1. Question

In your on-premises environment, you can create as many virtual servers as you need from a single template. What can you use to perform the same in AWS?

- **AMI**
- An internet gateway
- IAM
- EBS Snapshot

Unattempted

An Amazon Machine Image (AMI) is a template that contains a software configuration (for example, an operating system, an application server, and applications). This pre-configured template save time and avoid errors when configuring settings to create new instances. You specify an AMI when you launch an instance, and you can launch as many instances from the AMI as you need. You can also launch instances from as many different AMIs as you need.
The other options are incorrect:
“IAM“ is incorrect. IAM refers to the AWS Identity and Access Management.
“EBS Snapshot“ is incorrect. An EBS snapshot is a point-in-time copy of your Amazon EBS volume.
“An internet gateway“ is incorrect. An internet gateway is a VPC component that allows communication between instances in your VPC and the internet.
References:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html

2. 2. Question

Using Amazon RDS falls under the shared responsibility model. Which of the following are customer responsibilities? (Choose TWO)

- **Building the relational database schema**
- Installing the database software
- **Managing the database settings**
- Performing backups
- Patching the database software

Unattempted

Amazon RDS manages the work involved in setting up a relational database, from provisioning the infrastructure capacity you request to installing the database software. Once your database is up and running, Amazon RDS automates common administrative tasks such as performing backups and patching the software that powers your database. With optional Multi-AZ deployments, Amazon RDS also manages synchronous data replication across Availability Zones with automatic failover. Since Amazon RDS provides native database access, you interact with the relational database software as you normally would. This means you‘re still responsible for managing the database settings that are specific to your application. You‘ll need to build the relational

schema that best fits your use case and are responsible for any performance tuning to optimize your database for your application's workflow.
The other options are incorrect:
"Installing the database software" is incorrect. Installing the database software is AWS' responsibility.
"Performing backups" is incorrect. Performing backups is AWS' responsibility.
"Patching the database software" is incorrect. Patching the database software is AWS' responsibility.
References:
https://aws.amazon.com/rds/faqs/
https://aws.amazon.com/compliance/shared-responsibility-model/

3. 3. Question

What is the AWS tool that enables you to use scripts to manage all AWS services and resources?

- AWS Console
- **AWS CLI**
- AWS Service Catalog
- AWS OpsWorks

Unattempted

The AWS Command Line Interface (CLI) is a unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from the command line and automate them through scripts.
The other options are incorrect:
"AWS Service Catalog" is incorrect. AWS Service Catalog allows organizations to create and manage catalogs of IT services that are approved for use on AWS.
"AWS OpsWorks" is incorrect. AWS OpsWorks can be used to automate one service which is EC2. 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.
"AWS Console" is incorrect. AWS Console lets you access and manage Amazon Web Services through a web-based user interface.
References:
https://aws.amazon.com/cli/

4. 4. Question

Which of the following should be considered when performing a TCO analysis to compare the costs of running an application on AWS instead of on-premises?

- Market research
- Business analysis
- **Physical hardware**

- Application development

Unattempted

Weighing the financial considerations of owning and operating a data center facility versus employing a cloud infrastructure requires detailed and careful analysis. The Total Cost of Ownership (TCO) is often the financial metric used to estimate and compare costs of a product or a service. When comparing AWS with on-premises TCO, customers should consider all costs of owning and operating a data center. Examples of these costs include facilities, physical servers, storage devices, networking equipment, cooling and power consumption, data center space, and Labor IT cost.
The other options are incorrect.
“Application development” is incorrect. Application development is the process of creating a program or a set of programs to perform the different tasks that a business requires. Application development is a separate process that customers need to perform regardless of whether they will be using AWS or an on-premises data center. Application development is not part of the total cost of owning and operating a data center (TCO), and thus is an incorrect answer.
“Market Research” is incorrect. Market research is an organized effort to gather information about target audience and customers to determine how viable a product or service might be. Market research is a separate process that customers need to perform regardless of whether they will be using AWS or an on-premises data center.
“Business analysis” is incorrect. Business analysis is a multistage process aimed at identifying business needs and determining solutions to business problems. Business analysis is a separate process that customers need to perform regardless of whether they will be using AWS or an on-premises data center.
References:
https://aws.amazon.com/blogs/publicsector/cloud-economics-value-tco-assessment/

5. 5. Question

Which of the following EC2 instance purchasing options supports the Bring Your Own License (BYOL) model for almost every BYOL scenario?

- On-demand Instances
- Dedicated Instances
- Reserved Instances
- **Dedicated Hosts**

Unattempted

You have a variety of options for using new and existing Microsoft software licenses on the AWS Cloud. By purchasing Amazon Elastic Compute Cloud (Amazon EC2) or Amazon Relational Database Service (Amazon RDS) license-included instances, you get new, fully compliant Windows Server and SQL Server licenses from AWS. The BYOL model enables AWS customers to use their existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server.

Your existing licenses may be used on AWS with Amazon EC2 Dedicated

Hosts, Amazon EC2 Dedicated Instances or EC2 instances with default tenancy using Microsoft License Mobility through Software Assurance.

Dedicated Hosts provide additional control over your instances and visibility into Host level resources and tooling that allows you to manage software that consumes licenses on a per-core or per-socket basis, such as Windows Server and SQL Server. This is why most BYOL scenarios are supported through the use of Dedicated Hosts, while only certain scenarios are supported by Dedicated Instances.

The other options are incorrect:

“Dedicated Instances“ is incorrect. Dedicated Hosts is recommended for most BYOL scenarios for the reasons we mentioned above.

“On-demand Instances“ and “Reserved Instances“ are incorrect. On-demand instances and Reserved instances don’t support the Bring Your Own License (BYOL) model.

References:

https://aws.amazon.com/ec2/dedicated-hosts/

6. 6. Question

What is the AWS service that performs automated network assessments of Amazon EC2 instances to check for vulnerabilities?

- Amazon Kinesis
- **Amazon Inspector**
- Security groups
- AWS Network Access Control Lists

Unattempted

Amazon Inspector is an automated security assessment service that helps you test the network accessibility of your Amazon EC2 instances and the security state of your applications running on the instances. Amazon Inspector allows you to create assessment templates to automate security vulnerability assessments throughout your development and deployment pipelines or for static production systems.

The other options are incorrect:

“Security groups“ is incorrect. Security groups can be used to check the network accessibility of your Amazon EC2 instances -at the instance level- but this is not done automatically.

“Amazon Kinesis“ is incorrect. Amazon Kinesis allows you to collect, process, and analyze video and data streams in real time.

“AWS Network Access Control Lists“ is incorrect. AWS Network Access Control Lists can be used to check the network accessibility of your Amazon EC2 instances -at the subnet level- but this is not done automatically.

References:

https://aws.amazon.com/inspector/

7. 7. Question

What are the AWS services\features that can help you maintain a highly available and fault-tolerant architecture in AWS? (Choose TWO)

- CloudFormation
- **Elastic Load Balancer**
- Network ACLs
- AWS Direct Connect
- **Amazon EC2 Auto Scaling**

Unattempted

Amazon EC2 Auto Scaling is a fully managed service designed to launch or terminate Amazon EC2 instances automatically to help ensure you have the correct number of Amazon EC2 instances available to handle the load for your application. Amazon EC2 Auto Scaling helps you maintain application availability and fault tolerance through fleet management for EC2 instances, which detects and replaces unhealthy instances, and by scaling your Amazon EC2 capacity automatically according to conditions you define. You can use Amazon EC2 Auto Scaling to automatically increase the number of Amazon EC2 instances during demand spikes to maintain performance and decrease capacity during lulls to reduce costs.
Elastic Load Balancing provides an effective way to increase the availability and fault tolerance of a system. First ELB tries to discover the availability of your EC2 instances, it periodically sends pings, attempts connections, or sends requests to test the EC2 instances. These tests are called health checks. The load balancer routes user requests only to the healthy instances. When the load balancer determines that an instance is unhealthy, it stops routing requests to that instance. The load balancer resumes routing requests to the instance when it has been restored to a healthy state.
The other options are incorrect:
“CloudFormation“ is incorrect. AWS CloudFormation automates and simplifies the task of creating groups of related resources that power your applications. 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.
“Network ACLs“ is incorrect. Network ACLs is used to control traffic at the subnet level.
“AWS Direct Connect“ is incorrect. AWS Direct Connect allows you to establish a dedicated network connection from your on-premises to AWS.
References:
https://aws.amazon.com/ec2/autoscaling/
https://aws.amazon.com/elasticloadbalancing/

8. 8. Question

Amazon S3 Glacier Flexible Retrieval is an Amazon S3 storage class that is suitable for storing _____ & _____. (Choose TWO)

- **Active archives**
- Dynamic websites’ assets
- **Long-term analytic data**
- Active databases
- Cached data

Unattempted

S3 Glacier Flexible Retrieval (Formerly S3 Glacier) delivers the most flexible retrieval options that balance cost with access times ranging from minutes to hours and with free bulk retrievals. Amazon S3 Glacier Flexible Retrieval provides three retrieval options to fit your use case. Expedited retrievals typically return data in 1-5 minutes, and are best used for Active Archive use cases. Standard retrievals typically complete between 3-5 hours work, and work well for less time-sensitive needs like backup data, media editing, or long-term analytics. Bulk retrievals are the free retrieval option, returning large amounts of data within 5-12 hours.
The other options are incorrect:
“Active databases“ is incorrect. Active databases require consistent and low-latency storage performance. For example, DB instances for Amazon RDS for MySQL, MariaDB, PostgreSQL, Oracle, and Microsoft SQL Server use Amazon Elastic Block Store (Amazon EBS) volumes for database and log storage. S3 Glacier Flexible Retrieval is generally used for data archiving and backup, not for live databases.
“Cached data“ is incorrect. A cache is a high-speed data storage layer which stores a subset of data, typically transient in nature, so that future requests for that data are served up faster than is possible by accessing the data’s primary storage location. Caching allows you to efficiently reuse previously retrieved or computed data. The data in a cache is generally stored in fast access hardware such as RAM (Random-access memory) and may also be used in correlation with a software component. A cache‘s primary purpose is to increase data retrieval performance by reducing the need to access the underlying slower storage layer.
“Dynamic websites’ assets“ is incorrect. Dynamic websites usually require immediate retrieval, which is not available in S3 Glacier Flexible Retrieval.
References:
https://aws.amazon.com/glacier/

9. 9. Question

Which of the following is equivalent to a user name and password and is used to authenticate your programmatic access to AWS services and APIs?

- MFA
- Key pairs
- Instance Password
- **Access Keys**

Unattempted

Access keys consist of two parts: an access key ID and a secret access key. You must provide your AWS access keys to make programmatic requests to AWS or to use the AWS Command Line Interface or AWS Tools for PowerShell. Like a user name and password, you must use both the access key ID and secret access key together to authenticate your requests.
The other options are incorrect:
“MFA“ is incorrect. MFA is an additional security layer that can be used to secure

your AWS console. MFA can also be used to control access to AWS service APIs.
“Instance Password“ is incorrect. There are no passwords related to the EC2 instances.
“Key pairs“ is incorrect. The AWS key pair is used to securely connect to your Amazon EC2 instances.
References:
https://docs.aws.amazon.com/general/latest/gr/aws-sec-cred-types.html

10. 10. Question

Which of the following aspects of security are managed by AWS? (Choose TWO)

- Encryption of EBS volumes
- **Securing global physical infrastructure**
- Access permissions
- **Hardware patching**
- VPC security

Unattempted

AWS is continuously innovating the design and systems of its data centers to protect them from man-made and natural risks. For example, at the first layer of security, AWS provides a number of security features depending on the location, such as security guards, fencing, security feeds, intrusion detection technology, and other security measures.
According to the Shared Responsibility model, patching of the underlying hardware is the AWS’ responsibility. AWS is responsible for patching and fixing flaws within the infrastructure, but customers are responsible for patching their guest OS and applications.
The other options are incorrect:
“VPC security“ is incorrect. The configuration and security of the VPC are customer’s responsibilities.
“Encryption of EBS volumes“ is incorrect. The customer is responsible for encrypting their data on EBS either on the client side or on the server side.
“Access permissions“ is incorrect. The customer is responsible for managing the IAM permissions.
Additional information:
IAM permissions let the customer specify access to AWS resources. Permissions are granted to IAM entities (users, user groups, and roles) and by default these entities start with no permissions. In other words, IAM entities can do nothing in AWS until you grant them your desired permissions. To give entities permissions, you can attach a policy that specifies the type of access, the actions that can be performed, and the resources on which the actions can be performed.
References:
https://aws.amazon.com/compliance/shared-responsibility-model/

11. 11. Question

Which of the following will impact the price paid for an EC2 instance? (Choose TWO)

- Number of buckets
- The Availability Zone where the instance is provisioned
- **Load balancing**
- **Instance type**
- Number of private IPs

Unattempted

EC2 instance pricing varies depending on many variables:
– The buying option (On-demand, Savings Plans, Reserved, Spot, Dedicated)
– Selected instance type
– Selected Region
– Number of instances
– Load balancing
– Allocated Elastic IP Addresses
Load balancing: The number of hours the Elastic Load Balancer runs and the amount of data it processes contribute to the EC2 monthly cost.
Instance type: Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instance types comprise varying combinations of CPU, memory, storage, and networking capacity.
The other options are incorrect:

“The Availability Zone where the instance is provisioned“ is incorrect. Prices of the Amazon EC2 instances may vary depending on the Region where the instances are provisioned. Amazon EC2 instances provisioned in different Availability Zones within the same Region have the same price.
“Number of private IPs“ is incorrect. There is no charge for private IPs.
Additional information:
The number of allocated Elastic IPs is the factor that may affect Amazon EC2 charges. To ensure efficient use of Elastic IP addresses, AWS imposes a small hourly charge if an Elastic IP address is not associated with a running instance, or if it is associated with a stopped instance. While the instance is running, you are not charged for one Elastic IP address associated with the instance, but additional Elastic IPs are not free.
“Number of buckets“ is incorrect. A bucket is an Amazon S3 resource, not an Amazon EC2 resource.
Additional information:
To upload your data (photos, videos, documents, etc.) to Amazon S3, you must first create an S3 bucket (which is like a file folder) in one of the AWS Regions. You can then upload any number of objects to the bucket. The customer is charged based on the total size of the objects (in GB) stored in their S3 bucket, not for the bucket itself.
References:
https://docs.aws.amazon.com/whitepapers/latest/how-aws-pricing-works/how-aws-pricing-works.pdf

12. 12. Question

A company has deployed a new web application on multiple Amazon EC2 instances. Which of the following should they use to ensure that the incoming HTTP traffic is distributed evenly across the instances?

- **AWS Application Load Balancer**
- AWS Gateway Load Balancer
- AWS Network Load Balancer
- AWS Auto Scaling

Unattempted

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, and Lambda functions. Elastic Load Balancing supports four types of load balancers (Application Load Balancer, Network Load Balancer, Gateway Load Balancer, and Classic Load Balancer). You can select the appropriate load balancer based on your application needs.
1- If you need to load balance HTTP\HTTPS requests, AWS recommends using the AWS Application Load Balancer.
2- For network/transport protocols (layer4 – TCP, UDP) load balancing and for extreme performance/low latency applications, AWS recommends using the AWS Network Load Balancer.
3- To manage and distribute traffic across multiple third-party virtual appliances, AWS recommends using the AWS Gateway Load Balancer.
4- If you have an existing application built within the EC2-Classic network, you should use the AWS Classic Load Balancer.
Application Load Balancer is best suited for load balancing of HTTP and HTTPS traffic. In our case, the application receives HTTP traffic. Hence, the Application Load Balancer is the correct answer here.
The other options are incorrect:
“AWS Network Load Balancer“ is incorrect. The traffic comes to the instances through HTTP. Network Load Balancer is best suited for load balancing of TCP and UDP traffic.
“AWS Gateway Load Balancer“ is incorrect. AWS Gateway Load Balancer is used to manage and distribute traffic across multiple third-party virtual appliances.
Gateway Load Balancer helps you easily deploy, scale, and manage third-party virtual appliances such as firewalls, Anti-malware, deep packet inspection systems, and intrusion detection and prevention systems.
Gateway Load Balancer gives you one gateway for distributing traffic across multiple virtual appliances while scaling them up or down, based on demand. This decreases potential points of failure in your network and increases availability.
Additional information:
What is a virtual appliance?
A virtual appliance sits in line with network traffic and inspects incoming and outgoing traffic flows. These can be firewalls, deep packet inspection systems, inline analytics, or other inline functions that have traditionally been referred to as network appliances. AWS Customers can find, test, and buy virtual appliances from third-party vendors directly in AWS Marketplace. This integrated experience streamlines the deployment process, so customers see value from their virtual appliances more quickly.

“AWS Auto Scaling“ is incorrect. AWS Auto Scaling is not for distributing traffic. AWS Auto Scaling monitors your applications and automatically adjusts capacity (up or down) to maintain steady, predictable performance at the lowest possible cost.
References:
https://d1.awsstatic.com/whitepapers/aws-overview.pdf

13. 13. Question

Under the Shared Responsibility Model, which of the following controls do customers fully inherit from AWS? (Choose TWO)

- Patch management controls
- **Environmental controls**
- **Physical controls**
- Database controls
- Awareness & Training

Unattempted

AWS is responsible for physical controls and environmental controls. Customers inherit these controls from AWS.

As mentioned in the AWS Shared Responsibility Model page, Inherited Controls are controls which a customer fully inherits from AWS such as physical controls and environmental controls.

As a customer deploying an application on AWS infrastructure, you inherit security controls pertaining to the AWS physical, environmental and media protection, and no longer need to provide a detailed description of how you comply with these control families.

For example: Let’s say you have built an application in AWS for customers to securely store their data. But your customers are concerned about the security of the data and ensuring compliance requirements are met. To address this, you assure your customer that “our company does not host customer data in its corporate or remote offices, but rather in AWS data centers that have been certified to meet industry security standards.” That includes physical and environmental controls to secure the data, which is the responsibility of Amazon. Companies do not have physical access to the AWS data centers, and as such, they fully inherit the physical and environmental security controls from AWS.
You can read more about AWS’ data center controls here:
https://aws.amazon.com/compliance/data-center/controls/
The other options are incorrect:
“Patch management controls“ is incorrect. Patch Management belongs to the shared controls. AWS is responsible for patching the underlying hosts and fixing flaws within the infrastructure, but customers are responsible for patching their guest OS and applications.
“Database controls“ is incorrect. Database controls belongs to the shared controls. AWS maintains the configuration of its infrastructure devices that run the database, but customers are responsible for configuring their own databases, and applications.
“Awareness & Training“ is incorrect. Awareness & Training belongs to the shared controls. AWS trains AWS employees, but customers must train their own

employees.
References:
https://aws.amazon.com/compliance/shared-responsibility-model/

14. 14. Question

What are the change management tools that helps AWS customers audit and monitor all resource changes in their AWS environment? (Choose TWO)

- Amazon Comprehend
- AWS Transit Gateway
- AWS X-Ray
- **AWS Config**
- **AWS CloudTrail**

Unattempted

Change management is defined as “the Process responsible for controlling the Lifecycle of all Changes. The primary objective of Change Management is to enable beneficial changes to be made, with minimum disruption to IT Services.

Despite all of the investments in software and hardware, an erroneous configuration or misstep in a process can frequently undo these efforts and lead to failure.

AWS Config and AWS CloudTrail are change management tools that help AWS customers audit and monitor all resource and configuration changes in their AWS environment

Customers can use AWS Config to answer “What did my AWS resource look like?” at a point in time. Customers can use AWS CloudTrail to answer “Who made an API call to modify this resource?” For example, a customer can use the AWS Management Console for AWS Config to detect that the security group “Production-DB” was incorrectly configured in the past. Using the integrated AWS CloudTrail information, they can pinpoint which user misconfigured the “Production-DB” security group. In brief, AWS Config provides information about the changes made to a resource, and AWS CloudTrail provides information about who made those changes. These capabilities enable customers to discover any misconfigurations, fix them, and protect their workloads from failures.
The other options are incorrect:
“AWS Transit Gateway” is incorrect. AWS Transit Gateway is a network transit hub that customers can use to interconnect their virtual private clouds (VPCs) and their on-premises networks. AWS transit gateway simplifies how customers interconnect all of their VPCs, across thousands of AWS accounts and into their on-premises networks.
“AWS X-Ray” is incorrect. AWS X-Ray is a debugging service that helps developers understand how their application and its underlying services are performing to identify and troubleshoot the root cause of performance issues and errors.
“Amazon Comprehend” is incorrect. Amazon Comprehend is a Natural Language Processing (NLP) service that uses machine learning to find meaning and insights in text. Customers can use Amazon Comprehend to identify the language of the text, extract key phrases, places, people, brands, or events, understand sentiment about products or services, and identify the main topics

from a library of documents. The source of this text could be web pages, social media feeds, emails, or articles. Amazon Comprehend is fully managed, so there are no servers to provision, and no machine learning models to build, train, or deploy.
Note: Natural language processing (NLP) is an artificial intelligence technology that helps computers identify, understand, and manipulate human language.
References:
https://d1.awsstatic.com/whitepapers/aws-overview.pdf

15. 15. Question

What is the AWS data warehouse service that supports a high level of query performance on large amounts of datasets?

- Amazon RDS
- Amazon Kinesis
- Amazon DynamoDB
- **Amazon Redshift**

Unattempted

Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the cloud. It allows you to run complex analytic queries against petabytes of structured data. You can start with just a few hundred gigabytes of data and scale to a petabyte or more. Amazon Redshift manages the work needed to set up, operate, and scale a data warehouse, from provisioning the infrastructure capacity to automating ongoing administrative tasks such as backups, and patching.
The other options are incorrect:
“Amazon Kinesis“ is incorrect. Amazon Kinesis is used to collect, process, and analyze video and data streams in real time.
“Amazon RDS“ is incorrect. Amazon Relational Database Service (Amazon RDS) is a managed service that makes it easy to set up, operate, and scale a relational database in the AWS Cloud. Amazon RDS provides you with six relational database engines to choose from, including Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle Database, and Microsoft SQL Server.
“Amazon DynamoDB“ is incorrect. Amazon DynamoDB is a NoSQL database service.
References:
https://docs.aws.amazon.com/redshift/latest/mgmt/welcome.html

16. 16. Question

What are the connectivity options that can be used to build hybrid cloud architectures? (Choose TWO)

- AWS Artifact
- **AWS Direct Connect**
- AWS Cloud9

- AWS CloudTrail
- **AWS VPN**

Unattempted

In cloud computing, hybrid cloud refers to the use of both on-premises resources in addition to public cloud resources. A hybrid cloud enables an organization to migrate applications and data to the cloud, extend their datacenter capacity, utilize new cloud-native capabilities, move applications closer to customers, and create a backup and disaster recovery solution with cost-effective high availability. By working closely with enterprises, AWS has developed the industry's broadest set of hybrid capabilities across storage, networking, security, application deployment, and management tools to make it easy for you to integrate the cloud as a seamless and secure extension of your existing investments.

AWS Virtual Private Network solutions establish secure connections between your on-premises networks, remote offices, client devices, and the AWS global network. AWS VPN is comprised of two services: AWS Site-to-Site VPN and AWS Client VPN. AWS Site-to-Site VPN enables you to securely connect your on-premises network or branch office site to AWS. AWS Client VPN enables you to securely connect users (from any location) to AWS or on-premises networks. 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 can tolerate the inherent variability in Internet-based connectivity.

AWS Direct Connect does not involve the Internet; instead, it uses dedicated, private network connections between your on-premises network or branch office site and Amazon VPC. AWS Direct Connect is a network service that provides an alternative to using the Internet to connect customer's on-premise sites to AWS. Using AWS Direct Connect, data that would have previously been transported over the Internet can now be delivered through a private network connection between AWS and your datacenter or corporate network. Companies of all sizes use AWS Direct Connect to establish private connectivity between AWS and datacenters, offices, or colocation environments. Compared to AWS VPN (Internet-based connection), AWS Direct Connect can reduce network costs, increase bandwidth throughput, and provide a more consistent network experience.

Additional information:

Besides the connectivity options that AWS provides, AWS provides many features to support building more efficient hybrid cloud architectures. For example, AWS Identity and Access Management (IAM) can grant your employees and applications access to the AWS Management Console and AWS service APIs using your existing corporate identity systems. AWS IAM supports federation from corporate systems like Microsoft Active Directory, as well as external Web Identity Providers like Google and Facebook.

The other options are incorrect:

"AWS Cloud9" is incorrect. AWS Cloud9 is a cloud-based integrated development environment (IDE) that lets you write, run, and debug your code with just a browser. It includes a code editor, debugger, and terminal. Cloud9 comes prepackaged with essential tools for popular programming languages, including JavaScript, Python, PHP, and more, so you don't need to install files or configure your development machine to start new projects.

"AWS Artifact" is incorrect. AWS Artifact provides on-demand access to AWS'

compliance reports.
“AWS CloudTrail“ is incorrect. AWS CloudTrail is a web service that tracks and records all user interactions with AWS services.
References:
https://aws.amazon.com/directconnect/
https://aws.amazon.com/vpn/

17. 17. Question

Savings Plans are available for which of the following AWS compute services? (Choose TWO)

- **AWS Lambda**
- AWS Outposts
- **Amazon EC2**
- AWS Batch
- Amazon Lightsail

Unattempted

Savings Plans are a flexible pricing model that offers low prices on EC2, Lambda, and Fargate usage, in exchange for a commitment to a consistent amount of usage (measured in $/hour) for a 1 or 3 year term. When you sign up for Savings Plans, you will be charged the discounted Savings Plans price for your usage up to your commitment. For example, if you commit to $10 of compute usage an hour, you will get the Savings Plans prices on that usage up to $10 and any usage beyond the commitment will be charged On Demand rates.
Additional information:
What is the difference between Amazon EC2 Savings Plans and Amazon EC2 Reserved instances?

Reserved Instances are a billing discount applied to the use of On-Demand Compute Instances in your account. These On-Demand Instances must match certain attributes, such as instance type and Region to benefit from the billing discount.

For example, let say you have a t2.medium instance running as an On-Demand Instance and you purchase a Reserved Instance that matches the configuration of this particular t2.medium instance. At the time of purchase, the billing mode for the existing instance changes to the Reserved Instance discounted rate. The existing t2.medium instance doesn‘t need replacing or migrating to get the discount.

After the reservation expires, the instance is charged as an On-Demand Instance. You can repurchase the Reserved Instance to continue the discounted rate on your instance. Reserved Instances act as an automatic discount on new or existing On-Demand Instances in your account.

Savings Plans also offer significant savings on your Amazon EC2 costs compared to On-Demand Instance pricing. With Savings Plans, you make a commitment to a consistent usage amount, measured in USD per hour. This provides you with the flexibility to use the instance configurations that best meet your needs, instead of making a commitment to a specific instance configuration (as is the case with reserved instances). For example, with Compute Savings Plans, if you commit to $10 of compute usage an hour, you can use as many

instances as you need (of any type) and you will get the Savings Plans prices on that usage up to $10 and any usage beyond the commitment will be charged On Demand rates.
The other options are incorrect:
“AWS Batch“ is incorrect. Savings Plans are not available for AWS Batch.
AWS Batch is a compute service that allows you to run hundreds of thousands of batch computing jobs on AWS. AWS Batch dynamically provisions the optimal quantity and type of compute resources (e.g., CPU or memory optimized instances) based on the volume and specific resource requirements of the batch jobs submitted.
“AWS Outposts“ is incorrect. Savings Plans are not available for AWS Outposts.
AWS Outposts is an AWS service that delivers the same AWS infrastructure, native AWS services, APIs, and tools to virtually any customer on-premises facility. With AWS Outposts, customers can run AWS services locally on their Outpost, including EC2, EBS, ECS, EKS, and RDS, and also have full access to services available in the Region.
Customers can use AWS Outposts to securely store and process data that needs to remain on-premises or in countries where there is no AWS region. AWS Outposts is ideal for applications that have low latency or local data processing requirements, such as financial services, healthcare, etc.
“Amazon Lightsail” is incorrect. Savings Plans are not available for Amazon Lightsail.
Amazon Lightsail provides a low-cost Virtual Private Server (VPS) in the cloud.
References:
https://aws.amazon.com/savingsplans/

18. 18. Question

A company has a large amount of structured data stored in their on-premises data center. They are planning to migrate all the data to AWS, what is the most appropriate AWS database option?

- **Amazon RDS**
- Amazon DynamoDB
- Amazon ElastiCache
- Amazon SNS

Unattempted

Since the data is structured, then it is best to use a relational database service such as Amazon RDS.
The other options are incorrect:
“Amazon ElastiCache“ is incorrect. ElastiCache is an in-memory data store and cache service.
“Amazon DynamoDB“ is incorrect. DynamoDB is a NoSQL database service. NoSQL is designed for unstructured data.
“Amazon SNS“ is incorrect. Amazon Simple Notification Service (SNS) is not a database service. Amazon SNS is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and serverless applications.

References:
https://aws.amazon.com/rds/

19. 19. Question

Your application has recently experienced significant global growth, and international users are complaining of high latency. What is the AWS characteristic that can help improve your international users' experience?

- Data durability
- Elasticity
- **Global reach**
- High availability

Unattempted

With AWS, you can deploy your application in multiple regions around the world. The user will be redirected to the Region that provides the lowest possible latency and the highest performance. You can also use the CloudFront service that uses edge locations (which are located in most of the major cities across the world) to deliver content with low latency and high performance to your global users.
The other options are incorrect:
"High availability" is incorrect. High Availability can be achieved by deploying your application in multiple Availability Zones within a single Region. If one Availability Zone goes down, the others can handle user requests. This may not reduce latency to your international users. In other words, the application will be available for them all the time, but with high latency.
"Elasticity" is incorrect. Elasticity refers to the ability of a system to scale the underlying resources up when demand increases (to maintain performance), or scale down when demand decreases (to reduce costs). This option does not indicate whether your resources will be deployed in a single Region or multiple Regions.
"Data durability" is incorrect. Durability refers to the ability of a system to assure data is stored and data remains consistent in the system as long as it is not changed by legitimate access. This means that data should not become corrupted or disappear due to a system malfunction. Durability is used to measure the likelihood of data loss. For example, assume you have confidential data stored in your Laptop. If you make a copy of it and store it in a secure place, you have just improved the durability of that data. It is much less likely that all copies will be simultaneously destroyed.
Data durability can be achieved by replicating data across multiple Availability Zones within a single Region. For example, the S3 Standard Tier is designed for 99.999999999% durability. This means that if you store 100 billion objects in S3, you will lose one object at most.
References:
https://aws.amazon.com/about-aws/global-infrastructure/

20. 20. Question

What do you gain from setting up consolidated billing for five different AWS accounts under another master account?

- AWS services' costs will be reduced to half the original price
- **Each AWS account gets volume discounts**
- Each AWS account gets five times the free-tier services capacity
- The consolidated billing feature is just for organizational purposes

Unattempted

AWS consolidated billing enables an organization to consolidate payments for multiple AWS accounts within a single organization by making a single paying account. For billing purposes, AWS treats all the accounts on the consolidated bill as one account. Some services, such as Amazon EC2 and Amazon S3 have volume pricing tiers across certain usage dimensions that give the user lower prices when they use the service more. For example if you use 50 TB in each account you would normally be charged $23 *50*3 (because they are 3 different accounts), But with consolidated billing you would be charged $23*50+$22*50*2 (because they are treated as one account) which means that you would save $100.

HOW IT WORKS

After you create an organization and verify that you own the email address associated with the master (management) account, you can invite existing AWS accounts to join your organization. When you invite an account, the AWS Organizations service sends an invitation to the account owner, who decides whether to accept or decline the invitation. If they accept, their account becomes a member of that organization.

At the moment an account accepts the invitation to join an organization, the master account of the organization becomes liable for all charges accrued by the new member account. The payment method attached to the member account is no longer used. Instead, the payment method attached to the master account of the organization pays for all charges accrued by the member account.

References:

https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/consolidated-billing.html

https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_accounts_invites.html

https://aws.amazon.com/s3/pricing/

21. 21. Question

Which of the following must an IAM user provide to interact with AWS services using the AWS Command Line Interface (AWS CLI)?

- **Access keys**
- User ID
- User name and password
- Secret token

Unattempted

Access keys consist of an access key ID and secret access key, which are used to sign programmatic requests to AWS using the CLI or the SDK.
References:
https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html

22. 22. Question

Which of the following is not a benefit of Amazon S3? (Choose TWO)

- Amazon S3 stores any number of objects, but with object size limits
- **Amazon S3 can run any type of application or backend system**
- Amazon S3 provides 99.999999999% (11 9's) of data durability
- Amazon S3 provides unlimited storage for any type of data
- **Amazon S3 can be scaled manually to store and retrieve any amount of data from anywhere**

Unattempted

"Amazon S3 can run any type of application or backend system" is not a benefit of S3 and thus is a correct answer. Amazon S3 is a storage service not a compute service.
"Amazon S3 can be scaled manually to store and retrieve any amount of data from anywhere" is not a benefit of S3 and thus is a correct answer. Amazon S3 scales automatically to store and retrieve any amount of data from anywhere.
Companies today need the ability to simply and securely collect, store, and analyze their data at a massive scale. Amazon S3 is object storage built to store and retrieve any amount of data from anywhere – web sites and mobile apps, corporate applications, and data from IoT sensors or devices. It's a simple storage service that offers highly available, and infinitely scalable data storage infrastructure at very low costs. It is designed to deliver 99.999999999% durability, and stores data for millions of applications used by market leaders in every industry. S3 provides comprehensive security and compliance capabilities that meet even the most stringent regulatory requirements. It gives customers flexibility in the way they manage data for cost optimization, access control, and compliance. S3 provides query-in-place functionality, allowing you to run powerful analytics directly on your data at rest in S3. And Amazon S3 is the most supported cloud storage service available, with integration from the largest community of third-party solutions, systems integrator partners, and other AWS services.
Amazon S3 stores any number of objects, but each object does have a size limitation. Individual Amazon S3 objects can range in size from a minimum of 0 bytes to a maximum of 5 terabytes.
References:
https://aws.amazon.com/s3/

23. 23. Question

You work as an on-premises MySQL DBA. The work of database configuration, backups, patching, and DR can be time-consuming and repetitive. Your company

has decided to migrate to the AWS Cloud. Which of the following can help save time on database maintenance so you can focus on data architecture and performance?

- **Amazon RDS**
- Amazon CloudWatch
- Amazon Redshift
- Amazon DynamoDB

Unattempted

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, resizable capacity while automating time-consuming administration tasks such as hardware provisioning, operating system maintenance, 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.

Amazon RDS can be used to host Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle, and Microsoft SQL Server databases.

The other options are incorrect:

“Amazon Redshift“ is incorrect. Amazon Redshift is not a MySQL database service. Amazon Redshift is a fully managed data warehouse service that makes it simple and cost-effective to analyze all your data using standard SQL and your existing Business Intelligence (BI) tools.

“Amazon DynamoDB“ is incorrect. Amazon DynamoDB is not a MySQL database service. Amazon DynamoDB is a fully managed NoSQL database service.

“Amazon CloudWatch“ is incorrect. Amazon CloudWatch is not a database service. Amazon CloudWatch is a monitoring service that gives you complete visibility of your cloud resources and applications

References:

https://aws.amazon.com/rds/

24. 24. Question

What is the AWS database service that allows you to upload data structured in key-value format?

- Amazon Aurora
- **Amazon DynamoDB**
- Amazon Redshift
- Amazon RDS

Unattempted

Amazon DynamoDB is a NoSQL database service. NoSQL databases are used for non-structured data that are typically stored in JSON-like, key-value documents.

The other options are incorrect:

Amazon Redshift is incorrect. Amazon Redshift is a data warehouse service that only supports relational data, NOT key-value data.

Additional information:

Amazon Redshift is a fast, fully managed data warehouse service that is specifically designed for online analytic processing (OLAP) and business intelligence (BI) applications, which require complex queries against large datasets.
Amazon Aurora is incorrect. Amazon Aurora is a MySQL and PostgreSQL-compatible relational database NOT a key-value database.
Amazon RDS is incorrect. Amazon RDS is a relational database NOT a key-value database.
References:
https://aws.amazon.com/dynamodb/
https://aws.amazon.com/products/databases/

25. 25. Question

A company is introducing a new product to their customers, and is expecting a surge in traffic to their web application. As part of their Enterprise Support plan, which of the following provides the company with architectural and scaling guidance?

- AWS Support Concierge Service
- AWS Health Dashboard
- **Infrastructure Event Management**
- AWS Knowledge Center

Unattempted

AWS Infrastructure Event Management is a short-term engagement with AWS Support, included in the Enterprise-level Support product offering, and available for additional purchase for Business-level Support subscribers. AWS Infrastructure Event Management partners with your technical and project resources to gain a deep understanding of your use case and provide architectural and scaling guidance for an event. Common use-case examples for AWS Event Management include advertising launches, new product launches, and infrastructure migrations to AWS.
The other options are incorrect:
“AWS Health Dashboard“ is incorrect. The AWS Health Dashboard (previously AWS Personal Health Dashboard) is the single place to learn about the availability and operations of AWS services. You can view the overall status of all AWS services, and you can sign in to access a personalized view of the health of the specific services that are powering your workloads and applications. AWS Health Dashboard proactively notifies you when AWS experiences any events that may affect you, helping provide quick visibility and guidance to minimize the impact of events in progress, and plan for any scheduled changes, such as AWS hardware maintenance.
“AWS Knowledge Center“ is incorrect. AWS Knowledge Center is not part of the Enterprise support plan. AWS Knowledge Center is available for everyone free of charge. The AWS Knowledge Center helps answer the questions most frequently asked by AWS customers. The AWS Knowledge Center does not provide guidance on a case-by-case basis.
“AWS Support Concierge Service“ is incorrect. AWS Support Concierge Service assists customers with account and billing inquiries.

References:
https://aws.amazon.com/premiumsupport/features/

26. 26. Question

AWS allows users to manage their resources using a web based user interface. What is the name of this interface?

- AWS API
- **AWS Management Console**
- AWS SDK
- AWS CLI

Unattempted

The AWS Management Console allows you to access and manage Amazon Web Services through a simple and intuitive web-based user interface. You can also use the AWS Console mobile app to quickly view resources on the go.
The other options are incorrect:
AWS CLI is incorrect. The AWS Command Line Interface (CLI) is a unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from the command line and automate them through scripts.
AWS SDK is incorrect. The AWS SDK (Software Development Kit) allows you to interact with AWS services using your preferred programming language.
AWS API is incorrect. AWS API refers to the AWS application programming interface.
References:
https://aws.amazon.com/console/

27. 27. Question

You have set up consolidated billing for several AWS accounts. One of the accounts has purchased a number of reserved instances for 3 years. Which of the following is true regarding this scenario?

- **All accounts can receive the hourly cost benefit of the Reserved Instances**
- There are no cost benefits from using consolidated billing; It is for informational purposes only
- The purchased instances will have better performance than On-demand instances
- The Reserved Instance discounts can only be shared with the master account

Unattempted

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. For example, Suppose that Fiona and John each have an account in an organization. Fiona has five Reserved Instances of the same type, and John has none. During one particular hour, Fiona uses three instances and John uses six, for a total of nine instances on the organization‘s consolidated bill. AWS bills five instances as Reserved Instances, and the remaining four instances as On-demand instances.
The other options are incorrect:
“The purchased instances will have better performance than On-demand instances“ is incorrect. There is no difference in performance between On-demand and Reserved instances of the same type.
“The Reserved Instance discounts can only be shared with the master account“ is incorrect. The Reserved Instance discounts can be shared with all accounts in the organization.
“There are no cost benefits from using consolidated billing; It is for informational purposes only“ is incorrect. With Consolidated Billing, you can combine the usage across all accounts in the organization to share the Reserved Instance discounts, volume pricing discounts, and Savings Plans. This can result in a lower charge for your project, department, or company than with individual standalone accounts.
References:
https://docs.aws.amazon.com/aws-technical-content/latest/cost-optimization-reservation-models/consolidated-billing.html
https://aws.amazon.com/organizations/

28. 28. Question

A company is deploying a new two-tier web application in AWS. Where should the most frequently accessed data be stored so that the application’s response time is optimal?

- AWS Storage Gateway
- Amazon EBS volume
- AWS OpsWorks
- **Amazon ElastiCache**

Unattempted

Amazon ElastiCache is a web service that makes it easy to deploy, operate, and scale an in-memory data store or cache in the cloud. The service improves the performance of web applications by allowing you to retrieve information from fast, managed, in-memory data stores, instead of relying entirely on slower disk-based databases.

The primary purpose of an in-memory data store is to provide ultrafast (submillisecond latency) and inexpensive access to copies of data. Querying a database is always slower and more expensive than locating a copy of that data in a cache. Some database queries are especially expensive to perform. An example is queries that involve joins across multiple tables or queries with intensive calculations. By caching (storing) such query results, you pay the price of the query only once. Then you can quickly retrieve the data multiple times without having to re-execute the query.
The other options are incorrect:

“AWS Storage Gateway“ is incorrect. AWS Storage Gateway is not a caching service, it is a hybrid storage service that enables your on-premises applications to seamlessly use AWS cloud storage.
“Amazon EBS volume“ is incorrect. An Amazon EBS volume is a durable, block-level storage device that you can attach to a single EC2 instance. You can use EBS volumes as primary storage for data that requires frequent updates, such as the system drive for an instance or storage for a database application. You can also use them for throughput-intensive applications that perform continuous disk scans.
“AWS OpsWorks“ is incorrect. 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.
References:
https://aws.amazon.com/elasticache/

29. 29. Question

You have deployed your application on multiple Amazon EC2 instances. Your customers complain that sometimes they can’t reach your application. Which AWS service allows you to monitor the performance of your EC2 instances to assist in troubleshooting these issues?

- AWS Config
- AWS CloudTrail
- AWS Lambda
- **Amazon CloudWatch**

Unattempted

Amazon CloudWatch is a service that monitors AWS cloud resources and the applications you run on AWS. You can use Amazon CloudWatch to collect and track metrics, collect and monitor log files, set alarms, and automatically react to changes in your AWS resources. Amazon CloudWatch can monitor AWS resources such as Amazon EC2 instances, Amazon DynamoDB tables, and Amazon RDS DB instances, as well as custom metrics generated by your applications and services, and any log files your applications generate. You can use CloudWatch to detect anomalous behavior in your environments, take automated actions, troubleshoot issues, and discover insights to keep your applications running smoothly.
The other options are incorrect:
“AWS Config“ is incorrect. AWS Config is a fully managed service that provides you with an AWS resource inventory, configuration history, and configuration change notifications to enable security and governance. With AWS Config you can discover existing AWS resources, export a complete inventory of your AWS resources with all configuration details, and determine how a resource was configured at any point in time. These capabilities enable compliance auditing, security analysis, and resource change tracking.
“AWS CloudTrail“ is incorrect. AWS CloudTrail is an AWS service that can be

used to monitor all user interactions with the AWS environment.
“AWS Lambda“ is incorrect. AWS Lambda is a serverless compute service.
References:
https://aws.amazon.com/cloudwatch/

30. 30. Question

A company is concerned that they are spending money on underutilized compute resources in AWS. Which AWS feature will help ensure that their applications are automatically adding/removing EC2 compute capacity to closely match the required demand?

- AWS Cost Explorer
- AWS Budgets
- AWS Elastic Load Balancer
- **AWS Auto Scaling**

Unattempted

AWS Auto Scaling is the feature that automates the process of adding/removing server capacity (based on demand). Autoscaling allows you to reduce your costs by automatically turning off resources that aren’t in use. On the other hand, Autoscaling ensures that your application runs effectively by provisioning more server capacity if required.
The other options are incorrect:
“AWS Budgets“ is incorrect. 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.
“AWS Elastic Load Balancer“ is incorrect. AWS Elastic Load Balancer (ELB) is a service that distributes the incoming application traffic to multiple targets that you define.
“AWS Cost Explorer“ is incorrect. AWS Cost Explorer provides an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time.
References:
https://aws.amazon.com/autoscaling/

31. 31. Question

A company has decided to migrate its Oracle database to AWS. Which AWS service can help achieve this without negatively impacting the functionality of the source database?

- AWS Application Migration Service
- AWS OpsWorks
- **AWS Database Migration Service**
- AWS Application Discovery Service

Unattempted

AWS Database Migration Service (DMS) helps you migrate databases to AWS easily and securely. The source database remains fully operational during the migration, minimizing downtime to applications that rely on the database. The AWS Database Migration Service can migrate your data to and from most widely used commercial and open-source databases. The service supports homogeneous migrations such as Oracle to Oracle, as well as heterogeneous migrations between different database platforms, such as Oracle to Amazon Aurora or Microsoft SQL Server to MySQL. It also allows you to stream data to Amazon Redshift from any of the supported sources including Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle, SAP ASE, and SQL Server, enabling consolidation and easy analysis of data in the petabyte-scale data warehouse. AWS Database Migration Service can also be used for continuous data replication with high availability.
The other options are incorrect:
“AWS OpsWorks“ is incorrect. AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet.
“AWS Application Migration Service” is incorrect. AWS Application Migration Service is a highly automated lift-and-shift (rehost) solution that simplifies the process of migrating applications from physical, virtual, and cloud-based infrastructure, ensuring that they are fully operational in any AWS Region without compatibility issues.
“AWS Application Discovery Service“ is incorrect. AWS Application Discovery Service helps enterprise customers plan migration projects by gathering information about their on-premises data centers.
References:
https://d1.awsstatic.com/whitepapers/aws-overview.pdf

32. 32. Question

What is the advantage of the AWS-recommended practice of “decoupling“ applications?

- **Reduces inter-dependencies so that failures do not impact other components of the application**
- Allows treating an application as a single, cohesive unit
- Allows updates of any monolithic application quickly and easily
- Allows tracking of any API call made to any AWS service

Unattempted

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. On the other hand if the components of an application are tightly coupled and one component fails, the entire application will also fail. Therefore when designing your application, you should always decouple its components.
The other options are incorrect:
“Allows treating an application as a single, cohesive unit“ is incorrect. Decoupling allows you to deal with your application as multiple independent components (microservices) not as a single, cohesive unit.

“Allows tracking of any API call made to any AWS service“ is incorrect. There is no relation between decoupling an application and tracking API calls. API calls are tracked by AWS CloudTrail.
“Allows updates of any monolithic application quickly and easily“ is incorrect. Decoupling is the exact opposite of having a monolithic application. A monolithic application is designed to be self-contained; components of the program are interconnected and interdependent rather than loosely coupled as is the case with Microservices applications (or loosely-coupled applications). Decoupling allows the update of any microservices application component to occur quickly and independently of the remainder of the application. This allows developers to work independently to update multiple components at the same time. On the other hand, a monolithic application is a single unit and takes more time and effort to be updated.
References:
https://aws.amazon.com/microservices/

33. 33. Question

What does the AWS Health Dashboard provide? (Choose TWO)

- Recommendations for Cost Optimization
- **Detailed troubleshooting guidance to address AWS events impacting your resources**
- Health checks for Auto Scaling instances
- A dashboard detailing vulnerabilities in your applications
- **Personalized view of AWS service health**

Unattempted

The AWS Health Dashboard (previously AWS Personal Health Dashboard) is the single place to learn about the availability and operations of AWS services. You can view the overall status of all AWS services, and you can sign in to access a personalized view of the health of the specific services that are powering your workloads and applications. AWS Health Dashboard proactively notifies you when AWS experiences any events that may affect you, helping provide quick visibility and guidance to minimize the impact of events in progress, and plan for any scheduled changes, such as AWS hardware maintenance.
The benefits of the AWS Health Dashboard include:
**A personalized View of Service Health: AWS Health Dashboard gives you a personalized view of the status of the AWS services that power your applications, enabling you to quickly see when AWS is experiencing issues that may impact you. For example, in the event of a lost EBS volume associated with one of your EC2 instances, you would gain quick visibility into the status of the specific service you are using, helping save precious time troubleshooting to determine root cause.
**Proactive Notifications: The dashboard also provides forward looking notifications, and you can set up alerts across multiple channels, including email and mobile notifications, so you receive timely and relevant information to help plan for scheduled changes that may affect you. In the event of AWS hardware maintenance activities that may impact one of your EC2 instances, for example, you would receive an alert with information to help you plan for, and proactively

address any issues associated with the upcoming change.
**Detailed Troubleshooting Guidance: When you get an alert, it includes remediation details and specific guidance to enable you to take immediate action to address AWS events impacting your resources. For example, in the event of an AWS hardware failure impacting one of your EBS volumes, your alert would include a list of your affected resources, a recommendation to restore your volume, and links to the steps to help you restore it from a snapshot. This targeted and actionable information reduces the time needed to resolve issues.
The other options are incorrect:
“A dashboard detailing vulnerabilities in your applications“ is incorrect. You can check your applications for vulnerabilities using other services such as Amazon Inspector.
“Recommendations for Cost Optimization“ is incorrect. You can get help about cost optimization using other services such as the AWS Trusted Advisor.
“Health checks for Auto Scaling instances“ is incorrect. AWS Health Dashboard does not provide instance health checks. Amazon EC2 Auto Scaling can determine the health status of an instance by using one or more of the following health checks:
1- Amazon EC2 status checks and scheduled events: Checks that the instance is running; checks for underlying hardware or software issues that might impair the instance.
2- Elastic Load Balancing health checks: Checks whether the load balancer reports the instance as healthy, confirming whether the instance is available to handle requests.
3- Custom health checks: Checks for any other problems that might indicate instance health issues, according to your custom health checks.
The health status of an Auto Scaling instance indicates whether it is healthy or unhealthy. All instances in your Auto Scaling group start in the healthy state. Instances are assumed to be healthy unless Amazon EC2 Auto Scaling receives notification that they are unhealthy. This notification can come from sources such as Amazon EC2, Elastic Load Balancing, or custom health checks. When Amazon EC2 Auto Scaling detects an unhealthy instance, it terminates it and launches a new one.
References:
https://aws.amazon.com/premiumsupport/technology/aws-health-dashboard/

34. 34. Question

Which service is used to ensure that messages between software components are not lost if one or more components fail?

- AWS Direct Connect
- Amazon SES
- **Amazon SQS**
- Amazon Connect

Unattempted

Amazon Simple Queue Service (SQS) is a fully managed message queuing service that enables you to send, store, and receive messages between software components at any volume, without losing messages or requiring other services

to be available. SQS lets you decouple application components so that they run independently, increasing the overall fault tolerance of the system. Multiple copies of every message are stored redundantly across multiple availability zones so that they are available whenever needed.
The other options are incorrect:
Amazon SES is incorrect. Amazon SES (Amazon Simple Email Service) is a flexible, affordable, and highly-scalable email messaging platform for businesses and developers.
Amazon Connect is incorrect. Amazon Connect is a cloud-based contact center service that makes it easy for businesses to deliver customer service at low cost.
AWS Direct Connect is incorrect. AWS Direct Connect is a cloud service solution that is used to establish a dedicated network connection between your premises and AWS.
References:
https://d1.awsstatic.com/whitepapers/aws-overview.pdf

35. 35. Question

What should you do in order to keep the data on EBS volumes safe? (Choose TWO)

- **Create EBS snapshots**
- Store a backup daily in an external drive
- **Ensure that EBS data is encrypted at rest**
- Regularly update firmware on EBS devices
- Prevent any unauthorized access to AWS data centers

Unattempted

Creating snapshots of EBS Volumes can help ensure that you have a backup of your EBS volumes just in case any issues arise. You can use Amazon Data Lifecycle Manager (Amazon DLM) to automate the creation, retention, and deletion of EBS snapshots.
Automating snapshot management with Amazon DLM helps you to:
– Protect valuable data by enforcing a regular backup schedule.
– Retain backups as required by auditors or internal compliance.
– Reduce storage costs by deleting outdated backups.
– Create disaster recovery backup policies that back up data to isolated accounts.

Amazon EBS encryption offers a straight-forward encryption solution for your EBS resources that doesn‘t require you to build, maintain, and secure your own key management infrastructure. Encryption operations occur on the servers that host EC2 instances, ensuring the security of both data-at-rest and data-in-transit between an instance and its attached EBS storage.
The other options are incorrect:
“Prevent any unauthorized access to AWS data centers“ is incorrect. It is the responsibility of AWS to control and restrict access to its data centers.
“Store a backup daily in an external drive“ is incorrect. To make a backup of your EBS volumes you should use the Snapshot feature. Snapshots can provide a Copy-on-Write Consistency (reflect the exact image of the volume at the point-in-time of the snapshot).

“Regularly update firmware on EBS devices“ is incorrect. It is the responsibility of AWS to regularly update firmware on hardware devices.
Additional information:
EBS Snapshots are incremental backups, which means that only the blocks on the device that have changed after your last snapshot are saved. This minimizes the time required to create the snapshot and saves on storage costs by not duplicating data.
References:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html

36. 36. Question

Which statement is true regarding the AWS Shared Responsibility Model?

- Patching the guest OS is always the responsibility of AWS
- Security of the IaaS services is the responsibility of AWS
- **Responsibilities vary depending on the services used**
- Security of the managed services is the responsibility of the customer

Unattempted

Customers should be aware that their responsibilities may vary depending on the AWS services chosen. For example, when using Amazon EC2, you are responsible for applying operating system and application security patches regularly. However, such patches are applied automatically when using Amazon RDS.
The other options are incorrect:
“Security of the IaaS services is the responsibility of AWS“ is incorrect. AWS products that fall into the well-understood category of Infrastructure as a Service (IaaS) – such as Amazon EC2, and Amazon VPC – are completely under your control and require you to perform all of the necessary security configuration and management tasks. For example, for EC2 instances, you’re responsible for management of the guest OS (including updates and security patches), any application software or utilities you install on the instances, and the configuration of the AWS-provided firewall (called a security group) on each instance. These are basically the same security tasks that you’re used to performing no matter where your servers are located.
“Security of the managed services is the responsibility of the customer“ is incorrect. AWS is responsible for the security configuration of its managed services. Examples of these types of services include Amazon DynamoDB, Amazon RDS, Amazon Redshift, and Amazon Elastic MapReduce. For most of these services, all you have to do is to configure logical access controls on the resources and protect your account credentials, but overall, the security configuration work is performed by the service.
“Patching the guest OS is always the responsibility of AWS“ is incorrect.
A computer on which AWS runs one or more virtual machines is called a host machine, and each virtual machine is called a guest machine. AWS drives the concept of virtualization by allowing the physical host machine to operate multiple virtual machines as guests (for multiple customers) to help maximize the effective use of computing resources such as memory, network bandwidth and

CPU cycles.

Patching the guest operating system is the responsibility of AWS for the managed services only (such as Amazon RDS). The customer is responsible for patching the guest OS for other services (such as Amazon EC2).

AWS is responsible for patching the underlying hosts, upgrading the firmware, and fixing flaws within the infrastructure for all services, including Amazon EC2.

References:

https://aws.amazon.com/compliance/shared-responsibility-model/

37. 37. Question

A global company with a large number of AWS accounts is seeking a way in which they can centrally manage billing and security policies across all accounts. Which AWS Service will assist them in meeting these goals?

- AWS Config
- IAM User Groups
- **AWS Organizations**
- AWS Trusted Advisor

Unattempted

AWS Organizations helps customers centrally govern their environments as they grow and scale their workloads on AWS. Whether customers are a growing startup or a large enterprise, Organizations helps them to centrally manage billing; control access, compliance, and security; and share resources across their AWS accounts.

AWS Organizations has five main benefits:

1) Centrally manage access polices across multiple AWS accounts.
2) Automate AWS account creation and management.
3) Control access to AWS services.
4) Consolidate billing across multiple AWS accounts.
5) Configure AWS services across multiple accounts.

The other options are incorrect:

“AWS Trusted Advisor“ is incorrect. AWS Trusted Advisor is an online tool that provides customers with real time guidance to help them provision their resources following AWS best practices.

“IAM User Groups“ is incorrect. IAM user groups are not used to manage multiple AWS accounts. An IAM user group is a collection of IAM users – within the same AWS account – that are managed as a unit. IAM user groups let customers specify permissions for multiple users, which can make it easier to manage the permissions for those users. For example, customers could have a user group called Admins and give that user group the types of permissions that administrators typically need.

“AWS Config“ is incorrect. AWS Config is a fully managed service that provides customers with an AWS resource inventory, configuration history, and configuration change notifications to enable security and governance.

References:

https://aws.amazon.com/organizations/

38. 38. Question

A developer is planning to build a two-tier web application that has a MySQL database layer. Which of the following AWS database services would provide automated backups for the application?

- Amazon DynamoDB
- **Amazon Aurora**
- Amazon Neptune
- A MySQL database installed on an EC2 instance

Unattempted

Amazon Aurora is a MySQL and PostgreSQL-compatible relational database built for the cloud. Amazon Aurora combines the performance and availability of traditional enterprise databases with the simplicity and cost-effectiveness of open source databases. It delivers up to five times the throughput of standard MySQL and up to three times the throughput of standard PostgreSQL. Amazon Aurora is designed to be compatible with MySQL and with PostgreSQL, so that existing applications and tools can run without requiring modification. It is available through Amazon Relational Database Service (RDS), freeing you from time-consuming administrative tasks such as provisioning, patching, backup, recovery, failure detection, and repair.
The other options are incorrect:
“A MySQL database installed on an EC2 instance“ is incorrect. You can Install MySQL on an EC2 instance, but in this scenario, you would have to manage the database and the backup processes yourself; it would not be automatic.
“Amazon DynamoDB“ is incorrect. Amazon DynamoDB does not support MySQL. Amazon DynamoDB is a NoSQL database service.
“Amazon Neptune“ is incorrect. Amazon Neptune is a graph database service, not a MySQL database service. Amazon Neptune is used to build and run applications that work with highly connected datasets, such as social networking, recommendation engines, and knowledge graphs.
References:
https://aws.amazon.com/rds/aurora/

39. 39. Question

Which service provides DNS in the AWS cloud?

- **Route 53**
- AWS Config
- Amazon CloudFront
- Amazon EMR

Unattempted

Amazon Route 53 is a global service that provides highly available and scalable Domain Name System (DNS) services, domain name registration, and health-checking web services. 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 example.com into the numeric IP addresses, such as 192.0.2.1, that computers use to connect to each other.
Route 53 also simplifies the hybrid cloud by providing recursive DNS for your Amazon VPC and on-premises networks over AWS Direct Connect or AWS VPN.
The other options are incorrect:
“Amazon EMR“ is incorrect. EMR is used to process vast amounts of data easily and securely. Use cases include: big data,log analysis, web indexing, data transformations (ETL), machine learning, financial analysis, scientific simulation, and bioinformatics.
“AWS Config“ is incorrect. AWS Config is a fully managed service that provides you with an AWS resource inventory, configuration history, and configuration change notifications to enable security and governance.
“Amazon CloudFront“ is incorrect. Amazon CloudFront gives businesses and web application developers an easy and cost effective way to distribute content globally with low latency and high data transfer speeds.
References:
https://aws.amazon.com/route53/

40. 40. Question

A company has an AWS Enterprise Support plan. They want quick and efficient guidance with their billing and account inquiries. Which of the following should the company use?

- **AWS Support Concierge**
- AWS Operations Support
- AWS Health Dashboard
- AWS Customer Service

Unattempted

Included as part of the Enterprise Support plan, the Support Concierge Team are AWS billing and account experts that specialize in working with enterprise accounts. The Concierge team will quickly and efficiently assist you with your billing and account inquiries, and work with you to help implement billing and account best practices so that you can focus on running your business.
Support Concierge service includes:
** 24 x7 access to AWS billing and account inquires.
** Guidance and best practices for billing allocation, reporting, consolidation of accounts, and root-level account security.
** Access to Enterprise account specialists for payment inquiries, training on specific cost reporting, assistance with service limits, and facilitating bulk purchases.
The other options are incorrect:
“AWS Customer Service“ is incorrect. AWS Customer Service can help AWS customers with their billing and account inquiries, and it is included in all AWS support plans (Basic, Developer, Business, and Enterprise). However, due to the fact that AWS Customer Service is not dedicated to specific types of inquiries, it is not as quick or as efficient as the AWS Support Concierge. AWS Support Concierge is available only for AWS Enterprise support subscribers and is

dedicated only to help AWS customers with their billing and account inquiries.
“AWS Operations Support“ is incorrect. AWS Operations Support is an Enterprise support program that provides operations assessments and analysis to identify gaps across the operations lifecycle, as well as recommendations based on best practices.
“AWS Health Dashboard“ is incorrect. The AWS Health Dashboard (previously AWS Personal Health Dashboard) is the single place to learn about the availability and operations of AWS services. You can view the overall status of all AWS services, and you can sign in to access a personalized view of the health of the specific services that are powering your workloads and applications. AWS Health Dashboard proactively notifies you when AWS experiences any events that may affect you, helping provide quick visibility and guidance to minimize the impact of events in progress, and plan for any scheduled changes, such as AWS hardware maintenance.
References:
https://aws.amazon.com/premiumsupport/features/
https://aws.amazon.com/premiumsupport/plans/enterprise/

41. 41. Question

What does AWS Snowball provide? (Choose TWO)

- A catalog of third-party software solutions that customers need to build solutions and run their businesses
- A hybrid cloud storage between on-premises environments and the AWS Cloud
- **Built-in computing capabilities that allow customers to process data locally**
- **Secure transfer of large amounts of data into and out of the AWS Cloud**
- An Exabyte-scale data transfer service that allows you to move extremely large amounts of data to AWS

Unattempted

AWS Snowball is a petabyte-scale data transport solution that uses secure appliances to transfer large amounts of data into and out of the AWS cloud. Using Snowball addresses common challenges with large-scale data transfers, including high network costs, long transfer times, and security concerns.
AWS Customers use Snowball to migrate analytics data, genomics data, video libraries, image repositories, and backups. Transferring data with Snowball is simple, fast, secure, and can cost as little as one-fifth the cost of using high-speed internet.
Additionally, With AWS Snowball, you can access the compute power of the AWS Cloud locally and cost-effectively in places where connecting to the internet might not be an option. AWS Snowball is a perfect choice if you need to run computing in rugged, austere, mobile, or disconnected (or intermittently connected) environments.
With AWS Snowball, you have the choice of two devices, Snowball Edge Compute Optimized with more computing capabilities, suited for higher performance workloads, or Snowball Edge Storage Optimized with more storage,

which is suited for large-scale data migrations and capacity-oriented workloads.

Snowball Edge Storage Optimized is the optimal choice if you need to securely and quickly transfer dozens of terabytes to petabytes of data to AWS. It is also a good fit for running general purpose analysis such as IoT data aggregation and transformation.

Snowball Edge Compute Optimized is the optimal choice if you need powerful compute and high-speed storage for data processing. Examples include high-resolution video processing, advanced IoT data analytics, and real-time optimization of machine learning models.

The other options are incorrect:

“A catalog of third-party software solutions that customers need to build solutions and run their businesses“ is incorrect. AWS Marketplace is the service that provides this catalog. AWS Marketplace is a digital catalog with thousands of software listings from independent software vendors that make it easy to find, test, buy, and deploy software that runs on AWS. AWS Marketplace includes software listings from categories such as security, networking, storage, machine learning, business intelligence, database, and DevOps.

“A hybrid cloud storage between on-premises environments and the AWS Cloud“ is incorrect. AWS Storage Gateway is the service that enables your on-premises applications to seamlessly use AWS cloud storage.

“An Exabyte-scale data transfer service that allows you to move extremely large amounts of data to AWS“ is incorrect. AWS Snowmobile is the exabyte-scale data migration service that allows you to move very large datasets from on-premises to AWS.

References:

https://aws.amazon.com/snowball/

42. 42. Question

Which of the following does NOT belong to the AWS Cloud Computing models?

- **Networking as a Service (NaaS)**
- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)

Unattempted

There are three Cloud Computing Models:

1) Infrastructure as a Service (IaaS) – Infrastructure as a Service (IaaS) contains the basic building blocks for cloud IT and typically provide access to networking features, computers (virtual or on dedicated hardware), and data storage space. IaaS provides you with the highest level of flexibility and management control over your IT resources and is most similar to existing IT resources that many IT departments and developers are familiar with today.

2) Platform as a Service (PaaS) – Platform as a Service (PaaS) removes the need for your organization to manage the underlying infrastructure (usually hardware and operating systems) and allows you to focus on the deployment and management of your applications. This helps you be more efficient as you don’t need to worry about resource procurement, capacity planning, software maintenance, patching, or any of the other undifferentiated heavy lifting involved

in running your application.
3) Software as a Service (SaaS) – Software as a Service (SaaS) provides you with a completed product that is run and managed by the service provider. In most cases, people referring to Software as a Service are referring to end-user applications. With a SaaS offering you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use that particular piece of software. A common example of a SaaS application is web-based email which you can use to send and receive email without having to manage feature additions to the email product or maintain the servers and operating systems that the email program is running on.
Networking services are provided as part of the IaaS model.
References:
https://docs.aws.amazon.com/aws-technical-content/latest/aws-overview/types-of-cloud-computing.html

43. 43. Question

A company is planning to host an educational website on AWS. Their video courses will be streamed all around the world. Which of the following AWS services will help achieve high transfer speeds?

- AWS CloudFormation
- **Amazon CloudFront**
- Amazon SNS
- Amazon Kinesis Video Streams

Unattempted

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.
The use cases of Amazon CloudFront include:
1- Accelerate static website content delivery.
CloudFront can speed up the delivery of your static content (for example, images, style sheets, JavaScript, and so on) to viewers across the globe. By using CloudFront, you can take advantage of the AWS backbone network and CloudFront edge servers to give your viewers a fast, safe, and reliable experience when they visit your website.
2- Live & on-demand video streaming.
The Amazon CloudFront CDN offers multiple options for streaming your media – both pre-recorded files and live events – at sustained, high throughput required for 4K delivery to global viewers.
3- Security.
CloudFront integrates seamlessly with AWS Shield for Layer 3/4 DDoS mitigation and AWS WAF for Layer 7 protection.
4- Customizable content delivery with Lambda@Edge.
Lambda@Edge is a feature of Amazon CloudFront that lets you run code closer to users of your application, which improves performance and reduces latency.
The other options are incorrect:
“AWS CloudFormation“ is incorrect. 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.
“Amazon Kinesis Video Streams“ is incorrect. Amazon Kinesis Video Streams enables you to securely stream video from connected devices (IoT devices) to AWS for analytics, machine learning (ML), playback, and other processing. Kinesis Video Streams automatically provisions and elastically scales all the infrastructure needed to ingest streaming video data from millions of devices. It durably stores, encrypts, and indexes video data in your streams, and allows you to access your data through easy-to-use APIs.
“Amazon SNS“ is incorrect. Amazon Simple Notification Service (SNS) is a fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and serverless applications. Using Amazon SNS topics, your publisher systems can fan out messages to a large number of subscriber endpoints for parallel processing, including AWS Lambda functions, and HTTP/S webhooks. Additionally, SNS can be used to fan out notifications to end users using mobile push, SMS, and email.
References:
https://aws.amazon.com/cloudfront/

44. 44. Question

Your company has a data store application that requires access to a NoSQL database. Which AWS database offering would meet this requirement?

- Amazon Aurora
- Amazon Redshift
- Amazon Elastic Block Store
- **Amazon DynamoDB**

Unattempted

Amazon DynamoDB is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale. It is a fully managed cloud database and supports both document and key-value store models. Its flexible data model, reliable performance, and automatic scaling of throughput capacity, makes it a great fit for mobile, web, gaming, ad tech, IoT, and many other applications.
The other options are incorrect:
“Amazon Elastic Block Store“ is incorrect. Amazon Elastic Block Store (Amazon EBS) is a storage service, NOT a database service.
“Amazon Aurora“ is incorrect. Amazon Aurora doesn’t support NoSQL databases. Amazon Aurora is a MySQL and PostgreSQL-compatible relational database.
“Amazon Redshift“ is incorrect. Amazon Redshift doesn’t support non-relational data. Amazon Redshift is a fully managed data warehouse service that allows you to run complex analytic queries against petabytes of structured data using standard SQL and your existing Business Intelligence (BI) tools.
References:
https://aws.amazon.com/dynamodb/

45. 45. Question

As part of the Enterprise support plan, who is the primary point of contact for ongoing support needs?

- Infrastructure Event Management (IEM) engineer
- AWS Identity and Access Management (IAM) user
- **Technical Account Manager (TAM)**
- AWS Consulting Partners

Unattempted

For Enterprise-level customers, a TAM (Technical Account Manager) provides technical expertise for the full range of AWS services and obtains a detailed understanding of your use case and technology architecture. TAMs work with AWS Solution Architects to help you launch new projects and give best practices recommendations throughout the implementation life cycle. Your TAM is the primary point of contact for ongoing support needs, and you have a direct telephone line to your TAM.
The other options are incorrect:
“Infrastructure Event Management (IEM) engineer“ is incorrect. AWS Infrastructure Event Management (IEM) is a structured program available to Enterprise Support customers (and Business Support customers for an additional fee) that helps you plan for large-scale events such as product or application launches, infrastructure migrations, and marketing events. With Infrastructure Event Management, you get strategic planning assistance before your event, as well as real-time support during these moments that matter most for your business. AWS Infrastructure Event Management is not for day-to-day support needs.
“AWS Identity and Access Management (IAM) user“ is incorrect. An AWS Identity and Access Management (IAM) user is an entity that you create in AWS to represent the person or service that uses it to directly interact with AWS. A primary use for IAM users is to grant individuals access to the AWS Management Console for interactive tasks and / or to make programmatic requests to AWS services using the API or CLI.
“AWS Consulting Partners“ is incorrect. AWS Consulting Partners are not part of AWS support. AWS Consulting Partners are professional services firms that help customers design, architect, build, migrate, and manage their workloads and applications on AWS. Consulting Partners include System Integrators, Strategic Consultancies, Agencies, Managed Service Providers, and Value-Added Resellers.
References:
https://aws.amazon.com/premiumsupport/plans/

46. 46. Question

In the AWS Shared responsibility Model, which of the following are the responsibility of the customer? (Choose TWO)

- Patching the Network infrastructure
- Controlling physical access to compute resources
- **Configuring network access rules**

- Disk disposal
- **Setting password complexity rules**

Unattempted

The customer is responsible for securing their network by configuring Security Groups, Network Access control Lists (Network ACLs), and Routing Tables. The customer is also responsible for setting a password policy on their AWS account that specifies the complexity and mandatory rotation periods for their IAM users‘ passwords.
The other options are incorrect:
“Disk disposal“ is incorrect. Disk disposal (Storage Device Decommissioning): When a storage device has reached the end of its useful life, AWS procedures include a decommissioning process that is designed to prevent customer data from being exposed to unauthorized individuals. All decommissioned magnetic storage devices are degaussed and physically destroyed in accordance with industry-standard practices.
“Controlling physical access to compute resources“ is incorrect. AWS is responsible for controlling physical access to the data centers.
“Patching the Network infrastructure“ is incorrect. Patching the underlying infrastructure is the responsibility of AWS. The customer is responsible for patching the Operating System of their EC2 instances and any software installed on these instances.
References:
https://aws.amazon.com/compliance/shared-responsibility-model/

47. 47. Question

You are working on a project that involves creating thumbnails of millions of images. Consistent uptime is not an issue, and continuous processing is not required. Which EC2 buying option would be the most cost-effective?

- **Spot Instances**
- On-demand Instances
- Reserved Instances
- Dedicated Instances

Unattempted

Spot instances provide a discount (up to 90%) off the On-Demand price. The Spot price is determined by long-term trends in supply and demand for EC2 spare capacity. If the Spot price exceeds the maximum price you specify for a given instance or if capacity is no longer available, your instance will automatically be interrupted.

Spot Instances are a cost-effective choice if you can be flexible about when your applications run and if you don‘t mind if your applications get interrupted. For example, Spot Instances are well-suited for data analysis, batch jobs, background processing, and optional tasks.
The other options are incorrect:
“Reserved instances“ is incorrect. Reserved instances are recommended for Customers who can commit to using EC2 over a 1 or 3-year term to reduce their total computing costs. Even if the project will last for more than a year, the cost-

benefit for acquiring Reserved Instances is not as great as the cost-benefit from using Spot Instances. The Spot option provides the largest discount (up to 90%).
“On-demand instances“ is incorrect. On-demand instances are significantly less cost-effective than spot instances.
“Dedicated instances“ is incorrect. Dedicated instances are used when you need your instances to be physically isolated at the host hardware level from instances that belong to other AWS accounts. Dedicated instances are significantly more expensive than Spot Instances
References:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-spot-instances.html

48. 48. Question

Which of the following is an example of horizontal scaling in the AWS Cloud?

- Adding more RAM capacity to an EC2 instance
- Replacing an existing EC2 instance with a larger, more powerful one
- Increasing the compute capacity of a single EC2 instance to address the growing demands of an application
- **Adding more EC2 instances of the same size to handle an increase in traffic**

Unattempted

Horizontal Scaling:
Scaling horizontally takes place through an increase in the number of resources (e.g., adding more hard drives to a storage array or adding more servers to support an application). This is a great way to build Internet-scale applications that leverage the elasticity of cloud computing.
Vertical Scaling:
Scaling vertically takes place through an increase in the specifications of an individual resource (e.g., upgrading a server with a larger hard drive, adding more memory, or provisioning a faster CPU). On Amazon EC2, this can easily be achieved by stopping an instance and resizing it to an instance type that has more RAM, CPU, I/O,or networking capabilities. This way of scaling can eventually hit a limit and it is not always a cost efficient or highly available approach. However, it is very easy to implement and can be sufficient for many use cases especially as a short term solution.
Additional information:
Vertical-scaling is often limited to the capacity constraints of a single machine, scaling beyond that capacity often involves downtime and comes with an upper limit. With horizontal-scaling it is often easier to scale dynamically by adding more machines in parallel. Hence, in most cases, horizontal-scaling is recommended over vertical-scaling.
The other options are incorrect:
All other options are examples of Vertical Scaling.
References:
https://wa.aws.amazon.com/wat.concept.horizontal-scaling.en.html

49. 49. Question

An organization has a large number of technical employees who operate their AWS Cloud infrastructure. What does AWS provide to help organize them into teams and then assign the appropriate permissions for each team?

- IAM roles
- AWS Organizations
- IAM users
- **IAM user groups**

Unattempted

An IAM user group is a collection of IAM users that are managed as a unit. User groups let you specify permissions for multiple users, which can make it easier to manage the permissions for those users. For example, you could have a user group called Admins and give that user group the types of permissions that administrators typically need. Any user in that user group automatically has the permissions that are assigned to the user group. If a new user joins your organization and needs administrator privileges, you can assign the appropriate permissions by adding the user to that user group. Similarly, if a person changes jobs in your organization, instead of editing that user‘s permissions, you can remove him or her from the old user groups and add him or her to the appropriate new user groups.

The other options are incorrect:

“IAM role“ is incorrect. An IAM role is an IAM identity that you can create in your account that has specific permissions. IAM roles allow you to delegate access (for a limited time) to users or services that normally don‘t have access to your organization‘s AWS resources. IAM users or AWS services can assume a role to obtain temporary security credentials that can be used to interact with specific AWS resources.

You can use roles to delegate access to users, applications, or services that don‘t normally have access to your AWS resources. For example, you might want to grant users in your AWS account access to resources they don‘t usually have, or grant users in one AWS account access to resources in another account. Or you might want to allow a mobile app to use AWS resources, but not want to embed AWS keys within the app. Sometimes you want to give AWS access to users who already have identities defined outside of AWS, such as in your corporate directory. Or, you might want to grant access to your account to third parties so that they can perform an audit on your resources. For these scenarios, you can delegate access to AWS resources using an IAM role.

“IAM users“ is incorrect. An IAM user is an entity that you create in AWS to represent the person or application that uses it to directly interact with AWS. A primary use for IAM users is to give people the ability to sign in to the AWS Management Console for interactive tasks and to make programmatic requests to AWS services using the API or CLI. A user in AWS consists of a name, a password to sign into the AWS Management Console, and up to two access keys that can be used with the API or CLI. When you create an IAM user, you grant it permissions by making it a member of a user group that has appropriate permission policies attached (recommended), or by directly attaching policies to the user.

Additional information:

An IAM role is similar to an IAM user, in that it is an AWS identity with permission policies that determine what the identity can and cannot do in AWS. However,

instead of being uniquely associated with one person, a role is intended to be assumable by anyone (or any service, application, …etc) who needs it. Also, a role does not have standard long-term credentials such as a password or access keys associated with it. Instead, when you assume a role, it provides you with temporary security credentials for your role session. IAM roles are meant to be assumed by authorized entities, such as IAM users, applications, or an AWS service such as Amazon EC2.
“AWS Organizations“ is incorrect. AWS Organizations can be used to group AWS accounts, not IAM users (the employees). AWS Organization helps you to centrally manage billing; control access, compliance, and security; and share resources across multiple AWS accounts.
References:
https://docs.aws.amazon.com/IAM/latest/UserGuide/id.html

50. 50. Question

How can you view the distribution of AWS spending in one of your AWS accounts?

- By using Amazon VPC console
- By contacting the AWS Support team
- **By using AWS Cost Explorer**
- By contacting the AWS Finance team

Unattempted

AWS Cost Explorer is a free tool that you can use to view your costs and usage. You can view data up to the last 12 months, forecast how much you are likely to spend for the next 12 months, and get recommendations for what Reserved Instances to purchase. You can use AWS Cost Explorer to see patterns in how much you spend on AWS resources over time, identify areas that need further inquiry, and see trends that you can use to understand your costs. You can also specify time ranges for the data, and view time data by day or by month.
The other options are incorrect:
“By contacting the AWS Finance team“ is incorrect. The AWS Finance Team provides data driven analysis, strategic decision support, financial planning, and controllership to teams that plan and build data centers, design and source servers, and develop and sell cloud services at massive scale to developers and businesses all over the world.
“By contacting the AWS Support team“ is incorrect. The AWS support team will direct you to use AWS Cost Explorer.
“By using Amazon VPC console“ is incorrect. You can use the Amazon Virtual Private Cloud console to launch AWS resources, such as Amazon EC2 instances. You can use it to specify an IP address range for the VPC, add subnets, associate security groups, and configure route tables.
References:
https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/cost-explorer-what-is.html

51. 51. Question

Which S3 storage class is best for data with unpredictable access patterns?

- Amazon S3 Standard-Infrequent Access
- **Amazon S3 Intelligent-Tiering**
- Amazon S3 Standard
- Amazon S3 Glacier Flexible Retrieval

Unattempted

The S3 Intelligent-Tiering storage class is designed to optimize costs by automatically moving data to the most cost-effective access tier, without performance impact or operational overhead. It works by storing objects in two access tiers: one tier that is optimized for frequent access and another lower-cost tier that is optimized for infrequent access. For a small monthly monitoring and automation fee per object, Amazon S3 monitors access patterns of the objects in S3 Intelligent-Tiering, and moves the ones that have not been accessed for 30 consecutive days to the infrequent access tier. If an object in the infrequent access tier is accessed, it is automatically moved back to the frequent access tier. There are no retrieval fees when using the S3 Intelligent-Tiering storage class, and no additional tiering fees when objects are moved between access tiers. It is the ideal storage class for long-lived data with access patterns that are unknown or unpredictable.
The other options are incorrect:
“Amazon S3 Standard“ is incorrect. S3 Standard offers high durability, availability, and performance object storage for frequently accessed data.
“Amazon S3 Standard-Infrequent Access“ is incorrect. Amazon S3 Standard-Infrequent Access (S3 Standard-IA) is for data that is accessed less frequently, but requires rapid access when needed.
“Amazon S3 Glacier Flexible Retrieval“ is incorrect. Amazon S3 Glacier Flexible Retrieval (Formerly S3 Glacier) is a low-cost storage class for archive data that is accessed 1 – 2 times per year.
References:
https://aws.amazon.com/s3/storage-classes/

52. 52. Question

What is the AWS service that enables AWS architects to manage infrastructure as code?

- **AWS CloudFormation**
- Amazon SES
- AWS Config
- Amazon EMR

Unattempted

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. You create a template that describes all the AWS resources that you want (like Amazon EC2 instances or Amazon RDS DB instances), and AWS

CloudFormation takes care of provisioning and configuring those resources for you. You don‘t need to individually create and configure AWS resources and figure out what‘s dependent on what; AWS CloudFormation handles all that for you.
The other options are incorrect:
“Amazon SES“ is incorrect. Amazon SES refers to the Amazon Simple Email service.
“AWS Config“ is incorrect. AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources.
“Amazon EMR“ is incorrect. Amazon EMR is used to run and scale Apache Spark, Hadoop, Presto, and other Big Data Frameworks.
References:
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/Welcome.html

53. 53. Question

You have AWS Basic support, and you have discovered that some AWS resources are being used maliciously, and those resources could potentially compromise your data. What should you do?

- **Contact the AWS Abuse team**
- Contact the AWS Customer Service team
- Contact the AWS Concierge team
- Contact the AWS Security team

Unattempted

The AWS Abuse team can assist you when AWS resources are being used to engage in the following types of abusive behavior:
I. Spam: You are receiving unwanted emails from an AWS-owned IP address, or AWS resources are being used to spam websites or forums.
II. Port scanning: Your logs show that one or more AWS-owned IP addresses are sending packets to multiple ports on your server, and you believe this is an attempt to discover unsecured ports.
III. Denial of service attacks (DOS): Your logs show that one or more AWS-owned IP addresses are being used to flood ports on your resources with packets, and you believe this is an attempt to overwhelm or crash your server or software running on your server.
IV. Intrusion attempts: Your logs show that one or more AWS-owned IP addresses are being used to attempt to log in to your resources.
V. Hosting objectionable or copyrighted content: You have evidence that AWS resources are being used to host or distribute illegal content or distribute copyrighted content without the consent of the copyright holder.
VI. Distributing malware: You have evidence that AWS resources are being used to distribute software that was knowingly created to compromise or cause harm to computers or machines on which it is installed.
Note: Anyone can report abuse of AWS resources, not just AWS customers.
The other options are incorrect:
“Contact the AWS Security team“ is incorrect. The AWS Security team is responsible for the security of services offered by AWS.

“Contact the AWS Concierge team“ is incorrect. The AWS Concierge team can assist you with the issues that are related to your billing and account management.
“Contact the AWS Customer Service team“ is incorrect. The AWS Customer Service team is at the forefront of this transformational technology assisting a global list of customers that are taking advantage of a growing set of services and features to run their mission-critical applications. The team helps AWS customers understand what Cloud Computing is all about, and whether it can be useful for their business needs.
References:
https://aws.amazon.com/security/vulnerability-reporting/

54. 54. Question

What does the “Principle of Least Privilege“ refer to?

- IAM users should not be granted any permissions; to keep your account safe
- **You should grant your users only the permissions they need when they need them and nothing more**
- All IAM users should have at least the necessary permissions to access the core AWS services
- All trusted IAM users should have access to any AWS service in the respective AWS account

Unattempted

The principle of least privilege is one of the most important security practices and it means granting users the required permissions to perform the tasks entrusted to them and nothing more. The security administrator determines what tasks users need to perform and then attaches the policies that allow them to perform only those tasks. You should start with a minimum set of permissions and grant additional permissions when necessary. Doing so is more secure than starting with permissions that are too lenient and then trying to tighten them down.
References:
https://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html#grant-least-privilege

55. 55. Question

What does Amazon CloudFront use to distribute content to global users with low latency?

- AWS Global Accelerator
- AWS Regions
- **AWS Edge Locations**
- AWS Availability Zones

Unattempted

To deliver content to global end users with lower latency, Amazon CloudFront uses a global network of Edge Locations and Regional Edge Caches in multiple cities around the world. Amazon CloudFront uses this network to cache copies of your content close to your end-users. Amazon CloudFront ensures that end-user requests are served by the closest edge location. As a result, end-user requests travel a short distance, improving performance for your end-users, while reducing the load on the origin servers.
The other options are incorrect:
AWS Global Accelerator is incorrect. AWS Global Accelerator and CloudFront are two separate services that use the AWS global network and its edge locations around the world. CloudFront improves performance for both cacheable (e.g., images and videos) and dynamic content (e.g. dynamic site delivery). Global Accelerator is a good fit for specific use cases, such as gaming, IoT or Voice over IP.
“AWS Availability Zones“ and “AWS Regions“ are incorrect. Amazon CloudFront only uses Edge Locations or Regional Edge Caches.
References:
https://aws.amazon.com/cloudfront/

56. 56. Question

What are the benefits of having infrastructure hosted in AWS? (Choose TWO)

- Gaining complete control over the physical infrastructure
- **All of the physical security and most of the data/network security are taken care of for you**
- **Increasing speed and agility**
- There is no need to worry about security
- Operating applications on behalf of customers

Unattempted

All of the physical security are taken care of for you. Amazon data centers are surrounded by three physical layers of security. “Nothing can go in or out without setting off an alarm”. It’s important to keep bad guys out, but equally important to keep the data in which is why Amazon monitors incoming gear, tracking every disk that enters the facility. And “if it breaks we don’t return the disk for warranty. The only way a disk leaves our data center is when it’s confetti.”

Most (not all) data and network security are taken care of for you. When we talk about the data/network security, AWS has a “shared responsibility model” where AWS and the customer share the responsibility of securing them. For example, the customer is responsible for creating rules to secure their network traffic using the security groups and is also responsible for protecting data with encryption.

“Increasing speed and agility“ is also a correct answer because in a cloud computing environment, new IT resources are only a click away, which means it requires less time to make those resources available to 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.
The other options are incorrect:
“Gaining complete control over the physical infrastructure“ is incorrect. The

Physical infrastructure is a responsibility of AWS, not the customer.
“Operating applications on behalf of customers“ is incorrect. AWS customers are responsible for building and operating their applications.
“There is no need to worry about security“ is incorrect. As mentioned above, security is a shared responsibility between AWS and the customer. For example, the customer has to manage who can access and use AWS resources using the IAM service.
References:
https://docs.aws.amazon.com/aws-technical-content/latest/aws-overview/six-advantages-of-cloud-computing.html

57. 57. Question

Which of the following services allows customers to manage their agreements with AWS?

- AWS Systems Manager
- AWS Organizations
- **AWS Artifact**
- AWS Certificate Manager

Unattempted

AWS Artifact is a self-service audit artifact retrieval portal that provides customers with on-demand access to AWS’ compliance documentation and AWS agreements. You can use AWS Artifact Agreements to review, accept, and track the status of AWS agreements such as the Business Associate Addendum (BAA).
Additional information:
You can also use AWS Artifact Reports to download AWS security and compliance documents, such as AWS ISO certifications, Payment Card Industry (PCI), and System and Organization Control (SOC) reports.
The other options are incorrect:
“AWS Organizations“ is incorrect. AWS Organizations provides central governance and management across multiple AWS accounts.
“AWS Systems Manager“ is incorrect. AWS Systems Manager gives you visibility and control of your infrastructure on AWS. Systems Manager provides a unified user interface so you can view operational data from multiple AWS services and allows you to automate operational tasks across your AWS resources.
“AWS Certificate Manager“ is incorrect. AWS Certificate Manager is a service that lets you easily provision, manage, and deploy public and private Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates for use with AWS services and your internal connected resources
References:
https://aws.amazon.com/artifact/

58. 58. Question

What does AWS provide to deploy popular technologies – such as IBM MQ – on AWS with the least amount of effort and time?

- **AWS Partner Solutions**
- Amazon CloudWatch
- AWS OpsWorks
- Amazon Aurora

Unattempted

AWS Partner Solutions (formerly AWS Quick Starts) outline the architectures for popular enterprise solutions on AWS and provide AWS CloudFormation templates to automate their deployment. Each Partner Solution launches, configures, and runs the AWS compute, network, storage, and other services required to deploy a specific workload on AWS, using AWS best practices for security and availability.

AWS Partner Solutions are automated reference deployments built by AWS solutions architects and partners to help you deploy popular technologies on AWS, based on AWS best practices. These accelerators reduce hundreds of manual installation and configuration procedures into just a few steps, so you can build your production environment quickly and start using it immediately.

The other options are incorrect:

“AWS OpsWorks“ is incorrect. 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.

“Amazon CloudWatch“ is incorrect. Amazon CloudWatch is mainly used to monitor the utilization of your AWS resources.

“Amazon Aurora“ is incorrect. Amazon Aurora is a database service.

References:

https://aws.amazon.com/quickstart/