Exam JAN 17 SET-A

Total points 47/65

Full Mark : 65
Pass Mark: 47
Time : 120 minutes

0 of 0 points

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All Questions are Compulsary

47 of 65 points

✓ A company is migrating a monolithic application that does not scale well into the cloud and refactoring it into a microservices architecture. *1/1

Which best practice of the AWS Well-Architected Framework does this plan relate to?

- ○ Stop spending money on undifferentiated heavy lifting.
- ○ Manage change in automation.
- ○ Use multiple solutions to improve performance.
- ◉ Implement loosely coupled services. ✓

Feedback

Explanation
A microservices architecture will help ensure that each component of the application can scale independently and be updated independently. Loose coupling further assists as it places reduces the dependencies between systems and ensures that messages and data being passed between application components can be reliably and durably stored.

CORRECT: "Implement loosely coupled services" is the correct answer.

INCORRECT: "Stop spending money on undifferentiated heavy lifting" is incorrect. This is not the best practice being implemented by the company.

INCORRECT: "Manage change in automation" is incorrect. This is not the best practice being implemented by the company.

INCORRECT: "Use multiple solutions to improve performance" is incorrect. This is not the best practice being implemented by the company.

References:

https://aws.amazon.com/blogs/apn/the-5-pillars-of-the-aws-well-architected-framework/

✓ Which of the following is a sole responsibility of AWS? * 1/1

- ○ Customer data access controls
- ◉ Availability Zone management ✓
- ○ Application deployment
- ○ Patch management

Feedback

Explanation
According to the shared responsibility model, AWS is responsible to the management of all AWS global infrastructure components including Regions, Availability Zones, Edge locations, Regional Edge Caches, and Local Zones.

CORRECT: "Availability Zone management" is the correct answer.

INCORRECT: "Application deployment" is incorrect. Applications are deployed by customers, not AWS.

INCORRECT: "Patch management" is incorrect. Patch management is a shared responsibility. Customers must patch instances databases running on EC2 and AWS will patch the underlying infrastructure and some managed services.

INCORRECT: "Customer data access controls" is incorrect. Customers are responsible for implementing access controls for their data.

References:

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

✓ A company needs an AWS service that can continuously monitor the company's AWS account. If there are any changes to the architecture, members of the team must be contacted. *1/1

Which service will meet these requirements?

- ○ Amazon GuardDuty
- ○ AWS Trusted Advisor
- ○ Amazon Macie
- ◉ AWS Config ✓

Feedback

Explanation
AWS Config keeps track of all changes to your resources by invoking the Describe or the List API call for each resource in your account. The service uses those same API calls to capture configuration details for all related resources.

AWS Config also tracks the configuration changes that were not initiated by the API. AWS Config examines the resource configurations periodically and generates configuration items for the configurations that have changed.

You can configure alerts to let team members know if resource configurations have changed. AWS Config can send notifications using Amazon SNS topics.

CORRECT: "AWS Config" is the correct answer (as explained above.)

INCORRECT: "Amazon Macie" is incorrect. Amazon Macie helps identify Personally identifiable information (PII) data within S3 Bucket and does not track configuration changes.

INCORRECT: "Amazon GuardDuty" is incorrect. Amazon GuardDuty is an intelligent threat detection service which has nothing to do with resource configuration.

INCORRECT: "AWS Trusted Advisor" is incorrect, as AWS Trusted Advisor provides recommendations that help you follow AWS best practices and does not track resource configuration.

References:

https://docs.aws.amazon.com/config/latest/developerguide/how-does-config-work.html

✓ When running applications in the AWS Cloud, which common tasks can AWS manage on behalf of their customers? (Select TWO.) *1/1

- [ ] Application security testing
- [x] Patching database software ✓
- [x] Taking a backup of a database ✓
- [ ] Application source code auditing
- [ ] Creating a database schema

Feedback

Explanation
With AWS managed services you can reduce your time spent performing common IT tasks. With services such as Amazon RDS, AWS will patch the database host operating system and database software and perform patch management activities.

CORRECT: "Patching database software" is a correct answer.

CORRECT: "Taking a backup of a database" is also a correct answer.

INCORRECT: "Application source code auditing" is incorrect. AWS does not audit your source code. You can use Amazon CodeGuru for recommendations for improvement though.

INCORRECT: "Creating a database schema" is incorrect. AWS does not create your schema; this is something that's in the customer's control.

INCORRECT: "Application security testing" is incorrect. AWS does not perform any security testing of your applications.

References:

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

✓ Which of the following can an AWS customer use to launch a new ElastiCache cluster? (Select TWO.) *1/1

- [ ] AWS Systems Manager
- [x] AWS Management Console ✓
- [x] AWS CloudFormation ✓
- [ ] AWS Data Pipeline
- [ ] AWS Concierge

Feedback

Explanation
There are several ways to launch resources in AWS. You can use the AWS Management Console or Command Line Interface (CLI) or you can automate the process by using tools such as AWS CloudFormation.

With AWS CloudFormation you can deploy infrastructure such as Amazon ElastiCache clusters by defining your desired configuration state in code using a template file written in JSON or YAML. CloudFormation will then deploy the resources by creating a Stack according to the template file.

CORRECT: "AWS CloudFormation" is a correct answer.

CORRECT: "AWS Management Console" is also a correct answer.

INCORRECT: "AWS Concierge" is incorrect. The Concierge Support Team is available for customer who have an Enterprise level support plan. This team does not launch resources for you.

INCORRECT: "AWS Systems Manager" is incorrect. Systems Manager will not launch an ElastiCache cluster for you.

INCORRECT: "AWS Data Pipeline" is incorrect. AWS Data Pipeline is a web service that helps you reliably process and move data between different AWS compute and storage services.

References:

https://aws.amazon.com/cloudformation/

✓ How much data can a company store in the Amazon S3 service? * 1/1

- ○ 100 PB
- ◉ Virtually unlimited ✓
- ○ 1 PB
- ○ 100 TB

Feedback

Explanation
The Amazon Simple Storage Service (S3) offers virtually unlimited storage. The total volume of data and number of objects you can store are unlimited. Individual Amazon S3 objects can range in size from a minimum of 0 bytes to a maximum of 5 terabytes. The largest object that can be uploaded in a single PUT is 5 gigabytes.

CORRECT: "Virtually unlimited" is the correct answer.

INCORRECT: "1 PB" is incorrect. There is no such limit.

INCORRECT: "100 TB" is incorrect. There is no such limit.

INCORRECT: "100 PB" is incorrect. There is no such limit.

References:

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

✓ Which of the following can be used to identify a specific user who terminated an Amazon RDS DB instance? *1/1

- ○ Amazon Inspector
- ◉ AWS CloudTrail ✓
- ○ Amazon CloudWatch
- ○ AWS Trusted Advisor

Feedback

Explanation
AWS CloudTrail is a service that enables governance, compliance, operational auditing, and risk auditing of your AWS account. With CloudTrail, you can log, continuously monitor, and retain account activity related to actions across your AWS infrastructure.

CloudTrail provides event history of your AWS account activity, including actions taken through the AWS Management Console, AWS SDKs, command line tools, and other AWS services.

This event history simplifies security analysis, resource change tracking, and troubleshooting. In addition, you can use CloudTrail to detect unusual activity in your AWS accounts. These capabilities help simplify operational analysis and troubleshooting.

CORRECT: "AWS CloudTrail" is the correct answer.

INCORRECT: "Amazon Inspector" is incorrect. Inspector is used for running an automated security assessment service on cloud resources.

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

INCORRECT: "AWS Trusted Advisor" is incorrect. Trusted Advisor helps you to build your AWS resources in accordance with best practices.

References:

https://aws.amazon.com/cloudtrail/

✓ What is the best practice for managing AWS IAM access keys? * 1/1

- ○ There is no need to manage access keys.
- ○ Never use access keys, always use IAM roles.
- ◉ Customers should rotate access keys regularly. ✓
- ○ AWS rotate access keys on a schedule.

Feedback

Explanation
It is a security best practice to rotate access keys regularly. This practice ensures that if access keys are compromised the security exposure is mitigated.

CORRECT: "Customers should rotate access keys regularly" is the correct answer.

INCORRECT: "There is no need to manage access keys" is incorrect. This is not true; you must rotate access keys.

INCORRECT: "AWS rotate access keys on a schedule" is incorrect. AWS do not rotate your access keys.

INCORRECT: "Never use access keys, always use IAM roles" is incorrect. It is often better and more secure to use IAM roles for some uses but it is certainly not the case that you should never use access keys.

References:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html

✓ According to the AWS shared responsibility model, which task is the customer's responsibility? *1/1

- ○ Maintaining Amazon API Gateway infrastructure.
- ○ Updating the operating system of AWS Lambda instances.
- ◉ Updating the guest operating system on Amazon EC2 instances. ✓
- ○ Maintaining the infrastructure needed to run Amazon DynamoDB.

Feedback

Explanation
According to the AWS Shared Responsibility Model updating Amazon EC2 guest operating systems falls under the area of security "in" the cloud which is a customer responsibility. With EC2, AWS manage the underlying platform on which EC2 runs but you must launch and manage your operating systems.

CORRECT: "Updating the guest operating system on Amazon EC2 instances" is the correct answer.

INCORRECT: "Maintaining the infrastructure needed to run Amazon DynamoDB" is incorrect. This is a responsibility of AWS.

INCORRECT: "Updating the operating system of AWS Lambda instances" is incorrect. This is a responsibility of AWS.

INCORRECT: "Maintaining Amazon API Gateway infrastructure" is incorrect. This is a responsibility of AWS.

References:

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

✓ AWS are able to continually reduce their pricing due to: * 1/1

- (●) Economies of scale. ✓
- ( ) Elastic compute services.
- ( ) Compute savings plans.
- ( ) Pay-as-you go pricing.

Feedback

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

CORRECT: "economies of scale" is the correct answer.

INCORRECT: "pay-as-you go pricing" is incorrect. This is a benefit to the customer but is not the reason the actual unit prices are continually being reduce.

INCORRECT: "elastic compute services" is incorrect. Elasticity is useful for scaling your resources and aligning costs with demand but is not why AWS prices are being lowered.

INCORRECT: "compute savings plans" is incorrect. This is another feature you can take advantage of for bigger discounts but is not the reason for prices being lowered.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

✓ A large company is interested in avoiding long-term contracts and moving from fixed costs to variable costs. *1/1

What is the value proposition of AWS for this company?

- ○ Automated cost optimization
- ○ Volume pricing discounts
- ◉ Pay-as-you-go pricing ✓
- ○ Economies of scale

Feedback

Explanation
Pay-as-you-go pricing helps companies move away from fixed costs to variable costs in a model in which they only pay for what they actually use. There are no fixed term contracts with AWS so that requirement is also met.

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

INCORRECT: "Economies of scale" is incorrect. You do get good pricing because of the economies of scale leveraged by AWS. However, the value proposition for companies wishing to avoid fixed costs is pay-as-you-go pricing. This flexibility can be more important in some cases than the actual cost per unit.

INCORRECT: "Volume pricing discounts" is incorrect. This is not the value proposition for this company as they are seeking to avoid long-term contracts and fixed costs, not to achieve a discount.

INCORRECT: "Automated cost optimization" is incorrect. This is a not a feature that relates to the value proposition for this customer.

References:

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

Save time with our AWS cheat sheets:

https://digitalcloud.training/aws-billing-and-pricing/

✓ Which AWS service can a team use to deploy infrastructure on AWS using familiar programming languages? *1/1

- ○ Amazon CodeGuru
- ◉ AWS Cloud Development Kit (AWS CDK) ✓
- ○ AWS CodeCommit
- ○ AWS Config

Feedback

Explanation
The AWS Cloud Development Kit (AWS CDK) is an open source software development framework to define cloud application resources using familiar programming languages. With AWS CDK you can stick to using programming languages that are familiar to you and have infrastructure deployed using AWS CloudFormation.

CORRECT: "AWS Cloud Development Kit (AWS CDK)" is the correct answer.

INCORRECT: "Amazon CodeGuru" is incorrect. CodeGuru is used to review code and provide intelligent recommendations for improvement.

INCORRECT: "AWS Config" is incorrect. AWS Config is used for configuration compliance management.

INCORRECT: "AWS CodeCommit" is incorrect. CodeCommit is a fully-managed source control service.

References:

https://aws.amazon.com/cdk/

✗ Which on-premises costs must be included in a Total Cost of Ownership (TCO) calculation when comparing against the AWS Cloud? (Select TWO.) *0/1

- [x] Physical compute hardware ✓
- [x] Operating system administration ✗
- [ ] Database schema development
- [ ] Project management services
- [ ] Network infrastructure in the data center

Correct answer

- [x] Physical compute hardware
- [x] Network infrastructure in the data center

Feedback

Explanation
When performing a TCO analysis you must include all costs you are currently incurring in the on-premises environment that you will not pay for in the AWS Cloud. This should include labor costs for activities that will be reduced or eliminated. Labor costs that will continue to be incurred in the cloud need not be included.

CORRECT: "Physical compute hardware" is a correct answer.

CORRECT: "Network infrastructure in the data center" is also a correct answer.

INCORRECT: "Operating system administration" is incorrect. You don't need to include these costs as you will continue to incur them in the AWS Cloud.

INCORRECT: "Project management services" is incorrect. You don't need to include these costs as you will continue to incur them in the AWS Cloud.

INCORRECT: "Database schema development" is incorrect. You don't need to include these costs as you will continue to incur them in the AWS Cloud.

References:

https://docs.aws.amazon.com/whitepapers/latest/how-aws-pricing-works/aws-pricingtco-tools.html

✗ Which of the following represents a value proposition for using the AWS Cloud? *0/1

- ○ AWS provides full access to their data centers.
- ○ Customers can request specialized hardware.
- ◉ AWS is responsible for securing your applications. ✗
- ○ It is not necessary to enter into long term contracts.

Correct answer

- ◉ It is not necessary to enter into long term contracts.

Feedback

Explanation
With AWS you can pay for what you use and there is no requirement to enter into long term contracts. However, there are opportunities to gain large discounts by committing to 1 or 3 years contracts for reserved instances and savings plans.

CORRECT: "It is not necessary to enter into long term contracts" is the correct answer.

INCORRECT: "AWS is responsible for securing your applications" is incorrect. AWS does not secure your applications.

INCORRECT: "Customers can request specialized hardware" is incorrect. This is not true; you have no say in what hardware AWS utilize.

INCORRECT: "AWS provides full access to their data centers" is incorrect. This is never the case; you cannot access the AWS data centers.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

✗ A company plans to deploy a relational database on AWS. The IT department will perform database administration. Which service should the company use? *0/1

- ○ Amazon EC2
- ○ Amazon RedShift
- ◉ Amazon DynamoDB ✗
- ○ Amazon ElastiCache

Correct answer

- ◉ Amazon EC2

Feedback

Explanation
A self-managed relational database can be installed on Amazon EC2. When using this deployment you can choose the operating system and instance type that suits your needs and then install and manage any database software you require.

The table below helps you to understand when to use different types of database deployment:

CORRECT: "Amazon EC2" is the correct answer.

INCORRECT: "Amazon RedShift" is incorrect. RedShift is managed data warehouse solution and is better suited to use cases where analytics of data is required.

INCORRECT: "Amazon ElastiCache" is incorrect. ElastiCache is a managed service for in-memory, high-performance caching of database content.

INCORRECT: "Amazon DynamoDB" is incorrect. DynamoDB is a non-relational (NoSQL) type of database.

✗ A company has multiple AWS accounts and is using AWS Organizations with consolidated billing. Which advantages will they benefit from? (Select TWO.) *0/1

- [x] They may benefit from lower unit pricing for aggregated usage. ✓
- [ ] They will receive one bill for the accounts in the Organization.
- [x] They will be automatically enrolled in a business support plan. ✗
- [ ] They will receive a fixed discount for all usage across accounts.
- [ ] The default service limits in all accounts will be increased.

Correct answer

- [x] They may benefit from lower unit pricing for aggregated usage.
- [x] They will receive one bill for the accounts in the Organization.

Feedback

Explanation
You can use the consolidated billing feature in AWS Organizations to consolidate billing and payment for multiple AWS accounts. With consolidated billing you get:

- One bill for multiple accounts.

- Easy tracking or charges across accounts.

- Combined usage across accounts and sharing of volume pricing discounts, reserved instance discounts and savings plans.

- No extra fee.

CORRECT: "They will receive one bill for the accounts in the Organization" is a correct answer.

CORRECT: "They may benefit from lower unit pricing for aggregated usage" is also a correct answer.

INCORRECT: "The default service limits in all accounts will be increased" is incorrect. This is not true; service limit defaults are unaffected.

INCORRECT: "They will receive a fixed discount for all usage across accounts" is incorrect. There is no fixed usage discount applied for consolidated billing.

INCORRECT: "They will be automatically enrolled in a business support plan" is incorrect. This is not true; you must always pay for the business support plan.

References:

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

✗ A company has many underutilized compute resources on-premises. Which AWS Cloud feature will help resolve this issue? *0/1

- ○ High availability
- ○ Global deployment
- ◉ Fault tolerance ✗
- ○ Elasticity

Correct answer

- ◉ Elasticity

Feedback

Explanation
Elasticity can resolve the issue of underutilization as you can easily and automatically adjust the resource allocations for your compute resources based on actual utilization. This ensures that you have the right amount of resources and do not pay for more than you need.

CORRECT: "Elasticity" is the correct answer.

INCORRECT: "High availability" is incorrect. This does not help with resolving underutilization.

INCORRECT: "Fault tolerance" is incorrect. This does not help with resolving underutilization.

INCORRECT: "Global deployment" is incorrect. This does not help with resolving underutilization.

References:

https://aws.amazon.com/aws-cost-management/aws-cost-optimization/right-sizing/

✗ A Cloud Practitioner requires point-in-time recovery (PITR) for an Amazon DynamoDB table. Who is responsible for configuring and performing backups? *0/1

- ○ AWS is responsible for both tasks.
- ◉ AWS is responsible for configuring and the user is responsible for performing backups. ✗
- ○ The customer is responsible for configuring and AWS is responsible for performing backups.
- ○ The customer is responsible for both tasks.

Correct answer

- ◉ The customer is responsible for configuring and AWS is responsible for performing backups.

Feedback

Explanation
Point-in-time recovery (PITR) provides continuous backups of your DynamoDB table data. When enabled, DynamoDB maintains incremental backups of your table for the last 35 days until you explicitly turn it off. It is a customer responsibility to enable PITR on and AWS is responsible for actually performing the backups.

CORRECT: "The customer is responsible for configuring and AWS is responsible for performing backups" is the correct answer.

INCORRECT: "AWS is responsible for configuring and the user is responsible for performing backups" is incorrect. This is backwards, users are responsible for configuring and AWS is responsible for performing backups.

INCORRECT: "AWS is responsible for both tasks" is incorrect. This is not true as users must configure PITR.

INCORRECT: "The customer is responsible for both tasks" is incorrect. This is not true, AWS perform the backups.

References:

https://aws.amazon.com/blogs/aws/new-amazon-dynamodb-continuous-backups-and-point-in-time-recovery-pitr/

✗ A Cloud Practitioner needs a tool that can assist with viewing and managing AWS costs and usage over time. Which tool should the Cloud Practitioner use? *0/1

- ○ Amazon Inspector
- ◉ AWS Organizations ✗
- ○ AWS Budgets
- ○ AWS Cost Explorer

Correct answer

- ◉ AWS Cost Explorer

Feedback

Explanation
AWS Cost Explorer has an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time. AWS Cost Explorer provides you with a set of default reports that you can use as the starting place for your analysis. From there, use the filtering and grouping capabilities to dive deeper into your cost and usage data and generate custom insights.

CORRECT: "AWS Cost Explorer" is the correct answer.

INCORRECT: "AWS Budgets" is incorrect. AWS Budgets allows you to set custom budgets to track your cost and usage from the simplest to the most complex use cases.

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

INCORRECT: "AWS Organizations" is incorrect. AWS Organizations allows you to organize accounts, create accounts programmatically, and leverage consolidated billing.

References:

https://aws.amazon.com/aws-cost-management/aws-cost-explorer/

✗ What are AWS Identity and Access Management (IAM) access keys used for? *0/1

- ○ Making programmatic calls to AWS from AWS APIs.
- ○ Logging in to the AWS Management Console.
- ◉ Enabling encryption in transit for web servers. ✗
- ○ Ensuring the integrity of log files.

Correct answer

- ◉ Making programmatic calls to AWS from AWS APIs.

Feedback

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

Access keys consist of two parts: an access key ID (for example, AKIAIOSFODNN7EXAMPLE) and a secret access key (for example, wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY).

Like a user name and password, you must use both the access key ID and secret access key together to authenticate your requests. Manage your access keys as securely as you do your user name and password.

CORRECT: "Making programmatic calls to AWS from AWS APIs" is the correct answer.

INCORRECT: "Logging in to the AWS Management Console" is incorrect. You use a user name and password for the management console.

INCORRECT: "Ensuring the integrity of log files" is incorrect. This is not what access keys are used for.

INCORRECT: "Enabling encryption in transit for web servers" is incorrect. SSL/TLS certificates are used for creating encrypted channels using HTTPS.

References:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html

✓ Which technology can automatically adjust compute capacity as demand for an application increases or decreases? *1/1

- (●) Auto Scaling ✓
- ( ) High availability
- ( ) Load balancing
- ( ) Fault tolerance

Feedback

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

You can also use the dynamic and predictive scaling features of EC2 Auto Scaling to add or remove EC2 instances. Dynamic scaling responds to changing demand and predictive scaling automatically schedules the right number of EC2 instances based on predicted demand. Dynamic scaling and predictive scaling can be used together to scale faster.

The image below shows an example where an Auto Scaling group is configured to ensure the average CPU of instances in the ASG does not exceed 60%. An additional instance is being launched as the actual load is 71.5%.

CORRECT: "Auto Scaling" is the correct answer.

INCORRECT: "Load balancing" is incorrect. Load balancing is not about compute capacity but ensuring connections are distributed across multiple instances.

INCORRECT: "Fault tolerance" is incorrect. Fault tolerance is related to the architecture of an application that ensures that the failure of any single component does not affect the application.

INCORRECT: "High availability" is incorrect. High availability ensures the maximum uptime for your application by designing the system to recover from failure.

References:

https://aws.amazon.com/ec2/autoscaling/

✓ A Cloud Practitioner is developing a new application and wishes to integrate features of AWS services directly into the application. *1/1

Which of the following is the BEST tool for this purpose?

- ○ AWS CodeDeploy
- ◉ AWS Software Development Kit ✓
- ○ AWS CodePipeline
- ○ AWS Command Line Interface (CLI)

Feedback

Explanation
A software development kit (SDK) is a collection of software development tools in one installable package. AWS provide SDKs for various programming languages and these can be used for integrating the features of AWS services directly into an application.

CORRECT: "AWS Software Development Kit" is the correct answer.

INCORRECT: "AWS Command Line Interface (CLI)" is incorrect. The AWS CLI is used for running commands but is not the best tool for integrating features of AWS services directly into an application.

INCORRECT: "AWS CodeDeploy" is incorrect. CodeDeploy is used for deploying code from a code repository and actually installing the application.

INCORRECT: "AWS CodePipeline" is incorrect. CodePipeline is used for automating the code release lifecycle.

References:

https://aws.amazon.com/tools/

✓ Which of the following AWS services are compute services? (Select TWO.) *1/1

- [ ] Amazon EFS
- [ ] Amazon Inspector
- [ ] AWS CloudTrail
- [x] AWS Batch ✓
- [x] AWS Elastic Beanstalk ✓

Feedback

Explanation
AWS Batch enables developers, scientists, and engineers to easily and efficiently run hundreds of thousands of batch computing jobs on AWS.

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.

CORRECT: "AWS Batch" is a correct answer.

CORRECT: "AWS Elastic Beanstalk" is also a correct answer.

INCORRECT: "AWS CloudTrail" is incorrect. CloudTrail is used for auditing.

INCORRECT: "Amazon EFS" is incorrect. The Elastic File System (EFS) is used for storing data and is mounted by EC2 instances.

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

References:

https://aws.amazon.com/batch/

https://aws.amazon.com/elasticbeanstalk

✓ An application uses a PostgreSQL database running on a single Amazon EC2 instance. A Cloud Practitioner has been asked to increase the availability of the database so there is automatic recovery in the case of a failure. *1/1

Which tasks can the Cloud Practitioner take to meet this requirement?

- ○ Configure an Elastic Load Balancer in front of the EC2 instance.
- ○ Set the DeleteOnTermination value to false for the EBS root volume.
- ○ Configure EC2 Auto Recovery to move the instance to another Region.
- ◉ Migrate the database to Amazon RDS and enable the Multi-AZ feature. ✓

Feedback

Explanation
Moving the database to Amazon RDS means that the database can take advantage of the built-in Multi-AZ feature. This feature creates a standby instance in another Availability Zone and synchronously replicates to it. In the event of a failure that affects the primary database an automatic failover can occur and the database will become functional on the standby instance.

CORRECT: "Migrate the database to Amazon RDS and enable the Multi-AZ feature" is the correct answer.

INCORRECT: "Configure an Elastic Load Balancer in front of the EC2 instance" is incorrect. You cannot use an ELB to distribute traffic to a database and with a single instance there's no benefit here at all.

INCORRECT: "Configure EC2 Auto Recovery to move the instance to another Region" is incorrect. The auto recovery feature of EC2 automatically moves the instance to another host, not to another Region.

INCORRECT: "Set the DeleteOnTermination value to false for the EBS root volume" is incorrect. This will simply preserve the root volume; it will not perform automatic recovery

References:

https://aws.amazon.com/rds/features/multi-az/

✓ A company is deploying a new workload and software licensing requirements dictate that the workload must be run on a specific, physical server. *1/1

Which Amazon EC2 instance deployment option should be used?

- ○ Dedicated Instances
- ○ Spot Instances
- ○ Reserved Instances
- ◉ Dedicated Hosts ✓

Feedback

Explanation
An Amazon EC2 Dedicated Host is a physical server fully dedicated for your use, so you can help address corporate compliance requirements. Amazon EC2 Dedicated Hosts allow you to use your eligible software licenses from vendors such as Microsoft and Oracle on Amazon EC2, so that you get the flexibility and cost effectiveness of using your own licenses, but with the resiliency, simplicity and elasticity of AWS

CORRECT: "Dedicated Hosts" is the correct answer.

INCORRECT: "Dedicated Instances" is incorrect. With dedicated instances you are not given a specific physical server to run your instances on.

INCORRECT: "Spot Instances" is incorrect. This deployment option does not provide a specific physical server.

INCORRECT: "Reserved Instances" is incorrect. This deployment option does not provide a specific physical server.

References:

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

✓ What is one method of protecting against distributed denial of service (DDoS) attacks in the AWS Cloud? *1/1

- ○ Enable AWS CloudTrail logging.
- ○ Monitor the AWS Health Dashboard.
- ○ Use Amazon CloudWatch monitoring.
- ◉ Configure a firewall in front of resources. ✓

Feedback

Explanation
Some forms of DDoS mitigation are included automatically with AWS services. You can further improve your DDoS resilience by using an AWS architecture with specific services and by implementing additional best practices. Using a firewall with AWS resources is recommended to reduce the attack surface of your services which can mitigate some DDoS attacks.

CORRECT: "Configure a firewall in front of resources" is the correct answer.

INCORRECT: "Use Amazon CloudWatch monitoring" is incorrect. Performance monitoring will not protect against DDoS.

INCORRECT: "Enable AWS CloudTrail logging" is incorrect. Logging API calls will not protect against DDoS.

INCORRECT: "Monitor the AWS Health Dashboard" is incorrect. The AWS Health dashboard is not useful for monitoring and will not protect against DDoS.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-best-practices-ddos-resiliency/mitigation-techniques.html

✓ Which of the following best describes an Availability Zone in the AWS Cloud? *1/1

- ○ A completely isolated geographic location
- ○ A subnet for deploying resources
- ○ One or more edge locations based around the world
- ◉ One or more physical data centers ✓

Feedback

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.

References:

https://aws.amazon.com/about-aws/global-infrastructure/regions_az/

✓ According to the AWS shared responsibility model, which of the following is a responsibility of AWS? *1/1

- ○ Configuring network ACLs to block malicious attacks.
- ◉ Updating the firmware on the underlying EC2 hosts. ✓
- ○ Patching software running on Amazon EC2 instances.
- ○ Updating security group rules to enable connectivity.

Feedback

Explanation
AWS are responsible for updating firmware on the physical Amazon EC2 host servers. Customers are then responsible for any patching of the EC2 operating system and any installed software.

CORRECT: "Updating the firmware on the underlying EC2 hosts" is the correct answer.

INCORRECT: "Configuring network ACLs to block malicious attacks" is incorrect. This is a customer responsibility.

INCORRECT: "Patching software running on Amazon EC2 instances" is incorrect. This is a customer responsibility.

INCORRECT: "Updating security group rules to enable connectivity" is incorrect. This is a customer responsibility.

References:

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

✓ A company runs a batch job on an Amazon EC2 instance and it takes 6 hours to complete. The workload is expected to double in volume each month with a proportional increase in processing time. *1/1

What is the most efficient cloud architecture to address the growing workload?

- ○ Run the application on a bare metal Amazon EC2 instance.
- ○ Run the batch job on a larger Amazon EC2 instance type with more CPU.
- ○ Change the Amazon EC2 volume type to a Provisioned IOPS SSD volume.
- ◉ Run the batch workload in parallel across multiple Amazon EC2 instances. ✓

Feedback

Explanation
The most efficient option is to use multiple EC2 instances and distribute the workload across them. This is an example of horizontal scaling and will allow the workload to keep growing in size without any issue and without increasing the overall processing timeframe.

CORRECT: "Run the batch workload in parallel across multiple Amazon EC2 instances" is the correct answer.

INCORRECT: "Run the batch job on a larger Amazon EC2 instance type with more CPU" is incorrect. This may help initially but over time this will not scale well and the workload will take many days to complete.

INCORRECT: "Change the Amazon EC2 volume type to a Provisioned IOPS SSD volume" is incorrect. This will improve the underlying performance of the EBS volume but does not assist with processing (more CPU is needed, i.e. by spreading across instances).

INCORRECT: "Run the application on a bare metal Amazon EC2 instance" is incorrect. Bare metal instances are used for workloads that require access to the hardware feature set (such as Intel VT-x), for applications that need to run in non-virtualized environments for licensing or support requirements, or for customers who wish to use their own hypervisor.

References:

https://wa.aws.amazon.com/wellarchitected/2020-07-02T19-33-23/wat.concept.horizontal-scaling.en.html

✓ Customers using AWS services must patch operating systems on which of the following services? *1/1

- ○ Amazon DynamoDB
- ○ AWS Fargate
- ◉ Amazon EC2 ✓
- ○ AWS Lambda

Feedback

Explanation
Amazon EC2 is an infrastructure as a service (IaaS) solution. This means the underlying hardware and software layer for running a virtual server are managed for you. As a customer you must then manage the operating system and any software you install. This includes installing patches on the operating system as part of regular maintenance activities.

CORRECT: "Amazon EC2" is the correct answer.

INCORRECT: "AWS Lambda" is incorrect. This is a serverless service and you do not need to manage patches.

INCORRECT: "AWS Fargate" is incorrect. This is a serverless service and you do not need to manage patches.

INCORRECT: "Amazon DynamoDB" is incorrect. This is a serverless service and you do not need to manage patches.

References:

https://aws.amazon.com/ec2/

✗ A company must provide access to AWS resources for their employees. Which security practices should they follow? (Select TWO.) *0/1

- [ ] Disable password policies and management console access.
- [x] Enable multi-factor authentication for users. ✓
- [x] Create IAM Roles and apply them to IAM groups. ✗
- [ ] Create IAM policies based on least privilege principles.
- [ ] Create IAM users in different AWS Regions.

Correct answer

- [x] Enable multi-factor authentication for users.
- [x] Create IAM policies based on least privilege principles.

Feedback

Explanation
There are a several security best practices for AWS IAM that are listed in the document shared below. Enabling multi-factor authentication is a best practice to require a second factor of authentication when logging in. Another best practice is to grant least privilege access when configuring users and password policies.

CORRECT: "Enable multi-factor authentication for users" is a correct answer.

CORRECT: "Create IAM policies based on least privilege principles" is also a correct answer.

INCORRECT: "Disable password policies and management console access" is incorrect. This is not a security best practice. There is no need to disable management console access and password policies should be used.

INCORRECT: "Create IAM users in different AWS Regions" is incorrect. You cannot create IAM users in different Regions as the IAM service is a global service.

INCORRECT: "Create IAM Roles and apply them to IAM groups" is incorrect. You cannot apply roles to groups, you apply policies to groups.

References:

https://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html

✓ Which AWS service can a company use to discover and protect sensitive data that is stored in Amazon S3 buckets. *1/1

- (●) Amazon Macie ✓
- ( ) Amazon Detective
- ( ) AWS Policy Generator
- ( ) Amazon GuardDuty

Feedback

Explanation
Amazon Macie is a fully managed data security and data privacy service that uses machine learning and pattern matching to discover and protect your sensitive data in AWS. Amazon Macie automates the discovery of sensitive data at scale and lowers the cost of protecting your data.

Macie automatically provides an inventory of Amazon S3 buckets including a list of unencrypted buckets, publicly accessible buckets, and buckets shared with AWS accounts outside those you have defined in AWS Organizations.

Then, Macie applies machine learning and pattern matching techniques to the buckets you select to identify and alert you to sensitive data, such as personally identifiable information (PII).

CORRECT: "Amazon Macie" is the correct answer.

INCORRECT: "Amazon GuardDuty" is incorrect. Amazon GuardDuty is a threat detection service that continuously monitors for malicious activity and unauthorized behavior to protect your AWS accounts, workloads, and data stored in Amazon S3.

INCORRECT: "AWS Policy Generator" is incorrect. The AWS Policy Generator is a tool that enables you to create policies that control access to Amazon Web Services (AWS) products and resources.

INCORRECT: "Amazon Detective" is incorrect. Amazon Detective automatically processes terabytes of event data records about IP traffic, AWS management operations, and malicious or unauthorized activity.

References:

https://aws.amazon.com/macie/

✓ How does the AWS cloud increase the speed and agility of execution for customers? (Select TWO.) *1/1

- [ ] Lower cost of deployment
- [ ] Private connections to data centers
- [x] Scalable compute capacity ✓
- [ ] Secured data centers
- [x] Fast provisioning of resources ✓

Feedback

Explanation
The ability to quickly provision resources on AWS is a good example of speed and agility. On AWS the resources are readily available and can be deployed extremely quickly. Scalable compute capacity is another example as it gives you the agility to easily reconfigure your resources with more or less capacity as is required.

CORRECT: "Fast provisioning of resources" is a correct answer.

CORRECT: "Scalable compute capacity" is also a correct answer.

INCORRECT: "Private connections to data centers" is incorrect. A private connection to a data center is not an example of speed and agility.

INCORRECT: "Secured data centers" is incorrect. Secured data centers are not an example of speed and agility.

INCORRECT: "Lower cost of deployment" is incorrect. This is not an example of speed and agility.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

✗ Which AWS service provides a managed software version control system? *0/1

- ○ AWS DataSync
- ○ Amazon CodeDeploy
- ○ AWS CodeCommit
- ◉ AWS CodePipeline ✗

Correct answer

- ◉ AWS CodeCommit

Feedback

Explanation
AWS CodeCommit is a fully-managed source control service that hosts secure Git-based repositories. It makes it easy for teams to collaborate on code in a secure and highly scalable ecosystem.

CodeCommit eliminates the need to operate your own source control system or worry about scaling its infrastructure. You can use CodeCommit to securely store anything from source code to binaries, and it works seamlessly with your existing Git tools.

CORRECT: "AWS CodeCommit" is the correct answer.

INCORRECT: "Amazon CodeDeploy" is incorrect. CodeDeploy is a deployment service that deploys your application onto infrastructure.

INCORRECT: "AWS CodePipeline" is incorrect. CodePipeline is a continuous delivery service that automates release pipelines for code. CodeCommit can be used in a pipeline.

INCORRECT: "AWS DataSync" is incorrect. DataSync is used for replication and migrating data between storage systems and AWS.

References:

https://aws.amazon.com/codecommit/

Save time with our AWS cheat sheets:

https://digitalcloud.training/additional-aws-services/

✓ A user needs to identify underutilized Amazon EC2 instances to reduce costs. *1/1

Which AWS service or feature will meet this requirement?

- ○ AWS Cost Explorer
- ○ AWS Health Dashboard
- ◉ AWS Trusted Advisor ✓
- ○ AWS CodeBuild

Feedback

Explanation
AWS Trusted Advisor offers a rich set of best practice checks and recommendations across five categories: cost optimization, security, fault tolerance, performance, and service limits.

The Trusted Advisor "low utilization Amazon EC2 instances" check, checks the Amazon Elastic Compute Cloud (Amazon EC2) instances that were running at any time during the last 14 days and alerts you if the daily CPU utilization was 10% or less and network I/O was 5 MB or less on 4 or more days.

CORRECT: "AWS Trusted Advisor" is the correct answer.

INCORRECT: "AWS CodeBuild" is incorrect. CodeBuild is used for compiling and testing code ahead of deployment.

INCORRECT: "AWS Cost Explorer" is incorrect. Cost Explorer can be used to view itemized costs but you cannot check resource utilization.

INCORRECT: "AWS Health Dashboard" is incorrect. This dashboard will not warn you about underutilization of resources.

References:

https://aws.amazon.com/premiumsupport/technology/trusted-advisor/best-practice-checklist/

✓ Which of the following are valid benefits of using the AWS Cloud? (Select TWO.) *1/1

- [ ] Outsource all application development to AWS.
- [x] Ability to go global quickly. ✓
- [ ] Total control over data center infrastructure.
- [x] Fast provisioning of IT resources. ✓
- [ ] Outsource all operational risk.

Feedback

Explanation
The ability to provision IT resources quickly and easily and also globally are valid benefits of using the AWS cloud. These are covered in AWS' 6 advantages of cloud which include "Increase speed and agility" and "Go global in minutes".

CORRECT: "Fast provisioning of IT resources" is a correct answer.

CORRECT: "Ability to go global quickly" is also a correct answer.

INCORRECT: "Outsource all operational risk" is incorrect. You do not outsource all operational risk; you still have to manage risk for the applications you run on AWS.

INCORRECT: "Total control over data center infrastructure" is incorrect. You don't have any control over data center infrastructure in the AWS Cloud.

INCORRECT: "Outsource all application development to AWS" is incorrect. You must still develop your own applications on the AWS Cloud.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

✓ A Cloud Practitioner requires a simple method to identify if unrestricted access to resources has been allowed by security groups. Which service can the Cloud Practitioner use? *1/1

- ○ Amazon CloudWatch
- ○ VPC Flow Logs
- ○ AWS CloudTrail
- ◉ AWS Trusted Advisor ✓

Feedback

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

The following image shows the results of the security group checks in an AWS account:

CORRECT: "AWS Trusted Advisor" is the correct answer.

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

INCORRECT: "VPC Flow Logs" is incorrect. VPC Flow Logs are used to capture network traffic information, they will not easily identify unrestricted security groups.

INCORRECT: "AWS CloudTrail" is incorrect. This service is used for auditing API actions

References:

https://aws.amazon.com/premiumsupport/technology/trusted-advisor/

✗ A user is planning to launch three EC2 instances behind a single Elastic Load Balancer. The deployment should be highly available. How should the user achieve this? *0/1

- ○ Launch the instances in multiple AWS Regions, and use Elastic IP addresses.
- ○ Launch the instances across multiple Availability Zones in a single AWS Region.
- ◉ Launch the instances as EC2 Reserved Instances in the same AWS Region, but in different Availability Zones. ✗
- ○ Launch the instances as EC2 Spot Instances in the same AWS Region and the same Availability Zone.

Correct answer

- ◉ Launch the instances across multiple Availability Zones in a single AWS Region.

Feedback

Explanation
To make the deployment highly available the user should launch the instances across multiple Availability Zones in a single AWS Region. Elastic Load Balancers can only serve targets in a single Region so it is not possible to deploy across Regions.

CORRECT: "Launch the instances across multiple Availability Zones in a single AWS Region" is the correct answer.

INCORRECT: "Launch the instances as EC2 Spot Instances in the same AWS Region and the same Availability Zone" is incorrect. The pricing model is not relevant to high availability and deploying in a single AZ does not result in a highly available deployment.

INCORRECT: "Launch the instances in multiple AWS Regions, and use Elastic IP addresses" is incorrect. You cannot use an ELB with instances in multiple Regions and using an EIP does not help.

INCORRECT: "Launch the instances as EC2 Reserved Instances in the same AWS Region, but in different Availability Zones" is incorrect. Using reserved instances may not be appropriate as we do not know whether this is going to be a long-term workload or not.

References:

https://aws.amazon.com/about-aws/global-infrastructure/regions_az/

✓ An Amazon Virtual Private Cloud (VPC) can include multiple: * 1/1

- ○ Internet gateways.
- ○ Edge locations.
- ○ AWS Regions.
- ◉ Availability Zones. ✓

Feedback

Explanation
An Amazon VPC includes multiple Availability Zones. Within a VPC you can create subnets in each AZ that is available in the Region and distribute your resources across these subnets for high availability.

CORRECT: "Availability Zones" is the correct answer.

INCORRECT: "AWS Regions" is incorrect. A VPC cannot include multiple Regions.

INCORRECT: "Edge locations" is incorrect. A VPC cannot include multiple Edge locations as these are independent of the Regions in which a VPC is created.

INCORRECT: "Internet gateways" is incorrect. You can only attach one Internet gateway to each VPC.

References:

https://aws.amazon.com/vpc

✓ Which AWS service or feature can assist with protecting a website that is hosted outside of AWS? *1/1

- ○ Amazon VPC route tables
- ○ Amazon EC2 security groups
- ◉ AWS Web Application Firewall (WAF) ✓
- ○ Amazon VPC network ACLs

Feedback

Explanation
AWS WAF can be used to protect on-premises resources if they are deployed behind an Application Load Balancer (ALB). In this scenario the on-premises website servers are added to a target group by IP address. The ALB has a WAF WebACL attached to it and distributes connections to the on-premises website.

CORRECT: "AWS Web Application Firewall (WAF)" is the correct answer.

INCORRECT: "Amazon VPC route tables" is incorrect. A route table cannot be used for protecting resources running outside AWS.

INCORRECT: "Amazon EC2 security groups" is incorrect. Security groups can only be attached to EC2 instances.

INCORRECT: "Amazon VPC network ACLs" is incorrect. Network ACLs only filter traffic entering and leaving a VPC subnet.

References:

https://aws.amazon.com/waf/features/

✓ Which AWS Cloud service provides recommendations on how to optimize performance for AWS services? *1/1

- ○ Amazon Inspector
- ◉ AWS Trusted Advisor ✓
- ○ Amazon CloudWatch
- ○ AWS CloudTrail

Feedback

Explanation
AWS Trusted Advisor can improve the performance of your service by checking your service limits, ensuring you take advantage of provisioned throughput, and monitoring for overutilized instances.

CORRECT: "AWS Trusted Advisor" is the correct answer.

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

INCORRECT: "Amazon CloudWatch" is incorrect. CloudWatch monitors performance but does not provide recommendations for optimization.

INCORRECT: "AWS CloudTrail" is incorrect. CloudTrail is an auditing service.

References:

https://aws.amazon.com/premiumsupport/technology/trusted-advisor/

✓ Which AWS services can a company use to gather information about activity in their AWS account? (Select TWO.) *1/1

- [ ] Amazon Connect
- [x] AWS CloudTrail ✓
- [x] Amazon CloudWatch ✓
- [ ] Amazon CloudFront
- [ ] AWS Trusted Advisor

Feedback

Explanation
Amazon CloudWatch is a performance monitoring service. AWS services send metrics about their utilization to CloudWatch which collects the metrics. Additionally, CloudWatch collects metrics about account activity such as billing information which can also be viewed.

AWS CloudTrail is an auditing service that monitors API activity in your account. Whenever you perform any operation in the account this results in an API action and this information is recorded to create an audit trail.

CORRECT: "AWS CloudTrail" is a correct answer.

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

INCORRECT: "Amazon CloudFront" is incorrect. CloudFront is a content delivery network (CDN).

INCORRECT: "AWS Trusted Advisor" is incorrect. This service is used to assist with guidance on provisioning resources according to best practice.

INCORRECT: "Amazon Connect" is incorrect. This is a contact center service.

References:

https://aws.amazon.com/cloudwatch/

https://aws.amazon.com/cloudtrail/

✗ A company is planning to deploy an application with a relational database on AWS. The application layer requires access to the database instance's operating system in order to run scripts. *0/1

The company prefer to keep management overhead to a minimum. Which deployment should be used for the database?

- ○ Amazon S3
- ○ Amazon EC2
- ◉ Amazon RDS ✗
- ○ Amazon DynamoDB

Correct answer

- ◉ Amazon EC2

Feedback

Explanation
The company would like to keep management overhead to a minimum so RDS would be good to meet that requirement. However, with RDS you cannot access the operating system so the requirement for running scripts on the OS rules RDS out. Therefore, the next best solution is to deploy on an Amazon EC2 instances as the other options presented are unsuitable for a relational database.

CORRECT: "Amazon EC2" is the correct answer.

INCORRECT: "Amazon RDS" is incorrect as the application would not be able to access the OS of the RDS instance to run scripts.

INCORRECT: "Amazon DynamoDB" is incorrect. This is a non-relational database.

INCORRECT: "Amazon S3" is incorrect. This is an object-storage system and is not suitable for running a relational database.

References:

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

✓ A website has a global customer base and users have reported poor performance when connecting to the site. *1/1

Which AWS service will improve the customer experience by reducing latency?

- ○ AWS Direct Connect
- ○ Amazon EC2 Auto Scaling
- ○ Amazon ElastiCache
- ◉ Amazon CloudFront ✓

Feedback

Explanation
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.

CORRECT: "Amazon CloudFront" is the correct answer.

INCORRECT: "AWS Direct Connect" is incorrect. Direct Connect is a private network connection between an on-premises data center and AWS.

INCORRECT: "Amazon EC2 Auto Scaling" is incorrect. Auto Scaling launches and terminates instances, this does not reduce latency for global users.

INCORRECT: "Amazon ElastiCache" is incorrect. ElastiCache is a database caching service, it is not used to cache websites.

References:

https://aws.amazon.com/cloudfront/

✓ Which type of credential should a Cloud Practitioner use for programmatic access to AWS resources from the AWS CLI/API? *1/1

- ( ) User name and password
- (•) Access keys ✓
- ( ) SSL/TLS certificate
- ( ) SSH public keys

Feedback

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

Access keys consist of two parts: an access key ID (for example, AKIAIOSFODNN7EXAMPLE) and a secret access key (for example, wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY).

Like a user name and password, you must use both the access key ID and secret access key together to authenticate your requests. Manage your access keys as securely as you do your user name and password.

CORRECT: "Access keys" is the correct answer.

INCORRECT: "SSL/TLS certificate" is incorrect. Certificates are not used by users for authenticating to AWS services.

INCORRECT: "SSH public keys" is incorrect. These are used for connections using the SSH protocol.

INCORRECT: "User name and password" is incorrect. An IAM user name and password can be used for console access but cannot be used with the CLI or API.

References:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html

✓ Which AWS feature can be used to launch a pre-configured Amazon Elastic Compute Cloud (EC2) instance? *1/1

- ○ Amazon AppStream 2.0
- ◉ Amazon Machine Image (AMI) ✓
- ○ Amazon EC2 Systems Manager
- ○ Amazon Elastic Block Store (EBS)

Feedback

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

CORRECT: "Amazon Machine Image (AMI)" is the correct answer.

INCORRECT: "Amazon Elastic Block Store (EBS)" is incorrect. EBS is block-based storage for EC2.

INCORRECT: "Amazon EC2 Systems Manager" is incorrect . AWS Systems Manager gives you visibility and control of your infrastructure on AWS.

INCORRECT: "Amazon AppStream 2.0" is incorrect. Amazon AppStream 2.0 is a fully managed non-persistent application and desktop streaming service.

References:

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html

✓ A company is designing a new a service that must align with the operational excellence pillar of the AWS Well-Architected Framework. *1/1

Which design principles should the company follow? (Select TWO.)

- [x] Anticipate failure. ✓
- [ ] Make large-scale changes.
- [ ] Create static operational procedures.
- [x] Perform operations as code. ✓
- [ ] Perform manual operations.

Feedback

Explanation
AWS Well-Architected helps cloud architects build secure, high-performing, resilient, and efficient infrastructure for their applications and workloads. There are 5 pillars and under the operational excellence pillar the following best practices are recommended:

• Perform operations as code

• Make frequent, small, reversible changes

• Refine operations procedures frequently

• Anticipate failure

• Learn from all operational failures

CORRECT: "Anticipate failure" is a correct answer.

CORRECT: "Perform operations as code" is also a correct answer.

INCORRECT: "Make large-scale changes" is incorrect. This is not an operational best practice.

INCORRECT: "Perform manual operations" is incorrect. This is not an operational best practice.

INCORRECT: "Create static operational procedures" is incorrect. This is not an operational best practice.

References:

https://aws.amazon.com/architecture/well-architected/

✓ A company needs to publish messages to a thousands of subscribers simultaneously using a push mechanism. *1/1

Which AWS service should the company use?

- (●) Amazon Simple Notification Service (Amazon SNS) ✓
- ( ) AWS Step Functions
- ( ) Amazon Simple Queue Service (Amazon SQS)
- ( ) Amazon Simple Workflow Service (SWF)

Feedback

Explanation
Amazon SNS is a publisher/subscriber notification service that uses a push mechanism to publish messages to multiple subscribers. Amazon SNS enables you to send messages or notifications directly to users with SMS text messages to over 200 countries, mobile push on Apple, Android, and other platforms or email (SMTP).

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

INCORRECT: "Amazon Simple Queue Service (Amazon SQS)" is incorrect. SQS is a message queue service used for decoupling applications.

INCORRECT: "Amazon Simple Workflow Service (SWF)" is incorrect. SWF is a workflow orchestration service, not a messaging service.

INCORRECT: "AWS Step Functions" is incorrect. AWS Step Functions is a serverless workflow orchestration service for modern applications.

References:

https://aws.amazon.com/sns/

✓ Which benefits can a company gain by deploying a relational database on Amazon RDS instead of Amazon EC2? (Select TWO.) *1/1

- [ ] Root access to OS
- [ ] Schema management
- [x] Software patching ✓
- [x] Automated backups ✓
- [ ] Indexing of tables

Feedback

Explanation
Two of the benefits of using a managed Amazon RDS service instead of a self-managed database on EC2 are that you get automated backups and automatic software patching.

CORRECT: "Automated backups" is a correct answer.

CORRECT: "Software patching" is also a correct answer.

INCORRECT: "Schema management" is incorrect. This is not a feature of the managed service.

INCORRECT: "Indexing of tables" is incorrect. This is not a feature of the managed service.

INCORRECT: "Root access to OS" is incorrect. You do not get root access to an RDS instance's operating system.

References:

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

✓ Which resource should a new user on AWS use to get help with deploying popular technologies based on AWS best practices, including architecture and deployment instructions? *1/1

- ○ AWS CloudFormation
- ○ AWS Artifact
- ◉ AWS Partner Solutions ✓
- ○ AWS Config

Feedback

Explanation
Partner Solutions are built by Amazon Web Services (AWS) solutions architects and partners to help you deploy popular technologies on AWS, based on AWS best practices for security and high availability. These accelerators reduce hundreds of manual procedures into just a few steps, so you can build your production environment quickly and start using it immediately.

Each Quick Start includes AWS CloudFormation templates that automate the deployment and a guide that discusses the architecture and provides step-by-step deployment instructions.

CORRECT: "AWS Partner Solutions" is the correct answer.

INCORRECT: "AWS CloudFormation" is incorrect. CloudFormation is used to deploy infrastructure from templates, the Partner Solutions use CloudFormation.

INCORRECT: "AWS Artifact" is incorrect. Artifact provides on-demand access to AWS security and compliance reports.

INCORRECT: "AWS Config" is incorrect. Config is a service used for compliance relating the configuration of AWS resources.

References:

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

✓ A Cloud Practitioner needs to monitor a new Amazon EC2 instances CPU and network utilization. Which AWS service should be used? *1/1

- ○ AWS CloudTrail
- ○ Amazon Inspector
- ○ AWS Systems Manager
- ◉ Amazon CloudWatch ✓

Feedback

Explanation
Amazon CloudWatch is a performance monitoring service. AWS services send metrics about their utilization to CloudWatch which collects the metrics. You can then view the results in CloudWatch and configure alarms.

CORRECT: "Amazon CloudWatch" is the correct answer.

INCORRECT: "AWS CloudTrail" is incorrect. CloudTrail is used for auditing, not performance monitoring.

INCORRECT: "Amazon Inspector" is incorrect. Inspector is an automated security service.

INCORRECT: "AWS Systems Manager" is incorrect. Systems Manager is used for managing EC2 instances such as installing patches and software.

References:

https://aws.amazon.com/cloudwatch/features/

✓ How can an organization gain access to compliance reports natively through the AWS console? *1/1

- ○ AWS Security Hub
- ◉ AWS Artifact ✓
- ○ AWS Identity and Access Management (IAM)
- ○ AWS Certificate Manager (ACM)

Feedback

Explanation
AWS Artifact is your go-to, central resource for compliance-related information that matters to you. You can access the AWS Artifact console to use AWS Artifact to review, accept, and track the status of AWS agreements

CORRECT: "AWS Artifact" is the correct answer (as explained above.)

INCORRECT: "AWS Identity and Access Management (IAM)" is incorrect because IAM is related to administering permissions for Users, Groups and Roles within your account, and is not related to compliance.

INCORRECT: "AWS Security Hub" is incorrect. AWS Security Hub is not a compliance service. AWS Security Hub is a cloud security posture management service that automates best practice checks, aggregates alerts, and supports automated remediation.

INCORRECT: "AWS Certificate Manager (ACM)" is incorrect as ACM manages SSL certificates, not compliance.

References:
https://docs.aws.amazon.com/artifact/latest/ug/what-is-aws-artifact.html

✓ Which AWS service helps customers meet corporate, contractual, and regulatory compliance requirements for data security by using dedicated hardware appliances within the AWS Cloud? *1/1

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

Feedback

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.

References:

https://aws.amazon.com/cloudhsm/features/

✓ For what purpose would a Cloud Practitioner access AWS Artifact? * 1/1

- ○ Access training materials for AWS services.
- ○ Create a security assessment report for AWS services.
- ○ Download configuration details for all AWS resources.
- ◉ Gain access to AWS security and compliance documents. ✓

✓ Which of the following will help a user determine if they need to request an Amazon EC2 service limit increase? *1/1

- ○ AWS Cost Explorer
- ◉ AWS Trusted Advisor ✓
- ○ Amazon RDS
- ○ AWS Health Dashboard

Feedback

Explanation
AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices. Trusted Advisor checks help optimize your AWS infrastructure, improve security and performance, reduce your overall costs, and monitor service limits.

CORRECT: "AWS Trusted Advisor" is the correct answer.

INCORRECT: "AWS Health Dashboard" is incorrect. The health dashboard shows issues or upcoming events that may impact your resources. It does not notify of service limit breaches.

INCORRECT: "Amazon RDS" is incorrect. This is a managed SQL database and has nothing to do with service limits generally.

INCORRECT: "AWS Cost Explorer" is incorrect. Cost Explorer is used for viewing costs and will not assist with service limits.

References:

https://aws.amazon.com/premiumsupport/technology/trusted-advisor/

✓ A company is migrating virtual machines (VMs) from their data center to the AWS Cloud. The company plans to deploy these migrated machines on Amazon EC2. *1/1

Which cloud computing model will the company use for this operation?

- ○ Function as a Service (FaaS)
- ○ Platform as a Service (PaaS)
- ○ Software as a Service (SaaS)
- ◉ Infrastructure as a Service (IaaS) ✓

Feedback

Explanation
Infrastructure as a Service (IaaS) is a type of cloud computing service that offers essential compute, storage, and networking resources on demand, on a pay-as-you-go basis. IaaS is one of the four types of cloud services, along with software as a service (SaaS), platform as a service (PaaS), and Function as a Service (FaaS).

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

INCORRECT: "Platform as a Service (PaaS)" is incorrect. Platform as a service (PaaS) is a cloud computing model where a third-party provider delivers hardware and software tools to users over the internet. Usually, these tools are needed for application development.

INCORRECT: "Function as a Service (FaaS)" is incorrect, FaaS (Function-as-a-Service) is a type of cloud-computing service that allows you to execute code in response to events i.e. Lambda functions within AWS.

INCORRECT: "Software as a Service (SaaS)" is incorrect. Software as a service is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted.

References:

https://magenest.com/en/aws-iaas-paas-saas/

✗ Which of the following statements best describes the concept of agility in relation to cloud computing on AWS? (Select TWO.) *0/1

- [ ] The speed at which AWS resources can be created.
- [ ] The elimination of wasted capacity.
- [x] The ability to automatically scale capacity. ✗
- [ ] The speed at which AWS rolls out new features.
- [x] The ability to experiment quickly. ✓

Correct answer

- [x] The speed at which AWS resources can be created.
- [x] The ability to experiment quickly.

Feedback

Explanation
In a cloud computing environment, new IT resources are only a click away, which means that you reduce the time to make those resources available to your developers from weeks to just minutes. This results in a dramatic increase in agility for the organization, since the cost and time it takes to experiment and develop is significantly lower.

CORRECT: "The ability to experiment quickly" is a correct answer.

CORRECT: "The speed at which AWS resources can be created" is also a correct answer.

INCORRECT: "The speed at which AWS rolls out new features" is incorrect. This is not a statement that describes agility.

INCORRECT: "The elimination of wasted capacity" is incorrect. This is also known as right-sizing and it is a cost benefit of running in the cloud. It is not a statement that describes agility.

INCORRECT: "The ability to automatically scale capacity" is incorrect. Auto scaling ensures you have the right amount of capacity available.

References:

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/six-advantages-of-cloud-computing.html

✗ Which tasks require the use of the AWS account root user? (Select TWO.) * 0/1

- [x] Changing payment currency. ✗
- [ ] Changing the account name.
- [ ] Viewing AWS CloudTrail logs.
- [x] Changing AWS Support plans. ✓
- [ ] Enabling encryption for S3.

Correct answer

- [x] Changing the account name.
- [x] Changing AWS Support plans.

Feedback

Explanation
Some tasks can only be performed by the root user of an AWS account. This includes changing the account name and changing AWS support plans. For more information view the AWS article referenced below.

CORRECT: "Changing the account name" is a correct answer.

CORRECT: "Changing AWS Support plans" is also a correct answer.

INCORRECT: "Enabling encryption for S3" is incorrect. This does not require root.

INCORRECT: "Viewing AWS CloudTrail logs" is incorrect. This does not require root.

INCORRECT: "Changing payment currency" is incorrect. This does not require root.

References:

https://docs.aws.amazon.com/general/latest/gr/root-vs-iam.html

✓ A company is deploying an application in the AWS Cloud. How can they secure the application? (Select TWO.) *1/1

- [x] Enable encryption for the application data at rest. ✓
- [x] Limit access privileges according to the principal of least privilege. ✓
- [ ] Provide full admin access to developer and operations staff.
- [ ] Configure public access for the AWS services used by the application.
- [ ] Enable monitoring by turning off encryption for data in transit.

Feedback

Explanation
In this scenario the company must apply best practice principals for securing their application. Enabling encryption for data at rest is definitely a good practice and data in transit should also be encrypted where possible as well. It is also a good practice to limit access privileges according to the principal of least privilege. This means limiting privileges to those required to perform a specific role.

CORRECT: "Enable encryption for the application data at rest" is a correct answer.

CORRECT: "Limit access privileges according to the principal of least privilege" is also a correct answer.

INCORRECT: "Configure public access for the AWS services used by the application" is incorrect. In some cases public access may be required and in that case only the front end service(s) should be configured for public access. Otherwise it would be best to not enable public access.

INCORRECT: "Enable monitoring by turning off encryption for data in transit" is incorrect. There is no need to turn off encryption in transit to enable monitoring and this would reduce security.

INCORRECT: "Provide full admin access to developer and operations staff" is incorrect. This is not a security best practice; it is better to assign permissions according to the principal of least privilege

References:

https://aws.amazon.com/security/

✓ A company is deploying a MySQL database on AWS. The database must easily scale and have automatic backup enabled. *1/1

Which AWS service should the company use?

- ○ Amazon DynamoDB
- ◉ Amazon Aurora ✓
- ○ Amazon DocumentDB
- ○ Amazon Athena

Feedback

Explanation
Amazon Aurora is a relational database that is compatible with MySQL and PostgreSQL database engines. Aurora is extremely fast and scales up to 128 TB. You can also deploy replicas for read scaling within and across Regions. Aurora also offers automated backups.

CORRECT: "Amazon Aurora" is the correct answer.

INCORRECT: "Amazon DynamoDB" is incorrect. DynamoDB is a NoSQL (non-relational) database and you cannot deploy a MySQL database as it is a relational database type.

INCORRECT: "Amazon Athena" is incorrect. Athena is used for querying data in Amazon S3 using SQL.

INCORRECT: "Amazon DocumentDB" is incorrect. DocumentDB is a NoSQL database that supports document data structures.

References:

https://aws.amazon.com/rds/aurora/mysql-features/

✗ Which of the following AWS features or services can be used to provide root storage volumes for Amazon EC2 instances? *0/1

- ○ Amazon Elastic File System (EFS)
- ○ Amazon Elastic Block Store (EBS)
- ◉ Amazon Simple Storage Service (S3) ✗
- ○ Amazon Machine Image

Correct answer

- ◉ Amazon Elastic Block Store (EBS)

Feedback

Explanation
The Amazon Elastic Block Store (EBS) provides block-based storage volumes for Amazon EC2 instances. Root volumes are where the operating system is installed and can be either EBS volumes or instance store volumes.

CORRECT: "Amazon Elastic Block Store (EBS)" is the correct answer.

INCORRECT: "Amazon Machine Image" is incorrect. An AMI provides the information required to launch an instance including the mapping of EBS volumes.

INCORRECT: "Amazon Elastic File System (EFS)" is incorrect. EFS volumes cannot be used for the root storage volume but can be mounted to store data.

INCORRECT: "Amazon Simple Storage Service (S3)" is incorrect. Amazon S3 buckets cannot be attached to EC2 instances in any way, it is a service that is accessed via a REST API.

References:

https://docs.aws.amazon.com/opsworks/latest/userguide/best-practices-storage.html

✗ An individual IAM user must be granted access to an Amazon S3 bucket using a bucket policy. Which element in the S3 bucket policy should be updated to define the user account for which access will be granted? *0/1

- ○ Action
- ◉ Resource ✗
- ○ Principal
- ○ Condition

Correct answer

- ◉ Principal

Feedback

Explanation
*The Principal element specifies the user, account, service, or other entity that is allowed or denied access to a resource. The bucket policy below has a Principal element set to * which is a wildcard meaning any user. To grant access to a specific IAM user the following format can be used:*

"Principal":{"AWS":"arn:aws:iam::AWSACCOUNTNUMBER:user/username"}

CORRECT: "Principal" is the correct answer.

INCORRECT: "Action" is incorrect. Actions are the permissions that you can specify in a policy.

INCORRECT: "Resource" is incorrect. Resources are the ARNs of resources you wish to specify permissions for.

INCORRECT: "Condition" is incorrect. Conditions define certain conditions to apply when granting permissions such as the source IP address of the caller.

References:

https://docs.aws.amazon.com/AmazonS3/latest/userguide/s3-bucket-user-policy-specifying-principal-intro.html

✗ Which design principles are enabled by the AWS Cloud to improve the operation of workloads? (Select TWO.) *0/1

- [ ] Customized hardware
- [ ] Minimize platform design
- [ ] Remove single points of failure
- [x] Loose coupling ✓
- [ ] Minimum viable product

Correct answer

- [x] Remove single points of failure
- [x] Loose coupling

Feedback

Explanation
Loose coupling is when you break systems down into smaller components that are loosely coupled together. This reduces interdependencies between systems components. This is achieved in the cloud using messages buses, notification and messaging services.

Removing single points of failure ensures fault tolerance and high availability. This is easily achieved in the cloud as the architecture and features of the cloud support the implementation of highly available and fault tolerant systems.

CORRECT: "Loose coupling" is a correct answer.

CORRECT: "Remove single points of failure" is also a correct answer.

INCORRECT: "Customized hardware" is incorrect. You cannot customize hardware in the cloud.

INCORRECT: "Minimize platform design" is incorrect. This is not an operational advantage for workloads in the cloud.

INCORRECT: "Minimum viable product" is incorrect. This is not an operational advantage for workloads in the cloud.

References:

https://d1.awsstatic.com/whitepapers/AWS_Cloud_Best_Practices.pdf

✓ A customer needs to determine Total Cost of Ownership (TCO) for a workload that requires physical isolation. Which hosting model should be accounted for? *1/1

- ○ On-Demand Instances
- ○ Reserved Instances
- ◉ Dedicated Hosts ✓
- ○ Spot Instances

Feedback

Explanation
An Amazon EC2 Dedicated Host is a physical server with EC2 instance capacity fully dedicated to your use. Dedicated Hosts allow you to use your existing per-socket, per-core, or per-VM software licenses, including Windows Server, Microsoft SQL Server, SUSE, and Linux Enterprise Server.

Note that dedicated hosts can be considered "hosting model" as it determines that actual underlying infrastructure that is used for running your workload. All of the other answers are simply pricing plans for shared hosting models.

CORRECT: "Dedicated Hosts" is the correct answer.

INCORRECT: "Reserved Instances" is incorrect as this pricing model does not support physical isolation.

INCORRECT: "On-Demand Instances" is incorrect as this pricing model does not support physical isolation.

INCORRECT: "Spot Instances" is incorrect as this hosting pricing does not support physical isolation.

References:

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/dedicated-hosts-overview.html

✗ A company is planning to move a number of legacy applications to the AWS Cloud. The solution must be cost-effective. Which approach should the company take? *0/1

- (●) Use an Amazon S3 static website to host the legacy application code. ✗
- ( ) Rehost the applications on Amazon EC2 instances that are right-sized.
- ( ) Use AWS Lambda to host the legacy applications in the cloud.
- ( ) Migrate the applications to dedicated hosts on Amazon EC2.

Correct answer

- (●) Rehost the applications on Amazon EC2 instances that are right-sized.

Feedback

Explanation
The most cost-effective solution that works is to use Amazon EC2 instances that are right-sized with the most optimum instance types. Right-sizing is the process of ensuring that the instance type selected for each application provides the right amount of resources for the application.

CORRECT: "Rehost the applications on Amazon EC2 instances that are right-sized" is the correct answer.

INCORRECT: "Migrate the applications to dedicated hosts on Amazon EC2" is incorrect. Dedicated hosts are expensive and there is no need to use them with this solution.

INCORRECT: "Use AWS Lambda to host the legacy applications in the cloud" is incorrect. It is unlikely that you can simply host legacy applications using AWS Lambda.

INCORRECT: "Use an Amazon S3 static website to host the legacy application code" is incorrect. You cannot host legacy application code in an S3 static website, only static content is possible.

References:

https://d1.awsstatic.com/whitepapers/cost-optimization-right-sizing.pdf