructure.
- C. turn over application code to AWS so it can run on the AWS infrastructure.
- D. automate the infrastructure provisioning process.

260. A company requires a dedicated network connection between its on-premises servers and the AWS Cloud. Which AWS service should be used?

- A. AWS VPN
- B. AWS Direct Connect
- C. Amazon API Gateway
- D. Amazon Connect

Commented [MC257]: B

"The AWS Pricing Calculator is an easy-to-use online tool that enables you to estimate the monthly cost of AWS services for your use case based on your expected usage. The AWS Pricing Calculator is continuously updated with the latest pricing for all AWS services in all Regions."

Commented [MC258]: D

To provide connectivity between AWS and on-premises.

"Amazon VPC provides multiple network connectivity options for you to leverage depending on your current network designs and requirements. These connectivity options include leveraging either the internet (VPN) or a dedicated private AWS Direct Connect connection as the network backbone and terminating the connection into either AWS or user-managed network endpoints."

Incorrect answers:

--A-- The purpose of the service catalogue stated in the question is not its actual purpose. "AWS Service Catalog - Create, organize, and govern your curated catalog of AW...

Commented [MC259]: D

"AWS WAF is a web application firewall that helps protect web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources. You can use AWS WAF to define customizable web security rules that control which traffic accesses your web applications.

AWS WAF gives you control over how traffic reaches your applications by enabling you to create security rules that block common attack patterns, such as SQL injection or ...

Commented [MC260]: D

"AWS CloudFormation gives you an easy way to model a collection of related AWS and third-party resources, provision them quickly and consistently, and manage them throughout their lifecycles, by treating infrastructure as code. A CloudFormation template describes your desired resources and their dependencies so you can launch and configure them together as a stack. You can use a template to create, update, and delete an entire stack as a single unit, as often as you need to, instead of managing resources individually. Yo...

Commented [MC261]: B

"Both AWS VPN and AWS Direct Connect give connections between the on-premise servers and the AWS cloud, however, Direct Connect is a more dedicated solution (physical fiber optic connection vs A VPN network connection over the internet) ...

You can use AWS Direct Connect to establish a private virtual interface from your on-premise network directly to your Amazon VPC, providing you with a private, high bandwidth network connection between your network ...

261. Which AWS service can be used to query stored datasets directly from Amazon S3 using standard SQL?

- A. AWS Glue
- B. AWS Data Pipeline
- C. Amazon CloudSearch
- D. Amazon Athena

262. AWS CloudFormation is designed to help the user:

- A. model and provision resources.
- B. update application code.
- C. set up data lakes.
- D. create reports for billing.

263. A Cloud Practitioner must determine if any security groups in an AWS account have been provisioned to allow unrestricted access for specific ports. What is the SIMPLEST way to do this?

- A. Review the inbound rules for each security group in the Amazon EC2 management console to check for port 0.0.0.0/0.
- B. Run AWS Trusted Advisor and review the findings.
- C. Open the AWS IAM console and check the inbound rule filters for open access.
- D. In AWS Config, create a custom rule that invokes an AWS Lambda function to review rules for inbound access.

264. What are the benefits of developing and running a new application in the AWS Cloud compared to on-premises? (Choose two.)

- A. AWS automatically distributes the data globally for higher durability.
- B. AWS will take care of operating the application.
- C. AWS makes it easy to architect for high availability.
- D. AWS can easily accommodate application demand changes.
- E. AWS takes care application security patching.

265. A user needs an automated security assessment report that will identify unintended network access to Amazon EC2 instances and vulnerabilities on those instances. Which AWS service will provide this assessment report?

- A. EC2 security groups
- B. AWS Config
- C. Amazon Macie
- D. Amazon Inspector

Commented [MC262]: D

"Amazon Athena is defined as "an interactive query service that makes it easy to analyse data directly in Amazon Simple Storage Service (Amazon S3) using standard SQL." This is very similar to other SQL query engines, such as Apache Drill. But unlike Apache Drill, Athena is limited to data only from Amazon's own S3 storage service. However, Athena is able to query a variety of file formats, including, but not limited to CSV, Parquet, JSON, etc..."

Commented [MC263]: A

"AWS CloudFormation provides a common language for you to model and provision AWS and third party application resources in your cloud environment. AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. This gives you a single source of truth for your AWS and third party resources."

Commented [MC264]: B

"Trusted Advisor Security Summary - Improve the security of your application by closing gaps, enabling various AWS security features, and examining your permissions:

--Security groups - Specific ports unrestricted (free)  
---Checks security groups for rules that allow unrestricted access (0.0.0.0/0) to specific ports.  
---Unrestricted access increases opportunities for malicious activity (hacking, denial-of-service attacks, loss of data).

Commented [MC265]: C, D

Key benefits of cloud computing include:

--C--

High availability - "AWS delivers the highest network availability of any cloud provider. Each region is fully isolated and comprised of multiple AZs, which are fully isolated partitions of our infrastructure. To better isolate any issues and achieve high availability, you can partition applications across multiple AZs in the same region. In addition, AWS control planes and the AWS management

Commented [MC266]: D

"Amazon Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on AWS. Amazon Inspector automatically assesses applications for exposure, vulnerabilities, and deviations from best practices. After performing an assessment, Amazon Inspector produces a detailed list of security findings prioritized by level of severity. These findings can be reviewed directly or as part of detailed assessment reports which are available via the Amazon Inspector console or API. [Amazon Inspector](#)

266. How can a company isolate the costs of production and non-production workloads on AWS?

- A. Create Identity and Access Management (IAM) roles for production and non-production workloads.
- B. Use different accounts for production and non-production expenses.
- C. Use Amazon EC2 for non-production workloads and other services for production workloads.
- D. Use Amazon CloudWatch to monitor the use of services.

267. Where can users find a catalog of AWS-recognized providers of third-party security solutions?

- A. AWS Service Catalog
- B. AWS Marketplace
- C. AWS Quick Start
- D. AWS CodeDeploy

268. A Cloud Practitioner needs to store data for 7 years to meet regulatory requirements. Which AWS service will meet this requirement at the LOWEST cost?

- A. Amazon S3
- B. AWS Snowball
- C. Amazon Redshift
- D. Amazon S3 Glacier

269. What are the immediate benefits of using the AWS Cloud? (Choose two.)

- A. Increased IT staff.
- B. Capital expenses are replaced with variable expenses.
- C. User control of infrastructure.
- D. Increased agility.
- E. AWS holds responsibility for security in the cloud.

270. Which security service automatically recognizes and classifies sensitive data or intellectual property on AWS?

- A. Amazon GuardDuty
- B. Amazon Macie
- C. Amazon Inspector
- D. AWS Shield

Commented [MC267]: B

AWS Organisations can be used to consolidate the billing.

**Given that most companies have different policy requirements for production workloads, infrastructure and security can have nested organizational units (OU) for non-production (SDLC - Software Development Life Cycle) and production (Prod). Accounts in the SDLC OU host non-production workloads and therefore should not have production dependencies from other accounts.**

An organizational unit (OU) is a logical grouping of accounts in your AWS organization. OUs enable you to ...

Commented [MC268]: B

**AWS Marketplace is a curated digital catalog customers can use to find, buy, deploy, and manage third-party software, data, and services that customers need to build solutions and run their businesses. AWS Marketplace includes thousands of software listings from popular categories such as security, networking, storage, machine learning, business intelligence, database, as well as related professional services to help you manage and support those solutions.** AWS Marketplace also simplifies software licensing and procurement with flexible pricing ...

Commented [MC269]: D

**Glacier provides cheap long term storage. Often used to store data we want to keep just in case, rather than deleting.**

**Amazon S3 Glacier and S3 Glacier Deep Archive are a secure, durable, and extremely low-cost Amazon S3 cloud storage classes for data archiving and long-term backup.** They are designed to deliver 99.99999999% durability, and **provide comprehensive security and compliance capabilities that can help meet even the** ...

Commented [MC270]: B, D

--B--

**Trade capital expense for variable expense – Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can pay only when you consume computing resources, and pay only for how much you consume.”**

--D--

**Increase speed and agility – In a cloud computing environment, new IT resources are only a click away,** ...

Commented [MC271]: B

**Amazon Macie is a security service that uses machine learning to automatically discover, classify, and protect sensitive data in AWS.** Macie recognizes sensitive data such as personally identifiable information (PII) or intellectual property. It provides you with dashboards and alerts that give visibility into how this data is being accessed or moved.”

271. What is the purpose of AWS Storage Gateway?
- A. It ensures on-premises data storage is 99.99999999% durable.
  - B. It transports petabytes of data to and from AWS.
  - C. It connects to multiple Amazon EC2 instances.
  - D. It connects on-premises data storage to the AWS Cloud.
272. What should users do if they want to install an application in geographically isolated locations?
- A. Install the application using multiple internet gateways.
  - B. Deploy the application to an Amazon VPC.
  - C. Deploy the application to multiple AWS Regions.
  - D. Configure the application using multiple NAT gateways.
273. A system in the AWS Cloud is designed to withstand the failure of one or more components. What is this an example of?
- A. Elasticity
  - B. Scalability
  - C. Agility
274. A Cloud Practitioner needs a consistent and dedicated connection between AWS resources and an on-premises system. Which AWS service can fulfill this requirement?
- A. AWS Direct Connect
  - B. AWS VPN
  - C. Amazon Connect
  - D. AWS Data Pipeline
275. Within the AWS shared responsibility model, who is responsible for security and compliance?
- A. The customer is responsible.
  - B. AWS is responsible.
  - C. AWS and the customer share responsibility.
  - D. AWS shares responsibility with the relevant governing body.

Commented [MC272]: D

"Moving data to the cloud is not quite as simple as flipping a switch. For companies that have managed their own data centers or server rooms for decades, there are a few steps to consider -- and it's not always wise to pull the plug on an internal infrastructure quite so quickly. If a startup uses on-premise business servers and then experiences unexpected growth, abandoning those servers doesn't make sense (even if the long-term plan is to do exactly that).

**AWS Storage Gateway is a way to bridge this gap for companies of any size. It's a hybrid storage option that connects on-premise storage including age-old tape backup systems to the cloud in a way that also provides one console to access all storage configurations."**

Commented [MC273]: C

**"AWS has the concept of a Region, which is a physical location around the world where we cluster data centers. We call each group of logical data centers an Availability Zone. Each AWS Region consists of multiple, isolated, and physically separate AZ's within a geographic area"**

Commented [MC274]: B

**"Availability - The percentage of time that a workload is available for use, where "available for use" means that it performs its agreed function when required. Availability (also known as service availability) is a commonly used metric to quantitatively measure reliability"**

**"In any system of reasonable complexity, it is expected that failures will occur. Reliability requires that your workload be aware of failures as they occur and take action to avoid impact on availability. Workloads must**

Commented [MC275]: A

**"AWS Direct Connect is a cloud service solution that makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than Internet-based connections."**

Commented [MC276]: C

**"Security and Compliance is a shared responsibility between AWS and the customer.** This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates.

The customer assumes responsibility and management of the guest operating system (including updates and

276. To use the AWS CLI, users are required to generate:

- A. a password policy.
- B. an access/secret key.
- C. a managed policy.
- D. an API key.

277. Which AWS service is used to provide encryption for Amazon EBS?

- A. AWS Certificate Manager
- B. AWS Systems Manager
- C. AWS KMS
- D. AWS Config

278. How does AWS charge for AWS Lambda usage once the free tier has been exceeded? (Choose two.)

- A. By the time it takes for the Lambda function to execute.
- B. By the number of versions of a specific Lambda function.
- C. By the number of requests made for a given Lambda function.
- D. By the programming language that is used for the Lambda function.
- E. By the total number of Lambda functions in an AWS account.

279. Which of the following describes the relationships among AWS Regions, Availability Zones, and edge locations? (Choose two.)

- A. There are more AWS Regions than Availability Zones.
- B. There are more edge locations than AWS Regions.
- C. An edge location is an Availability Zone.
- D. There are more AWS Regions than edge locations.
- E. There are more Availability Zones than AWS Regions.

280. What does AWS Shield Standard provide?

- A. WAF rules
- B. DDoS protection
- C. Identity and Access Management (IAM) permissions and access to resources
- D. Data encryption

Commented [MC277]: B

"For general use, the AWS configure command is the fastest way to set up your AWS CLI installation. When you enter this command, the AWS CLI prompts you for four pieces of information:

--Access key ID  
--Secret access key  
--AWS Region  
--Output format

The AWS CLI stores this information in a profile (a collection of settings) named default in the credentials file. By default, the information in this profile is used when you run an AWS CLI command that doesn't explicitly specify a profile to use."

Commented [MC278]: C

"AWS Key Management Service (KMS) makes it easy for you to create and manage cryptographic keys and control their use across a wide range of AWS services and in your applications. AWS KMS is a secure and resilient service that uses hardware security modules that have been validated under FIPS 140-2, or are in the process of being validated, to protect your keys. AWS KMS is integrated with AWS CloudTrail to provide you with logs of all key usage to help meet your regulatory and compliance needs."

Commented [MC279]: A, C

"With AWS Lambda, you pay only for what you use. You are charged based on the number of requests for your functions and the duration, the time it takes for your code to execute."

Commented [MC280]: B, E

AWS has:  
--25 geographic regions (with plans to launch five more AWS Regions)  
--80 Availability Zones across (with plans to launch 15 more)  
--177 Edge Locations and 11 Regional Edge Caches in 70 cities across 31 countries.

"A Region is a geographical area that has two or more Availability Zones. Each Region is completely independent.  
..."

An Availability Zone (AZ) is an area with either one or more discrete Data Centres (building filled with servers), each with redundant power, networking, and connectivity.

Commented [MC281]: B

"AWS Shield Standard provides protection for all AWS customers from common, most frequently occurring network and transport layer DDoS attacks that target your web site or application at no additional charge."

281. A company wants to build its new application workloads in the AWS Cloud instead of using on-premises resources. What expense can be reduced using the AWS Cloud?

- A. The cost of writing custom-built Java or Node.js code
- B. Penetration testing for security
- C. hardware required to support new applications
- D. Writing specific test cases for third-party applications.

Commented [MC282]: C

"The cloud allows you to trade high initial CapEx (such as data centers and physical servers) for a variable OpEx model, and only pay for IT as you consume it. Plus, the variable OpEx expenses are much lower than what you would pay to do it yourself because of the massive economies of scale that AWS has created."

282. What does AWS Marketplace allow users to do? (Choose two.)

- A. Sell unused Amazon EC2 Spot Instances.
- B. Sell solutions to other AWS users.
- C. Buy third-party software that runs on AWS.
- D. Purchase AWS security and compliance documents.
- E. Order AWS Snowball.

Commented [MC283]: C

"AWS Marketplace is a curated digital catalog that makes it easy for customers to find, buy, consume, and manage third-party software, services, and data that customers need to build solutions and run their businesses. AWS Marketplace includes thousands of software listings from popular categories such as security, networking, storage, machine learning, business intelligence, database, and devOps and simplifies software licensing and procurement with flexible pricing options and multiple deployment methods."

AWS Marketplace features many software categories including databases, application servers, testing tools, monitoring tools, content management, and business intelligence. You can select commercial software from well-known vendors, as well as many widely used open source offerings

...  
The AWS Marketplace helps enable qualified partners to market and sell their software to AWS customers. AWS Marketplace is an online software store that helps

Commented [MC284]: D

"Hybrid cloud – Mix of public and private cloud" i.e. some resources are on deployed privately (e.g. a private on-premises data centre) and some are on the public cloud (e.g. AWS)

Commented [MC285]: B

"AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations. With Config, you can review changes in configurations and relationships between AWS resources, dive into detailed resource configuration histories, and determine your overall compliance against the configurations specified in your internal guidelines."

Commented [MC286]: A

"AWS helps you reduce Total Cost of Ownership (TCO) by reducing the need to invest in large capital expenditures and providing a pay-as-you-go model that empowers you to invest in the capacity you need and use it only when the business requires it."

286. Which activity is a customer responsibility in the AWS Cloud according to the AWS shared responsibility model?

- A. Ensuring network connectivity from AWS to the internet
- B. Patching and fixing flaws within the AWS Cloud infrastructure
- C. Ensuring the physical security of cloud data centers
- D. Ensuring Amazon EBS volumes are backed up

287. What are the advantages of the AWS Cloud? (Choose two.)

- A. Fixed rate monthly cost
- B. No need to guess capacity requirements
- C. Increased speed to market
- D. Increased upfront capital expenditure
- E. Physical access to cloud data centers

288. When comparing the total cost of ownership (TCO) of an on-premises infrastructure to a cloud architecture, what costs should be considered? (Choose two.)

- A. The credit card processing fees for application transactions in the cloud.
- B. The cost of purchasing and installing server hardware in the on-premises datacentre.
- C. The cost of administering the infrastructure, including operating system and software installations, patches, backups, and recovering from failures.
- D. The costs of third-party penetration testing.
- E. The advertising costs associated with an ongoing enterprise-wide campaign.

289. Which AWS feature allows a company to take advantage of usage tiers for services across multiple member accounts?

- A. Service control policies (SCPs)
- B. Consolidated billing
- C. All Upfront Reserved Instances
- D. AWS Cost Explorer

290. What is one of the customer's responsibilities according to the AWS shared responsibility model?

- A. Virtualization infrastructure
- B. Network infrastructure
- C. Application security
- D. Physical security of hardware

Commented [MC287]: D

You have to configure EBS volumes for backup

[You can back up the data on your Amazon EBS volumes to Amazon S3 by taking point-in-time snapshots.](#)

Snapshots are incremental backups, which means that only the blocks on the device that have changed after your most recent snapshot are saved. This minimizes the time required to create the snapshot and saves on storage costs by not duplicating data. Each snapshot contains all of the information that is needed to restore your data (from the moment when the snapshot was taken) to a new EBS volume."

Commented [MC288]: C

Advantages of Cloud Computing

--Trade capital expense for variable expense

--Benefit from massive economies of scale

--[Stop guessing about capacity \(elasticity\)](#)

--[Increased speed and agility](#)

--Stop spending money running and maintaining data centres

--Go global in minutes

Commented [MC289]: B, C

--B--

[The key benefit between traditional computing deployments and cloud computing deployments is that the customer no longer needs to expend large sums for hardware, infrastructure, building space and other up-front expenses, i.e. with cloud computing the CapEx \(capital expense\) is reduced to zero.](#)

--C--

Commented [MC290]: B

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization.

Allows you to:

--programmatically create new AWS accounts and allocate resources

--group accounts to organize your workflows

--apply policies to accounts or groups for governance

Commented [MC291]: C

Customer responsibility "Security in the Cloud" – Customer responsibility will be determined by the AWS Cloud services that a customer selects. This determines the amount of configuration work the customer must perform as part of their security responsibilities. For example, a service such as Amazon Elastic Compute Cloud (Amazon EC2) is categorized as Infrastructure as a Service (IaaS) and, as such, requires the customer to perform all of the necessary security configuration and management tasks. [Customers that deploy an Amazon EC2 instance a](#) ...

291. What helps a company provide a lower latency experience to its users globally?
- A. Using an AWS Region that is central to all users
  - B. Using a second Availability Zone in the AWS Region that is being used
  - C. Enabling caching in the AWS Region that is being used
  - D. Using edge locations to put content closer to all users

292. How can the AWS Cloud increase user workforce productivity after migration from an on-premises data center?
- A. Users do not have to wait for infrastructure provisioning.
  - B. The AWS Cloud infrastructure is much faster than an on-premises data center infrastructure.
  - C. AWS takes over application configuration management on behalf of users.
  - D. Users do not need to address security and compliance issues.

293. Which AWS service provides a quick and automated way to create and manage AWS accounts?
- A. AWS QuickSight
  - B. Amazon Lightsail
  - C. AWS Organizations
  - D. Amazon Connect

294. Which Amazon RDS feature can be used to achieve high availability?
- A. Multiple Availability Zones
  - B. Amazon Reserved Instances
  - C. Provisioned IOPS storage
  - D. Enhanced monitoring

295. Where should users report that AWS resources are being used for malicious purposes?
- A. AWS Trust & Safety team
  - B. AWS Shield
  - C. AWS Support
  - D. AWS Developer Forums

Commented [MC292]: D

"**Edge locations cache responses reducing traffic on the server and delivering content closer to users**"

"When a user requests content that you're serving with CloudFront, the request is routed to the edge location that provides the lowest latency (time delay), so that content is delivered with the best possible performance."

Incorrect answers:

--Using an AWS region central to all users – This answer is incorrect because even if this single region is located centrally to all global users it can still be far from some users on the periphery. Ideally multiple regional deployments would need to be used to provide low latency performance globally.

Commented [MC293]: A

"**Increase speed and agility – In a cloud computing environment, new IT resources are only a click away, which means that you reduce the time to make those resources available to your developers from weeks to just minutes.** This results in a dramatic increase in agility for the organization, since the cost and time it takes to experiment and develop is significantly lower."

Commented [MC294]: C

"AWS Organizations is an account management service that enables you to consolidate multiple AWS accounts into an organization that you create and centrally manage. AWS Organizations includes account management and consolidated billing capabilities that enable you to better meet the budgetary, security, and compliance needs of your business. **As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization.**"

Commented [MC295]: A

"**Amazon RDS provides high availability and failover support for DB instances using Multi-AZ deployments.** Amazon RDS uses several different technologies to provide failover support. Multi-AZ deployments for Oracle, PostgreSQL, MySQL, and MariaDB DB instances use Amazon's failover technology. SQL Server DB instances use SQL Server Database Mirroring (DBM)."

Commented [MC296]: A

"**If you suspect that AWS resources are used for abusive purposes, contact the AWS Trust & Safety team** (formerly AWS Abuse team) using the Report Amazon AWS abuse form, or by contacting abuse@amazonaws.com. Provide all the necessary information, including logs in plaintext, email headers, and so on, when you submit your request."

296. Which AWS service needs to be enabled to track all user account changes within the AWS Management Console?

- A. AWS CloudTrail
- B. Amazon Simple Notification Service (Amazon SNS)
- C. VPC Flow Logs
- D. AWS CloudHSM

297. What is an AWS Cloud design best practice?

- A. Tight coupling of components
- B. Single point of failure
- C. High availability
- D. Overprovisioning of resources

298. Which of the following is an example of how moving to the AWS Cloud reduces upfront cost?

- A. By replacing large variable costs with lower capital investments
- B. By replacing large capital investments with lower variable costs
- C. By allowing the provisioning of compute and storage at a fixed level to meet peak demand
- D. By replacing the repeated scaling of virtual servers with a simpler fixed-scale model

299. When designing a typical three-tier web application, which AWS services and/or features improve availability and reduce the impact failures? (Choose two.)

- A. AWS Auto Scaling for Amazon EC2 instances
- B. Amazon VPC subnet ACLs to check the health of a service
- C. Distributed resources across multiple Availability Zones
- D. AWS Server Migration Service (AWS SMS) to move Amazon EC2 instances into a different Region
- E. Distributed resources across multiple AWS points of presence

300. Which cloud design principle aligns with AWS Cloud best practices?

- A. Create fixed dependencies among application components
- B. Aggregate services on a single instance
- C. Deploy applications in a single Availability Zone
- D. Distribute the compute load across multiple resources

Commented [MC297]: A

"AWS CloudTrail is a service that enables governance, compliance, operational auditing, and risk auditing of your AWS account. With CloudTrail, you can log, continuously monitor, and retain account activity related to actions across your AWS infrastructure. CloudTrail provides event history of your AWS account activity, including actions taken through the AWS Management Console, AWS SDKs, command line tools, and other AWS services. This event history simplifies security analysis, resource change tracking, and troubleshooting. In addition, you can use CloudTrail to detect unusual activity in your AWS accounts. These capabilities help simplify operational analysis and troubleshooting."

Commented [MC298]: C

"Availability refers to the percentage of time that the infrastructure, system or a solution remains operational under normal circumstances in order to serve its intended purpose. For cloud infrastructure solutions, availability relates to the time that the datacenter is accessible or delivers the intended IT service as a proportion of the duration for which the service is purchased. The mathematical formula for Availability is as follows:

Commented [MC299]: B

"The key benefit between traditional computing deployments and cloud computing deployments is that the customer no longer needs to expend large sums for hardware, infrastructure, building space and other upfront expenses, i.e. with cloud computing the CapEx (capital expense) is reduced to zero.

Another associated benefit is that OpEx (operational expense) is greatly reduced as the cost of administering the infrastructure is also greatly reduced due to the

Commented [MC300]: C

--A--  
"Amazon EC2 Auto Scaling helps to maintain your Amazon EC2 instance availability. Whether you are running one Amazon EC2 instance or thousands, you can use Amazon EC2 Auto Scaling to detect impaired Amazon EC2 instances, and replace the instances without intervention. This ensures that your application has the compute capacity that you expect"

--C--

Commented [MC301]: D

This is horizontal scaling by other words.

"A "horizontally scalable" system is one that can increase capacity by adding more resources (i.e. computers) to the system. This is in contrast to a "vertically scalable" system, which is constrained to running its processes on only one computer."

301-350

301. Which of the following are recommended practices for managing IAM users? (Choose two.)

- A. Require IAM users to change their passwords after a specified period of time
- B. Prevent IAM users from reusing previous passwords
- C. Recommend that the same password be used on AWS and other sites
- D. Require IAM users to store their passwords in raw text
- E. Disable multi-factor authentication (MFA) for IAM users

302. A company is migrating from on-premises data centers to the AWS Cloud and is looking for hands-on help with the project. How can the company get this support? (Choose two.)

- A. Ask for a quote from the AWS Marketplace team to perform a migration into the company's AWS account.
- B. Contact AWS Support and open a case for assistance
- C. Use AWS Professional Services to provide guidance and to set up an AWS Landing Zone in the company's AWS account
- D. Select a partner from the AWS Partner Network (APN) to assist with the migration
- E. Use Amazon Connect to create a new request for proposal (RFP) for expert assistance in migrating to the AWS Cloud.

303. How does the AWS Enterprise Support Concierge team help users?

- A. Supporting application development
- B. Providing architecture guidance
- C. Answering billing and account inquiries
- D. Answering questions regarding technical support cases

304. An application designed to span multiple Availability Zones is described as:

- A. being highly available
- B. having global reach
- C. using an economy of scale
- D. having elasticity

305. A new service using AWS must be highly available. Yet, due to regulatory requirements, all of its Amazon EC2 instances must be located in a single geographic area. According to best practices, to meet these requirements, the EC2 instances must be placed in at least two:

- A. AWS Regions
- B. Availability Zones
- C. subnets
- D. placement groups

Commented [MC302]: A, B

"Security best practices in IAM:  
--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
--Grant least privilege  
--Get started using permissions with AWS managed policies  
--Validate your policies  
--Use customer managed policies instead of inline policies  
--Use access levels to review IAM permissions  
**Configure a strong password policy for your users**  
--Enable MFA  
--Use roles for applications that run on Amazon EC2 instances

Commented [MC303]: C, D

"**The AWS Professional Services organization is a global team of experts that can help you realize your desired business outcomes when using the AWS Cloud.**  
**We work together with your team and your chosen member of the AWS Partner Network (APN) to execute your enterprise cloud computing initiatives.** Some AWS partners specialize in migrating to AWS and can assist the

Commented [MC304]: C

"Your AWS Concierge is a senior customer service agent who is assigned to your account when you subscribe to an Enterprise or qualified Reseller Support plan. **This Concierge agent is your primary point of contact for billing or account inquiries;** when you don't know whom to call, they will find the right people to help. In most cases, the AWS Concierge is available during regular business hours in your headquarters' geography. Outside of business hours, the global customer service team can ...

Commented [MC305]: A

"**High availability. Protect against data center, availability zone, server, network and storage subsystem failures to keep your business running without downtime.**"

"Availability Zones are connected to each other with fast, private fiber-optic networking, **enabling you to architect applications that automatically fail-over between AZs without interruption.** These AZs offer AWS customers an easier and more effective way to design and operate applications and databases, making them more highly ...

Commented [MC306]: B

"**Each Region is a separate geographic area. Each Region has multiple, isolated locations known as Availability Zones.**"

"**To have high availability and protect against data center, availability zone, server, network and storage subsystem failures to keep your business running without downtime it is necessary to be deployed to multiple availability zones.**"

306. A company has multiple AWS accounts within AWS Organizations and wants to apply the Amazon EC2 Reserved Instances benefit to a single account only. Which action should be taken?

- A. Purchase the Reserved Instances from master payer account and turn off Reserved Instance sharing.
- B. Enable billing alerts in the AWS Billing and Cost Management console.
- C. Purchase the Reserved Instances in individual linked accounts and turn off Reserved Instance sharing from the payer level.
- D. Enable Reserved Instance sharing in the AWS Billing and Cost Management console.

307. Which situation should be reported to the AWS Trust & Safety team?

- A. In Availability Zone has a service disruption
- B. An intrusion attempt is made from an AWS IP address
- C. A user has trouble accessing an Amazon S3 bucket from an AWS IP address
- D. A user needs to change payment methods due to a compromise

308. A company is planning to launch an ecommerce site in a single AWS Region to a worldwide user base. Which AWS services will allow the company to reach users and provide low latency and high transfer speeds? (Choose two.)

- A. Application Load Balancer
- B. AWS Global Accelerator
- C. AWS Direct Connect
- D. Amazon CloudFront
- E. AWS Lambda

309. Which AWS service or resource is serverless?

- A. AWS Lambda
- B. Amazon EC2 instances
- C. Amazon Lightsail
- D. Amazon ElastiCache

310. Which of the following are components of Amazon VPC? (Choose two.)

- A. Objects
- B. Subnets
- C. Buckets
- D. Internet gateways
- E. Access key

Commented [MC307]: C

"If Reserved Instance sharing is turned off for an account in an organization, Reserved Instance discounts apply only to the account that purchased the Reserved Instance."

Incorrect answers:

--A is not correct. You can't buy resources from the master payer account, resources should only be linked to your sub accounts.

Commented [MC308]: B

"If you suspect that AWS resources are used for abusive purposes, contact the AWS Trust & Safety team using the Report Amazon AWS abuse form, or by contacting abuse@amazonaws.com. Provide all the necessary information, including logs in plaintext, email headers, and so on, when you submit your request."

Commented [MC309]: B, D

--B--

"AWS Global Accelerator is a service in which you create accelerators to improve availability and performance of your applications for local and global users. Global Accelerator directs traffic to optimal endpoints over the AWS global network. This improves the availability and performance of your internet applications that are used by a global audience. Global Accelerator is a global service that supports endpoints in multiple AWS Regions, which are listed in the AWS Region Table."

--D--

"Amazon CloudFront is a web service that speeds up distribution of your static and dynamic web content, such as .html, .css, .js, and image files, to your users. CloudFront delivers your content through a worldwide

Commented [MC310]: A

Serverless services: AWS Lambda, Amazon Fargate, Amazon EventBridge, AWS Step Functions, Amazon SQS, Amazon SNS, Amazon API Gateway, AWS AppSync, Amazon S3, Amazon DynamoDB, Amazon RDS Proxy, Amazon Aurora Serverless

Commented [MC311]: B, D

"A virtual private cloud (VPC) is a virtual network dedicated to your AWS account. It is logically isolated from other virtual networks in the AWS Cloud. You can launch your AWS resources, such as Amazon EC2 instances, in a virtual network that you define. You have complete control over your virtual networking environment, including selection of your own IP address range, creation of subnets, associate security groups, modifying access control lists and configuration of route tables and network gateways."

311. **AWS Budgets can be used to:**
- A. prevent a given user from creating a resource
  - B. send an alert when the utilization of Reserved Instances drops below a certain percentage
  - C. set resource limits in AWS accounts to prevent overspending
  - D. split an AWS bill across multiple forms of payment

Commented [MC312]: B

"AWS Budgets lets customers set custom budgets and receive alerts if their costs or usage exceed (or are forecasted to exceed) their budgeted amount.

...  
**Customers can monitor and receive alerts when their Reserved Instance ("RI") utilization falls below the threshold they define"**

312. **Which of the following will enhance the security of access to the AWS Management Console? (Choose two.)**
- A. AWS Secrets Manager
  - B. AWS Certificate Manager
  - C. AWS Multi-Factor Authentication (AWS MFA)
  - D. Security groups
  - E. Password policies

Incorrect answers:

--Not C because budgets does not turn things off when you hit a limit.

313. **The AWS Trusted Advisor checks include recommendations regarding which of the following? (Choose two.)**
- A. Information on Amazon S3 bucket permissions
  - B. AWS service outages
  - C. Multi-factor authentication enabled on the AWS account root user
  - D. Available software patches
  - E. Number of users in the account

Commented [MC313]: C, E

"Security best practices in IAM:  
--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
--Grant least privilege  
--Get started using permissions with AWS managed policies  
--Validate your policies  
--Use customer managed policies instead of inline policies  
--Use access levels to review IAM permissions  
**Configure a strong password policy for your users**  
--Enable MFA

314. **Which functions can users perform using AWS KMS?**
- A. Create and manage AWS access keys for the AWS account root user
  - B. Create and manage AWS access keys for an AWS account IAM user
  - C. Create and manage keys for encryption and decryption of data
  - D. Create and manage keys for multi-factor authentication

Commented [MC314]: A, C

AWS Basic Support and AWS Developer Support customers get access to 6 security checks (listed below) and 50 service limit checks (to see how close you are to exceeding use quotas):  
--S3 Bucket Permissions  
--Security Groups – Specific Ports Unrestricted  
--IAM Use  
--MFA on Root Account  
--EBS Public Snapshots  
--RDS Public Snapshots

315. **How does AWS Trusted Advisor provide guidance to users of the AWS Cloud? (Choose two.)**
- A. It identifies software vulnerabilities in applications running on AWS
  - B. It provides a list of cost optimization recommendations based on current AWS usage
  - C. It detects potential security vulnerabilities caused by permissions settings on account resources
  - D. It automatically corrects potential security issues caused by permissions settings on account resources
  - E. It provides proactive alerting whenever an Amazon EC2 instance has been compromised

Commented [MC315]: C

**"AWS Key Management Service (KMS) makes it easy for you to create and manage cryptographic keys and control their use across a wide range of AWS services and in your applications."** AWS KMS is a secure and resilient service that uses hardware security modules that have been validated under FIPS 140-2, or are in the process of being validated, to protect your keys. AWS KMS is integrated with AWS CloudTrail to provide you with logs of all key

Commented [MC316]: B, C

"AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices. Trusted Advisor checks help optimize your AWS infrastructure, **increase security and performance, reduce your overall costs**, and monitor service limits. Whether establishing new workflows, developing applications, or as part of ongoing improvement, take advantage of the recommendations

316. Which of the following are advantages of the AWS Cloud? (Choose two.)

- A. AWS manages the maintenance of the cloud infrastructure
- B. AWS manages the security of applications built on AWS
- C. AWS manages capacity planning for physical servers
- D. AWS manages the development of applications on AWS
- E. AWS manages cost planning for virtual servers

317. A user deploys an Amazon RDS DB instance in multiple Availability Zones. This strategy involves which pillar of the AWS Well-Architected Framework?

- A. Performance efficiency
- B. Reliability
- C. Cost optimization
- D. Security

318. Which AWS services provide a user with connectivity between the AWS Cloud and on-premises resources? (Choose two.)

- A. AWS VPN
- B. Amazon Connect
- C. Amazon Cognito
- D. AWS Direct Connect
- E. AWS Managed Services

319. Which AWS service is used to pay AWS bills, and monitor usage and budget costs?

- A. AWS Billing and Cost Management
- B. Consolidated billing
- C. Amazon CloudWatch
- D. Amazon QuickSight

320. Which element of the AWS global infrastructure consists of one or more discrete data centers, each with redundant power, networking, and connectivity, which are housed in separate facilities?

- A. AWS Regions
- B. Availability Zones
- C. Edge locations
- D. Amazon CloudFront

Commented [MC317]: A, C

"6 Advantages of Cloud Computing:  
--Trade capital expense for variable expense  
--Benefit from massive economies of scale  
--Stop guessing about capacity  
--Increased speed and agility  
--Stop spending money running and maintaining data centres  
--Go global in minutes"

Commented [MC318]: B

"Amazon RDS Multi-AZ deployments provide enhanced availability and durability for RDS 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). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable."

Commented [MC319]: A, D

"Amazon VPC provides multiple network connectivity options for you to leverage depending on your current network designs and requirements. These connectivity options include leveraging either the internet (VPN) or an AWS Direct Connect connection as the network backbone and terminating the connection into either AWS or user-managed network endpoints."

Commented [MC320]: A

"AWS Billing and Cost Management is a web service that provides features that helps you monitor your costs and pay your bill. Amazon Web Services (AWS) bills your account for usage, which ensures that you pay only for what you use. Included in this service are: --Cost Explorer - which allows you to view your AWS cost data as a graph. With Cost Explorer, you can filter graphs by values such as API operation, Availability Zone, AWS service, custom cost allocation tag, Amazon EC2 instance type, purchase option, AWS Region, usage type, usage type group, and more. If you use consolidated billing, you can also filter by member account. In addition, you can see a forecast of future costs based on your historical cost data.  
--AWS Budgets - You can use AWS Budgets to track your AWS usage and costs. Budgets use the cost visualization provided by Cost Explorer to show you the status of your budgets. This provides forecasts of your estimated costs and tracks your AWS usage, including your free tier usage. You can also use budgets to create Amazon Simple...

Commented [MC321]: B

"Availability Zones consist of one or more discrete data centers, each with redundant power, networking, and connectivity, housed in separate facilities."

321. Which Amazon VPC feature enables users to capture information about the IP traffic that reaches Amazon EC2 instances?

- A. Security groups
- B. Elastic network interfaces
- C. Network ACLs
- D. VPC Flow Logs

322. Which AWS service can be used to automatically scale an application up and down without making capacity planning decisions?

- A. Amazon AutoScaling
- B. Amazon Redshift
- C. AWS CloudTrail
- D. AWS Lambda

323. AWS Enterprise Support users have access to which service or feature that is not available to users with other AWS Support plans?

- A. AWS Trusted Advisor
- B. AWS Support case
- C. Concierge team
- D. Amazon Connect

324. A company wants to migrate a MySQL database to AWS but does not have the budget for Database Administrators to handle routine tasks including provisioning, patching, and performing backups. Which AWS service will support this use case?

- A. Amazon RDS
- B. Amazon DynamoDB
- C. Amazon DocumentDB
- D. Amazon ElastiCache

325. A company wants to expand from one AWS Region into a second AWS Region. What does the company need to do to start supporting the new Region?

- A. Contact an AWS Account Manager to sign a new contract
- B. Move an Availability Zone to the new Region
- C. Begin deploying resources in the second Region
- D. Download the AWS Management Console for the new Region

Commented [MC322]: D

"**VPC Flow Logs** is a feature that enables you to capture information about the IP traffic going to and from network interfaces in your VPC"

Commented [MC323]: A

"AWS Auto Scaling monitors your applications and automatically adjusts capacity to maintain steady, predictable performance at the lowest possible cost. Using AWS Auto Scaling, it's easy to setup application scaling for multiple resources across multiple services in minutes. With AWS Auto Scaling, your applications always have the right resources at the right time."

The service provides a simple, powerful user interface that lets you build scaling plans for resources. AWS Auto Scaling makes scaling simple with recommendations that allow you to optimize performance, costs, or balance between them.

**Application Auto Scaling** is a service for developers and system administrators who need a solution for automatically scaling their scalable resources for individual AWS services beyond Amazon EC2. If you're already using Amazon EC2 Auto Scaling to dynamically scale your Amazon EC2 instances, you can now combine

Commented [MC324]: C

"**Your AWS Concierge** is a senior customer service agent who is assigned to your account when you subscribe to an Enterprise or qualified Reseller Support plan."

This Concierge agent is your primary point of contact for billing or account inquiries; when you don't know whom to call, they will find the right people to help.

In most cases, the AWS Concierge is available during regular business hours in your headquarters' geography.

Commented [MC325]: A

"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."

Commented [MC326]: C

**You select the region from the management console and start deployment**

Incorrect answers:

--A – No new contract is needed, resource provision can be started immediately using the existing account and setup

326. A user must meet compliance and software licensing requirements that state a workload must be hosted on a physical server. Which Amazon EC2 instance pricing option will meet these requirements?

- A. Dedicated Hosts
- B. Dedicated Instances
- C. Spot Instances
- D. Reserved Instances

327. Which AWS service will provide a way to generate encryption keys that can be used to encrypt data? (Choose two.)

- A. Amazon Macie
- B. AWS Certificate Manager
- C. AWS Key Management Service (AWS KMS)
- D. AWS Secrets Manager
- E. AWS CloudHSM

328. A company is planning to migrate from on-premises to the AWS Cloud. Which AWS tool or service provides detailed reports on estimated cost savings after migration?

- A. AWS Total Cost of Ownership (TCO) Calculator
- B. Cost Explorer
- C. AWS Budgets
- D. AWS Migration Hub

329. What can assist in evaluating an application for migration to the cloud? (Choose two.)

- A. AWS Trusted Advisor
- B. AWS Professional Services
- C. AWS Systems Manager
- D. AWS Partner Network (APN)
- E. AWS Secrets Manager

330. Which AWS service helps users meet contractual and regulatory compliance requirements for data security by using dedicated hardware appliances within the AWS Cloud?

- A. AWS Secrets Manager
- B. AWS CloudHSM
- C. AWS Key Management Service (AWS KMS)
- D. AWS Directory Service

Commented [MC327]: A

"Amazon EC2 Dedicated Hosts allow you to use your eligible software licenses from vendors such as Microsoft and Oracle on Amazon EC2, so that you get the flexibility and cost effectiveness of using your own licenses, but with the resiliency, simplicity and elasticity of AWS. An Amazon EC2 Dedicated Host is a physical server fully dedicated for your use, so you can help address corporate compliance requirements. A dedicated host is a complete physical machine with a single partition."

Notes:

--Dedicated instances and dedicated hosts are separate offerings.

--Dedicated Instances are Amazon EC2 instances that run in a VPC on hardware that's dedicated to a single customer.

Commented [MC328]: C, E

--C--

"AWS Key Management Service (KMS) is an Amazon Web Services product that allows administrators to create, delete and control keys that encrypt data stored in AWS databases and products"

--E--

Commented [MC329]: A

"Use AWS Total Cost of Ownership (TCO) Calculator to compare the cost of running your applications in an on-premises or colocation environment to AWS. Describe your on-premises or colocation configuration to produce a detailed cost comparison with AWS."

Incorrect answers:

Commented [MC330]: B, D

"AWS Professional Services helps you automate and accelerate the migration of large numbers of workloads to the AWS Cloud."

"We work together with your team and your chosen member of the AWS Partner Network (APN) to execute your enterprise cloud computing initiatives. Some AWS partners specialize in migrating to AWS and can assist the

Commented [MC331]: B

"(AWS) CloudHSM (Hardware Security Module) service helps you meet corporate, contractual, and regulatory compliance requirements for data security by using dedicated Hardware Security Module (HSM) instances within the AWS cloud. AWS and AWS Marketplace partners offer a variety of solutions for protecting sensitive data within the AWS platform, but for some applications and data subject to contractual or regulatory mandates for managing cryptographic keys, additional protection may be necessary."

331. Under the AWS shared responsibility model, the customer manages which of the following? (Choose two.)

- A. Decommissioning of physical storage devices
- B. Security group and ACL configuration
- C. Patch management of an Amazon RDS instance operating system
- D. Controlling physical access to data centers
- E. Patch management of an Amazon EC2 instance operating system

332. Which AWS service is suitable for an event-driven workload?

- A. Amazon EC2
- B. AWS Elastic Beanstalk
- C. AWS Lambda
- D. Amazon Lumberyard

333. What is a value proposition of the AWS Cloud?

- A. AWS is responsible for security in the AWS Cloud
- B. No long-term contract is required
- C. Provision new servers in days
- D. AWS manages user applications in the AWS Cloud

334. What is a characteristic of Amazon S3 cross-region replication?

- A. Both source and destination S3 buckets must have versioning disabled
- B. The source and destination S3 buckets cannot be in different AWS Regions
- C. S3 buckets configured for cross-region replication can be owned by a single AWS account or by different accounts
- D. The source S3 bucket owner must have the source and destination AWS Regions disabled for their account

335. What is a user responsible for when running an application in the AWS Cloud?

- A. Managing physical hardware
- B. Updating the underlying hypervisor
- C. Providing a list of users approved for data center access
- D. Managing application software updates

Commented [MC332]: B, E

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment."

"You're responsible for the security of:

Commented [MC333]: C

"An event-driven architecture uses events to trigger and communicate between decoupled services and is common in modern applications built with microservices. An event is a change in state, or an update, like an item being placed in a shopping cart on an e-commerce website. Events can either carry the state (the item purchased, its price, and a delivery address) or events can be identifiers (a notification that an order was shipped)."

Commented [MC334]: B

"AWS offers you a pay-as-you-go approach for pricing for over 160 cloud services. With AWS you pay only for the individual services you need, for as long as you use them, and without requiring long-term contracts or complex licensing. AWS pricing is similar to how you pay for utilities like water and electricity. You only pay for the services you consume, and once you stop using them, there are no additional costs or termination fees."

Commented [MC335]: C

"Replication enables automatic, asynchronous copying of objects across Amazon S3 buckets. Buckets that are configured for object replication can be owned by the same AWS account or by different accounts. Object may be replicated to a single destination bucket or multiple destination buckets. Destination buckets can be in different AWS Regions or within the same Region as the source bucket."

Amazon S3 cross-region replication Requirements:

Commented [MC336]: D

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment."

336. A company that does business online needs to quickly deliver new functionality in an iterative manner, minimizing the time to market. Which AWS Cloud feature can provide this?

- A. Elasticity
- B. High availability
- C. Agility
- D. Reliability

337. Which features or services can be used to monitor costs and expenses for an AWS account? (Choose two.)

- A. AWS Cost and Usage report
- B. AWS product pages
- C. AWS Pricing Calculator
- D. Billing alerts and Amazon CloudWatch alarms
- E. AWS Price List API

338. Amazon Route 53 enables users to:

- A. encrypt data in transit
- B. register DNS domain names
- C. generate and manage SSL certificates
- D. establish a dedicated network connection to AWS

339. Which AWS service helps identify malicious or unauthorized activities in AWS accounts and workloads?

- A. Amazon Rekognition
- B. AWS Trusted Advisor
- C. Amazon GuardDuty
- D. Amazon CloudWatch

340. A company wants to try a third-party ecommerce solution before deciding to use it long term. Which AWS service or tool will support this effort?

- A. AWS Marketplace
- B. AWS Partner Network (APN)
- C. AWS Managed Services
- D. AWS Service Catalog

Commented [MC337]: C

"**Agility** is the practice of “building in” the ability to change quickly and inexpensively. The cloud not only makes these other practices practical but provides agility on its own. Infrastructure can be provisioned in minutes instead of months, and de-provisioned or changed just as quickly."

Commented [MC338]: A, D

--A--  
"The **AWS Cost and Usage Reports** contains the most comprehensive set of cost and usage data available. AWS Cost and Usage Reports tracks your AWS usage and provides estimated charges associated with your account. Each report contains line items for each unique combination of AWS products, usage type, and operation that you use in your AWS account. You can use Cost and Usage Reports to publish your AWS billing reports to an Amazon Simple Storage Service (Amazon S3) bucket that you own."

--D--

"**You can monitor your estimated AWS charges by using Amazon CloudWatch.** When you enable the monitoring...

Commented [MC339]: B

"Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service. It is designed to give developers and businesses an extremely reliable and cost effective way to route end users to Internet applications by translating names like www.example.com into the numeric IP addresses like 192.0.2.1 that computers use to connect to each other. Amazon Route 53 is fully compliant with IPv6 as well."

Commented [MC340]: C

"**Amazon GuardDuty** is a threat detection service that continuously monitors for malicious activity and unauthorized behavior to protect your AWS accounts, workloads, and data stored in Amazon S3."

With the cloud, the collection and aggregation of account and network activities is simplified, but it can be time consuming for security teams to continuously analyze event log data for potential threats. With GuardDuty, you...

Commented [MC341]: A

"The AWS Marketplace enables qualified partners to market and sell their software to AWS Customers. AWS Marketplace is an online software store that helps customers find, buy, and immediately start using the software and services that run on AWS. AWS Marketplace is designed for Independent Software Vendors (ISVs), Value-Added Resellers (VARs), and Systems Integrators (SIs) who have software products they want to offer to customers in the cloud. Partners use AW...

341. Which AWS service is a managed NoSQL database?

- A. Amazon Redshift
- B. Amazon DynamoDB
- C. Amazon Aurora
- D. Amazon RDS for MariaDB

342. Which AWS service should be used to create a billing alarm?

- A. AWS Trusted Advisor
- B. AWS CloudTrail
- C. Amazon CloudWatch
- D. Amazon QuickSight

343. A company is hosting a web application in a Docker container on Amazon EC2. AWS is responsible for which of the following tasks?

- A. Scaling the web application and services developed with Docker
- B. Provisioning or scheduling containers to run on clusters and maintain their availability
- C. Performing hardware maintenance in the AWS facilities that run the AWS Cloud
- D. Managing the guest operating system, including updates and security patches

344. Users are reporting latency when connecting to a website with a global customer base. Which AWS service will improve the customer experience by reducing latency?

- A. Amazon CloudFront
- B. AWS Direct Connect
- C. Amazon EC2 Auto Scaling
- D. AWS Transit Gateway

345. Which actions represent best practices for using AWS IAM? (Choose two.)

- A. Configure a strong password policy
- B. Share the security credentials among users of AWS accounts who are in the same Region
- C. Use access keys to log in to the AWS Management Console
- D. Rotate access keys on a regular basis
- E. Avoid using IAM roles to delegate permissions

Commented [MC342]: B

**"Amazon DynamoDB - Fast and flexible NoSQL database service for any scale.** A key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multiregion, multimaster, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. DynamoDB can handle more than 10 trillion requests per day and can support peaks of more than 20 million requests per second."

Commented [MC343]: C

**"You can monitor your estimated AWS charges by using Amazon CloudWatch.** When you enable the monitoring of estimated charges for your AWS account, the estimated charges are calculated and sent several times daily to CloudWatch as metric data.

Billing metric data is stored in the US East (N. Virginia) Region and represents worldwide charges. This data includes the estimated charges for every service in AWS ...

Commented [MC344]: C

**"AWS is responsible for operating and maintaining the infrastructure that runs all of the services offered in the AWS Cloud. This infrastructure is composed of the hardware, software, networking, and facilities that run AWS Cloud services."**

AWS provides physical data center access only to approved employees. All employees who need data center access must first apply for access and provide a valid business justification. These requests are granted based ...

Commented [MC345]: A

**"Amazon CloudFront - When your web traffic is geo-dispersed, it's not always feasible and certainly not cost effective to replicate your entire infrastructure across the globe. A content delivery network (CDN) provides you the ability to utilize its global network of edge locations to deliver a cached copy of web content such as videos, webpages, images and so on to your customers. To reduce response time, the CDN utilizes the nearest edge location to the customer or originating request location in order to reduce the response time.** Throughput is dramatically ...

Commented [MC346]: A, D

**"Security best practices in IAM:**  
--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
--Grant least privilege  
--Get started using permissions with AWS managed policies  
--Validate your policies  
--Use customer managed policies instead of inline policies  
--Use access levels to review IAM permissions

346. Which AWS feature or service can be used to capture information about incoming and outgoing traffic in an AWS VPC infrastructure?

- A. AWS Config
- B. VPC Flow Logs
- C. AWS Trusted Advisor
- D. AWS CloudTrail

347. A company wants to use an AWS service to monitor the health of application endpoints, with the ability to route traffic to healthy regional endpoints to improve application availability. Which service will support these requirements?

- A. Amazon Inspector
- B. Amazon CloudWatch
- C. AWS Global Accelerator
- D. Amazon CloudFront

348. According to the AWS Well-Architected Framework, what change management steps should be taken to achieve reliability in the AWS Cloud? (Choose two.)

- A. Use AWS Config to generate an inventory of AWS resources
- B. Use service limits to prevent users from creating or making changes to AWS resources
- C. Use AWS CloudTrail to record AWS API calls into an auditable log file
- D. Use AWS Certificate Manager to whitelist approved AWS resources and services
- E. Use Amazon GuardDuty to validate configuration changes made to AWS resources

349. Which service can be used to monitor and receive alerts for AWS account root user AWS Management Console sign-in events?

- A. Amazon CloudWatch
- B. AWS Config
- C. AWS Trusted Advisor
- D. AWS IAM

350. Which design principle should be considered when architecting in the AWS Cloud?

- A. Think of servers as non-disposable resources
- B. Use synchronous integration of services
- C. Design loosely coupled components
- D. Implement the least permissive rules for security groups

Commented [MC347]: B

"VPC Flow Logs is a feature that enables you to capture information about the IP traffic going to and from network interfaces in your VPC. Flow log data can be published to Amazon CloudWatch Logs or Amazon S3. After you've created a flow log, you can retrieve and view its data in the chosen destination. Flow logs can help you with a number of tasks, such as:

--Diagnosing overly restrictive security group rule  
--Monitoring the traffic that is reaching your instance  
--Determining the direction of the traffic to and from the network interfaces

--Flow log data is collected outside of the path of your network traffic, and therefore does not affect network

Commented [MC348]: C

"AWS Global Accelerator uses the AWS global network to optimize the path from your users to your applications, improving the performance of your traffic by as much as 60%. AWS Global Accelerator continually monitors the health of your application endpoints and redirects traffic to healthy endpoints in less than 30 seconds."

Commented [MC349]: A, C

"Reliability Design Principles and Best Practices

Change Management: Changes to your workload or its environment must be anticipated and accommodated to achieve reliable operation of the workload. Changes include those imposed on your workload, such as spikes in demand, as well as those from within, such as feature deployments and security patches. Using AWS, you can monitor the behaviour of a workload and automate the response to these changes. With monitoring in place,

Commented [MC350]: A

Amazon CloudWatch - Typical runthrough of how this would happen:

--An Amazon CloudWatch Events rule detects any AWS account root user API events.  
--It triggers an AWS Lambda function.  
--The Lambda function then processes the root API event. It also publishes a message to an Amazon SNS topic, where the subject contains the AWS account ID or AWS account alias where the root API call was detected and the type of API activity.

Commented [MC351]: C

"As application complexity increases, a desirable attribute of an IT system is that it can be broken into smaller, loosely coupled components. This means that IT systems should be designed in a way that reduces interdependencies—a change or a failure in one component should not cascade to other components."

Your infrastructure also needs to have well defined interfaces that allow the various components to interact with each other only through specific, technology-

351-400

351. Which AWS services can be used to move data from on-premises data centers to AWS? (Choose two.)

- A. AWS Snowball
- B. AWS Lambda
- C. AWS ElastiCache
- D. AWS Database Migration Service (AWS DMS)
- E. Amazon API Gateway

352. A batch workload takes 5 hours to finish on an Amazon EC2 instance. The amount of data to be processed doubles monthly and the processing time is proportional. What is the best cloud architecture to address this consistently growing demand?

- A. Run the application on a bigger EC2 instance size.
- B. Switch to an EC2 instance family that better matches batch requirements.
- C. Distribute the application across multiple EC2 instances and run in parallel.
- D. Run the application on a bare metal EC2 instance.

353. Each department in a company has its own independent AWS account and its own payment method. New company leadership wants to centralize departmental governance and consolidate payments. How can this be achieved using AWS services & features?

- A. Forward monthly invoices for each account. Then create IAM roles to allow cross-account access.
- B. Create a new AWS account. Then configure AWS Organizations and invite all existing accounts to join.
- C. Configure AWS Organizations in each of the existing accounts. Then link all accounts together.
- D. Use Cost Explorer to combine costs from all accounts. Then replicate IAM policies across accounts.

354. The ability to horizontally scale Amazon EC2 instances based on demand is an example of which concept in the AWS Cloud value proposition?

- A. Economy of scale
- B. Elasticity
- C. High availability
- D. Agility

355. An ecommerce company anticipates a huge increase in web traffic for two very popular upcoming shopping holidays. Which AWS service or feature can be configured to dynamically adjust resources to meet this change in demand?

- A. AWS CloudTrail
- B. Amazon EC2 Auto Scaling
- C. Amazon Forecast
- D. AWS Config

Commented [MC352]: A, D

--A--

"AWS Snowball:

Petabyte-scale data transport with on-board storage and compute capabilities  
part of the AWS Snow Family, is an edge computing, data migration, and edge storage device.

--You can use these devices for data collection, machine learning and processing, and storage in environments with intermittent connectivity (like manufacturing, industrial, and transportation) or in extremely remote locations (like military or maritime operations) before shipping them back to AWS.

Commented [MC353]: C

"Scale horizontally: to increase aggregate workload availability. Replace one large resource with multiple small resources to reduce the impact of a single failure on the overall workload. Distribute requests across multiple, smaller resources to ensure that they don't share a common point of failure."

Commented [MC354]: B

"(AWS) Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements

Commented [MC355]: B

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible."

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain

Commented [MC356]: B

"The goal of an Auto Scaling Group (ASG) is to:  
--Scale out (add EC2 instances) to match an increased load  
--Scale in (remove EC2 instances) to match a decreased load  
--Ensure we have a minimum and a maximum number of machines running  
--Automatically register new instances to a load balancer  
--Replace unhealthy instances

356. Which AWS service enables users to securely connect to AWS resources over the public internet?

- A. Amazon VPC peering
- B. AWS Direct Connect
- C. wa
- D. Amazon Pinpoint

357. Which tool is used to forecast AWS spending?

- A. AWS Trusted Advisor
- B. AWS Organizations
- C. Cost Explorer
- D. Amazon Inspector

358. A company is running an ecommerce application hosted in Europe. To decrease latency for users who access the website from other parts of the world, the company would like to cache frequently accessed static content closer to the users. Which AWS service will support these requirements?

- A. Amazon ElastiCache
- B. Amazon CloudFront
- C. Amazon Elastic File System (Amazon EFS)
- D. Amazon Elastic Block Store (Amazon EBS)

359. Which of the following is a component of the AWS Global Infrastructure?

- A. Amazon Alexa
- B. AWS Regions
- C. Amazon Lightsail
- D. AWS Organizations

360. Which AWS service will help users determine if an application running on an Amazon EC2 instance has sufficient CPU capacity?

- A. Amazon CloudWatch
- B. AWS Config
- C. AWS CloudTrail
- D. Amazon Inspector

Commented [MC357]: C

"Amazon VPC provides multiple network connectivity options for you to leverage depending on your current network designs and requirements. These connectivity options include leveraging either the internet (VPN) or a dedicated private AWS Direct Connect connection as the network backbone and terminating the connection into either AWS or user-managed network endpoints."

"A VPC VPN Connection utilizes IPSec to establish encrypted network connectivity between your intranet and Amazon VPC over the Internet. VPN Connections can be configured in minutes and are a good solution if you have an immediate need, have low to modest bandwidth requirements, and want to keep your traffic private."

Commented [MC358]: C

"The AWS Billing and Cost Management console includes the no-cost Cost Explorer tool for viewing your AWS cost data as a graph. With Cost Explorer, you can filter graphs by values such as API operation, Availability Zone, AWS service, custom cost allocation tag, Amazon EC2 instance type, purchase option, AWS Region, usage type, usage type group, and more. If you use consolidated billing, you can also filter by member account. In addition, you can see a forecast of future costs based on your historical cost data."

Commented [MC359]: B

"Amazon CloudFront employs a global network of edge locations and regional edge caches that cache copies of your content close to your viewers. Amazon CloudFront ensures that end-user requests are served by the closest edge location. As a result, viewer requests travel a short distance, improving performance for your viewers. For files not cached at the edge locations and the regional edge caches, Amazon CloudFront keeps persistent

Commented [MC360]: B

AWS Global Infrastructure:  
↓  
AWS Regions  
↓  
AWS Availability Zones  
↓  
AWS Data Centers

AWS Global Infrastructure is comprised of AWS Regions

Commented [MC361]: A

"The CloudWatch metric for CPU utilization will report 100% utilization if the instance bursts so much that it exceeds its available CPU resources during that CloudWatch monitored minute. CloudWatch reporting 100% CPU utilization is your signal that you should consider scaling – manually or via Auto Scaling – up to a larger instance type or scale out to multiple Micro instances."

361. Why is it beneficial to use Elastic Load Balancers with applications?

- A. They allow for the conversion from Application Load Balancers to Classic Load Balancers.
- B. They are capable of handling constant changes in network traffic patterns.
- C. They automatically adjust capacity.
- D. They are provided at no charge to users.

362. Which tasks are the customer's responsibility in the AWS shared responsibility model? (Choose two.)

- A. Infrastructure facilities access management
- B. Cloud infrastructure hardware lifecycle management
- C. Configuration management of user's applications
- D. Networking infrastructure protection
- E. Security groups configuration

363. IT systems should be designed to reduce interdependencies, so that a change or failure in one component does not cascade to other components. This is an example of which principle of cloud architecture design?

- A. Scalability
- C. Automation
- D. Automatic scaling

364. Which AWS service or feature can enhance network security by blocking requests from a particular network for a web application on AWS? (Choose two.)

- A. AWS WAF
- B. AWS Trusted Advisor
- C. AWS Direct Connect
- D. AWS Organizations
- E. Network ACLs

365. An application runs on multiple Amazon EC2 instances that access a shared file system simultaneously. Which AWS storage service should be used?

- A. Amazon EBS
- B. Amazon EFS
- C. Amazon S3
- D. AWS Artifact
- E. Amazon EC2 instance store

Commented [MC362]: B

"Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, Lambda functions, and virtual appliances. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones. Elastic Load Balancing assist with maintaining high availability, automatic scaling, and robust security necessary to make your applications fault tolerant. Elastic Load Balancing scales with web traffic"

Commented [MC363]: C, E

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment. This differentiation of responsibility is commonly referred to as Security "of" the Cloud versus Security "in" the Cloud."

Commented [MC364]: B

"Loose coupling - As application complexity increases, a desirable attribute of an IT system is that it can be broken into smaller, loosely coupled components. This means that IT systems should be designed in a way that reduces interdependencies—a change or a failure in one component should not cascade to other components.

Your infrastructure also needs to have well defined interfaces that allow the various components to interact with each other only through specific, technology-

Commented [MC365]: A, E

"AWS WAF is a web application firewall that helps protect your web applications or APIs against common web exploits that may affect availability, compromise security, or consume excessive resources. AWS WAF gives you control over how traffic reaches your applications by enabling you to create security rules that block common attack patterns, such as SQL injection or cross-site scripting, and rules that filter out specific traffic patterns you define. You can monitor attributes of traffic,

Commented [MC366]: B

"The EFS file system can be used by multiple EC2 instances from different data centers in parallel. Additionally, the data of the EFS file system is replicated among multiple data centers & Availability Zones (AZ). Also it remains available even if a whole data center suffers from an outage, which isn't true for EBS and Instance Store."

Incorrect answers:

366. A web application is hosted on AWS using an Elastic Load Balancer, multiple Amazon EC2 instances, and Amazon RDS. Which security measures fall under the responsibility of AWS? (Choose two.)

- A. Running a virus scan on EC2 instances
- B. Protecting against IP spoofing and packet sniffing
- C. Installing the latest security patches on the RDS instance
- D. Encrypting communication between the EC2 instances and the Elastic Load Balancer
- E. Configuring a security group and a network access control list (NACL) for EC2

367. What is the benefit of elasticity in the AWS Cloud?

- A. Ensure web traffic is automatically spread across multiple AWS Regions.
- B. Minimize storage costs by automatically archiving log data.
- C. Enable AWS to automatically select the most cost-effective services.
- D. Automatically adjust the required compute capacity to maintain consistent performance.

368. The continual reduction of AWS Cloud pricing is due to:

- A. pay-as-you go pricing
- B. the AWS global infrastructure
- C. economies of scale
- D. reserved storage pricing

369. A company needs an Amazon S3 bucket that cannot have any public objects due to compliance requirements. How can this be accomplished?

- A. Enable S3 Block Public Access from the AWS Management Console.
- B. Hold a team meeting to discuss the importance if only uploading private S3 objects.
- C. Require all S3 objects to be manually approved before uploading.
- D. Create a service to monitor all S3 uploads and remove any public uploads.

370. A Cloud Practitioner identifies a billing issue after examining the AWS Cost and Usage report in the AWS Management Console. Which action can be taken to resolve this?

- A. Open a detailed case related to billing and submit it to AWS Support for help.
- B. Upload data describing the issue to a new object in a private Amazon S3 bucket.
- C. Create a pricing application and deploy it to a right-sized Amazon EC2 instance for more information.
- D. Proceed with creating a new dashboard in Amazon QuickSight.

Commented [MC367]: B, C

--B--

"AWS utilizes a wide variety of automated monitoring systems to provide a high level of service performance and availability. These tools monitor server and network usage, port scanning activities, application usage, and unauthorized intrusion attempts. The tools have the ability to set custom performance metrics thresholds for unusual activity. AWS network provides protection against traditional network security issues:

--DDOS -- AWS uses proprietary DDoS mitigation techniques. Additionally, AWS's networks are multi-homed across a number of providers to achieve Internet access diversity.

Commented [MC368]: D

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible."

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain

Commented [MC369]: C

"Because usage from hundreds of thousands of customers is aggregated in the cloud, providers such as AWS can achieve higher economies of scale, which translates into lower pay as-you-go prices."

Commented [MC370]: A

There is an option for S3 to Block Public Access from the AWS Management Console.

"...Today we are making it easier for you to protect your buckets and objects with the introduction of Amazon S3 Block Public Access. This is a new level of protection that works at the account level and also on individual buckets, including those that you create in the future. You have the ability to block existing public access (whether it was specified by an ACL or a policy) and to

Commented [MC371]: A

Contacting AWS Support is the fastest and most direct method for communicating with an AWS associate about your questions. AWS Support does not publish a direct phone number for reaching a support representative. You can use the following process to have an associate reach out to you by email or phone instead.

Cost and billing support is available to all AWS customers even those who do not have a support plan.

371. What does the AWS Pricing Calculator do?
- A. Compares on-premises costs to colocation environments
  - B. Estimates monthly billing based on projected usage
  - C. Estimates power consumption at existing data centers
  - D. Estimates CPU utilization

372. Who is responsible for patching the guest operating system for Amazon RDS?
- A. The customer Database Administrator
  - B. Managed partners
  - C. AWS

373. Which AWS services may be scaled using AWS Auto Scaling? (Choose two.)
- A. Amazon EC2
  - B. Amazon DynamoDB
  - C. Amazon S3
  - D. Amazon Route 53
  - E. Amazon Redshift

374. Which of the following are benefits of AWS Global Accelerator? (Choose two.)
- A. Reduced cost to run services on AWS
  - B. Improved availability of applications deployed on AWS
  - C. Higher durability of data stored on AWS
  - D. Decreased latency to reach applications deployed on AWS
  - E. Higher security of data stored on AWS

375. A user who wants to get help with billing and reactivate a suspended account should submit an account and billing request to:
- A. the AWS Support forum
  - B. AWS Abuse
  - C. an AWS Solutions Architect
  - D. AWS Support

Commented [MC372]: B

"[AWS Pricing Calculator - Configure a cost estimate that fits your unique business or personal needs with AWS products and services](#). Previously known as Simply Monthly Calculator. Transparent pricing lets you see the math behind the price for your service configurations. View prices per service or per group of services to analyse your architecture costs.

Configure services, or groups of services, in multiple AWS Regions. Prices and availability of AWS services vary per Region.

Commented [MC373]: C

RDS is a managed database service, AWS will take care of security patches

"Managed Services – is a cloud feature that you can use without having to take care of the underlying hardware's administration. [In managed services common activities are automated and implemented according to best practices, such as change requests, monitoring, patch management, security, and backup services](#). AWS Managed Services provide full-lifecycle services to

Commented [MC374]: A, B

Amazon EC2 for the compute layer, and DynamoDB for the data layer. In this case, AWS Auto Scaling will scale one or more EC2 Auto Scaling groups and DynamoDB tables that are powering the application in response to the demand curve

"AWS Auto Scaling monitors your applications and automatically adjusts capacity to maintain steady, predictable performance at the lowest possible cost. Using AWS Auto Scaling, it's easy to setup application scaling fo

Commented [MC375]: D

"If local and global traffic to your application's single Region is left on the public internet, it can be negatively impacted by internet congestion and local outages. AWS Global Accelerator is a networking service that sends your user's traffic through Amazon Web Service's global network infrastructure, through 80+ global edge locations, then directed to your application origins, [improving your internet user performance by up to 60%](#). When the internet is congested, Global Accelerator's automatic

Commented [MC376]: D

"Contacting AWS Support is the fastest and most direct method for communicating with an AWS associate about your questions. AWS Support does not publish a direct phone number for reaching a support representative. You can use the following process to have an associate reach out to you by email or phone instead.

[Cost and billing support is available from AWS Support to all AWS customers even those who do not have a support plan](#).

376. Which AWS Cloud best practice uses the elasticity and agility of cloud computing?
- A. Provision capacity based on past usage and theoretical peaks
  - B. Dynamically and predictively scale to meet usage demands
  - C. Build the application and infrastructure in a data center that grants physical access
  - D. Break apart the application into loosely coupled components

377. Which method helps to optimize costs of users moving to the AWS Cloud?
- A. Paying only for what is used
  - B. Purchasing hardware before it is needed
  - C. Manually provisioning cloud resources
  - D. Purchasing for the maximum possible load

378. Under the AWS shared responsibility model, which of the following is a customer responsibility?
- A. Installing security patches for the Xen and KVM hypervisors
  - B. Installing operating system patches for Amazon DynamoDB
  - C. Installing operating system security patches for Amazon EC2 database instances
  - D. Installing operating system security patches for Amazon RDS database instances

379. The AWS Cost Management tools give users the ability to do which of the following? (Choose two.)
- A. Terminate all AWS resources automatically if budget thresholds are exceeded.
  - B. Break down AWS costs by day, service, and linked AWS account.
  - C. Create budgets and receive notifications if current or forecasted usage exceeds the budgets.
  - D. Switch automatically to Reserved Instances or Spot Instances, whichever is most cost-effective.
  - E. Move data stored in Amazon S3 to a more cost-effective storage class.

380. Under the AWS shared responsibility model, the security and patching of the guest operating system is the responsibility of:
- A. AWS Support
  - B. the customer
  - C. AWS Systems Manager
  - D. AWS Config

Commented [MC377]: B

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible."

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain conditions, like when your cloud solution is running out of processing power."

Commented [MC378]: A

"AWS offers you a pay-as-you-go approach for pricing for over 160 cloud services. With AWS you pay only for the individual services you need, for as long as you use them, and without requiring long-term contracts or complex licensing." AWS pricing is similar to how you pay for utilities like water and electricity. You only pay for the services you consume, and once you stop using them, there are no additional costs or termination fees."

Commented [MC379]: C

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment. This differentiation of responsibility is ..."

Commented [MC380]: B, C

"AWS has a set of solutions to help you with cost management and optimization. This includes services, tools, and resources to organize and track cost and usage data, enhance control through consolidated billing and access permission, enable better planning through budgeting and forecasts, and further lower cost with resources and pricing optimizations."

"The AWS Cost and Usage Reports contains the most comprehensive set of cost and usage data available."

Commented [MC381]: B

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment. This differentiation of responsibility is ..."

381. Which AWS service makes it easy to create and manage AWS users and groups, and provide them with secure access to AWS resources at no charge?

- A. AWS Direct Connect
- B. Amazon Connect
- C. AWS Identity and Access Management (IAM)
- D. AWS Firewall Manager

382. Which AWS service can be used to turn text into life-like speech?

- A. Amazon Polly
- B. Amazon Transcribe
- C. Amazon Rekognition
- D. Amazon Lex

383. What is one of the core principles to follow when designing a highly available application in the AWS Cloud?

- A. Design using a serverless architecture
- B. Assume that all components within an application can fail
- C. Design AWS Auto Scaling into every application
- D. Design all components using open-source code

384. A user needs to generate a report that outlines the status of key security checks in an AWS account. The report must include:

- The status of Amazon S3 bucket permissions.
- Whether multi-factor authentication is enabled for the AWS account root user.
- If any security groups are configured to allow unrestricted access.

Where can all this information be found in one location?

- A. Amazon QuickSight dashboard
- B. AWS CloudTrail trails
- C. AWS Trusted Advisor report
- D. IAM credential report

385. Which Amazon EC2 pricing model should be used to comply with per-core software license requirements?

- A. Dedicated Hosts
- B. On-Demand Instances
- C. Spot Instances
- D. Reserved Instances

Commented [MC382]: C

"AWS Identity and Access Management (IAM) enables you to manage access to AWS services and resources securely. Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources. IAM is a feature of your AWS account offered at no additional charge. You will be charged only for use of other AWS services by your users."

Commented [MC383]: A

"Amazon Polly - is a service that turns text into lifelike speech, allowing you to create applications that talk, and build entirely new categories of speech-enabled products. Polly's Text-to-Speech (TTS) service uses advanced deep learning technologies to synthesize natural sounding human speech. With dozens of lifelike voices across a broad set of languages, you can build speech-enabled applications that work in many different countries."

In addition to Standard TTS voices, Amazon Polly offers Neural Text-to-Speech (NTTS) voices that deliver advanced improvements in speech quality through a new machine learning approach. Polly's Neural TTS technology also

Commented [MC384]: B

"Reliability Design Principles and Best Practices

...  
Failure Management / automatically recover from failure:  
In any system of reasonable complexity, it is expected that failures will occur. Reliability requires that your workload be aware of failures as they occur and take action to avoid impact on availability. Workloads must be able to both withstand failures and automatically repair issues"

Commented [MC385]: C

"AWS Basic Support and AWS Developer Support customers get access to 6 Trusted Advisor security checks (S3 Bucket Permissions, Security Groups - Specific Ports Unrestricted, IAM Use, MFA on Root Account, EBS Public Snapshots, RDS Public Snapshots) and 50 service limit checks.

AWS Business Support and AWS Enterprise Support customers get access to all 115 Trusted Advisor checks (14 cost optimization, 17 security, 24 fault tolerance, 10

Commented [MC386]: A

"Amazon EC2 Dedicated Hosts allow you to use your eligible software licenses from vendors such as Microsoft and Oracle on Amazon EC2, so that you get the flexibility and cost effectiveness of using your own licenses, but with the resiliency, simplicity and elasticity of AWS. An Amazon EC2 Dedicated Host is a physical server fully dedicated for your use, so you can help address corporate compliance requirements. A dedicated host is a complete physical machine with a single partition."

386. Which of the AWS global infrastructure is used to cache copies of content for faster delivery to users across the globe?

- A. AWS Regions
- B. Availability Zones
- C. Edge locations
- D. Data centers

387. Using AWS Config to record, audit, and evaluate changes to AWS resources to enable traceability is an example of which AWS Well-Architected Framework pillar?

- A. Security
- B. Operational excellence
- C. Performance efficiency
- D. Cost optimization

388. A user needs to quickly deploy a non-relational database on AWS. The user does not want to manage the underlying hardware or the database software. Which AWS service can be used to accomplish this?

- A. Amazon RDS
- B. Amazon DynamoDB
- C. Amazon Aurora
- D. Amazon Redshift

389. A Cloud Practitioner is developing a disaster recovery plan and intends to replicate data between multiple geographic areas. Which of the following meets these requirements?

- A. AWS Accounts
- B. AWS Regions
- C. Availability Zones
- D. Edge locations

390. Which features and benefits does the AWS Organizations service provide? (Choose two.)

- A. Establishing real-time communications between members of an internal team
- B. Facilitating the use of NoSQL databases
- C. Providing automated security checks
- D. Implementing consolidated billing
- E. Enforcing the governance of AWS accounts

Commented [MC387]: C

"When your web traffic is geo-dispersed, it's not always feasible and certainly not cost effective to replicate your entire infrastructure across the globe. A CDN provides you the ability to utilize its global network of edge locations to deliver a cached copy of web content such as videos, webpages, images and so on to your customers. To reduce response time, the CDN utilizes the nearest edge location to the customer or originating request location in order to reduce the response time. Throughput is dramatically increased given that the web assets are delivered from cache. For dynamic data, many CDNs can be configured to retrieve data from the origin servers."

Commented [MC388]: A

From the Security section of Well-Architected\_Framework:  
**"Enable traceability: Monitor, alert, and audit actions and changes to your environment in real time.** Integrate log and metric collection with systems to automatically investigate and take action."

Commented [MC389]: B

"Fast and flexible NoSQL database service for any scale. A key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multiregion, multimaster, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. DynamoDB can handle more than 10 trillion requests per day and can support peaks of more than 20 million requests per second."

Notes:

Commented [MC390]: B

"Disaster Recovery (DR) Using AWS regions: Most organizations try to implement High Availability (HA) instead of DR to guard them against any downtime of services.

In case of HA, we ensure there exists a fallback mechanism for our services. The service that runs in HA is handled by hosts running in different availability zones but in the same geographical region. This approach, however, does ...

Commented [MC391]: D, E

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--**apply policies to accounts or groups for governance**  
--define central configurations and audit requirements ...

391. Which AWS service is used to automate configuration management using Chef and Puppet?

- A. AWS Config
- B. AWS OpsWorks
- C. AWS CloudFormation
- D. AWS Systems Manager

392. Which tool is best suited for combining the billing of AWS accounts that were previously independent from one another?

- A. Detailed billing report
- B. Consolidated billing
- C. AWS Cost and Usage report
- D. Cost allocation report

393. The AWS Total Cost of Ownership (TCO) Calculator is used to:

- A. receive reports that break down AWS Cloud compute costs by duration, resource, or tags
- B. estimate savings when comparing the AWS Cloud to an on-premises environment
- C. estimate a monthly bill for the AWS Cloud resources that will be used
- D. enable billing alerts to monitor actual AWS costs compared to estimated costs

394. Under the AWS shared responsibility model, which of the following are customer responsibilities? (Choose two.)

- A. Setting up server-side encryption on an Amazon S3 bucket
- B. Amazon RDS instance patching
- C. Network and firewall configurations
- D. Physical security of data center facilities
- E. Compute capacity availability

395. What is the MINIMUM AWS Support plan level that will provide users with access to the AWS Support API?

- A. Developer
- B. Enterprise
- C. Business
- D. Basic

Commented [MC392]: B

**"AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet."**

Chef and Puppet are automation platforms that allow you to use code to automate the configurations of your servers. OpsWorks lets you use Chef and Puppet to automate how servers are configured, deployed, and managed across your Amazon EC2 instances or on-premises compute environments.

You model your application as a stack, consisting of various layers. These layers are like blueprints detailing how to setup and configure a set of EC2 instances and related resources. There are prebuilt layers for common components. "Chef recipes" detail your layout and configuration. Automatically and manually scalable.

Commented [MC393]: B

**AWS Organizations** helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:  
--programmatically create new AWS accounts and allocate resources  
--group accounts to organize your workflows  
--apply policies to accounts or groups for governance  
--define central configurations and audit requirements

Commented [MC394]: B

"Total Cost of Ownership (TCO) calculator makes a **comparison between On Premise IT infrastructure expense the equivalent expense that would exist in the AWS cloud**. It then lets the customer know what their cost savings would be if they decided to move their existing IT infrastructure to the AWS cloud."

Commented [MC395]: A, C

--A--  
"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to the physical security of the facilities in which the service operates. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment. This differentiation of responsibility is

Commented [MC396]: C

**Support API only available to business and enterprise support levels only**

--MORE INFO--

<https://aws.amazon.com/premiumsupport/plans/>

396. A company has deployed several relational databases on Amazon EC2 instances. Every month, the database software vendor releases new security patches that need to be applied to the databases. What is the MOST efficient way to apply the security patches?
- A. Connect to each database instance on a monthly basis, and download and apply the necessary security patches from the vendor.
  - B. Enable automatic patching for the instances using the Amazon RDS console.
  - C. In AWS Config, configure a rule for the instances and the required patch level.
  - D. Use AWS Systems Manager to automate database patching according to a schedule.
397. A company wants to use Amazon Elastic Compute Cloud (Amazon EC2) to deploy a global commercial application. The deployment solution should be built with the highest redundancy and fault tolerance. Based on this situation, the Amazon EC2 instances should be deployed:
- A. in a single Availability Zone in one AWS Region
  - B. with multiple Elastic Network Interfaces belonging to different subnets
  - C. across multiple Availability Zones in one AWS Region
  - D. across multiple Availability Zones in two AWS Regions
398. A company has an application with users in both Australia and Brazil. All the company infrastructure is currently provisioned in the Asia Pacific (Sydney) Region in Australia, and Brazilian users are experiencing high latency. What should the company do to reduce latency?
- A. Implement AWS Direct Connect for users in Brazil
  - B. Provision resources in the South America (Sao Paulo) Region in Brazil
  - C. Use AWS Transit Gateway to quickly route users from Brazil to the application
  - D. Launch additional Amazon EC2 instances in Sydney to handle the demand
399. An Amazon EC2 instance runs only when needed yet must remain active for the duration of the process. What is the most appropriate purchasing option?
- A. Dedicated Instances
  - B. Spot Instances
  - C. On-Demand Instances
  - D. Reserved Instances
400. Which AWS dashboard displays relevant and timely information to help users manage events in progress, and provides proactive notifications to help plan for scheduled activities?
- A. AWS Service Health Dashboard
  - B. AWS Personal Health Dashboard
  - C. AWS Trusted Advisor dashboard
  - D. Amazon CloudWatch dashboard

Commented [MC397]: D

Because the customer has deployed the DB software on EC2 the customer is solely responsible for keeping it updated. If the databases were deployed on RDS the software would be managed by AWS but this is not the case in this scenario. So we are looking for an efficient way to patch the software installed on EC2. System Manager provides the facility we need.

"AWS Systems Manager Maintenance Windows let you define a schedule for when to perform potentially disruptive actions on your instances such as patching an operating system, updating drivers, or installing software or patches.

Commented [MC398]: D

"Disaster Recovery (DR) Using AWS regions: Most organizations try to implement High Availability (HA) instead of Disaster Recovery to guard them against any downtime of services.

In case of High Availability, we ensure there exists a fallback mechanism for our services. The service that runs in High Availability is handled by hosts running in different availability zones but in the same geographical region. This approach, however, does not guarantee the

Commented [MC399]: B

With B, you can provision more resources to Brazil and alleviate the high latency, this would make the deployment a multi-region architecture.

(<https://read.acloud.guru/why-and-how-do-we-build-a-multi-region-active-active-architecture-6d81acb7d208>):

"Why bother with multi-region architectures?

Commented [MC400]: C

"We recommend that you use On-Demand Instances for applications with short-term, irregular workloads that cannot be interrupted."

--INCORRECT ANSWERS--

A - Dedicated instances would also work for workloads that must remain active for the duration of the process, however there is a premium added to the cost of

Commented [MC401]: B

"AWS Personal Health Dashboard - A personalized view of the health of AWS services, and alerts when your resources are impacted. AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you. The dashboard displays relevant and timely information to help you manage events in progress, and provides proactive notification to help you plan for scheduled activities.

With Personal Health Dashboard, alerts are triggered by changes in the health of AWS resources, giving you even

401-450

401. Which AWS hybrid storage service enables a user's on-premises applications to seamlessly use AWS Cloud storage?

- A. AWS Backup
- B. Amazon Connect
- C. AWS Direct Connect
- D. AWS Storage Gateway

402. Which of the following acts as a virtual firewall at the Amazon EC2 instance level to control traffic for one or more instances?

- A. Access keys
- B. Virtual private gateways
- C. Security groups
- D. Access Control Lists (ACL)

403. What is the most efficient way to establish network connectivity from on-premises to multiple VPCs in different AWS Regions?

- A. Use AWS Direct Connect
- B. Use AWS VPN
- C. Use AWS Client VPN
- D. Use an AWS Transit Gateway

404. Which AWS Support plan provides access to architectural and operational reviews, as well as 24/7 access to Senior Cloud Support Engineers through email, online chat, and phone?

- A. Basic
- B. Business
- C. Developer
- D. Enterprise

405. Which AWS service or feature helps restrict the AWS services, resources, and individual API actions the users and roles in each member account can access?

- A. Amazon Cognito
- B. AWS Organizations
- C. AWS Shield
- D. AWS Firewall Manager

Commented [MC402]: D

"[AWS Storage Gateway](#) is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage.

--Customers use Storage Gateway to simplify storage management and reduce costs for key hybrid cloud storage use cases. These include moving backups to the cloud, using on-premises file shares backed by cloud storage, and providing low latency access to data in AWS for on-premises applications, as well as various migration, backup, archiving, processing, moving data to S3 for in-cloud workloads and tiered storage; and disaster recovery use cases.

Commented [MC403]: C

"A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. When you launch an instance in a VPC, you can assign up to five security groups to the instance. [Security groups act at the instance level, not the subnet level](#). Therefore, each instance in a subnet in your VPC can be assigned to a different set of security groups."

Commented [MC404]: D

"Transit Gateway is for having transitive peering between thousands of VPC and on-premises, hub-and-spoke (star) connection.

"[Transit Gateway abstracts away the complexity of maintaining VPN connections with hundreds of VPCs](#).

"[AWS Transit Gateway now supports the ability to establish peering connections between Transit Gateways in different AWS Regions](#). Transit Gateway is a service

Commented [MC405]: D

"[Only with Business and Enterprise support do you get 24x7 phone, email, and chat access to Cloud Support Engineers](#)"

Architectural and operational reviews are only included with an Enterprise support plan:

--"[AWS Infrastructure Event Management \(IEM\) offers architecture and scaling guidance and operational support during the preparation and execution of planned changes](#)"

Commented [MC406]: B

"AWS Organizations helps you centrally manage and govern your environment as you grow and scale your AWS resources. As an administrator of an organization, you can create accounts in your organization and invite existing accounts to join the organization. Allows you to:

--programmatically create new AWS accounts and allocate resources

--group accounts to organize your workflows

--apply policies to accounts or groups for governance

--define central configurations and audit requirements

406. Which Amazon S3 storage class is optimized to provide access to data with lower resiliency requirements, but rapid access when needed such as duplicate backups?

- A. Amazon S3 Standard
- B. Amazon S3 Glacier Deep Archive
- C. Amazon S3 One Zone-Infrequent Access
- D. Amazon S3 Glacier

407. What is an Availability Zone in AWS?

- A. One or more physical data centers
- B. A completely isolated geographic location
- C. One or more edge locations based around the world
- D. A data center location with a single source of power and networking

408. Which AWS services can be used as infrastructure automation tools? (Choose two.)

- A. AWS CloudFormation
- B. Amazon CloudFront
- C. AWS Batch
- D. AWS OpsWorks
- E. Amazon QuickSight

409. Which AWS service enables users to create copies of resources across AWS Regions?

- A. Amazon ElastiCache
- B. AWS CloudFormation
- C. AWS CloudTrail
- D. AWS Systems Manager

410. A user would like to encrypt data that is received, stored, and managed by AWS CloudTrail. Which AWS service will provide this capability?

- A. AWS Secrets Manager
- B. AWS Systems Manager
- C. AWS Key Management Service (AWS KMS)
- D. AWS Certificate Manager

Commented [MC407]: C

"S3 One Zone-IA (Infrequent Access) is for data that is accessed less frequently, but requires rapid access when needed. Unlike other S3 Storage Classes which store data in a minimum of three Availability Zones (AZs), S3 One Zone-IA stores data in a single AZ and costs 20% less than S3 Standard-IA. S3 One Zone-IA is ideal for customers who want a lower-cost option for infrequently accessed data but do not require the availability and resilience of S3 Standard or S3 Standard-IA. It's a good choice for storing secondary backup copies of on-premises data or easily re-creatable data. You can also use it as cost-effective storage for data that is replicated from another AWS Region using S3 Cross-Region Replication.

Commented [MC408]: A

"Availability Zone (AZ) is an area with either one or more discrete Data Centres (building filled with servers), each with redundant power, networking, and connectivity, housed in separate facilities. If there are more than one data centre, they are counted as one AZ because they are located close together. Each Availability Zone is isolated, but the Availability Zones in a Region are connected through low-latency links."

Commented [MC409]: A, D

--A--  
"CloudFormation - Speed up cloud provisioning with infrastructure as code. Gives you an easy way to model a collection of related AWS and third-party resources, provision them quickly and consistently, and manage them throughout their lifecycles, by treating infrastructure as code (IaC). A CloudFormation template describes your desired resources and their dependencies so you can launch and configure them together as a stack. You can use a template to create, update, and delete an

Commented [MC410]: B

"AWS CloudFormation helps AWS customers implement an Infrastructure as Code model. Instead of setting up their environments and applications by hand, they build a template and use it to create all of the necessary resources, collectively known as a CloudFormation stack. This infrastructure as code model is easily exported to other regions. Benefits are the removal of opportunities for manual error, an increased efficiency and certainty of

Commented [MC411]: C

"By default, the log files delivered by CloudTrail to your bucket are encrypted by Amazon server-side encryption with Amazon S3-managed encryption keys (SSE-S3). To provide a security layer that is directly manageable, you can instead use server-side encryption with AWS KMS-managed keys (SSE-KMS) for your CloudTrail log files."

"AWS Key Management Service (KMS) – Easily create and control the customer master keys (CMKs), the encryption keys used to encrypt or digitally sign your data. Makes it

411. Which AWS Cloud benefit eliminates the need for users to try estimating future infrastructure usage?

- A. Easy and fast deployment of applications in multiple Regions around the world
- B. Security of the AWS Cloud
- C. Elasticity of the AWS Cloud
- D. Lower variable costs due to massive economies of scale

412. What credential components are required to gain programmatic access to an AWS account? (Choose two.)

- A. An access key ID
- B. A primary key
- C. A secret access key
- D. A user ID
- E. A secondary key

413. Which of the following are AWS compute services? (Select two.)

- A. Amazon Lightsail
- B. AWS Systems Manager
- C. AWS CloudFormation
- D. AWS Batch
- E. Amazon Inspector

414. Which AWS service provides the ability to detect inadvertent data leaks of personally identifiable information (PII) and user credential data?

- A. Amazon GuardDuty
- B. Amazon Inspector
- C. Amazon Macie
- D. AWS Shield

415. Which tool can be used to monitor AWS service limits?

- A. AWS Total Cost of Ownership (TCO) Calculator
- B. AWS Trusted Advisor
- C. AWS Personal Health Dashboard
- D. AWS Cost and Usage report

Commented [MC412]: C

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible"

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain

Commented [MC413]: A, C

"Access keys are long-term credentials for an IAM user or the AWS account root user. You can use access keys to sign programmatic requests to the AWS CLI (Command Line Interface), SDK (Software Development Kit), and other development tools."

IAM policies don't have access keys. The only way you will ever get an Access key is to create them from an IAM user. Access keys consist of an access key ID and secret access key, which are used to sign programmatic requests that you make to AWS. If you don't have access keys, you can

Commented [MC414]: A, D

"A list of compute services:  
--Amazon EC2  
--Amazon EC2 Auto Scaling  
--Amazon Elastic Container Registry  
--Amazon Elastic Container Service  
--Amazon Elastic Kubernetes Service  
--**Amazon Lightsail**  
--**AWS Batch**  
--AWS Elastic Beanstalk  
--AWS Fargate

Commented [MC415]: C

"Amazon Macie is a fully managed data security and data privacy service that uses machine learning and pattern matching to discover, classify and protect your sensitive data in AWS.  
--Macie recognizes sensitive data such as personally identifiable information (PII) or intellectual property. It provides you with dashboards and alerts that give visibility into how this data is being accessed or moved.  
--As organizations manage growing volumes of data, identifying and protecting their sensitive data at scale can

Commented [MC416]: B

"Trusted Adviser analyse your AWS account and provides recommendation:  
1) Cost Optimization  
2) Performance  
3) Security  
4) Fault Tolerance  
5) Service Limits"

They are called service quotas now instead though

416. Which of the following describes a security best practice that can be implemented using AWS IAM?

- A. Disable AWS Management Console access for all users
- B. Generate secret keys for every IAM user
- C. Grant permissions to users who are required to perform a given task only
- D. Store AWS credentials within Amazon EC2 instances

417. What can be used to automate and manage secure, well-architected, multi-account AWS environments?

- A. AWS shared responsibility model
- B. AWS Control Tower
- C. AWS Security Hub
- D. AWS Well-Architected Tool

418. Which AWS service or feature allows a user to easily scale connectivity among thousands of VPCs?

- A. VPC peering
- B. AWS Transit Gateway
- C. AWS Direct Connect
- D. AWS Global Accelerator

419. A company needs protection from expanded distributed denial of service (DDoS) attacks on its website and assistance from AWS experts during such events. Which AWS managed service will meet these requirements?

- A. AWS Shield Advanced
- B. AWS Firewall Manager
- C. AWS WAF
- D. Amazon GuardDuty

420. Under the AWS shared responsibility model, what are the customer's responsibilities? (Choose two.)

- A. Physical and environmental security
- B. Physical network devices including firewalls
- C. Storage device decommissioning
- D. Security of data in transit
- E. Data integrity authentication

Commented [MC417]: C

"To help secure your AWS resources, follow these recommendations for the AWS Identity and Access Management (IAM) service.  
--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
--**Grant least privilege**  
--Get started using permissions with AWS managed policies  
--Use customer managed policies instead of inline policies  
--Use access levels to review IAM permissions

Commented [MC418]: B

"Control Tower automates the process of setting up a new baseline multi-account AWS environment that is secure, well-architected, and ready to use.

If you're an enterprise with multiple AWS accounts and teams, cloud setup and governance can be complex and time consuming, slowing down the very innovation you're trying to speed up. **AWS Control Tower provides the easiest way to set up and govern a new, secure, multi-account AWS environment based on best practices**

Commented [MC419]: B

**Transit Gateway is for having transitive peering between thousands of VPC and on-premises, hub-and-spoke (star) connection.** Transit Gateway abstracts away the complexity of maintaining VPN connections with thousands of VPCs."

-INCORRECT ANSWERS-

--A - VPC peering max limit is 125 peering connections per VPC.

Commented [MC420]: A

"AWS Shield Advanced - For higher levels of protection against attacks targeting your applications running on Amazon Elastic Compute Cloud (EC2), Elastic Load Balancing (ELB), Amazon CloudFront, AWS Global Accelerator and Amazon Route 53 resources, you can subscribe to AWS Shield Advanced. In addition to the network and transport layer protections that come with Standard, **AWS Shield Advanced provides additional detection and mitigation against large and sophisticated DDoS attacks, near real-time visibility into attacks, and**

Commented [MC421]: D, E

"For certain compliance requirements, you might require an additional layer of protection between the services from AWS and your operating systems and platforms, where your applications and data reside. You can impose additional controls, such as protection of data at rest, and **protection of data in transit**, or introduce a layer of opacity between services from AWS and your platform. The opacity layer can include data encryption, **data integrity authentication**, software- and data-signing, secure time-stamping, and more."

421. A cloud practitioner has a data analysis workload that is infrequently executed and can be interrupted without harm. To optimize for cost, which Amazon EC2 purchasing option should be used?

- A. On-Demand Instances
- B. Reserved Instances
- C. Spot Instances
- D. Dedicated Hosts

422. Which AWS container service will help a user install, operate, and scale the cluster management infrastructure?

- A. Amazon Elastic Container Registry (Amazon ECR)
- B. AWS Elastic Beanstalk
- C. Amazon Elastic Container Service (Amazon ECS)
- D. Amazon Elastic Block Store (Amazon EBS)

423. Which of the following allows an application running on an Amazon EC2 instance to securely write data to an Amazon S3 bucket without using long term credentials?

- A. Amazon Cognito
- B. AWS Shield
- C. AWS IAM role
- D. AWS IAM user access key

424. A company with a Developer-level AWS Support plan provisioned an Amazon RDS database and cannot connect to it. Who should the developer contact for this level of support?

- A. AWS Support using a support case
- B. AWS Professional Services
- C. AWS technical account manager
- D. AWS consulting partners

425. What is the purpose of having an internet gateway within a VPC?

- A. To create a VPN connection to the VPC
- B. To allow communication between the VPC and the Internet
- C. To impose bandwidth constraints on internet traffic
- D. To load balance traffic from the Internet across Amazon EC2 instances

Commented [MC422]: C

"Amazon EC2 Spot Instances let you take advantage of unused EC2 capacity in the AWS cloud. Spot Instances are available at up to a **90% discount compared to On-Demand prices**. You can use Spot Instances for various stateless, fault-tolerant, or **flexible** applications such as big data, containerized workloads, CI/CD, web servers, high-performance computing (HPC), and test & development workloads. Because Spot Instances are tightly integrated with AWS services such as Auto Scaling, EMR, ECS, CloudFormation, Data Pipeline and AWS Batch, you can choose how to launch and maintain your applications running on Spot Instances.

**When you use Spot Instances, you must be prepared for interruptions.** Amazon EC2 can interrupt your Spot Instance when the demand for Spot Instances rises, when the supply of Spot Instances decreases, or when the Spot price exceeds your maximum price. When Amazon EC2 interrupts a Spot Instance, it provides the ...

Commented [MC423]: C

"Amazon Elastic Container Service (Amazon ECS) allows you to easily run, scale, and secure Docker container applications on AWS. Applications packaged as containers locally will deploy and run in the same way as containers managed by Amazon ECS. **Amazon ECS eliminates the need to install, operate, and scale your own container orchestration and cluster management infrastructure, and allows you to focus on the resource needs and ...**

Commented [MC424]: C

**"You can and should use an IAM role to manage temporary credentials for applications that run on an EC2 instance.** When you use a role, you don't have to distribute long-term credentials (such as a user name and password or access keys) to an EC2 instance. Instead, the role supplies temporary permissions that applications can use when they make calls to other AWS resources. When you launch an EC2 instance, you specify an IAM role to associate with the instance. Applications that run on the ...

Commented [MC425]: A

"For technical support, all AWS customers have access to AWS documentation, the AWS Knowledge Center, AWS whitepapers, and support forums.

**You can also subscribe to a Developer, Business or Enterprise Support plan to receive one-on-one fast-response support from experienced technical support engineers.** With these Support plans, you get pay-by-the-month pricing and unlimited support cases. **If you have operational issues or technical questions, you can ...**

Commented [MC426]: B

**"An internet gateway is a horizontally scaled, redundant, and highly available VPC component that allows communication between your VPC and the internet."**

426. A company must ensure that its endpoint for a database instance remains the same after a single Availability Zone service interruption. The application needs to resume database operations without the need for manual administrative intervention. How can these requirements be met?

- A. Use multiple Amazon Route 53 routes to the standby database instance endpoint hosted on AWS Storage Gateway.
- B. Configure Amazon RDS Multi-Availability Zone deployments with automatic failover to the standby.
- C. Add multiple Application Load Balancers and deploy the database instance with AWS Elastic Beanstalk.
- D. Deploy a single Network Load Balancer to distribute incoming traffic across multiple Amazon CloudFront origins.

427. Which AWS managed service can be used to distribute traffic between one or more Amazon EC2 instances?

- A. NAT gateway
- B. Elastic Load Balancing
- C. Amazon Athena
- D. AWS PrivateLink

428. AWS Trusted Advisor provides recommendations on which of the following? (Choose two.)

- A. Cost optimization
- B. Auditing
- C. Serverless architecture
- D. Performance
- E. Scalability

429. Which of the following tasks can only be performed after signing in with AWS account root user credentials? (Choose two.)

- A. Closing an AWS account
- B. Creating a new IAM policy
- C. Changing AWS Support plans
- D. Attaching a role to an Amazon EC2 instance
- E. Generating access keys for IAM users

430. Fault tolerance refers to:

- A. the ability of an application to accommodate growth without changing design
- B. how well and how quickly an application's environment can have lost data restored
- C. how secure your application is
- D. the built-in redundancy of an application's components

Commented [MC427]: B

"Amazon RDS Multi-AZ deployments provide enhanced availability and durability for RDS 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). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure, Amazon RDS performs an automatic failover to the standby (or to a read replica in the case of Amazon Aurora), so that you can resume database operations as soon as the failover is complete [...]

Commented [MC428]: B

"Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, Lambda functions, and virtual appliances. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones. Elastic Load Balancing offers four types of load balancers that all feature the high availability, automatic scaling, an [...]

Commented [MC429]: A, D

"AWS Trusted Advisor analyzes your AWS environment and provides best practice recommendations in five categories:  
--Performance: AWS Trusted Advisor can improve the performance of your service by checking your service limits, ensuring you take advantage of provisioned throughput, and monitoring for overutilized instances.  
--Service Quotas: AWS maintains service quotas (formerly called service limits) for each account to help guarantee [...]

Commented [MC430]: A, C

"Tasks that require root user credentials. We recommend that you use an IAM user with appropriate permissions to perform tasks and access AWS resources. However, you can perform the tasks listed below only when you sign in as the root user of an account:  
--Change your account settings. This includes the account name, email address, root user password, and root user access keys. Other account settings, such as contact information, payment currency preference, and Regions, do not require root user credentials. [...]

Commented [MC431]: D

"Fault-tolerance is the ability for a system to remain in operation even if some of the components used to build the system fail.  
...  
Amazon Web Services (AWS) provides a platform that is ideally suited for building fault-tolerant software systems."  
<https://docs.aws.amazon.com/whitepapers/latest/fault-tolerant-components/fault-tolerant-components.pdf> [...]

431. A company operating in the AWS Cloud requires separate invoices for specific environments, such as development, testing, and production. How can this be achieved?

- A. Use multiple AWS accounts
- B. Use resource tagging
- C. Use multiple VPCs
- D. Use Cost Explorer

432. Which AWS service can be used in the application deployment process?

- A. AWS AppSync
- B. AWS Batch
- C. AWS CodePipeline
- D. AWS DataSync

433. What can be used to reduce the cost of running Amazon EC2 instances? (Choose two.)

- A. Spot Instances for stateless and flexible workloads
- B. Memory optimized instances for high-compute workloads
- C. On-Demand Instances for high-cost and sustained workloads
- D. Reserved Instances for sustained workloads
- E. Spend limits set using AWS Budgets

434. Which AWS service or feature allows the user to manage cross-region application traffic?

- A. Amazon AppStream 2.0
- B. Amazon VPC
- C. Elastic Load Balancer
- D. Amazon Route 53

435. Which AWS service can be used to track unauthorized API calls?

- A. AWS Config
- B. AWS CloudTrail
- C. AWS Trusted Advisor
- D. Amazon Inspector

Commented [MC432]: A

The only way you can do this is by having the instance in a separate AWS account. An AWS account is a billing boundary. Using multiple AWS accounts does not cost any more than using a single account and you can pay via a single bill & payment method but get separate billing details for your instance. There is no lower limit on the number of resources in an AWS account.

(<https://www.quora.com/Can-I-have-a-separate-billing-profile-for-a-specific-server-instance-on-AWS>)

Incorrect Answers:

Commented [MC433]: C

"AWS CodePipeline" is a fully managed continuous delivery service that helps you automate your release pipelines for fast and reliable application and infrastructure updates. CodePipeline automates the build, test, and **deploy phases** of your release process every time there is a code change, based on the release model you define."

Commented [MC434]: A, D

--A--  
Amazon EC2 Spot Instances let you take advantage of unused EC2 capacity in the AWS cloud. Spot **Instances are available at up to a 90% discount compared to On-Demand prices**. You can use Spot Instances for various **stateless, fault-tolerant, or flexible applications** such as big data, containerized workloads, CI/CD, web servers, high-performance computing (HPC), and test & development workloads. Because Spot Instances are tightly integrated with AWS services such as Auto Scaling

Commented [MC435]: D

"Amazon Route 53 provides a global DNS service that can be used as a public or private endpoint for (real-time communication) RTC clients to register and connect with media applications. With Amazon Route 53, DNS health checks can be configured to route traffic to healthy endpoints or to independently monitor the health of your application. The **Amazon Route 53 Traffic Flow feature makes it easy for you to manage traffic globally through a variety of routing types, including latency-based routing, geo DNS, geoproximity, and weighted round**

Commented [MC436]: B

"AWS CloudTrail - Track user activity and API usage." Helps you enable governance, compliance, and operational and risk auditing of your AWS account. Actions taken by a user, role, or an AWS service are recorded as events in CloudTrail. Events include actions taken in the AWS Management Console, AWS Command Line Interface, and AWS SDKs and APIs."

436. A user needs to regularly audit and evaluate the setup of all AWS resources, identify non-compliant accounts, and be notified when a resource changes. Which AWS service can be used to meet these requirements?

- A. AWS Trusted Advisor
- B. AWS Config
- C. AWS Resource Access Manager
- D. AWS Systems Manager

437. A user is planning to launch two additional Amazon EC2 instances to increase availability. Which action should the user take?

- A. Launch the instances across multiple Availability Zones in a single AWS Region.
- B. Launch the instances as EC2 Reserved Instances in the same AWS Region and the same Availability Zone.
- C. Launch the instances in multiple AWS Regions, but in the same Availability Zone.
- D. Launch the instances as EC2 Spot Instances in the same AWS Region, but in different Availability Zones.

438. A company must store critical business data in Amazon S3 with a backup to another AWS Region. How can this be achieved?

- A. Use an Amazon CloudFront Content Delivery Network (CDN) to cache data globally
- B. Set up Amazon S3 cross-region replication to another AWS Region
- C. Configure the AWS Backup service to back up the data to another AWS Region
- D. Take Amazon S3 bucket snapshots and copy that data to another AWS Region

439. Which AWS Cloud service can send alerts to customers if custom spending thresholds are exceeded?

- A. AWS Budgets
- B. AWS Cost Explorer
- C. AWS Cost Allocation Tags
- D. AWS Organizations

440. Which components are required to build a successful site-to-site VPN connection on AWS? (Choose two.)

- A. Internet gateway
- B. NAT gateway
- C. Customer gateway
- D. Virtual private gateway

Commented [MC437]: B

"AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources."

Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations.

With Config, you can review changes in configurations and relationships between AWS resources, dive into detailed resource configuration histories, and determine your overall compliance against the configurations specified in your internal guidelines. This enables you to simplify ...

Commented [MC438]: A

Launching across multiple Availability Zones in a single AWS Region is a good approach for availability, as if an availability zone goes down there will be other resources available in other availability zones to continue the workload.

"Most organizations try to implement High Availability (HA) to guard them against any downtime of services. In case of HA, we ensure there exists a fallback mechanism for our services. The service that runs in HA is handled by ..."

Commented [MC439]: B

S3 Replication enables automatic, asynchronous copying of objects across Amazon S3 buckets. Buckets that are configured for object replication can be owned by the same AWS account or by different accounts. There are two kinds of S3 replication:

--Cross Region Replication (CRR). When an item has been uploaded to a primary bucket is replicated to a secondary bucket in a different AWS Region.

Commented [MC440]: A

"AWS Budgets gives you the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount." You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define."

Commented [MC441]: C, D

AWS Virtual Private Network (VPN) solutions establish secure connections via the public internet between your on-premises networks, remote offices, client devices, and the AWS global network. You can connect your Amazon VPC to remote networks and users using the following VPN connectivity options:

--AWS Site-to-Site VPN: creates encrypted tunnels between your network and your Amazon Virtual Private Clouds. A VPN Connection utilizes IPSec to establish ...

441. Which Amazon EC2 pricing option is best suited for applications with short-term, spiky, or unpredictable workloads that cannot be interrupted?

- A. Spot Instances
- B. Dedicated Hosts
- C. On-Demand Instances
- D. Reserved Instances

442. What is the MOST effective resource for staying up to date on AWS security announcements?

- A. AWS Personal Health Dashboard
- B. AWS Secrets Manager
- C. AWS Security Bulletins
- D. Amazon Inspector

443. Which AWS service offers persistent storage for a file system?

- A. Amazon S3
- B. Amazon EC2 instance store
- C. Amazon Elastic Block Store (Amazon EBS)
- D. Amazon ElastiCache

444. Which of the following allows AWS users to manage cost allocations for billing?

- A. Tagging resources
- B. Limiting who can create resources
- C. Adding a secondary payment method
- D. Running all operations on a single AWS account

445. Which requirement must be met for a member account to be unlinked from an AWS Organizations account?

- A. The linked account must be actively compliant with AWS System and Organization Controls (SOC).
- B. The payer and the linked account must both create AWS Support cases to request that the member account be unlinked from the organization.
- C. The member account must meet the requirements of a standalone account.
- D. The payer account must be used to remove the linked account from the organization.

Commented [MC442]: C

"On-Demand Instances let you pay for compute capacity by the hour or second (minimum of 60 seconds) with no long-term commitments. You have full control over its lifecycle—you decide when to launch, stop, hibernate, start, reboot, or terminate it. This frees you from the costs and complexities of planning, purchasing, and maintaining hardware and transforms what are commonly large fixed costs into much smaller variable costs."

Pricing is per instance-hour consumed for each instance, from the time an instance is launched until it is terminated or stopped. Each partial instance-hour consumed will be ...

Commented [MC443]: C

"AWS Security Bulletins - No matter how carefully engineered the services are, from time to time it may be necessary to notify customers of security and privacy events with AWS services. We will publish security bulletins online to update our customers of any changes."

(<https://aws.amazon.com/security/security-bulletins/>)

Commented [MC444]: C

"Amazon EBS delivers high-availability block-level storage volumes for Amazon Elastic Compute Cloud (EC2) instances. It stores data on a file system which is retained after the EC2 instance is shut down. Amazon EFS offers scalable file storage, also optimized for EC2. It can be used as a common data source for any application or workload that runs on numerous instances. Using an EFS file system, you may configure instances to mount the file system."

Commented [MC445]: A

"Cost allocation tags – are key-value pairs that allow you to organize your AWS resources into groups. For each resource, each tag key must be unique, and each tag key can have only one value. AWS provides two types of cost allocation tags, an AWS generated tags and user-defined tags. You can use tags to:  
–organize your resources, and cost allocation tags to track your AWS costs on a detailed level  
–Visualize information about tagged resources in one place, in conjunction with Resource Groups."

Commented [MC446]: C

"You can remove an account from your organization only if the account has the information that is required for it to operate as a standalone account. When you create an account in an organization using the AWS Organizations console, API, or AWS CLI commands, all the information that is required of standalone accounts is not automatically collected. For each account that you want to make standalone, you must choose a support plan, provide and verify the required contact information, and provide a current payment method. AWS uses the ..."

446. What AWS benefit refers to a customer's ability to deploy applications that scale up and down to meet variable demand?

- A. Elasticity
- B. Agility
- C. Security
- D. Scalability

447. During a compliance review, one of the auditors requires a copy of the AWS SOC 2 report. Which service should be used to submit this request?

- A. AWS Personal Health Dashboard
- B. AWS Trusted Advisor
- C. AWS Artifact
- D. Amazon S3

448. A company wants to set up a highly available workload in AWS with a disaster recovery plan that will allow the company to recover in case of a regional service interruption. Which configuration will meet these requirements?

- A. Run on two Availability Zones in one AWS Region, using the additional Availability Zones in the AWS Region for the disaster recovery site.
- B. Run on two Availability Zones in one AWS Region, using another AWS Region for the disaster recovery site.
- C. Run on two Availability Zones in one AWS Region, using a local AWS Region for the disaster recovery site.
- D. Run across two AWS Regions, using a third AWS Region for the disaster recovery site.

449. Which AWS service can run a managed PostgreSQL database that provides online transaction processing (OLTP)?

- A. Amazon DynamoDB
- B. Amazon Athena
- C. Amazon RDS
- D. Amazon EMR

450. Which of the following assist in identifying costs by department? (Choose two.)

- A. Using tags on resources
- B. Using multiple AWS accounts
- C. Using an account manager
- D. Using AWS Trusted Advisor
- E. Using Consolidated Billing

Commented [MC447]: D

"What is the difference between scalability and elasticity?"

The purpose of elasticity is to match the resources allocated with actual amount of resources needed at any given point in time. Scalability handles the changing needs of an application within the confines of the infrastructure via statically adding or removing resources to meet applications demands if needed"

"Scalability is a characteristic of a software architecture related to serving higher amount of workload, where

Commented [MC448]: C

"SOC 2: Security, Availability & Confidentiality - A description of the AWS controls environment and external audit of AWS controls that meet the AICPA Trust Services Security, Availability, and Confidentiality Principles and Criteria"

"AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements. [Report](#) ...

Commented [MC449]: B

"Disaster Recovery (DR) Using AWS regions: Most organizations try to implement High Availability (HA) instead of DR to guard them against any downtime of services."

In case of HA, we ensure there exists a fallback mechanism for our services. The service that runs in HA is handled by hosts running in different availability zones but in the same geographical region. This approach,

Commented [MC450]: C

"OLTP (Online Transactional Processing) is a category of data processing that is focused on transaction-oriented tasks. OLTP typically involves inserting, updating, and/or deleting small amounts of data in a database. OLTP mainly deals with large numbers of transactions by a large number of users."

"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

Commented [MC451]: A, B

The key is Identifying the costs by department

--A--

Cost allocation tags – are key-value pairs that allow you to organize your AWS resources into groups. For each resource, each tag key must be unique, and each tag key can have only one value. AWS provides two types of cost allocation tags, an AWS generated tags and user-defined tags. You can use tags to:

451-500

451. A company wants to allow full access to an Amazon S3 bucket for a particular user. Which element in the S3 bucket policy holds the user details that describe who needs access to the S3 bucket?

- A. Principal
- B. Action
- C. Resource
- D. Statement

452. A company is piloting a new customer-facing application on Amazon Elastic Compute Cloud (Amazon EC2) for one month. What pricing model is appropriate?

- A. Reserved Instances
- B. Spot Instances
- C. On-Demand Instances
- D. Dedicated Hosts

453. Under the AWS shared responsibility model, which of the following is a responsibility of AWS?

- A. Enabling server-side encryption for objects stored in S3
- B. Applying AWS IAM security policies
- C. Patching the operating system on an Amazon EC2 instance
- D. Applying updates to the hypervisor

454. Performing operations as code is a design principle that supports which pillar of the AWS Well-Architected Framework?

- A. Performance efficiency
- B. Operational excellence
- C. Reliability
- D. Security

455. Which design principle is achieved by following the reliability pillar of the AWS Well-Architected Framework?

- A. Vertical scaling
- B. Manual failure recovery
- C. Testing recovery procedures
- D. Changing infrastructure manually

Commented [MC452]: A

"In its most basic sense, a policy contains the following elements:

--Resources – Buckets, objects, access points, and jobs are the Amazon S3 resources for which you can allow or deny permissions. In a policy, you use the Amazon Resource Name (ARN) to identify the resource.

--Actions – For each resource, Amazon S3 supports a set of operations. You identify resource operations that you will allow (or deny) by using action keywords. For example, the s3:ListBucket permission allows the user to use the Amazon S3 GET Bucket (List Objects) operation.

Commented [MC453]: C

"On-Demand Instances let you pay for compute capacity by the hour or second (minimum of 60 seconds) **with no long-term commitments**. You have full control over its lifecycle—you decide when to launch, stop, hibernate, start, reboot, or terminate it. This frees you from the costs and complexities of planning, purchasing, and maintaining hardware and transforms what are commonly large fixed costs into much smaller variable costs.

Commented [MC454]: D

"**With AWS everything from the physical servers to the hypervisor layer is AWS's responsibility**, anything below that layer is the customer's responsibility. A customer's poorly coded applications, misconfigured operating systems, or insecure firewall settings will not affect the hypervisor, it will only affect the customer's virtual machines running on that hypervisor. It remains the customer's responsibility to ensure the integrity, confidentiality, and availability of the systems, applications, and data that they host on EC2."

Commented [MC455]: B

**Operational Excellence Design Principles and Best Practices**

...  
Perform operations as code: In the cloud, you can apply the same engineering discipline that you use for application code to your entire environment. You can define your entire workload (applications, infrastructure) as code and update it with code. You can implement your operations procedures as code and automate their execution by triggering them in response to events. **By**

Commented [MC456]: C

**Reliability Design Principles and Best Practices**

...  
**Failure Management / automatically recover from failure:**  
In any system of reasonable complexity, it is expected that failures will occur. Reliability requires that your workload be aware of failures as they occur and take action to avoid impact on availability. Workloads must be able to both withstand failures and automatically repair issues:  
--With AWS, you can take advantage of automation to react to monitoring data. For example, when a particular

456. What is a characteristic of Convertible Reserved Instances (RIs)?
- A. Users can exchange Convertible RIs for other Convertible RIs from a different instance family.
  - B. Users can exchange Convertible RIs for other Convertible RIs in different AWS Regions.
  - C. Users can sell and buy Convertible RIs on the AWS Marketplace.
  - D. Users can shorten the term of their Convertible RIs by merging them with other Convertible RIs.
- Commented [MC457]: A
- "These provide a discount (up to 54% off On-Demand) and the capability to change the attributes of the RI (instance family, operating system, and tenancy) as long as the exchange results in the creation of Reserved Instances equal or greater value (even if this means switching RIs to a different instance family). There are no limits to how many times you perform an exchange. Like Standard RIs, Convertible RIs are best suited for steady-state usage."
457. The user is fully responsible for which action when running workloads on AWS?
- A. Patching the infrastructure components
  - B. Implementing controls to route application traffic
  - C. Maintaining physical and environmental controls
  - D. Maintaining the underlying infrastructure components
- Commented [MC458]: B
- "A route table contains a set of rules, called routes, that are used to determine where network traffic from your subnet or gateway is directed.
- Your VPC has an implicit router (AWS manages this), and you use route tables to control where network traffic is directed. Each subnet in your VPC must be associated with a route table, which controls the routing for the subnet (subnet route table). You can explicitly associate a subnet with a particular route table. Otherwise, the subnet is implicitly associated with the main route table. A subnet ...
458. Which are benefits of using Amazon RDS over Amazon EC2 when running relational databases on AWS? (Choose two.)
- A. Automated backups
  - B. Schema management
  - C. Indexing of tables
  - D. Software patching
  - E. Extract, transform, and load (ETL) management
- Commented [MC459]: A, D
- "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."
459. What does the Amazon S3 Intelligent-Tiering storage class offer?
- A. Payment flexibility by reserving storage capacity
  - B. Long-term retention of data by copying the data to an encrypted Amazon Elastic Block Store (Amazon EBS) volume
  - C. Automatic cost savings by moving objects between tiers based on access pattern changes
  - D. Secure, durable, and lowest cost storage for data archival
- Commented [MC460]: C
- "Amazon S3 Intelligent-Tiering - Automatic cost savings by moving objects between tiers based on access pattern changes.
- S3 Intelligent-Tiering is a new Amazon S3 storage class designed for customers who want to optimize storage costs automatically when data access patterns change, without performance impact or operational overhead. S3 Intelligent-Tiering is the first cloud object storage class that delivers automatic cost savings by moving data ...
460. A company has multiple data sources across the organization and wants to consolidate data into one data warehouse. Which AWS service can be used to meet this requirement?
- A. Amazon DynamoDB
  - B. Amazon Redshift
  - C. Amazon Athena
  - D. Amazon QuickSight
- Commented [MC461]: B
- Key is Data Warehouse -> More or less always this will correspond to Amazon Redshift.
- "Amazon Redshift -is the most widely used cloud data warehouse. It makes it fast, simple and cost-effective to analyze all your data using standard SQL and your existing Business Intelligence (BI) tools. It allows you to run complex analytic queries against terabytes to petabytes of structured and semi-structured data, using sophisticated query optimization, columnar storage on high- ...

461. A user has underutilized on-premises resources. Which AWS Cloud concept can BEST address this issue?

- A. High availability
- B. Elasticity
- C. Security
- D. Loose coupling

462. A user has a stateful workload that will run on Amazon EC2 for the next 3 years. What is the MOST cost-effective pricing model for this workload?

- A. On-Demand Instances
- B. Reserved Instances
- C. Dedicated Instances
- D. Spot Instances

463. A cloud practitioner needs an Amazon EC2 instance to launch and run for 7 hours without interruptions. What is the most suitable and cost-effective option for this task?

- A. On-Demand Instance
- B. Reserved Instance
- C. Dedicated Host
- D. Spot Instance

464. Which of the following are benefits of using AWS Trusted Advisor? (Choose two.)

- A. Providing high-performance container orchestration
- B. Creating and rotating encryption keys
- C. Detecting underutilized resources to save costs
- D. Improving security by proactively monitoring the AWS environment
- E. Implementing enforced tagging across AWS resources

465. A developer has been hired by a large company and needs AWS credentials. Which are security best practices that should be followed? (Choose two.)

- A. Grant the developer access to only the AWS resources needed to perform the job.
- B. Share the AWS account root user credentials with the developer.
- C. Add the developer to the administrator's group in AWS IAM.
- D. Configure a password policy that ensures the developer's password cannot be changed.
- E. Ensure the account password policy requires a minimum length.

Commented [MC462]: B

"In cloud computing, elasticity is defined as "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible"

Some cloud solutions can also be automatically adjusted to meet these needs. This means you can set them up to scale up or down automatically based on certain conditions, like when your cloud solution is has too many resources of which some are being under-utilised or if ...

Commented [MC463]: B

"A Reserved Instance is a reservation of resources and capacity, for either one or three years, for a particular Availability Zone within a region. When you purchase a reservation, you commit to paying for all of the hours of the 1- or 3-year term; in exchange, the hourly rate is lowered significantly."

"Amazon EC2 Reserved Instances (RI) provide a significant discount (up to 72%) compared to On-Demand RI."

Commented [MC464]: A

"On-Demand Instances let you pay for compute capacity by the hour or second (minimum of 60 seconds) with no long-term commitments. You have full control over its lifecycle—you decide when to launch, stop, hibernate, start, reboot, or terminate it. This frees you from the costs and complexities of planning, purchasing, and maintaining hardware and transforms what are commonly large fixed costs into much smaller variable costs."

Commented [MC465]: C, D

"AWS Trusted Advisor analyzes your AWS environment and provides best practice recommendations in five categories:

--Performance: AWS Trusted Advisor can improve the performance of your service by checking your service limits, ensuring you take advantage of provisioned throughput, and monitoring for overutilized instances.  
--Service Quotas: AWS Trusted Advisor checks for service usage that is more than 80% of the service quota.

Commented [MC466]: E

"To help secure your AWS resources, follow these recommendations for the AWS Identity and Access Management (IAM) service.

--Lock away your AWS account root user access keys  
--Create individual IAM users  
--Use groups to assign permissions to IAM users  
**--Grant least privilege**  
--Get started using permissions with AWS managed policies  
--Use customer managed policies instead of inline policies

466. A user is planning to migrate an application workload to the AWS Cloud. Which control becomes the responsibility of AWS once the migration is complete?

- A. Patching the guest operating system
- B. Maintaining physical and environmental controls
- C. Protecting communications and maintaining zone security
- D. Patching specific applications

**Commented [MC467]: B**

"Security and Compliance is a shared responsibility between AWS and the customer. This shared model can help relieve the customer's operational burden as AWS operates, manages and controls the components from the host operating system and virtualization layer down to **the physical security of the facilities in which the service operates**. The nature of this shared responsibility also provides the flexibility and customer control that permits the deployment. As shown in the chart above, this differentiation of responsibility is commonly referred to as Security "of" the Cloud versus Security "in" the Cloud."

"AWS data centers are secure by design and our controls make that possible. Before we build a data center, we spend countless hours considering potential threats and designing, implementing, and testing controls to ensure the systems, technology, and people we deploy counteract risk. To help you fulfill your own audit and regulatory requirements, we are providing you with insight into some of our **physical and environmental controls** below...."

## Todo

- Duplicated questions for:
  - AWS Artifact
  - AWS Organizations
  - Shared responsibility model
- Questions to revisit:
  - CMDB question
- Other:
  - Large Scale Disaster Recovery remove
  - DR = disaster recovery
  - AWS Abuse team -> AWS Trust & Safety Team
  - Ensure answers both bold & underlined
  - Ensure removed bullet points are replaced
  - Is MFA physical or virtual always
  - Search for badly worded answers/questions
  - Were any changes lost during change tracking issues
    1. Some items lost bold & underlining
    2. Recheck tagging
    3. Incorrect comment hightlighting
    4. Other?

## Change Log

v1.0 - November 2020 – Completed first version. Approximately 515 questions in total, though many are duplicates and answers are very limited

v1.1. – Mon 19 April 2021 – Improved answers, removed duplicate questions, tidied everything a bit

v1.2 – Fri 07 May 2021 - Improved answers further. Color coded answers. Bold & underlined relevant parts of answers. Resolved all tracked changes & disabled change tracking for future. (Note: I think I will not update the document much further in the near future, perhaps though if I get enough free time, I can return to update it and add more questions, no promises though). I haven't completed any other exams for AWS as of yet or compiled any resources for them, though I hope to do so in future eventually.

V1.3 – Mon 21 Jun 2021 – Some changes made, notably to Q70 (thanks Jano Broos) and Q190 (thanks Pravat Kumar Pala). Thanks also to Dred for your contribution. Also, I got a few emails asking how I did, 958/1000 if anyone else is curious. Thanks for all kind words as well, the emails are nice to read. Work wants me to do Azure AZ900 next, will get back to AWS exams in future hopefully tho. I've completed an Outsystems Reactive Web Developer guide also, so I'll try to upload that somewhere too.