Question 1:
Which items should be included in a TCO analysis comparing on-premise to AWS Cloud? (Select TWO.)

- [x] Data center security
  (Correct)
- [x] Application licensing
- [ ] Operating system patching
- [ ] Compute hardware
  (Correct)
- [ ] Firewall management

Explanation
You need to identify the items that have a cost on-premise and that will be rolled into the service in the cloud. Compute hardware costs and data center security costs will be rolled in the service cost in the cloud so you need to include them in the model so you can really understand the true TCO on-premise vs. the cloud.

Firewall management, application licensing and operating system patching need to be paid for on-premise and in the cloud so there is little difference.

CORRECT: "Compute hardware" is a correct answer.

CORRECT: "Data center security" is also a correct answer.

INCORRECT: "Firewall management" is incorrect as explained above.

INCORRECT: "Application licensing" is incorrect as explained above.

INCORRECT: "Operating system patching" is incorrect as explained above.

Question 2:
Which AWS service can be used to host a static website?

- ○ AWS CloudFormation
- ○ Amazon EBS
- ◉ Amazon S3
  (Correct)
- ○ Amazon EFS

Explanation

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

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

CORRECT: "Amazon S3" is the correct answer.

INCORRECT: "Amazon EBS" is incorrect as it cannot be used to host a static website.

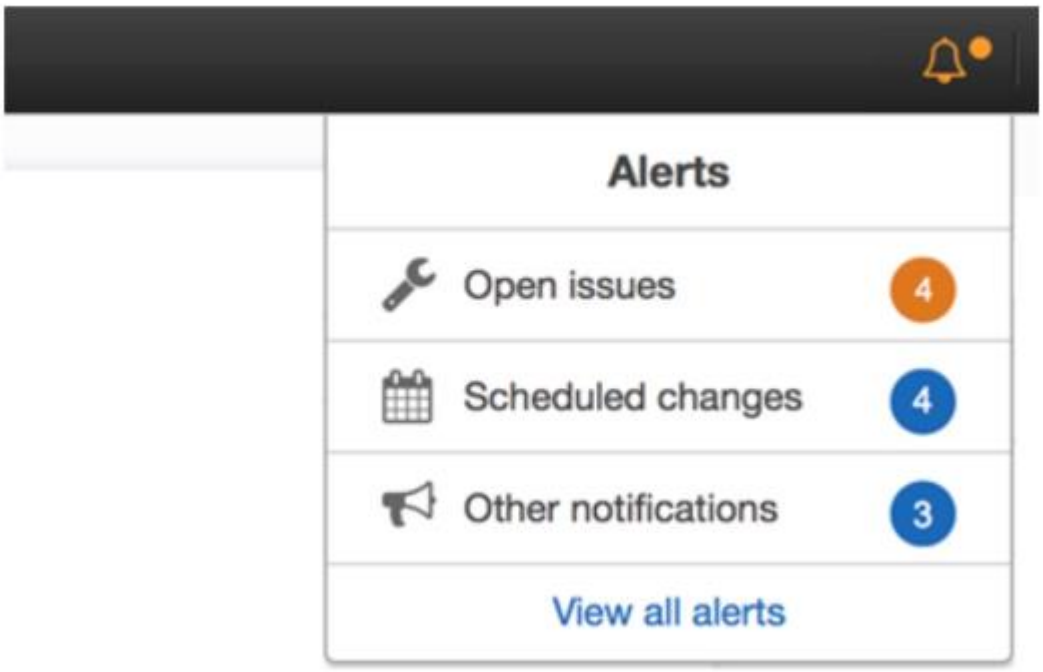
INCORRECT: "AWS CloudFormation" is incorrect as it cannot be used to host a static website.

INCORRECT: "Amazon EFS" is incorrect as it cannot be used to host a static website.

Question 3:
Which AWS dashboard displays relevant and timely information to help users manage events in progress, and provides proactive notifications to help plan for scheduled activities?

- AWS Personal Health Dashboard **(Correct)**
- Amazon CloudWatch dashboard
- AWS Service Health Dashboard
- AWS Trusted Advisor dashboard

Explanation
AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you. While the Service Health Dashboard displays the general status of AWS services, Personal Health Dashboard gives you a personalized view into the performance and availability of the AWS services underlying your AWS resources.



The dashboard displays relevant and timely information to help you manage events in progress, and provides proactive notification to help you plan for scheduled activities. With Personal Health Dashboard, alerts are triggered by changes in the health of AWS resources, giving you event visibility, and guidance to help quickly diagnose and resolve issues.

CORRECT: "AWS Personal Health Dashboard" is the correct answer.

INCORRECT: "AWS Service Health Dashboard" is incorrect. This shows the current status of services across regions. However, it does not provide proactive notifications of scheduled activities or guidance of any kind.

INCORRECT: "AWS Trusted Advisor dashboard" is incorrect. AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices.

INCORRECT: "Amazon CloudWatch dashboard" is incorrect as this service is used for monitoring performance related information for your infrastructure and resources, not the underlying AWS resources.

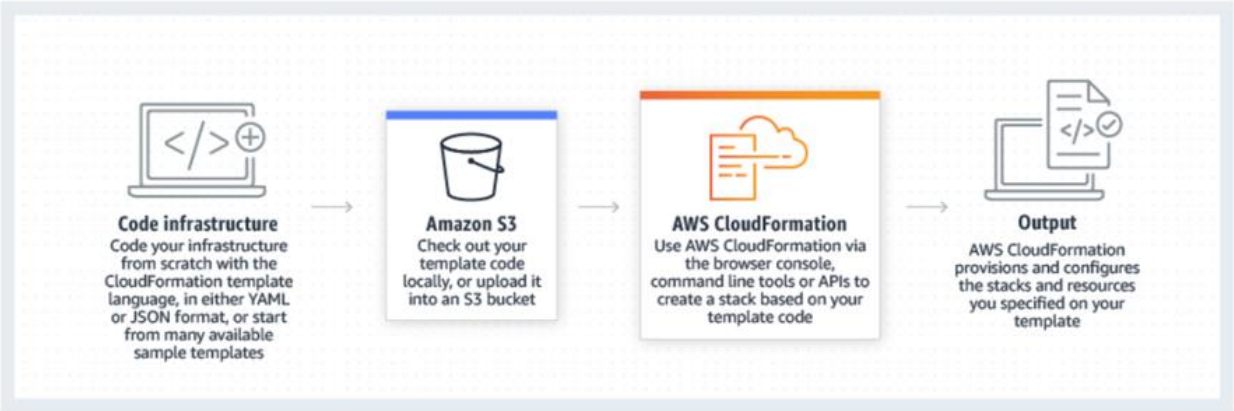
Question 4:
An architect wants to find a tool for consistently deploying the same resources through a templated configuration. Which AWS service can be used?

- AWS CodeDeploy
- AWS CodeBuild
- AWS Elastic Beanstalk
- AWS CloudFormation

(Correct)

Explanation
AWS CloudFormation provides a common language for you to describe and provision all the infrastructure resources in your cloud environment.

CloudFormation allows you to use a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts.



CORRECT: "AWS CloudFormation" is the correct answer.

INCORRECT: "AWS Elastic Beanstalk" is incorrect. AWS Elastic Beanstalk is used for running applications in a managed environment. It is not used for deploying templated configurations.

INCORRECT: "AWS CodeBuild" is incorrect. AWS CodeBuild is a fully managed continuous integration service that compiles source code, runs tests, and produces software packages that are ready to deploy.

INCORRECT: "AWS CodeDeploy" is incorrect. AWS CodeDeploy is a fully managed deployment service that automates software deployments to a variety of compute services such as Amazon EC2, AWS Lambda, and on-premises servers. It does not use a templated configuration for deployment.

Question 5:
Which AWS service can be used to run Docker containers?

- Amazon AMI
- Amazon ECS
  (Correct)
- Amazon ECR
- AWS Lambda

Explanation

Amazon Elastic Container Service (ECS) is a highly scalable, high performance container management service that supports Docker containers and allows you to easily run applications on a managed cluster of Amazon EC2 instances.

CORRECT: "Amazon ECS" is the correct answer.

INCORRECT: "AWS Lambda" is incorrect. AWS Lambda is a serverless technology that lets you run code in response to events as functions

INCORRECT: "Amazon ECR" is incorrect. Amazon Elastic Container Registry (ECR) is a fully-managed Docker container registry that makes it easy for developers to store, manage, and deploy Docker container images

INCORRECT: "Amazon AMI" is incorrect. Amazon Machine Images (AMI) store configuration information for Amazon EC2 instances.

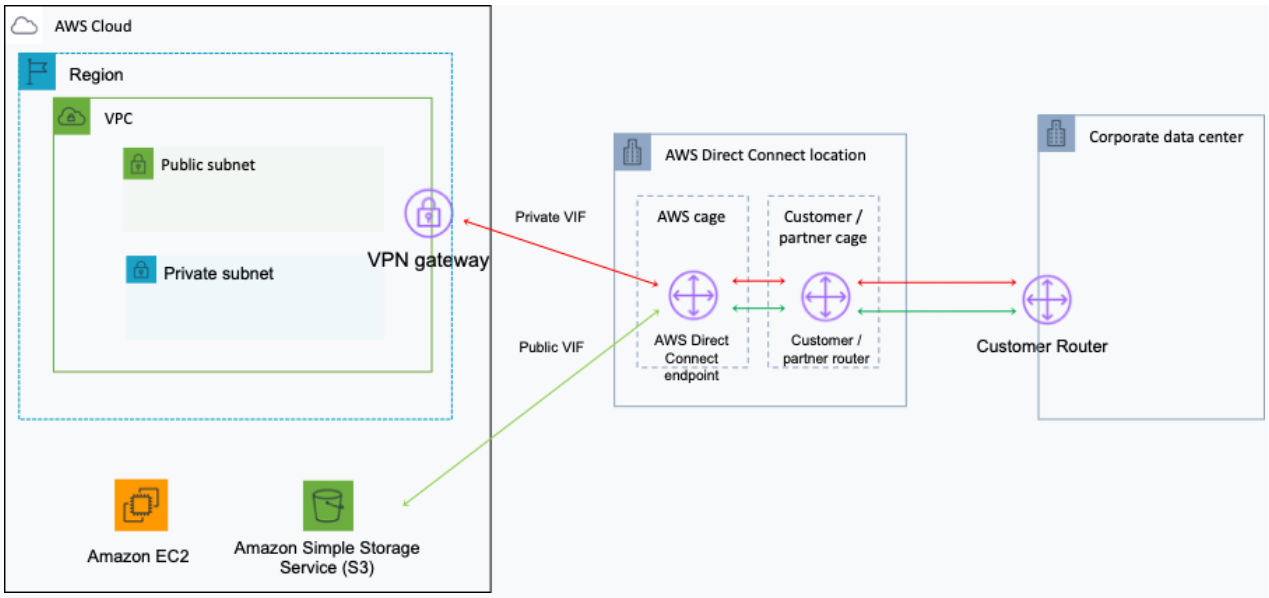
Question 6:
A company needs a consistent and dedicated connection between AWS resources and an on-premise system.

Which AWS service can fulfil this requirement?

- Amazon Connect
- AWS Direct Connect **(Correct)**
- AWS DataSync
- AWS Managed VPN

Explanation
An AWS Direct Connect connection is a private, dedicated link to AWS. As it does not use the internet, performance is consistent.

The following diagram shows how a corporate data center is connected to AWS using a Direct Connect link via an AWS Direct Connect location:



CORRECT: "AWS Direct Connect" is the correct answer.

INCORRECT: "AWS Managed VPN" is incorrect. This services uses the public internet so it is not a dedicated link and performance will not be consistent.

INCORRECT: "Amazon Connect" is incorrect. Amazon Connect is an easy to use omnichannel cloud contact center that helps companies provide superior customer service at a lower cost

INCORRECT: "AWS DataSync" is incorrect. AWS DataSync makes it simple and fast to move large amounts of data online between on-premises storage and Amazon S3, Amazon Elastic File System (Amazon EFS), or Amazon FSx for Windows File Server.

Question 7:
How can an organization assess application for vulnerabilities and deviations from best practice?

- Use AWS WAF
- Use AWS Inspector **(Correct)**
- Use AWS Artifact
- Use AWS Shield

Explanation
Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on AWS. Inspector automatically assesses applications for vulnerabilities or deviations from best practices.

CORRECT: "Use AWS Inspector" is the correct answer.

INCORRECT: "Use AWS Artifact" is incorrect. AWS Artifact is your go-to, central resource for compliance-related information that matters to you.

INCORRECT: "Use AWS Shield" is incorrect. AWS Shield is a managed Distributed Denial of Service (DDoS) protection service.

INCORRECT: "Use AWS WAF" is incorrect. AWS Web application Firewall (WAF) is a firewall service, it is not used for assessing best practice.

Question 8:
What can a Cloud Practitioner use the AWS Total Cost of Ownership (TCO) Calculator for?

- Generate reports that break down AWS Cloud compute costs by duration, resource, or tags
- Enable billing alerts to monitor actual AWS costs compared to estimated costs
- Estimate savings when comparing the AWS Cloud to an on-premises environment **(Correct)**
- Estimate a monthly bill for the AWS Cloud resources that will be used

Explanation
The TCO calculators allow you to estimate the cost savings when using AWS, compared to on-premises, and provide a detailed set of reports that can be used in executive presentations. The calculators also give you the option to modify assumptions that best meet your business needs.

CORRECT: "Estimate savings when comparing the AWS Cloud to an on-premises environment" is the correct answer.

INCORRECT: "Generate reports that break down AWS Cloud compute costs by duration, resource, or tags" is incorrect. This describes the AWS Cost & Usage Report.

INCORRECT: "Estimate a monthly bill for the AWS Cloud resources that will be used" is incorrect. This describes the AWS Pricing Calculator (or Simple Monthly Calculator).

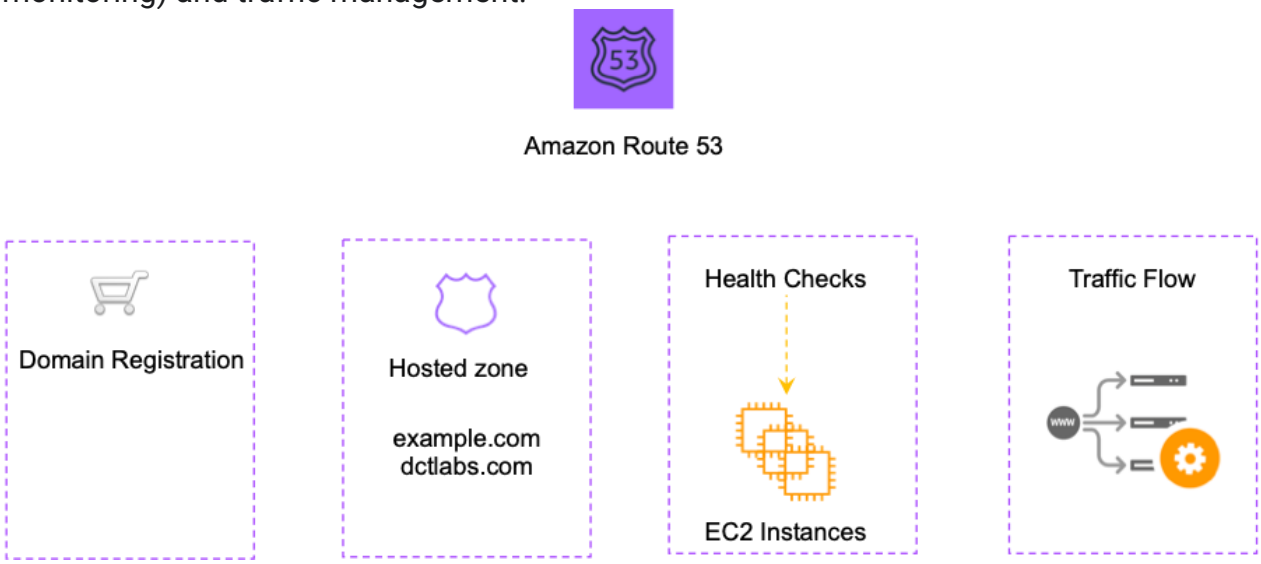
INCORRECT: "Enable billing alerts to monitor actual AWS costs compared to estimated costs" is incorrect. Billing alerts can be enabled using Amazon CloudWatch.

Question 9:
Which of the following services does Amazon Route 53 provide? (Select TWO.)

- Load balancing
- Domain Name Service (DNS) **(Correct)**
- Auto Scaling
- Route tables

- [x] Domain registration
  (Correct)

Explanation
Amazon Route 53 services include domain registration, DNS, health checking (availability monitoring) and traffic management.



CORRECT: "Domain registration" is a correct answer.

CORRECT: "Domain Name Service (DNS)" is also a correct answer.

INCORRECT: "Route tables" is incorrect as this is not provided by Route 53.

INCORRECT: "Auto Scaling" is incorrect as this is not provided by Route 53.

INCORRECT: "Load balancing" is incorrect as this is not provided by Route 53.

Question 10:
Which statements are true about Amazon EBS volumes? (Select TWO.)

- [ ] EBS volume data is ephemeral and is lost when an instance is stopped
- [x] EBS volumes must be in the same AZ as the instances they are attached to
  (Correct)
- [x] You can attach multiple EBS volumes to an instance
  (Correct)
- [ ] You can attach EBS volumes to multiple instances
- [ ] EBS volumes are object storage

Explanation
Amazon EBS volumes are used by EC2 instances for persistent storage. EBS volumes must be in the same AZ as the instances they are attached to and you can attach multiple EBS volumes to an instance.

CORRECT: "EBS volumes must be in the same AZ as the instances they are attached to" is the correct answer.

CORRECT: "You can attach multiple EBS volumes to an instance" is the correct answer.

INCORRECT: "You can attach EBS volumes to multiple instances" is incorrect. You cannot attach an EBS volume to multiple instances (use Elastic File Store instead).

INCORRECT: "EBS volume data is ephemeral and is lost when an instance is stopped" is incorrect. EBS volume data persists independently of the life of the instance.

INCORRECT: "EBS volumes are object storage" is incorrect as EBS volumes are block storage devices.

Question 11:
Using AWS terminology, which items can be created in an Amazon S3 bucket? (Select TWO.)

- [x] Folders **(Correct)**
- [ ] Files
- [ ] Tables
- [ ] Queues
- [x] Objects **(Correct)**

Explanation
The Amazon Simple Storage Service (S3) is an object store so you create objects (files, images, video etc.) within buckets. Though it is a flat structure (no hierarchy), you can mimic a hierarchical structure by using folders.

CORRECT: "Folders" is a correct answer.

CORRECT: "Objects" is also a correct answer.

INCORRECT: "Files" is incorrect as with an object-based storage system you create objects.

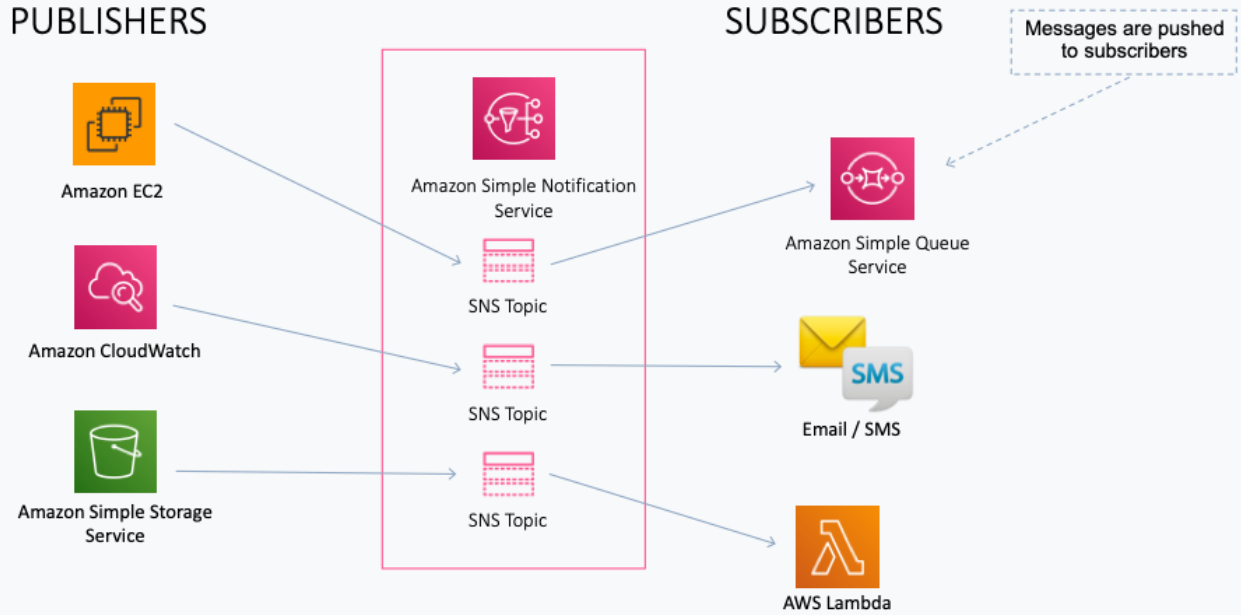
INCORRECT: "Tables" is incorrect as you do not create table in S3, you create them in a database such as Amazon DynamoDB.

INCORRECT: "Queues" is incorrect as a queue is created in a message queue service like Amazon SQS.

Question 12:
Which AWS service is used to send both text and email messages from distributed applications?

- Amazon Simple Notification Service (Amazon SNS) **(Correct)**
- Amazon Simple Email Service (Amazon SES)
- Amazon Simple Workflow Service (Amazon SWF)
- Amazon Simple Queue Service (Amazon SQS)

Explanation
Amazon Simple Notification Service (SNS) is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and serverless applications.



Amazon SNS provides topics for high-throughput, push-based, many-to-many messaging. Using Amazon SNS topics, your publisher systems can fan out messages to a large number of subscriber endpoints for parallel processing, including Amazon SQS queues, 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.

CORRECT: "Amazon Simple Notification Service (Amazon SNS)" is the correct answer.

INCORRECT: "Amazon Simple Email Service (Amazon SES)" is incorrect. This service is used for sending email but not SMS text messages.

INCORRECT: "Amazon Simple Workflow Service (Amazon SWF)" is incorrect. Amazon SWF helps developers build, run, and scale background jobs that have parallel or

sequential steps. You can think of Amazon SWF as a fully-managed state tracker and task coordinator in the Cloud.

INCORRECT: "Amazon Simple Queue Service (Amazon SQS)" is incorrect. Amazon Simple Queue Service (SQS) is a fully managed message queuing service that enables you to decouple and scale microservices, distributed systems, and serverless applications.

Question 13:
At what level is a Network ACL applied?

- Instance level
- Availability Zone level
- Subnet level **(Correct)**
- Region level

Explanation
Network Access Control Lists (ACLs) are a firewall/security layer applied at the subnet level.

Security Groups are a firewall/security layer applied at the instance level.

CORRECT: "Subnet level" is the correct answer.

INCORRECT: "Instance level" is incorrect as security groups are applied at the instance level.

INCORRECT: "Region level" is incorrect as they are not applied at a regional level.

INCORRECT: "Availability Zone level" is incorrect as they are not applied at an AZ level.

Question 14:
Which services are involved with security? (Select TWO.)

- AWS CloudHSM **(Correct)**
- Amazon ELB
- AWS KMS **(Correct)**
- AWS DMS

AWS SMS

Explanation
AWS Key Management Service (KMS) gives you centralized control over the encryption keys used to protect your data. AWS CloudHSM is a cloud-based hardware security module (HSM) that enables you to easily generate and use your own encryption keys on the AWS Cloud.

CORRECT: "AWS CloudHSM" is a correct answer.

CORRECT: "AWS KMS" is also a correct answer.

INCORRECT: "AWS DMS" is incorrect. AWS Database Migration Service is used for migration of databases.

INCORRECT: "AWS SMS" is incorrect. AWS Server Migration Service is used for migration of virtual machines.

INCORRECT: "Amazon ELB" is incorrect. Amazon Elastic Load Balancing is used for distributing incoming connections to pools of EC2 instances

Question 15:
Which configuration changes are associated with scaling horizontally? (Select TWO.)

- ☐ Changing the DB instance class on an RDS DB
- ☐ Changing an EC2 instance to a type that has more CPU and RAM
- ☐ Adding a larger capacity hard drive to a server
- ☑ Adding additional EC2 instances through Auto Scaling **(Correct)**
- ☑ Adding additional hard drives to a storage array **(Correct)**

Explanation
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)

Scaling vertically takes place through an increase in the specifications of an individual resource (e.g., upgrading a server with a larger hard drive or 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, IO, or networking capabilities

CORRECT: "Adding additional EC2 instances through Auto Scaling" is the correct answer.

CORRECT: "Adding additional hard drives to a storage array" is the correct answer.

INCORRECT: "Adding a larger capacity hard drive to a server" is incorrect as this is scaling vertically.

INCORRECT: "Changing the DB instance class on an RDS DB" is incorrect as this is scaling vertically.

INCORRECT: "Changing an EC2 instance to a type that has more CPU and RAM" is incorrect as this is scaling vertically.

Question 16:
Which AWS network element allows you to assign a static IPv4 address to an EC2 instance?

- Static IP
- Elastic IP
  (Correct)
- Public IP
- Dynamic IP

Explanation
An Elastic IP address is a static IPv4 address designed for dynamic cloud computing. An Elastic IP address is associated with your AWS account. With an Elastic IP address, you can mask the failure of an instance or software by rapidly remapping the address to another instance in your account.

Name	Description
Public IP address	Lost when the instance is stopped Used in Public Subnets No charge Associated with a private IP address on the instance Cannot be moved between instances
Private IP address	Retained when the instance is stopped Used in Public and Private Subnets
Elastic IP address	Static Public IP address You are charged if not used Associated with a private IP address on the instance Can be moved between instances and Elastic Network Adapters

CORRECT: "Elastic IP" is the correct answer.

INCORRECT: "Public IP" is incorrect. An Elastic IP is a public IP. However, in the AWS cloud an elastic IP is the construct used to assign a public IP to an EC2 instance.

INCORRECT: "Static IP" is incorrect. A static IP is an IP address (public or private) that is statically defined.

INCORRECT: "Dynamic IP" is incorrect. A dynamic IP is an IP address (public or private) that is dynamically obtained (through DHCP).

Question 17:
Which services are managed at a regional (rather than global) level? (Select TWO.)

- ☐ Amazon Route 53
- ☑ Amazon S3 **(Correct)**
- ☑ Amazon EC2 **(Correct)**
- ☐ Amazon CloudFront
- ☐ AWS IAM

Explanation
Both Amazon EC2 and Amazon S3 are managed at a regional level. Note: Amazon S3 is a global namespace but you still create your buckets within a region. Amazon CloudFront, Amazon Route 52 and AWS IAM are managed at a global level.

CORRECT: "Amazon S3" is a correct answer.

CORRECT: "Amazon EC2" is also a correct answer.

INCORRECT: "Amazon CloudFront" is incorrect as it is a global service.

INCORRECT: "Amazon Route 53" is incorrect as it is a global service.

INCORRECT: "AWS IAM" is incorrect as it is a global service.

Question 18:
A Cloud Practitioner wants to build an application stack that will be highly elastic. What AWS services can be used that don't require you to make any capacity decisions upfront? (Select TWO.)

- ☐ Amazon RDS
- ☐ Amazon DynamoDB Provisioned mode
- ☑ Amazon S3 **(Correct)**
- ☐

AWS Lambda
(Correct)

- ☑ Amazon EC2

Explanation
With Amazon S3 you don't need to specify any capacity at any time, the service scales in both capacity and performance as required.

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

CORRECT: "AWS Lambda" is a correct answer.

CORRECT: "Amazon S3" is also a correct answer.

INCORRECT: "Amazon EC2" is incorrect. With Amazon EC2 you need to select your instance sizes and number of instances.

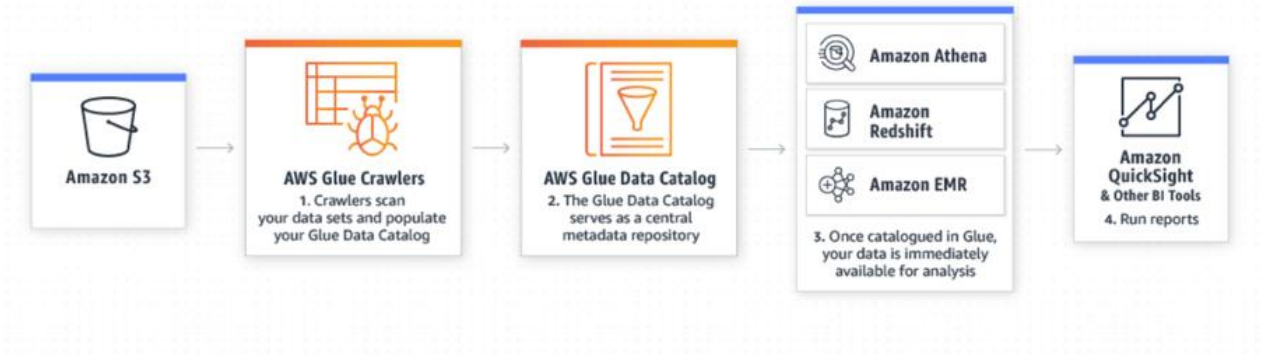
INCORRECT: "Amazon RDS" is incorrect. With RDS you need to select the instance size for the DB.

INCORRECT: "Amazon DynamoDB" is incorrect. With DynamoDB provisioned mode you need to specify the read/write capacity of the DB. On-demand mode does allow elasticity, as does DynamoDB Auto Scaling but these are not offered as options.

Question 19:
Which AWS service can be used to load data from Amazon S3, transform it, and move it to another destination?

- ○ Amazon EMR
- ◉ AWS Glue
(Correct)
- ○ Amazon RedShift
- ○ Amazon Kinesis

Explanation
AWS Glue is an Extract, Transform, and Load (ETL) service. You can use AWS Glue with data sources on Amazon S3, RedShift and other databases. With AWS Glue you transform and move the data to various destinations. It is used to prepare and load data for analytics.



CORRECT: "AWS Glue" is the correct answer.

INCORRECT: "Amazon RedShift" is incorrect. Amazon RedShift is a data warehouse. With a data warehouse you load data from other databases such as transactional SQL databases and run analysis. You can analyze data using SQL and Business Intelligence tools.

INCORRECT: "Amazon EMR" is incorrect. Amazon EMR is a managed Hadoop framework running on EC2 and S3. It is used for analyzing data, not for ETL.

INCORRECT: "Amazon Kinesis" is incorrect. Amazon Kinesis is used for collecting, processing and analyzing real-time streaming data.

Question 20:
Which benefits can a company immediately realize using the AWS Cloud? (Select TWO.)

- ☐ No responsibility for security
- ☐ User control of physical infrastructure
- ☐ Variable expenses are replaced with capital expenses
- ☑ Increased agility
  (Correct)
- ☑ Capital expenses are replaced with variable expenses
  (Correct)

Explanation
A couple of the benefits that companies will realize immediately when using the AWS Cloud are increased agility and a change from capital expenditure to variable operational expenditure.

Agility is enabled through the flexibility of cloud services and the ease with which applications can be deployed, scaled, and managed. When using cloud services you pay for what you use and this is a variable, operational expense which can be beneficial to company cashflow.

CORRECT: "Capital expenses are replaced with variable expenses" is a correct answer.

CORRECT: "Increased agility" is also a correct answer.

INCORRECT: "Variable expenses are replaced with capital expenses" is incorrect. This is the wrong way around, capital expenses are replaced with variable expenses.

INCORRECT: "User control of physical infrastructure" is incorrect. This is not true, you do not get control of the physical infrastructure.

INCORRECT: "No responsibility for security" is incorrect. This is not true, you are still responsible for “security in the cloud”.

Question 21:
A company is planning to migrate some resources into the cloud. What factors need to be considered when determining the cost of the AWS Cloud? (Select TWO.)

- [x] The number of servers migrated into EC2
  (Correct)
- [ ] The amount of ingress data per month
- [ ] The number of VPCs created
- [ ] The number of IAM users created
- [x] The amount of egress data per month
  (Correct)

Explanation
There are three fundamental drivers of cost with AWS: compute, storage, and outbound data transfer. These characteristics vary somewhat, depending on the AWS product and pricing model you choose.

In most cases, there is no charge for inbound data transfer or for data transfer between other AWS services within the same region. However, there are some exceptions.

CORRECT: "The number of servers migrated into EC2" is a correct answer.

CORRECT: "The amount of egress data per month" is also a correct answer.

INCORRECT: "The number of VPCs created" is incorrect as you are not charged for VPCs.

INCORRECT: "The number of IAM users created" is incorrect as you are not charged for IAM.

INCORRECT: "The amount of ingress data per month" is incorrect as you are not charged for data ingress.

Question 22:
Which of the following are AWS recommended best practices in relation to IAM? (Select TWO.)

- [ ] Grant greatest privilege
- [ ] Embed access keys in application code
- [x] Enable MFA for all users
  (Correct)
- [x]

Assign permissions to users

- Create individual IAM users
  (Correct)

Explanation
AWS recommends that you create individual IAM users rather than sharing IAM user accounts.

For extra security, AWS recommends that you require multi-factor authentication (MFA) for all users in your account. For privileged IAM users who are allowed to access sensitive resources or API operations, AWS recommend using U2F or hardware MFA devices.

CORRECT: "Create individual IAM users" is the correct answer.

CORRECT: "Enable MFA for all users" is the correct answer.

INCORRECT: "Assign permissions to users" is incorrect. You should use groups to assign permissions to IAM users and should avoid embedding access keys in application code.

INCORRECT: "Embed access keys in application code" is incorrect as this is against best practice as it is highly insecure.

INCORRECT: "Grant greatest privilege" is incorrect. AWS recommend creating individual IAM users and assigning the **least** privilege necessary for them to perform their role.

Question 23:
Which AWS service provides elastic web-scale cloud computing allowing you to deploy operating system instances?

- Amazon RDS
- AWS Lambda
- Amazon EC2
  (Correct)
- Amazon EBS

Explanation
The Amazon Elastic Compute Cloud (EC2) provides elastic web-scale computing in the cloud allowing you to deploy instances running the Windows and Linux operating systems.

CORRECT: "Amazon EC2" is the correct answer.

INCORRECT: "Amazon EBS" is incorrect. Amazon Elastic Block Store (Amazon EBS) provides persistent block storage volumes for use with Amazon EC2instances in the AWS Cloud.

INCORRECT: "AWS Lambda" is incorrect. AWS Lambda lets you run code without provisioning or managing server operating systems.

INCORRECT: "Amazon RDS" is incorrect. Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud.

Question 24:
Which of the facts below are accurate in relation to AWS Regions? (Select TWO.)

- [x] Each region is designed to be completely isolated from the other Amazon Regions **(Correct)**
- [x] Each region consists of 2 or more availability zones **(Correct)**
- [ ] Regions are Content Delivery Network (CDN) endpoints for CloudFront
- [ ] Each region consists of a collection of VPCs
- [ ] Regions have direct, low-latency, high throughput and redundant network connections between each other

Explanation
Availability Zones (not regions) have direct, low-latency, high throughput and redundant network connections between each other. Each AWS Region consist of 2 or more Availability Zones. AWS Regions are geographical areas and each AWS Region is designed to be completely isolated from other AWS Regions.

CORRECT: "Each region consists of 2 or more availability zones" is a correct answer.

CORRECT: "Each region is designed to be completely isolated from the other Amazon Regions" is also a correct answer.

INCORRECT: "Each region consists of a collection of VPCs" is incorrect. A region is not a collection of VPCs, it is composed of at least 2 AZs. VPCs exist within accounts on a per region basis.

INCORRECT: "Regions have direct, low-latency, high throughput and redundant network connections between each other" is incorrect. This is a description of an Availability Zone.

INCORRECT: "Regions are Content Delivery Network (CDN) endpoints for CloudFront" is incorrect. Edge locations are (not regions) are Content Delivery Network (CDN) endpoints for CloudFront

Question 25:
How can a security compliance officer retrieve AWS compliance documentation such as a SOC 2 report?

- Using AWS Trusted Advisor
- Using AWS Inspector
- Using AWS Artifact
  (Correct)
- Using the AWS Personal Health Dashboard

Explanation
AWS Artifact, available in the console, is a self-service audit artifact retrieval portal that provides our customers with on-demand access to AWS' compliance documentation and AWS agreements.

You can 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.

CORRECT: "Using AWS Artifact" is the correct answer.

INCORRECT: "Using AWS Trusted Advisor" is incorrect. AWS Trusted Advisor is an online resource to help you reduce cost, increase performance, and improve security by optimizing your AWS environment.

INCORRECT: "Using AWS Inspector" is incorrect. Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on AWS.

INCORRECT: "Using the AWS Personal Health Dashboard" is incorrect. AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you.

Question 26:
Which AWS service protects against common exploits that could compromise application availability, compromise security or consume excessive resources?

- AWS WAF
  (Correct)
- AWS Shield
- Network ACL
- Security Group

Explanation
AWS WAF is a web application firewall that protects against common exploits that could compromise application availability, compromise security or consume excessive resources.

CORRECT: "AWS WAF" is the correct answer.

INCORRECT: "AWS Shield" is incorrect. AWS Shield is a managed Distributed Denial of Service (DDoS) protection service.

INCORRECT: "Security Group" is incorrect. Security groups are firewalls applied at the instance level.

INCORRECT: "Network ACL" is incorrect. Network ACLs are firewalls applied at the subnet level.

Question 27:
Which AWS service helps customers meet corporate, contractual, and regulatory compliance requirements for data security by using dedicated hardware appliances within the AWS Cloud?

- AWS Secrets Manager
- AWS Directory Service
- AWS Key Management Service (AWS KMS)
- AWS CloudHSM
  (Correct)

Explanation
The AWS CloudHSM service helps you meet corporate, contractual, and regulatory compliance requirements for data security by using dedicated Hardware Security Module (HSM) instances within the AWS cloud. AWS CloudHSM enables you to easily generate and use your own encryption keys on the AWS Cloud.

CORRECT: "AWS CloudHSM" is the correct answer.

INCORRECT: "AWS Secrets Manager" is incorrect. AWS Secrets Manager enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.

INCORRECT: "AWS Key Management Service (AWS KMS)" is incorrect. This service is also involved with creating and managing encryption keys but does not use dedicated hardware.

INCORRECT: "AWS Directory Service" is incorrect. AWS Directory Service for Microsoft Active Directory, also known as AWS Managed Microsoft AD, enables your directory-aware workloads and AWS resources to use managed Active Directory in the AWS Cloud.

Question 28:
Which AWS hybrid storage service enables a user's on-premises applications to seamlessly use AWS Cloud storage?

- AWS Direct Connect
- AWS Storage Gateway **(Correct)**
- Amazon Connect
- AWS Backup

Explanation
AWS Storage Gateway is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage. Customers use Storage Gateway to simplify storage management and reduce costs for key hybrid cloud storage use cases.

These include moving tape backups to the cloud, reducing on-premises storage with cloud-backed file shares, providing low latency access to data in AWS for on-premises applications, as well as various migration, archiving, processing, and disaster recovery use cases.

CORRECT: "AWS Storage Gateway" is the correct answer.

INCORRECT: "AWS Backup" is incorrect. AWS Backup is a fully managed backup service that makes it easy to centralize and automate the backup of data across AWS services. It is not used for connecting on-premises storage to cloud storage.

INCORRECT: "Amazon Connect" is incorrect. Amazon Connect is an easy to use omnichannel cloud contact center that helps companies provide superior customer service at a lower cost. It has nothing to do with storing data.

INCORRECT: "AWS Direct Connect" is incorrect. AWS Direct Connect is a cloud service solution that makes it easy to establish a dedicated network connection from your premises to AWS. It is not related to storage of data.

Question 29:
What are the benefits of using the AWS Managed Services? (Select TWO.)

- ☐ Designed for small businesses
- ☐ Support for all AWS services
- ☑ Baseline integration with ITSM tools **(Correct)**
- ☑ Alignment with ITIL processes **(Correct)**
- ☐ Managed applications so you can focus on infrastructure

Explanation
AWS Managed Services manages the daily operations of your AWS infrastructure in alignment with ITIL processes. AWS Managed Services provides a baseline integration with IT Service Management (ITSM) tools such as the ServiceNow platform.

AWS Managed Services provides ongoing **management of your AWS infrastructure so you can focus on your applications**. By implementing best practices to maintain your infrastructure, AWS Managed Services helps to reduce your operational overhead and risk.

AWS Managed Services currently supports the 20+ services most critical for Enterprises, and will continue to expand our list of integrated AWS services.

AWS Managed Services is **designed to meet the needs of Enterprises** that require stringent SLAs, adherence to corporate compliance, and integration with their systems and ITIL®-based processes.

CORRECT: "Alignment with ITIL processes" is a correct answer.

CORRECT: "Baseline integration with ITSM tools" is also a correct answer.

INCORRECT: "Managed applications so you can focus on infrastructure" is incorrect as this is not offered by AWS Managed Services.

INCORRECT: "Designed for small businesses" is incorrect as the service is designed for enterprises.

INCORRECT: "Support for all AWS services" is incorrect as the service does not support all AWS services.

Question 30:
Which cloud computing model gives the IT department the highest level of flexibility and management control?

- Software as a Service (SaaS)
- On-premises cloud
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS) **(Correct)**

Explanation
With IaaS the IT department have the most flexibility and management control over resources as only the infrastructure layer is provided by the Cloud Provider. Everything else is managed by the end customer. This means more control and more responsibility for management.

With PaaS and SaaS, the Cloud Provider manages up to a higher level in the stack. This means that as an organization using the service you have less control (and less responsibility).

On-premises cloud is a cloud deployment model, not a cloud computing model. Other cloud deployment models are Private, Public and Hybrid.

CORRECT: "Infrastructure as a Service (IaaS)" is the correct answer.

INCORRECT: "Platform as a Service (PaaS)" is incorrect as explained above.

INCORRECT: "Software as a Service (SaaS)" is incorrect as explained above.

INCORRECT: "On-premises cloud" is incorrect as explained above.

Question 31:
What type of database is fully managed and can be scaled without incurring downtime?

- Amazon DynamoDB **(Correct)**
- Amazon RDS
- Amazon ElastiCache
- Amazon S3

Explanation
Amazon DynamoDB is fully managed and can be scaled without incurring downtime. DynamoDB scales horizontally and it does so seamlessly.

Both RDS and ElastiCache use EC2 instances and therefore scaling (vertically) requires downtime.

CORRECT: "Amazon DynamoDB" is the correct answer.

INCORRECT: "Amazon RDS" is incorrect as it must be scaled vertically and this requires downtime.

INCORRECT: "Amazon S3" is incorrect. S3 is not a fully managed database, it is an object store.

INCORRECT: "Amazon ElastiCache" is incorrect as it must be scaled vertically and this requires downtime.

Question 32:
Which AWS service provides preconfigured virtual private servers (instances) that include everything required to deploy an application or create a database?

- Amazon ECS
- AWS Lambda
- Amazon Lightsail
  (Correct)
- AWS CloudFormation

Explanation
LightSail provides preconfigured virtual private servers (instances) that include everything required to deploy and application or create a database.

LightSail includes everything you need to launch your project quickly – a virtual machine, SSD-based storage, data transfer, DNS management, and a static IP.

CORRECT: "Amazon LightSail" is the correct answer.

INCORRECT: "AWS CloudFormation" is incorrect. CloudFormation is used to deploy resources through code, as a service it does not include preconfigured servers.

INCORRECT: "Amazon ECS" is incorrect. Amazon Elastic Container Service (ECS) is a highly scalable, high performance container management service that supports Docker containers and allows you to easily run applications on a managed cluster of Amazon EC2 instances.

INCORRECT: "AWS Lambda" is incorrect. Lambda is a serverless computing technology that allows you to run code without provisioning or managing servers.

Question 33:
Which tool can be used to create and manage a selection of AWS services that are approved for use on AWS?

- AWS Organizations
- Amazon Cloud Directory
- AWS Service Catalog
  (Correct)
- AWS OpsWorks

Explanation
AWS Service Catalog allows organizations to create and manage catalogs of IT services that are approved for use on AWS. These IT services can include everything from virtual machine images, servers, software, and databases to complete multi-tier application architectures

CORRECT: "AWS Service Catalog" is the correct answer.

INCORRECT: "AWS OpsWorks" is incorrect. AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet.

INCORRECT: "Amazon Cloud Directory" is incorrect. Amazon Cloud Directory enables you to build flexible cloud-native directories for organizing hierarchies of data along multiple dimensions.

INCORRECT: "AWS Organizations" is incorrect. AWS Organizations offers policy-based management for multiple AWS accounts

Question 34:
Which AWS services can be utilized at no cost? (Select TWO.)

- Amazon CloudFront
- Amazon VPC
  (Correct)
- Amazon S3
- Amazon RedShift
- Identity and Access Management (IAM)
  (Correct)

Explanation

AWS offer many services without charge. These include the AWS IAM services for creating users, groups, roles and policies and the Amazon VPC service for creating virtual private clouds, subnets, route tables etc.

CORRECT: "Identity and Access Management (IAM)" is a correct answer.

CORRECT: "Amazon VPC" is also a correct answer.

INCORRECT: "Amazon S3" is incorrect as you must pay for this service.

INCORRECT: "Amazon CloudFront" is incorrect as you must pay for this service.

INCORRECT: "Amazon RedShift" is incorrect as you must pay for this service.

Question 35:
A user has limited knowledge of AWS services, but wants to quickly deploy a scalable Node.js application in an Amazon VPC.

Which service should be used to deploy the application?

- Amazon LightSail
- AWS CloudFormation
- Amazon EC2
- AWS Elastic Beanstalk **(Correct)**

Explanation
AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.

You can simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. At the same time, you retain full control over the AWS resources powering your application and can access the underlying resources at any time.

CORRECT: "AWS Elastic Beanstalk" is the correct answer.

INCORRECT: "Amazon LightSail" is incorrect. LightSail is a good service to use when you don't have good knowledge of AWS. However, you cannot deploy a scalable node.js application into a VPC.

INCORRECT: "AWS CloudFormation" is incorrect. CloudFormation is used for automating the deployment of infrastructure resources in AWS.

INCORRECT: "Amazon EC2" is incorrect. This would require more expertise that using Elastic Beanstalk.

Question 36:
What are the names of two types of AWS Storage Gateway? (Select TWO.)

- ☐ Cached Gateway
- ☐ Block Gateway
- ☑ Gateway Virtual Tape Library
  (Correct)
- ☑ File Gateway
  (Correct)
- ☐ S3 Gateway

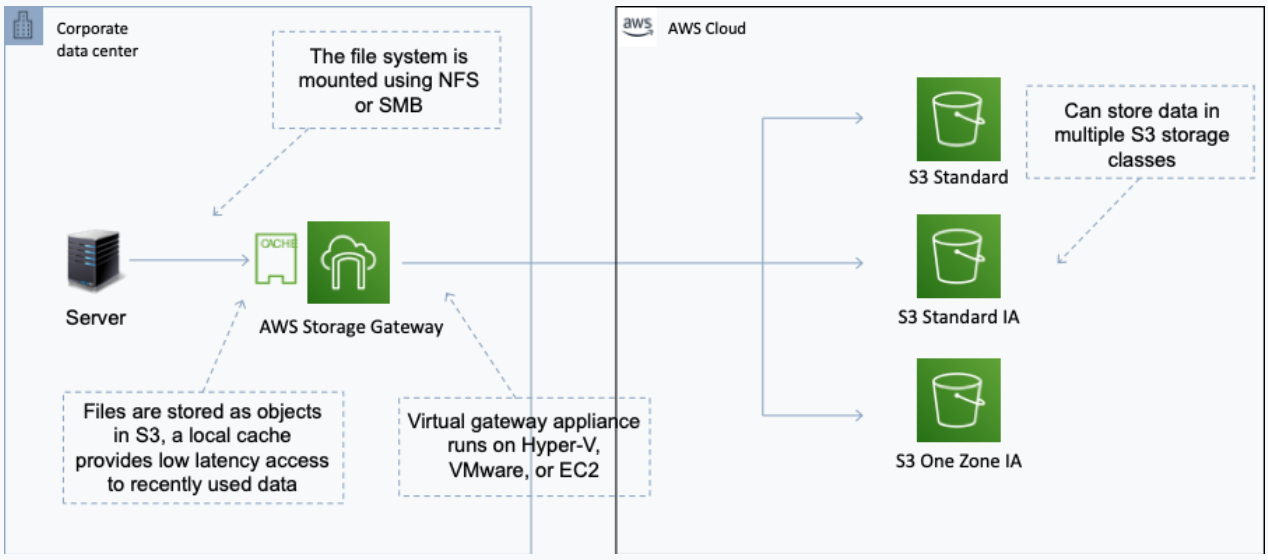
Explanation
The AWS Storage Gateway service enables hybrid storage between on-premises environments and the AWS Cloud. It provides low-latency performance by caching frequently accessed data on premises, while storing data securely and durably in Amazon cloud storage services. AWS Storage Gateway supports three storage interfaces: file, volume, and tape

File gateway provides a virtual on-premises file server, which enables you to store and retrieve files as objects in Amazon S3

The volume gateway represents the family of gateways that support block-based volumes, previously referred to as gateway-cached and gateway-stored modes

Tape Gateway (formerly known as Gateway Virtual Tape Library) is used for backup with popular backup software.

The diagram below depicts a File Gateway.



All other answers are bogus and use terms that are associated with Storage Gateways (S3, block, cached)

CORRECT: "File Gateway" is a correct answer.

CORRECT: "Tape Gateway" is also a correct answer.

INCORRECT: "S3 Gateway" is incorrect as explained above.

INCORRECT: "Block Gateway" is incorrect as explained above.

INCORRECT: "Cached Gateway" is incorrect as explained above.

Question 37:
You need to ensure you have the right amount of compute available to service demand. Which AWS service can automatically scale the number of EC2 instances for your application?

- Amazon EC2 Auto Scaling **(Correct)**
- Amazon RedShift
- Amazon ElastiCache
- Amazon Elastic Load Balancer

Explanation
Auto Scaling automates the process of adding (scaling up) OR removing (scaling down) EC2 instances based on the traffic demand for your application.

CORRECT: "Amazon EC2 Auto Scaling" is the correct answer.

INCORRECT: "Amazon Elastic Load Balancer" is incorrect. ELB automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses.

INCORRECT: "Amazon ElastiCache" is incorrect. Amazon ElastiCache offers fully managed Redis and Memcached database services.

INCORRECT: "Amazon RedShift" is incorrect. Amazon Redshift is a fast, scalable data warehouse that makes it simple and cost-effective to analyze all your data across your data warehouse and data lake.

Question 38:
Which of the following are valid types of Reserved Instance? (Select TWO.)

- ☐ Long-Term RI
- ☐ Special RI
- ☑ Convertible RI
  (Correct)
- ☑ Scheduled RI
  (Correct)
- ☐ Discounted RI

Explanation
Reserved Instances (RI) provide a significant discount (up to 72%) compared to On-Demand pricing and provide a capacity reservation when used in a specific Availability Zone. The following types of RI are available:

Standard RIs: These provide the most significant discount (up to 75% off On-Demand) and are best suited for steady-state usage.

Convertible RIs: These provide a discount (up to 54% off On-Demand) and the capability to change the attributes of the RI as long as the exchange results in the creation of Reserved Instances of equal or greater value. Like Standard RIs, Convertible RIs are best suited for steady-state usage.

Scheduled RIs: These are available to launch within the time windows you reserve. This option allows you to match your capacity reservation to a predictable recurring schedule that only requires a fraction of a day, a week, or a month.

CORRECT: "Convertible RI" is a correct answer.

CORRECT: "Scheduled RI" is also a correct answer.

INCORRECT: "Discounted RI" is incorrect as this is not a type of RI available.

INCORRECT: "Long-Term RI" is incorrect as this is not a type of RI available.

INCORRECT: "Special RI" is incorrect as this is not a type of RI available.

Question 39:
How should an organization deploy an application running on multiple EC2 instances to ensure that a power failure does not cause an application outage?

- Launch the EC2 instances in separate regions
- Launch the EC2 instances into different VPCs
- Launch the EC2 instances into different Availability Zones **(Correct)**
- Launch the EC2 instances into Edge Locations

Explanation
If you have multiple EC2 instances that are part of an application, you should deploy them into separate availability zones (AZs). Each AZ has redundant power and is also fed from a different grid. AZs also have low-latency network links which is often advantageous for most applications.

You do not need to deploy into separate regions to prevent a power outage bringing your application down. AZs have redundant power and grids so you are safe deploying your applications into multiple AZs. If you split your applications across regions you introduce latency which may impact your application. You may also run into data sovereignty issues in some cases.

Deploying your EC2 instances into different VPCs is not required and would complicate your application deployment. Also, bear in mind that VPCs within a region use the same underlying infrastructure so deploying into different VPCs may still result in your EC2 instances being deployed into the same AZs. It is a best practice to deploy into separate AZs.

CORRECT: "Launch the EC2 instances into different Availability Zones" is the correct answer.

INCORRECT: "Launch the EC2 instances in separate regions" is incorrect as described above.

INCORRECT: "Launch the EC2 instances into different VPCs" is incorrect as described above.

INCORRECT: "Launch the EC2 instances into Edge Locations" is incorrect. You cannot deploy EC2 instances into Edge Locations.

Question 40:
A user needs an automated security assessment report that will identify unintended network access to Amazon EC2 instances and vulnerabilities on those instances.

Which AWS service will provide this assessment report?

- Amazon Inspector
  (Correct)
- Amazon Macie
- EC2 security groups
- AWS Config

Explanation
Amazon Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on AWS. Amazon Inspector automatically assesses applications for exposure, vulnerabilities, and deviations from best practices.

After performing an assessment, Amazon Inspector produces a detailed list of security findings prioritized by level of severity. These findings can be reviewed directly or as part of detailed assessment reports which are available via the Amazon Inspector console or API.

CORRECT: "Amazon Inspector" is the correct answer.

INCORRECT: "EC2 security groups" is incorrect. Security groups are instance-level firewalls used for controlling network traffic reaching and leaving EC2 instances.

INCORRECT: "AWS Config" is incorrect. AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources.

INCORRECT: "Amazon Macie" is incorrect. Amazon Macie is a fully managed data security and data privacy service that uses machine learning and pattern matching to discover and protect sensitive data in AWS.

Question 41:
Which AWS service or feature allows a company to receive a single monthly AWS bill when using multiple AWS accounts?

- Amazon Cloud Directory
- Consolidated billing
  (Correct)
- AWS Cost Explorer

- AWS Cost and Usage report

Explanation
You can use the consolidated billing feature in AWS Organizations to consolidate billing and payment for multiple AWS accounts or multiple Amazon Internet Services Pvt. Ltd (AISPL) accounts. Every organization in AWS Organizations has a *master (payer) account* that pays the charges of all the *member (linked) accounts*.

Consolidated billing has the following benefits:

• **One bill** – You get one bill for multiple accounts.

• **Easy tracking** – You can track the charges across multiple accounts and download the combined cost and usage data.

• **Combined usage** – You can combine the usage across all accounts in the organization to share the volume pricing discounts, Reserved Instance discounts, and Savings Plans. This can result in a lower charge for your project, department, or company than with individual standalone accounts.

• **No extra fee** – Consolidated billing is offered at no additional cost.

CORRECT: "Consolidated billing" is the correct answer.

INCORRECT: "Amazon Cloud Directory" is incorrect. Cloud Directory is used for creating cloud-native directories. This is not related to billing.

INCORRECT: "AWS Cost Explorer" is incorrect. AWS Cost Explorer has an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time. It does not centralize billing.

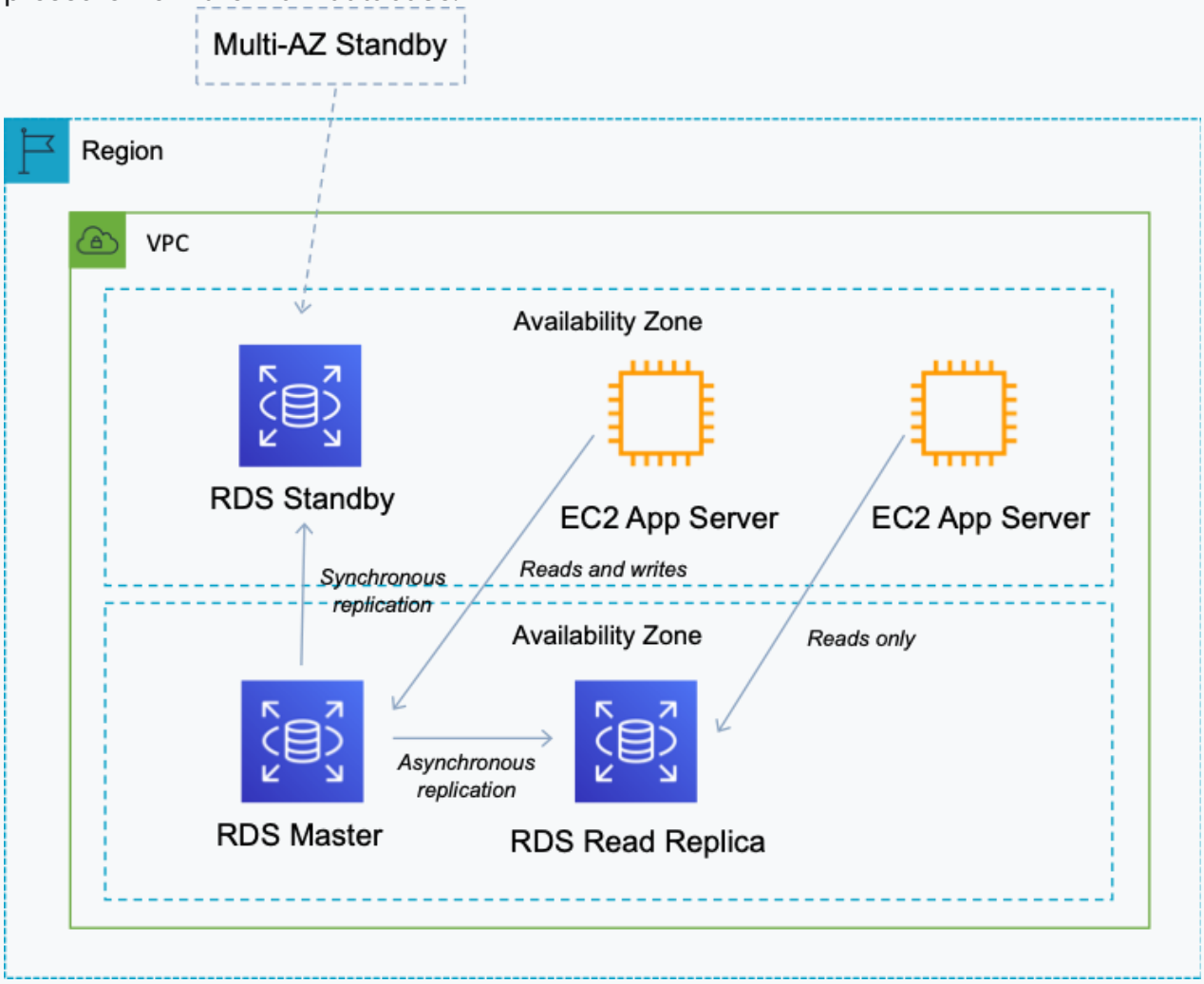
INCORRECT: "AWS Cost and Usage report" is incorrect. The AWS Cost & Usage Report lists AWS usage for each service category used by an account and its IAM users in hourly or daily line items, as well as any tags that you have activated for cost allocation purposes.

Question 42:
What features does Amazon RDS provide to deliver scalability, availability and durability? (Select TWO.)

- ☐ DB mirroring
- ☑ Multi-AZ **(Correct)**
- ☑ Read Replicas **(Correct)**
- ☐ Multi-Subnet

- ☐ Clustering

Explanation
Multi-AZ RDS creates a replica in another AZ and synchronously replicates to it (DR only). Read replicas are used for read heavy DBs and replication is asynchronous. With a read replica you direct your database queries to the read replica and this offloads pressure from the main database.



CORRECT: "Multi-AZ" is a correct answer.

CORRECT: "Read Replicas" is also a correct answer.

INCORRECT: "DB mirroring" is incorrect as it is not offered by RDS.

INCORRECT: "Clustering" is incorrect as this is not offered by RDS.

INCORRECT: "Multi-Subnet" is incorrect as this is not offered by RDS.

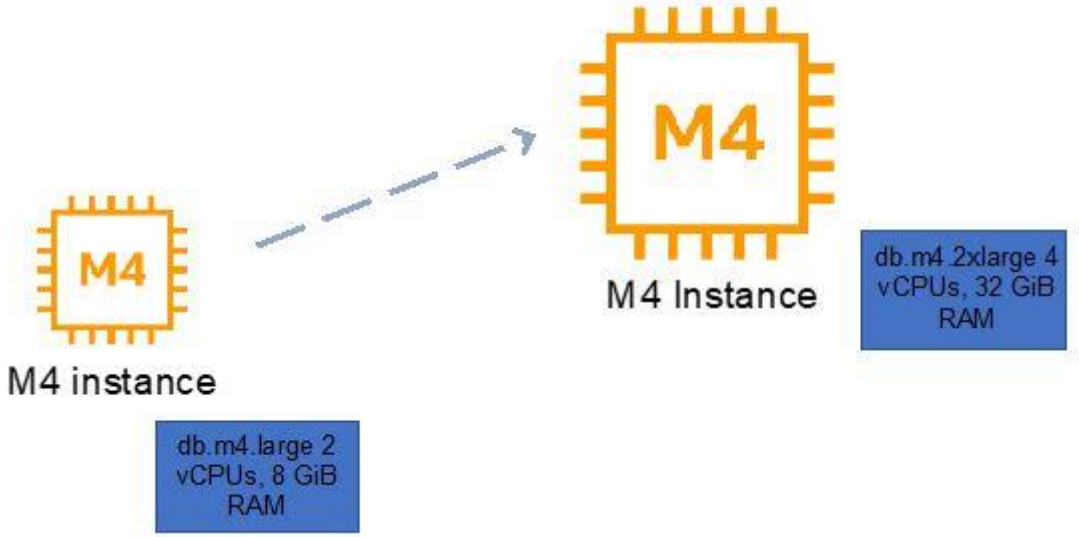
Question 43:
Which configuration changes are associated with scaling vertically? (Select TWO.)

- ☑ Adding a larger capacity hard drive to a server **(Correct)**
- ☐ Adding additional hard drives to a storage array

- ☐ Adding additional EC2 instances through Auto Scaling
- ☑ Changing an EC2 instance to a type that has more CPU and RAM **(Correct)**
- ☐ Distributed processing

Explanation
Scaling vertically takes place through an increase in the specifications of an individual resource (e.g., upgrading a server with a larger hard drive or 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, IO, or networking capabilities.

The diagram below shows an example of scaling vertically with RDS by changing instance type.



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).

CORRECT: "Adding a larger capacity hard drive to a server" is a correct answer.

CORRECT: "Changing an EC2 instance to a type that has more CPU and RAM" is also a correct answer.

INCORRECT: "Adding additional EC2 instances through Auto Scaling" is incorrect as this is an example of scaling horizontally.

INCORRECT: "Adding additional hard drives to a storage array" is incorrect as this is an example of scaling horizontally.

INCORRECT: "Distributed processing" is incorrect as this is an example of scaling horizontally.

Question 44:
Which service provides visibility into user activity by recording actions taken on your account?

- Amazon CloudFormation
- Amazon CloudTrail
  (Correct)
- Amazon CloudHSM
- Amazon CloudWatch

Explanation
CloudTrail is a web service that records activity made on your account and delivers log files to an Amazon S3 bucket. CloudTrail records API activity. CloudTrail is used for auditing whereas CloudWatch is used for performance monitoring.

CORRECT: "Amazon CloudTrail" is the correct answer.

INCORRECT: "Amazon CloudWatch" is incorrect. CloudWatch is used for performance monitoring.

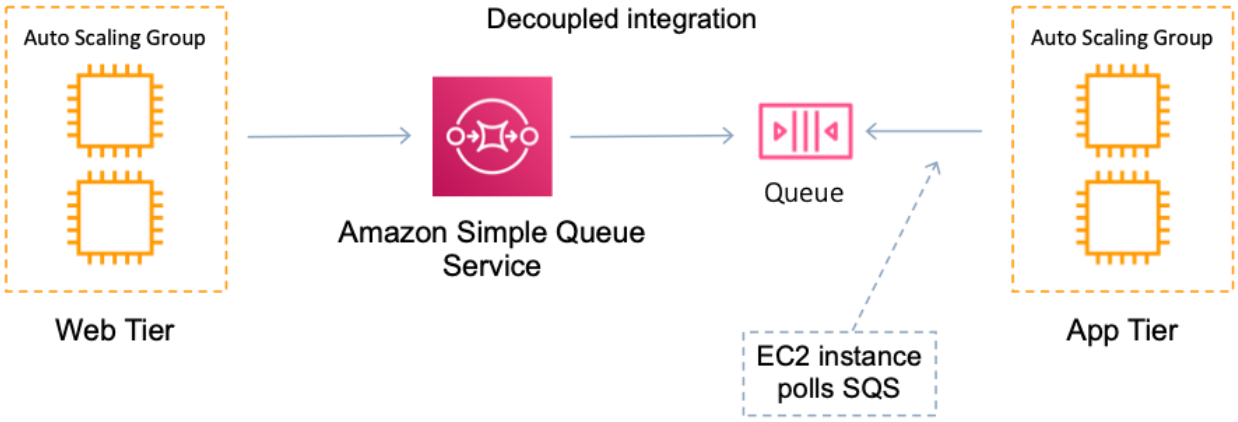
INCORRECT: "Amazon CloudFormation" is incorrect. CloudFormation is used for deploying infrastructure through code

INCORRECT: "Amazon CloudHSM" is incorrect. CloudHSM is a hardware security module for generating, managing and storing encryption keys.

Question 45:
You need to implement a hosted queue for storing messages in transit between application servers. Which service should you use?

- Amazon DynamoDB
- Amazon SWF
- Amazon SQS
  (Correct)
- Amazon SNS

Explanation
Amazon Simple Queue Service (Amazon SQS) is a web service that gives you access to message queues that store messages waiting to be processed. SQS offers a reliable, highly-scalable, hosted queue for storing messages in transit between computers. SQS is used for distributed/decoupled application.



CORRECT: "Amazon SQS" is a correct answer.

INCORRECT: "Amazon SNS" is incorrect. Amazon Simple Notification Service (SNS) is a highly available, durable, secure, fully managed pub/sub messaging service that enables you to decouple microservices, distributed systems, and serverless applications.

INCORRECT: "Amazon DynamoDB" is incorrect. Amazon DynamoDB is a nonrelational database that delivers reliable performance at any scale.

INCORRECT: "Amazon SWF" is incorrect. Amazon SWF helps developers build, run, and scale background jobs that have parallel or sequential steps.

Question 46:
What are two ways an AWS customer can reduce their monthly spend? (Select TWO.)

- ☐ Use more power efficient instance types
- ☑ Reserve capacity where suitable **(Correct)**
- ☐ Be efficient with usage of Security Groups
- ☐ Reduce the amount of data ingress charges
- ☑ Turn off resources that are not being used **(Correct)**

Explanation
Turning of resources that are not used can reduce spend. You can also use reserved capacity to reduce the monthly spend at the expense of having to lock into a 1 or 3-year contract – good for stable workloads.

CORRECT: "Turn off resources that are not being used" is a correct answer.

CORRECT: "Reserve capacity where suitable" is also a correct answer.

INCORRECT: "Use more power efficient instance types" is incorrect as you do not pay for power on AWS.

INCORRECT: "Be efficient with usage of Security Groups" is incorrect as you do not pay for security groups on AWS.

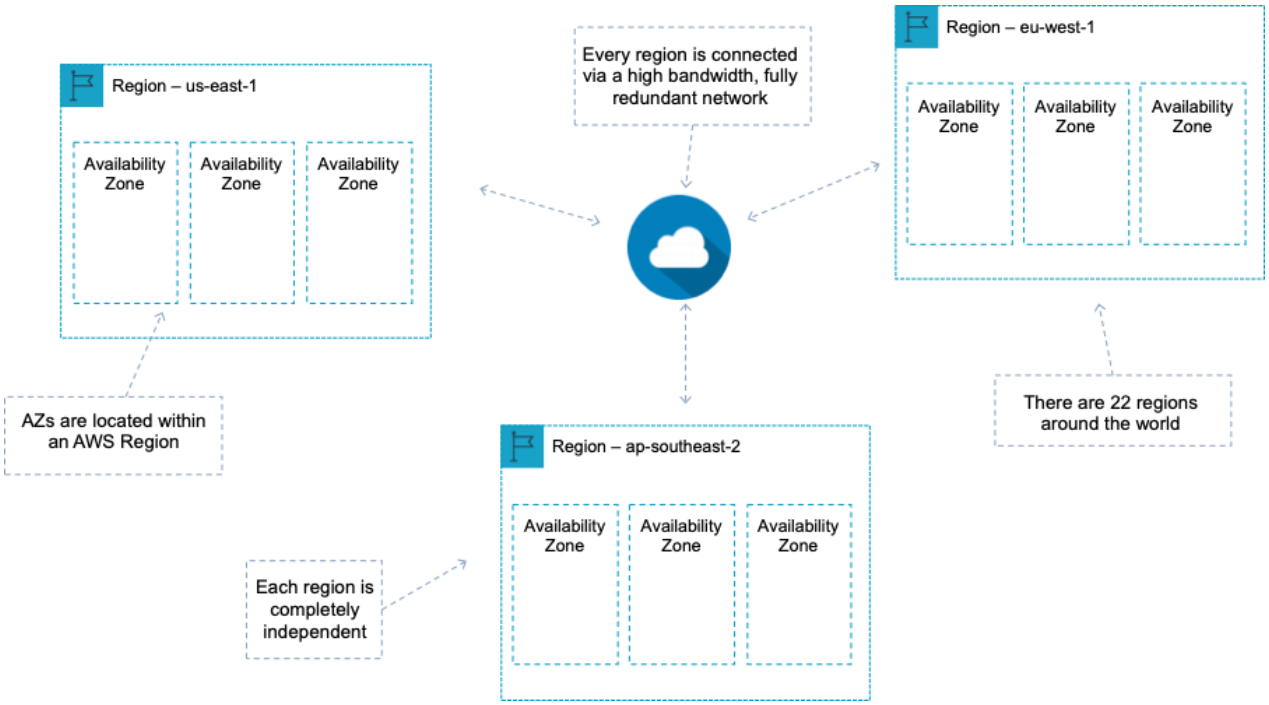
INCORRECT: "Reduce the amount of data ingress charges" is incorrect as in most cases you do not pay for data ingress.

Question 47:
Which of the following best describes an Availability Zone in the AWS Cloud?

- A completely isolated geographic location
- One or more edge locations based around the world
- One or more physical data centers **(Correct)**
- A subnet for deploying resources into

Explanation
An Availability Zone (AZ) is one or more discrete data centers with redundant power, networking, and connectivity in an AWS Region. AZ's give customers the ability to operate production applications and databases that are more highly available, fault tolerant, and scalable than would be possible from a single data center.

The diagram below shows how AZs relate to AWS Regions:



CORRECT: "One or more physical data centers" is the correct answer.

INCORRECT: "A completely isolated geographic location" is incorrect. This is a description of an AWS Region.

INCORRECT: "One or more edge locations based around the world" is incorrect. Edge locations are used by Amazon CloudFront for caching content.

INCORRECT: "A subnet for deploying resources into" is incorrect. Subnets are created within AZs.

Question 48:
A company has an application with users in both Australia and Germany. All the company infrastructure is currently provisioned in the Europe (Frankfurt) Region, and Australian users are experiencing high latency.

What should the company do to reduce latency?

- Implement AWS Direct Connect for users in Australia
- Provision resources in the Asia Pacific (Sydney) Region in Australia **(Correct)**
- Use AWS Transit Gateway to quickly route users from Australia to the application
- Launch additional Amazon EC2 instances in Frankfurt to handle the demand

Explanation
Latency (slow response times) is experienced when resources are far away. Distance is the single biggest factor that causes latency. The easiest option presented to resolve this situation is to place resources closer to where the users are.

CORRECT: "Provision resources in the Asia Pacific (Sydney) Region in Australia" is the correct answer.

INCORRECT: "Implement AWS Direct Connect for users in Australia" is incorrect. Direct Connect is a private network connection from your network or data center into a nearby AWS Region. This does not solve the latency issues.

INCORRECT: "Use AWS Transit Gateway to quickly route users from Australia to the application" is incorrect. This service is used to connect Amazon Virtual Private Clouds (VPCs) and on-premises networks to a single gateway for connecting multiple VPCs and on-premises networks. This does not solve the latency issues.

INCORRECT: "Launch additional Amazon EC2 instances in Frankfurt to handle the demand" is incorrect. Latency will still be an issue even with more resources in Frankfurt.

Question 49:
Which AWS service should a Cloud Practitioner use to automate configuration management using Puppet?

- AWS CloudFormation
- AWS Systems Manager

- AWS Config
- AWS OpsWorks
  (Correct)

Explanation
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,

CORRECT: "AWS OpsWorks" is the correct answer.

INCORRECT: "AWS Config" is incorrect. AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources.

INCORRECT: "AWS CloudFormation" is incorrect. AWS CloudFormation provides a common language for you to model and provision AWS and third party application resources in your cloud environment.

INCORRECT: "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.

Question 50:
Which of the statements below is correct in relation to Consolidated Billing? (Select TWO.)

- You pay a fee per linked account
- You receive a single bill for multiple accounts
  (Correct)
- You can combine usage and share volume pricing discounts
  (Correct)
- You are charged a fee per user
- You receive one bill per AWS account

Explanation
Consolidated billing has the following benefits:

One bill – You get one bill for multiple accounts.

Easy tracking – You can track the charges across multiple accounts and download the combined cost and usage data.

Combined usage – You can combine the usage across all accounts in the organization to share the volume pricing discounts and Reserved Instance discounts. This can result in a lower charge for your project, department, or company than with individual standalone accounts.

CORRECT: "You receive a single bill for multiple accounts" is a correct answer.

CORRECT: "You can combine usage and share volume pricing discounts" is also a correct answer.

INCORRECT: "You receive one bill per AWS account" is incorrect as you receive a single bill for multiple accounts.

INCORRECT: "You pay a fee per linked account" is incorrect as you do not pay a fee.

INCORRECT: "You are charged a fee per user" is incorrect as you do not pay a fee.

Question 51:
Amazon S3 is typically used for which of the following use cases? (Select TWO.)

- [x] Host a static website
  (Correct)
- [ ] Install an operating system
- [x] Media hosting
  (Correct)
- [ ] In-memory data cache
- [ ] Message queue

Explanation
Amazon S3 is an object storage system. Typical use cases include: Backup and storage, application hosting, media hosting, software delivery and hosting a static website.

CORRECT: "Host a static website" is the correct answer.

CORRECT: "Media hosting" is the correct answer.

INCORRECT: "Install an operating system" is incorrect. You cannot install an operating system on an object-based storage system. Instead, you need a block-based storage system such as Amazon EBS.

INCORRECT: "In-memory data cache" is incorrect. You cannot use Amazon S3 as an in-memory data cache; for this you need a service such as Amazon ElastiCache.

INCORRECT: "Message queue" is incorrect. You cannot use Amazon S3 as a message queue (or at least it is not a typical use case). You should use a services such as Amazon SQS or Amazon MQ.

Question 52:
How can you apply metadata to an EC2 instance that categorizes it according to its purpose, owner or environment?

- Hostname
- Tags
  (Correct)
- Labels
- Stickers

Explanation
A tag is a label that you assign to an AWS resource. Each tag consists of a *key* and an optional *value*, both of which you define. Tags enable you to categorize your AWS resources in different ways, for example, by purpose, owner, or environment

CORRECT: "Tags" is the correct answer.

INCORRECT: "Labels" is incorrect as this is not something you can assign to an AWS resource.

INCORRECT: "Hostname" is incorrect as you cannot use hostnames to categorize EC2 instances. Use tags instead.

INCORRECT: "Stickers" is incorrect as this is not something you can assign to an AWS resource.

Question 53:
Which AWS support plans provide support via email, chat and phone? (Select TWO.)

- Business
  (Correct)
- Enterprise
  (Correct)
- Developer
- Basic
- Global

Explanation

Only the business and enterprise plans provide support via email, chat and phone.

	Developer	Business	Enterprise
Enhanced Technical Support	Business hours** email access to Cloud Support Associates Unlimited cases / 1 primary contact	24x7 phone, email, and chat access to Cloud Support Engineers Unlimited cases / unlimited contacts (IAM supported)	24x7 phone, email, and chat access to Cloud Support Engineers Unlimited cases / unlimited contacts (IAM supported)

CORRECT: "Business" is the correct answer.

CORRECT: "Enterprise" is the correct answer.

INCORRECT: "Basic" is incorrect does not provide support via email, chat and phone.

INCORRECT: "Developer" is incorrect only provides email support.

INCORRECT: "Global" is incorrect is not a support plan offered by AWS.

Question 54:
An application stores images which will be retrieved infrequently, but must be available for retrieval immediately. Which is the most cost-effective storage option that meets these requirements?

- Amazon EFS
- Amazon S3 Standard
- Amazon Glacier with expedited retrievals
- Amazon S3 Standard-Infrequent Access **(Correct)**

Explanation
Amazon S3 Standard-Infrequent Access is the most cost-effective choice. It provides immediate access and is suitable for this use case as it is lower cost than S3 standard. Note that you must pay a fee for retrievals which is why you would only use this tier for infrequent access use cases.

	S3 Standard	S3 Intelligent-Tiering*	S3 Standard-IA	S3 One Zone-IA†	S3 Glacier	S3 Glacier Deep Archive
Designed for durability	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)
Designed for availability	99.99%	99.9%	99.9%	99.5%	99.99%	99.99%
Availability SLA	99.9%	99%	99%	99%	99.9%	99.9%
Availability Zones	≥3	≥3	≥3	1	≥3	≥3
Minimum capacity charge per object	N/A	N/A	128KB	128KB	40KB	40KB
Minimum storage duration charge	N/A	30 days	30 days	30 days	90 days	180 days
Retrieval fee	N/A	N/A	per GB retrieved	per GB retrieved	per GB retrieved	per GB retrieved
First byte latency	milliseconds	milliseconds	milliseconds	milliseconds	select minutes or hours	select hours
Storage type	Object	Object	Object	Object	Object	Object
Lifecycle transitions	Yes	Yes	Yes	Yes	Yes	Yes

CORRECT: "Amazon S3 Standard-Infrequent Access" is the correct answer.

INCORRECT: "Amazon Glacier with expedited retrievals" is incorrect. Amazon Glacier with expedited retrievals is fast (1-5 minutes) but not immediate.

INCORRECT: "Amazon EFS" is incorrect. Amazon EFS is a high-performance file system and not ideally suited to this scenario, it is also not the most cost-effective option.

INCORRECT: "Amazon S3 Standard" is incorrect. Amazon S3 Standard provides immediate retrieval but is not less cost-effective compared to Standard-Infrequent access.

Question 55:
Which AWS service gives you centralized control over the encryption keys used to protect your data?

- Amazon EBS
- AWS KMS **(Correct)**
- AWS STS
- AWS DMS

Explanation
AWS Key Management Service gives you centralized control over the encryption keys used to protect your data. You can create, import, rotate, disable, delete, define usage policies for, and audit the use of encryption keys used to encrypt your data.

Note: Make sure you know your abbreviations! Sometimes AWS will expand them and other times they won't, it varies by question. Therefore, you must know the abbreviations for all services in scope for the exam.

CORRECT: "AWS KMS" is the correct answer.

INCORRECT: "AWS STS" is incorrect. The AWS Security Token Service (STS) is a web service that enables you to request temporary, limited-privilege credentials for AWS Identity and Access Management (IAM) users.

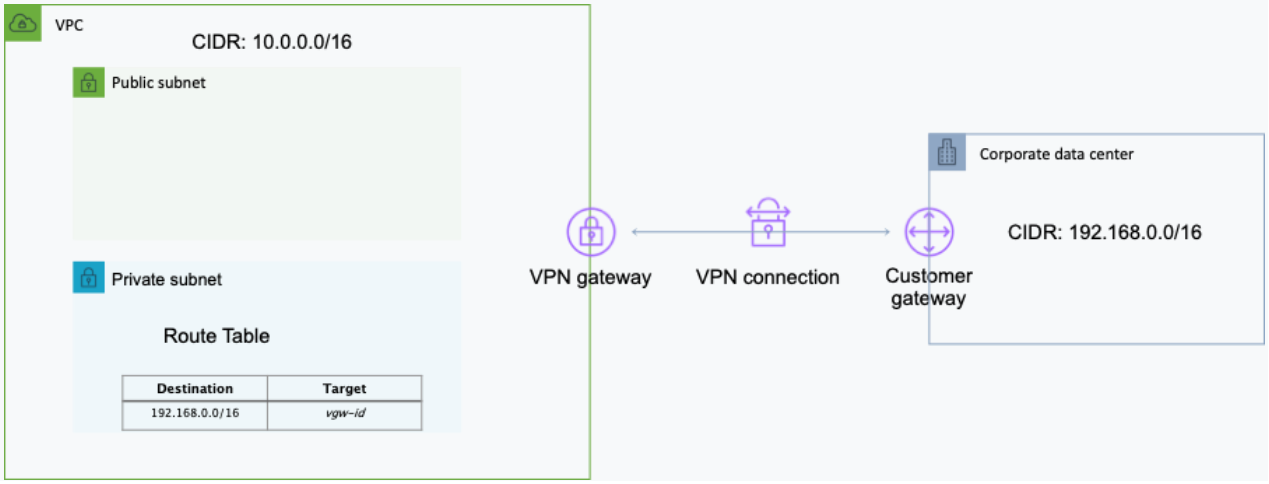
INCORRECT: "AWS DMS" is incorrect. AWS Database Migration Service (DMS) helps you migrate databases to AWS quickly and securely.

INCORRECT: "Amazon EBS" is incorrect. Amazon Elastic Block Store (Amazon EBS) provides persistent block storage volumes for use with Amazon EC2instances in the AWS Cloud.

Question 56:
To connect an on-premises network to an Amazon VPC using an Amazon Managed VPN connection, which components are required? (Select TWO.)

- [x] Virtual Private Gateway
  (Correct)
- [x] Direct Connect
- [ ] NAT Instance
- [ ] VPC Router
- [ ] Customer Gateway
  (Correct)

Explanation
Two of the components you need to connect to your VPC with a VPN connection are a virtual private gateway on the VPC side and a customer gateway on the on-premise network side.



CORRECT: "Virtual Private Gateway" is a correct answer.

CORRECT: "Customer Gateway" is also a correct answer.

INCORRECT: "VPC Router" is incorrect. VPC routers are not part of the VPN configuration.

INCORRECT: "NAT Instance" is incorrect. NAT instances are not used for VPN, they are used by EC2 instances in private subnets to access the Internet.

INCORRECT: "Direct Connect" is incorrect. AWS Direct Connect can be used to connect an on-premise network to the cloud however it is not part of the configuration of an Amazon Managed VPN connection

Question 57:
What are two ways of connecting to an Amazon VPC from an on-premise data center? (Select TWO.)

- ☐ Internet Gateway
- ☑ AWS VPN CloudHub **(Correct)**
- ☐ VPC Peering
- ☐ VPC Router
- ☑ AWS Direct Connect **(Correct)**

Explanation
You can connect from your on-premise data center to a VPC via Direct Connect or VPN CloudHub.

AWS Direct Connect is a network service that provides an alternative to using the Internet to connect a customer's on premise sites to AWS.

If you have multiple VPN connections, you can provide secure communication between sites using the AWS VPN CloudHub.

CORRECT: "AWS Direct Connect" is a correct answer.

CORRECT: "AWS VPN CloudHub" is also a correct answer.

INCORRECT: "VPC Peering" is incorrect as this is a way to connect VPCs to each other, not on-premises locations

INCORRECT: "Internet Gateway" is incorrect as this is used to provide internet connectivity to a VPC.

INCORRECT: "VPC Router" is incorrect as this is used for routing within a VPC.

Question 58:
Which of the following security operations tasks must be performed by AWS customers? (Select TWO.)

- [x] Installing security updates on EC2 instances
  (Correct)
- [ ] Issuing data center access keycards
- [ ] Collecting syslog messages from physical firewalls
- [ ] Installing security updates for server firmware
- [x] Enabling multi-factor authentication (MFA) for privileged users
  (Correct)

Explanation
The customer is responsible for installing security updates on EC2 instances and enabling MFA. AWS is responsible for security of the physical data center and the infrastructure upon which customer services run.

CORRECT: "Installing security updates on EC2 instances" is a correct answer.

CORRECT: "Enabling multi-factor authentication (MFA) for privileged users" is also a correct answer.

INCORRECT: "Collecting syslog messages from physical firewalls" is incorrect as this is an AWS responsibility.

INCORRECT: "Issuing data center access keycards" is incorrect as this is an AWS responsibility.

INCORRECT: "Installing security updates for server firmware" is incorrect as this is an AWS responsibility.

Question 59:
Which of the following should be used to improve the security of access to the AWS Management Console? (Select TWO.)

- [x] AWS Multi-Factor Authentication (AWS MFA)
  (Correct)
- [ ] AWS Certificate Manager
- [ ] Security group rules
- [x]

Strong password policies
(Correct)

- ☐ AWS Secrets Manager

Explanation
For extra security, AWS recommends that you require multi-factor authentication (MFA) for all users in your account. With MFA, users have a device that generates a response to an authentication challenge.

Both the user's credentials (something you know) and the device-generated response (something you have) are required to complete the sign-in process. If a user's password or access keys are compromised, your account resources are still secure because of the additional authentication requirement.

Additionally, strong password policies should be used to enforce measures including minimum password length, complexity, and password reuse restrictions.

CORRECT: "AWS Multi-Factor Authentication (AWS MFA)" is a correct answer.

CORRECT: "Strong password policies" is also a correct answer.

INCORRECT: "AWS Secrets Manager" is incorrect. This service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle.

INCORRECT: "AWS Certificate Manager" is incorrect. This service is used for creating SSL/TLS certificates for use with HTTPS connections.

INCORRECT: "Security group rules" is incorrect as these are used to restrict traffic to/from your EC2 instances.

Question 60:
A new user is unable to access any AWS services, what is the most likely explanation?

- ◉ By default new users are created without access to any AWS services
(Correct)

- ○ The default limit for user logons has been reached

- The user needs to login with a key pair
- The services are currently unavailable

Explanation
By default new users are created with NO access to any AWS services – they can only login to the AWS console. You must apply permissions to users to allow them to access services.

The recommended way to do this is to organize users into groups and then apply permissions policies to the group.

CORRECT: "By default new users are created without access to any AWS services" is the correct answer.

INCORRECT: "The user needs to login with a key pair" is incorrect. Key pairs are used for programmatic access using the API so they are required for API access only.

INCORRECT: "The services are currently unavailable" is incorrect as it is far more likely that the user just doesn't have permissions.

INCORRECT: "The default limit for user logons has been reached" is incorrect as there is no limit for user logons.

Question 61:
An application has highly dynamic usage patterns. Which characteristics of the AWS Cloud make it cost-effective for this type of workload? (Select TWO.)

- [ ] High availability
- [x] Elasticity **(Correct)**
- [ ] Strict security
- [x] Pay-as-you-go pricing **(Correct)**
- [ ] Reliability

Explanation
AWS is a cost-effective for dynamic workloads because it is elastic, meaning your workload can scale based on demand. And because you only pay for what you use (pay-as-you-go pricing).

CORRECT: "Elasticity" is the correct answer.

CORRECT: "Pay-as-you-go pricing" is the correct answer.

INCORRECT: "High availability" is incorrect. This is not a characteristic that results in cost-effectiveness.

INCORRECT: "Strict security" is incorrect. This is not a characteristic that results in cost-effectiveness.

INCORRECT: "Reliability" is incorrect. This is not a characteristic that results in cost-effectiveness.

Question 62:
Which AWS construct provides you with your own dedicated virtual network in the cloud?

- Amazon IAM
- Amazon EC2
- Amazon Workspaces
- Amazon VPC **(Correct)**

Explanation
A virtual private cloud (VPC) is a virtual network dedicated to your AWS account. A VPC is analogous to having your own DC inside AWS. It is logically isolated from other virtual networks in the AWS Cloud.

CORRECT: "Amazon VPC" is the correct answer.

INCORRECT: "Amazon Workspaces" is incorrect. Amazon WorkSpaces is a managed desktop computing service running on the AWS cloud

INCORRECT: "Amazon EC2" is incorrect. Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud.

INCORRECT: "Amazon IAM" is incorrect. IAM is used to securely control individual and group access to AWS resources.

Question 63:
A manager needs to keep a check on his AWS spend. How can the manager setup alarms that notify him when his bill reaches a certain amount?

- Using AWS Trusted Advisor
- Using AWS CloudTrail
- Using Amazon CloudWatch **(Correct)**
- By notifying AWS support

Explanation
The best ways to do this is to use CloudWatch to configure alarms that deliver a notification when activated. The alarms can use cost metrics that trigger the alarm when a certain amount of spend has been reached

CORRECT: "Using Amazon CloudWatch" is the correct answer.

INCORRECT: "Using AWS Trusted Advisor" is incorrect as this service is focused on providing guidance for provisioning resources following AWS best practices.

INCORRECT: "Using AWS CloudTrail" is incorrect as this service is used for auditing API activity.

INCORRECT: "By notifying AWS support" is incorrect as you don't need assistance from AWS support to do this.

Question 64:
Which of the following compliance programs allows the AWS environment to process, maintain, and store protected health information?

- ISO 27001
- SOC 1
- HIPAA **(Correct)**
- PCI DSS

Explanation
AWS enables covered entities and their business associates subject to the U.S. Health Insurance Portability and Accountability Act of 1996 (HIPAA) to use the secure AWS environment to process, maintain, and store protected health information.

CORRECT: "HIPAA" is the correct answer.

INCORRECT: "ISO 27001" is incorrect as ISO/IEC 27001 is an information security standard.

INCORRECT: "PCI DSS" is incorrect as PCI DSS is related to the security of credit card payments.

INCORRECT: "SOC 1" is incorrect as this relates to financial reporting.

Question 65:
What is a Resource Group?

- A collection of resources within a VPC
- A collection of services within a category
- A collection of resources that share one or more tags **(Correct)**
- A collection of services within a region

Explanation
A resource group is a collection of resources that share one or more *tags* or portions of tags. To create a resource group, you simply identify the tags that contain the items that members of the group should have in common.

CORRECT: "A collection of resources that share one or more tags" is the correct answer.

INCORRECT: "A collection of resources within a VPC" is incorrect.

INCORRECT: "A collection of services within a category" is incorrect.

INCORRECT: "A collection of services within a region" is incorrect.