

Question 1 Correct

An IT company has a hybrid cloud architecture and it wants to centralize the server logs for its Amazon Elastic Compute Cloud (Amazon EC2) instances and on-premises servers. Which of the following is the MOST effective for this use-case?

Use AWS Lambda to send log data from Amazon Elastic Compute Cloud (Amazon EC2) instance as well as on-premises servers to Amazon CloudWatch Logs

Your answer is correct

Use Amazon CloudWatch Logs for both the Amazon Elastic Compute Cloud (Amazon EC2) instance and the on-premises servers

Use AWS CloudTrail for the Amazon Elastic Compute Cloud (Amazon EC2) instance and Amazon CloudWatch Logs for the on-premises servers

Use Amazon CloudWatch Logs for the Amazon Elastic Compute Cloud (Amazon EC2) instance and AWS CloudTrail for the on-premises servers

Overall explanation

Correct option:

Use Amazon CloudWatch Logs for both the Amazon Elastic Compute Cloud (Amazon EC2) instance and the on-premises servers

You can use Amazon CloudWatch Logs to monitor, store, and access your log files from Amazon Elastic Compute Cloud (Amazon EC2) instances, AWS CloudTrail, Route 53, and other sources such as on-premises servers.

Amazon CloudWatch Logs enables you to centralize the logs from all of your systems, applications, and AWS services that you use, in a single, highly scalable service. You can then easily view them, search them for specific error codes or patterns, filter them based on specific fields, or archive them securely for future analysis.

Incorrect options:

Use AWS Lambda to send log data from Amazon Elastic Compute Cloud (Amazon EC2) instance as well as on-premises servers to Amazon CloudWatch Logs

AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume. Lambda cannot be used to centralize the logs from Amazon Elastic Compute Cloud (Amazon EC2) instances and on-premises servers.

Use Amazon CloudWatch Logs for the Amazon Elastic Compute Cloud (Amazon EC2) instance and AWS CloudTrail for the on-premises servers

Use AWS CloudTrail for the Amazon Elastic Compute Cloud (Amazon EC2) instance and Amazon CloudWatch Logs for the on-premises servers

AWS CloudTrail is a service that enables governance, compliance, operational auditing, and risk auditing of your AWS account. With AWS CloudTrail, you can log, continuously monitor, and retain account activity related to actions across your AWS infrastructure. AWS 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. AWS CloudTrail cannot be used to centralize the server logs for Amazon Elastic Compute Cloud (Amazon EC2) instances or on-premises servers, so both these options are incorrect.

References:

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html>

<https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/AgentReference.html>

Domain

Security and Compliance

Overall explanation

Correct option:

Amazon EC2 Auto Scaling

Amazon EC2 Auto Scaling helps you ensure that you have the correct number of Amazon EC2 instances available to handle the load for your application. You create collections of Amazon EC2 instances, called Auto Scaling groups. You can specify the minimum number of instances in each Auto Scaling group, and Amazon EC2 Auto Scaling ensures that your group never goes below this size.

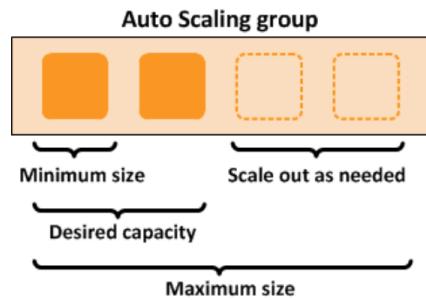
Amazon EC2 Auto Scaling Overview:

What Is Amazon EC2 Auto Scaling?

[PDF](#) | [Kindle](#) | [RSS](#)

Amazon EC2 Auto Scaling helps you ensure that you have the correct number of Amazon EC2 instances available to handle the load for your application. You create collections of EC2 instances, called *Auto Scaling groups*. You can specify the minimum number of instances in each Auto Scaling group, and Amazon EC2 Auto Scaling ensures that your group never goes below this size. You can specify the maximum number of instances in each Auto Scaling group, and Amazon EC2 Auto Scaling ensures that your group never goes above this size. If you specify the desired capacity, either when you create the group or at any time thereafter, Amazon EC2 Auto Scaling ensures that your group has this many instances. If you specify scaling policies, then Amazon EC2 Auto Scaling can launch or terminate instances as demand on your application increases or decreases.

For example, the following Auto Scaling group has a minimum size of one instance, a desired capacity of two instances, and a maximum size of four instances. The scaling policies that you define adjust the number of instances, within your minimum and maximum number of instances, based on the criteria that you specify.



via -

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/what-is-amazon-ec2-auto-scaling.html>

Incorrect options:

Multi-AZ deployment - With Availability Zones (AZ), you can design and operate applications and databases that automatically failover between zones without interruption. Multi-AZ deployment of Amazon EC2 instances provided high availability, it does not help in scaling resources.

Network Load Balancer - Network Load Balancer is best suited for load balancing of Transmission Control Protocol (TCP), User Datagram Protocol (UDP) and Transport Layer Security (TLS) traffic where extreme performance is required. It distributes traffic, does not scale resources.

Application Load Balancer - An Application Load Balancer serves as the single point of contact for clients. The load balancer distributes incoming application traffic across multiple targets, such as EC2 instances, in multiple Availability Zones. It distributes traffic, does not scale resources.

Reference:

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/what-is-amazon-ec2-auto-scaling.html>

Domain

Cloud Concepts

Question 3Correct

A company uses reserved EC2 instances across multiple units with each unit having its own AWS account. However, some of the units under-utilize their reserved instances while other units need more reserved instances. As a Cloud Practitioner, which of the following would you recommend as the most cost-optimal solution?

Your answer is correct

Use AWS Organizations to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units

Use AWS Systems Manager to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units

Use AWS Cost Explorer to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units

Use AWS Trusted Advisor to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units

Overall explanation

Correct option:

Use AWS Organizations to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units

AWS Organizations helps you to centrally manage billing; control access, compliance, and security; and share resources across your AWS accounts. Using AWS Organizations, you can automate account creation, create groups of accounts to reflect your business

needs, and apply policies for these groups for governance. You can also simplify billing by setting up a single payment method for all of your AWS accounts. AWS Organizations is available to all AWS customers at no additional charge.

Key Features of AWS Organizations:

CENTRALLY MANAGE POLICIES ACROSS MULTIPLE AWS ACCOUNTS

To improve control over your AWS environment, you can use AWS Organizations to create groups of accounts, and then attach policies to a group to ensure the correct policies are applied across the accounts without requiring custom scripts and manual processes.

GOVERN ACCESS TO AWS SERVICES, RESOURCES, AND REGIONS

AWS Organizations allows you to restrict what services and actions are allowed in your accounts. You can use Service Control Policies (SCPs) to apply permission guardrails on [AWS Identity and Access Management \(IAM\)](#) users and roles. For example, you can apply an SCP that restricts users in accounts in your organization from launching any resources in regions that you do not explicitly allow.

AUTOMATE AWS ACCOUNT CREATION AND MANAGEMENT

AWS Organizations helps you simplify IT operations by automating AWS account creation and management. The Organizations APIs enable you to create new accounts programmatically, and to add the new accounts to a group. The policies attached to the group are automatically applied to the new account. For example, you can automate the creation of new accounts for workload or application isolation and grant entities in those accounts access only to the necessary AWS services.

CONFIGURE AWS SERVICES ACROSS MULTIPLE ACCOUNTS

AWS Organizations helps you configure [AWS services](#) and share resources across accounts in your organization. For example, Organizations integrates with [AWS Single Sign-on](#) to enable you to easily provision access for all of your developers to accounts in your organization from a single place. You can make central changes to access permissions and have them automatically updated on accounts in your organization.

CONSOLIDATE BILLING ACROSS MULTIPLE AWS ACCOUNTS

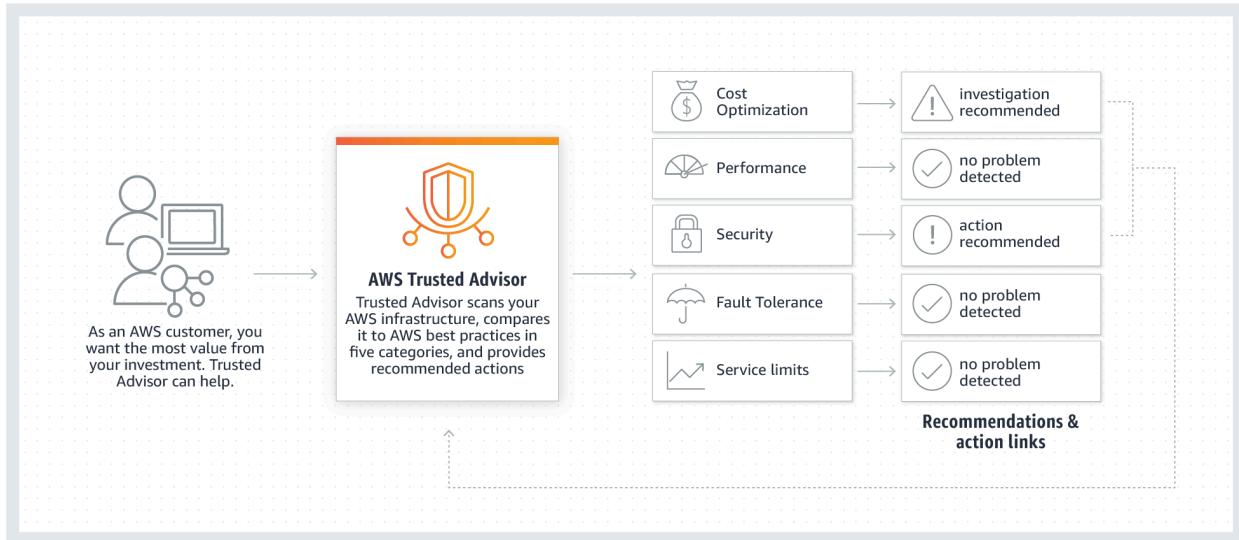
You can use AWS Organizations to set up a single payment method for all the AWS accounts in your organization through consolidated billing. With consolidated billing, you can see a combined view of charges incurred by all your accounts, as well as take advantage of pricing benefits from aggregated usage, such as volume discounts for [Amazon EC2](#) and [Amazon S3](#).

via - <https://aws.amazon.com/organizations/>

Incorrect options:

Use AWS Trusted Advisor to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits, and performance improvement. You cannot use Trusted Advisor to share the reserved EC2 instances amongst multiple AWS accounts.

How Trusted Advisor Works:

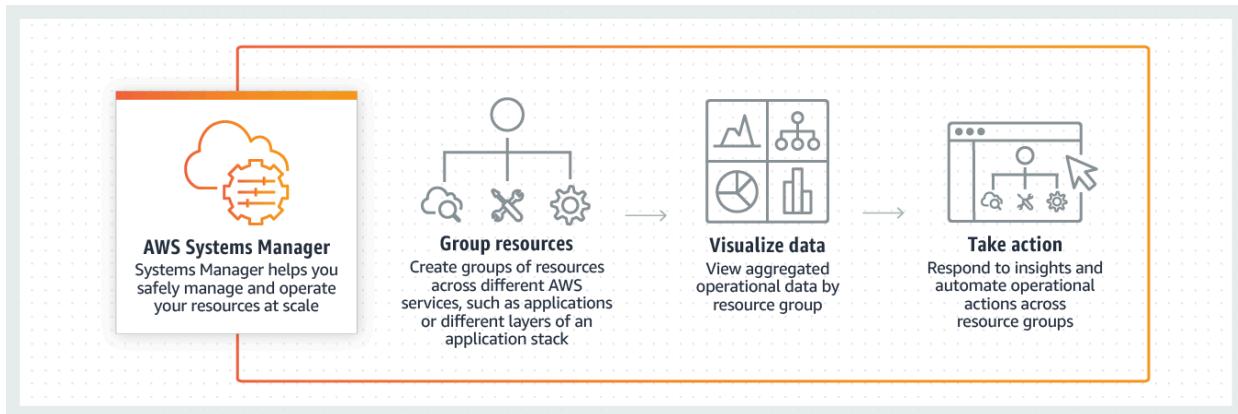


via - <https://aws.amazon.com/premiumsupport/technology/trusted-advisor/>

Use AWS Cost Explorer to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units - AWS Cost Explorer lets you explore your AWS costs and usage at both a high level and at a detailed level of analysis, and empowering you to dive deeper using several filtering dimensions (e.g., AWS Service, Region, Linked Account). You cannot use Cost Explorer to share the reserved EC2 instances amongst multiple AWS accounts.

Use AWS Systems Manager to manage AWS accounts of all units and then share the reserved EC2 instances amongst all units - 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. With Systems Manager, you can group resources, like Amazon EC2 instances, Amazon S3 buckets, or Amazon RDS instances, by application, view operational data for monitoring and troubleshooting, and take action on your groups of resources. You cannot use Systems Manager to share the reserved EC2 instances amongst multiple AWS accounts.

How AWS Systems Manager Works:



via - <https://aws.amazon.com/systems-manager/>

References:

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

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

<https://aws.amazon.com/systems-manager/>

Domain

Security and Compliance

Question 4 Correct

An organization deploys its IT infrastructure in a combination of its on-premises data center along with AWS Cloud. How would you categorize this deployment model?

Private deployment

Cloud deployment

Mixed deployment

Your answer is correct

Hybrid deployment

Overall explanation

Correct option:

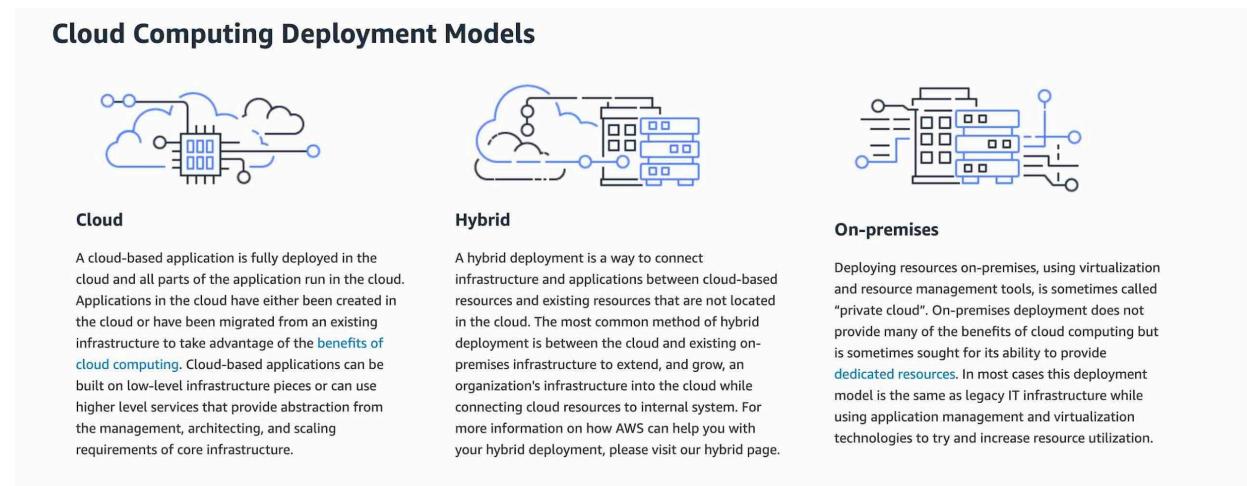
Hybrid deployment

A hybrid deployment is a way to connect your on-premises infrastructure to the cloud.

The most common method of hybrid deployment is between the cloud and existing

on-premises infrastructure to extend an organization's infrastructure into the cloud while connecting cloud resources to internal systems.

Overview of Cloud Computing Deployment Models:



via - <https://aws.amazon.com/types-of-cloud-computing/>

Incorrect options:

Cloud deployment - For this type of deployment, a cloud-based application is fully deployed in the cloud, and all parts of the application run in the cloud. Applications in the cloud have either been created in the cloud or have been migrated from an existing infrastructure to take advantage of the benefits of cloud computing.

Private deployment - For this deployment model, resources are deployed on-premises using virtualization technologies. On-premises deployment does not provide many of the benefits of cloud computing but is sometimes sought for its ability to provide dedicated resources.

Mixed deployment - This is a made-up option and has been added as a distractor.

References:

<https://aws.amazon.com/types-of-cloud-computing/>

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

Domain

Cloud Concepts

Question 5 Correct

Which of the following Amazon S3 storage classes takes the most time to retrieve data (also known as first byte latency)?

Your answer is correct

- Amazon S3 Glacier Deep Archive**
- Amazon S3 Intelligent-Tiering
- Amazon S3 Glacier Flexible Retrieval
- Amazon S3 Standard

Overall explanation

Correct option:

Amazon S3 Glacier Deep Archive

Amazon S3 Glacier Deep Archive is Amazon S3's lowest-cost storage class and supports long-term retention and digital preservation for data that may be accessed once or twice in a year. It is designed for customers – particularly those in highly-regulated industries, such as the Financial Services, Healthcare, and Public Sectors – that retain data sets for 7-10 years or longer to meet regulatory compliance requirements. Amazon S3 Glacier Deep Archive can also be used for backup and disaster recovery use cases. It has a retrieval time (first byte latency) of 12 to 48 hours.

Please review this illustration for Amazon S3 Storage Classes data retrieval times. You don't need to memorize the actual numbers, just remember that Amazon S3 Glacier Deep Archive takes the most time to retrieve data:

Performance across the S3 Storage Classes

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

via - <https://aws.amazon.com/s3/storage-classes/>

Incorrect options:

Amazon S3 Standard - Amazon S3 Standard offers high durability, availability, and performance object storage for frequently accessed data. Amazon S3 Standard has a retrieval time (first byte latency) of milliseconds.

Amazon S3 Intelligent-Tiering - The Amazon S3 Intelligent-Tiering storage class is designed to optimize costs by automatically moving data to the most cost-effective access tier, without performance impact or operational overhead. It works by storing objects in two access tiers: one tier that is optimized for frequent access and another lower-cost tier that is optimized for infrequent access. Amazon S3 Intelligent-Tiering has a retrieval time (first byte latency) of milliseconds.

Amazon S3 Glacier Flexible Retrieval - Amazon S3 Glacier Flexible Retrieval delivers low-cost storage, up to 10% lower cost (than Amazon S3 Glacier Instant Retrieval), for archive data that is accessed 1–2 times per year and is retrieved asynchronously. For archive data that does not require immediate access but needs the flexibility to retrieve large sets of data at no cost, such as backup or disaster recovery use cases, Amazon S3 Glacier Flexible Retrieval (formerly Amazon S3 Glacier) is the ideal storage class.

Reference:

<https://aws.amazon.com/s3/storage-classes/>

Domain

Technology

Question 6 Incorrect

Which option is a common stakeholder role for the AWS Cloud Adoption Framework (AWS CAF) platform perspective? (Select two)

Your selection is incorrect

Chief Information Officer (CIO)

Chief Data Officer (CDO)

Your selection is correct

Chief Technology Officer (CTO)

Chief Product Officer (CPO)

Correct selection

Engineer

Overall explanation

Correct option:

Engineer

Chief Technology Officer (CTO)

The AWS Cloud Adoption Framework (AWS CAF) leverages AWS experience and best practices to help you digitally transform and accelerate your business outcomes through innovative use of AWS. AWS CAF identifies specific organizational capabilities that underpin successful cloud transformations. These capabilities provide best practice guidance that helps you improve your cloud readiness. AWS CAF groups its capabilities in six perspectives: Business, People, Governance, Platform, Security, and Operations.

The platform perspective focuses on accelerating the delivery of your cloud workloads via an enterprise-grade, scalable, hybrid cloud environment. It comprises seven

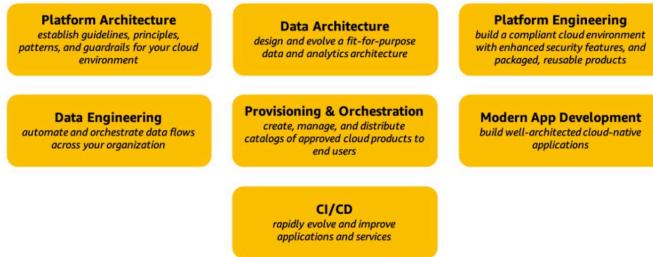
capabilities shown in the following figure. Common stakeholders include Chief Technology Officer (CTO), technology leaders, architects, and engineers.

The AWS Cloud Adoption Framework (AWS CAF) platform perspective:

Platform perspective: infrastructure and applications

[PDF](#) | [RSS](#)

The *platform perspective* focuses on accelerating the delivery of your cloud workloads via an enterprise-grade, scalable, hybrid cloud environment. It comprises seven capabilities shown in the following figure. **Common stakeholders** include CTO, technology leaders, architects, and engineers.



via -

<https://docs.aws.amazon.com/whitepapers/latest/overview-aws-cloud-adoption-framework/platform-perspective.html>

Incorrect options:

Chief Product Officer (CPO)

Chief Data Officer (CDO)

Chief Information Officer (CIO)

These three options contradict the explanation provided above, so these options are incorrect.

References:

<https://docs.aws.amazon.com/whitepapers/latest/overview-aws-cloud-adoption-framework/platform-perspective.html>

<https://d1.awsstatic.com/whitepapers/aws-caf-ebook.pdf>

Domain

Cloud Concepts

Question 7Correct

AWS Marketplace facilitates which of the following use-cases? (Select two)

Your selection is correct

Sell Software as a Service (SaaS) solutions to AWS customers

Buy Amazon EC2 Standard Reserved Instances (RI)

Your selection is correct

AWS customer can buy software that has been bundled into customized Amazon Machine Image (AMIs) by the AWS Marketplace sellers

Raise request for purchasing AWS Direct Connect connection

Purchase compliance documents from third-party vendors

Overall explanation

Correct option:

Sell Software as a Service (SaaS) solutions to AWS customers

AWS customer can buy software that has been bundled into customized Amazon Machine Image (AMIs) by the AWS Marketplace sellers

AWS Marketplace is a digital catalog with thousands of software listings from independent software vendors that make it easy to find, test, buy, and deploy software that runs on AWS. The AWS Marketplace enables qualified partners to market and sell their software to AWS Customers.

AWS Marketplace offers two ways for sellers to deliver software to customers: Amazon Machine Image (AMI) and Software as a Service (SaaS).

Amazon Machine Image (AMI): Offering an AMI is the preferred option for listing products in AWS Marketplace. Partners have the option for free or paid products. Partners can offer paid products charged by the hour or month. Bring-Your-Own-License (BYOL) is also available and enables customers with existing software licenses to easily migrate to AWS.

Software as a Service (SaaS): If you offer a SaaS solution running on AWS (and are unable to build your product into an AMI) the SaaS listing offers our partners a way to market their software to customers.

Incorrect options:

Purchase compliance documents from third-party vendors - There is no third party vendor for providing compliance documents. AWS Artifact is your go-to, central resource for compliance-related information that matters to you. It provides on-demand access to AWS' security and compliance reports and select online agreements.

Buy Amazon EC2 Standard Reserved Instances (RI) - Amazon EC2 Standard Reserved Instances (RI) can be bought from the Amazon EC2 console at
<https://console.aws.amazon.com/ec2/>

Raise request for purchasing AWS Direct Connect connection - AWS Direct Connect connection can be raised from the AWS management console at
<https://console.aws.amazon.com/directconnect/v2/home>

References:

<https://aws.amazon.com/partners/aws-marketplace/>

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

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ri-market-concepts-buying.html#ri-queued-purchase>

Domain

Billing and Pricing

Question 8Correct

An IT company is on a cost-optimization spree and wants to identify all Amazon Elastic Compute Cloud (Amazon EC2) instances that are under-utilized. Which AWS services can be used off-the-shelf to address this use-case without needing any manual configurations? (Select two)

AWS Cost & Usage Report (AWS CUR)

Your selection is correct

AWS Cost Explorer

Your selection is correct

AWS Trusted Advisor

Amazon CloudWatch

AWS Budgets

Overall explanation

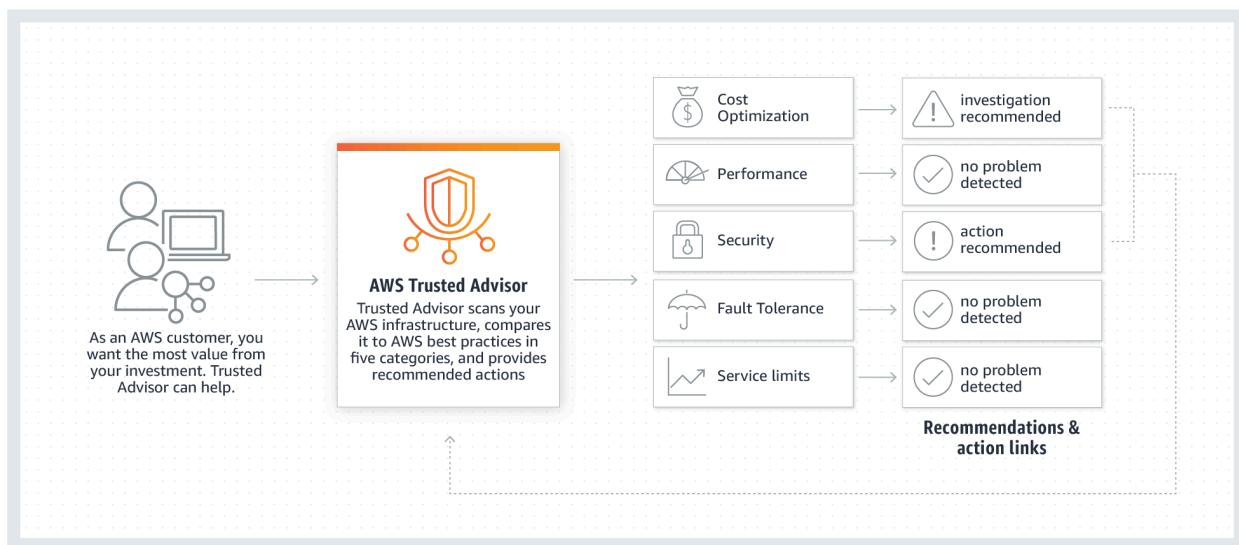
Correct option:

AWS Trusted Advisor

AWS Trusted Advisor is an online tool that provides real-time guidance to help provision your resources following AWS best practices. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally. AWS Trusted Advisor analyzes your AWS environment and provides best practice recommendations in five categories: Cost Optimization, Performance, Security, Fault Tolerance, Service Limits.

AWS Trusted Advisor 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.

How AWS Trusted Advisor Works:



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

How AWS Trusted Advisor identifies low utilization Amazon EC2 instances:

Low utilization Amazon EC2 instances

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. Running instances generate hourly usage charges. Although some scenarios can result in low utilization by design, you can often lower your costs by managing the number and size of your instances.

Estimated monthly savings are calculated by using the current usage rate for On-Demand Instances and the estimated number of days the instance might be underutilized. Actual savings will vary if you are using Reserved Instances or Spot Instances, or if the instance is not running for a full day. To get daily utilization data, download the report for this check.

via -

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

AWS Cost Explorer

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 includes a default report that helps you visualize the costs and usage associated with your top five cost-accruing AWS services, and gives you a detailed breakdown of all services in the table view. The reports let you adjust the time range to view historical data going back up to twelve months to gain an understanding of your cost trends.

The rightsizing recommendations feature in AWS Cost Explorer helps you identify cost-saving opportunities by downsizing or terminating Amazon EC2 instances. You can see all of your underutilized Amazon EC2 instances across member accounts in a single view to immediately identify how much you can save.

Incorrect options:

AWS Cost & Usage Report (AWS CUR) - The AWS Cost & Usage Report (AWS CUR) contains the most comprehensive set of cost and usage data available. You can use AWS Cost & Usage Report (AWS CUR) to publish your AWS billing reports to an Amazon Simple Storage Service (Amazon S3) bucket that you own. You can receive reports that break down your costs by the hour or month, by product or product resource, or by tags that you define yourself. AWS Cost & Usage Report (AWS CUR) cannot be used to identify under-utilized Amazon EC2 instances.

Amazon CloudWatch - Amazon CloudWatch can be used to create alarm to monitor your estimated charges. When you enable the monitoring of estimated charges for your AWS account, the estimated charges are calculated and sent several times daily to CloudWatch as metric data. You can choose to receive alerts by email when charges have exceeded a certain threshold. Think resource performance monitoring, events, and alerts; think CloudWatch. Amazon CloudWatch cannot be used to identify under-utilized Amazon EC2 instances without manually configuring an alarm with the appropriate threshold to track the Amazon EC2 utilization, so this option is incorrect.

AWS Budgets - AWS Budgets gives the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define. AWS Budgets can be created at the monthly, quarterly, or yearly level, and you can customize the start and end dates. You can further refine your budget to track costs associated with multiple dimensions, such as AWS service, linked account, tag, and others. AWS Budgets cannot be used to identify under-utilized EC2 instances without manually configuring coverage targets, so this option is incorrect.

References:

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

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/ce-rightsizing.html>

Domain

Cloud Concepts

Question 9Correct

Which policy describes prohibited uses of the web services offered by Amazon Web Services?

AWS Fair Use Policy

AWS Applicable Use Policy

AWS Trusted Advisor

Your answer is correct

AWS Acceptable Use Policy

Overall explanation

Correct option:

AWS Acceptable Use Policy

The Acceptable Use Policy describes prohibited uses of the web services offered by Amazon Web Services, Inc. and its affiliates (the “Services”) and the website located at <http://aws.amazon.com> (the “AWS Site”). This policy is present at <https://aws.amazon.com/aup/> and is updated on a need basis by AWS.

Incorrect options:

AWS Trusted Advisor - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits, and performance improvement. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally. Trusted Advisor does not describe prohibited uses of the web services offered by Amazon Web Services.

AWS Fair Use Policy - This is a made-up option and has been added as a distractor.

AWS Applicable Use Policy - This is a made-up option and has been added as a distractor.

Reference:

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

Domain

Cloud Concepts

Question 10Correct

A photo sharing web application wants to store thumbnails of user-uploaded images on Amazon Simple Storage Service (Amazon S3). The thumbnails are rarely used but need

to be immediately accessible from the web application. The thumbnails can be regenerated easily if they are lost. Which is the most cost-effective way to store these thumbnails on Amazon Simple Storage Service (Amazon S3)?

Use Amazon S3 Glacier Flexible Retrieval to store the thumbnails

Use Amazon S3 Standard-Infrequent Access (S3 Standard-IA) to store the thumbnails

Use Amazon S3 Standard to store the thumbnails

Your answer is correct

Use Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) to store the thumbnails

Overall explanation

Correct option:

Use Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) to store the thumbnails

Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) is for data that is accessed less frequently but requires rapid access when needed. Unlike other S3 Storage Classes which store data in a minimum of three Availability Zones (AZs), Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) stores data in a single Availability Zone (AZ) and costs 20% less than Amazon S3 Standard-Infrequent Access (S3 Standard-IA).

Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) offers the same high durability, high throughput, and low latency of S3 Standard, with a low per GB storage price and per GB retrieval fee. Although Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) offers less availability than S3 Standard but that's not an issue for the given use-case since the thumbnails can be regenerated easily.

As the thumbnails are rarely used but need to be rapidly accessed when required, so Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) is the best choice for this use-case.

Exam Alert:

Please review this detailed comparison on S3 Storage Classes as you can expect a few questions on this aspect of S3:

Performance across the S3 Storage Classes

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

via - <https://aws.amazon.com/s3/storage-classes/>

Incorrect options:

Use Amazon S3 Standard-Infrequent Access (S3 Standard-IA) to store the thumbnails - Amazon S3 Standard-Infrequent Access (S3 Standard-IA) storage class is for data that is accessed less frequently but requires rapid access when needed. Amazon S3 Standard-Infrequent Access (S3 Standard-IA) matches the high durability, high throughput, and low latency of S3 Standard, with a low per GB storage price and per GB retrieval fee. Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) costs 20% less than Amazon S3 Standard-Infrequent Access (S3 Standard-IA), so this option is incorrect.

Use Amazon S3 Standard to store the thumbnails - Amazon S3 Standard offers high durability, availability, and performance object storage for frequently accessed data. As described above, Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA) is a better fit than Amazon S3 Standard, hence using Amazon S3 standard is ruled out for the given use-case.

Use Amazon S3 Glacier Flexible Retrieval to store the thumbnails - Amazon S3 Glacier Flexible Retrieval is a secure, durable, and low-cost storage class for data archiving.

Although Amazon S3 Glacier Flexible Retrieval is cheaper than Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA), however the retrieval time ranges from a minute to hours, so this option is also ruled out for the given use-case.

Reference:

<https://aws.amazon.com/s3/storage-classes/>

Domain

Technology

Question 11Correct

Which of the following statements is the MOST accurate when describing AWS Elastic Beanstalk?

It is an Infrastructure as Code (IaC) that allows you to model and provision resources needed for an application

Your answer is correct

It is a Platform as a Service (PaaS) that allows you to deploy and scale web applications and services

It is a Platform as a Service (PaaS) that allows you to model and provision resources needed for an application

It is an Infrastructure as a Service (IaaS) that allows you to deploy and scale web applications and services

Overall explanation

Correct option:

It is a Platform as a Service (PaaS) that allows you to deploy and scale web applications and services

AWS Elastic Beanstalk makes it even easier for developers to quickly deploy and manage applications in the AWS Cloud. Developers simply upload their applications, and AWS Elastic Beanstalk automatically handles the deployment details of capacity provisioning, load balancing, auto-scaling, and application health monitoring.

It is a Platform as a Service (PaaS) as you only manage the applications and the data.

Please review this overview of the types of Cloud Computing:

Cloud Computing Models

There are three main models for cloud computing. Each model represents a different part of the cloud computing stack.



Infrastructure as a Service (IaaS)

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



Platform as a Service (PaaS)

Platforms as a service remove the need for organizations to manage the underlying infrastructure (usually hardware and operating systems) and allow you to focus on the deployment and management of your applications. This helps you be more efficient as you don't need to worry about resource procurement, capacity planning, software maintenance, patching, or any of the other undifferentiated heavy lifting involved in running your application.



Software as a Service (SaaS)

Software as a Service provides you with a completed product that is run and managed by the service provider. In most cases, people referring to Software as a Service are referring to end-user applications. With a SaaS offering you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use that particular piece of software. A common example of a SaaS application is web-based email where you can send and receive email without having to manage feature additions to the email product or maintaining the servers and operating systems that the email program is running on.

via - <https://aws.amazon.com/types-of-cloud-computing/>

Incorrect options:

It is an Infrastructure as Code (IaC) that allows you to model and provision resources needed for an application - This is the definition of AWS CloudFormation. AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion. You can use the AWS CloudFormation sample templates or create your own templates to describe your AWS resources, and any associated dependencies or runtime parameters, required to run your application.

It is a Platform as a Service (PaaS) that allows you to model and provision resources needed for an application - AWS Elastic Beanstalk is a Platform as a Service (PaaS). However, the service that allows you to model and provision resources needed for an application is AWS CloudFormation.

It is an Infrastructure as a Service (IaaS) that allows you to deploy and scale web applications and services - AWS Elastic Beanstalk allows you to deploy and scale web applications and services, but it is not an Infrastructure as a Service (IaaS). With AWS Elastic Beanstalk, you do not manage the runtime, the middleware, and the operating system.

Reference:

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

Domain

Technology

Question 12Correct

What is the primary benefit of deploying an Amazon Relational Database Service (Amazon RDS) database in a Read Replica configuration?

Read Replica reduces database usage costs

Read Replica enhances database availability

Read Replica protects the database from a regional failure

Your answer is correct

Read Replica improves database scalability

Overall explanation

Correct option:

Read Replica improves database scalability

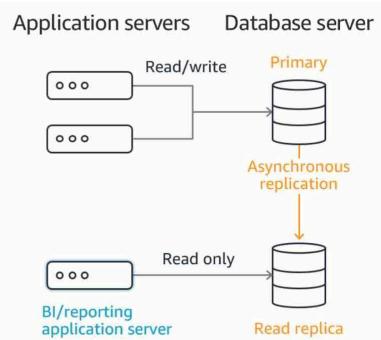
Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. Read Replicas allow you to create read-only copies that are synchronized with your master database. Read Replicas are used for improved read performance. You can also place your read replica in a different AWS Region closer to your users for better performance. Read Replicas are an example of horizontal scaling of resources.

Read Replica Overview:

Amazon RDS Read Replicas provide enhanced performance and durability for RDS database (DB) instances. They make it easy to elastically scale out beyond the capacity constraints of a single DB instance for read-heavy database workloads. You can create one or more replicas of a given source DB Instance and serve high-volume application read traffic from multiple copies of your data, thereby increasing aggregate read throughput. Read replicas can also be promoted when needed to become standalone DB instances. Read replicas are available in Amazon RDS for MySQL, MariaDB, PostgreSQL, Oracle, and SQL Server as well as Amazon Aurora.

For the MySQL, MariaDB, PostgreSQL, Oracle, and SQL Server database engines, Amazon RDS creates a second DB instance using a snapshot of the source DB instance. It then uses the engines' native asynchronous replication to update the read replica whenever there is a change to the source DB instance. The read replica operates as a DB instance that allows only read-only connections; applications can connect to a read replica just as they would to any DB instance. Amazon RDS replicates all databases in the source DB instance.

Amazon Aurora further extends the benefits of read replicas by employing an SSD-backed virtualized storage layer purpose-built for database workloads. Amazon Aurora replicas share the same underlying storage as the source instance, lowering costs and avoiding the need to copy data to the replica nodes. For more information about replication with Amazon Aurora, see the [online documentation](#).



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

Exam Alert:

Please review the differences between Amazon RDS Multi-AZ, Multi-Region and Read Replica deployments for RDS:

Read replicas, Multi-AZ deployments, and multi-region deployments

Amazon RDS read replicas complement [Multi-AZ deployments](#). While both features maintain a second copy of your data, there are differences between the two:

Multi-AZ deployments	Multi-Region deployments	Read replicas
Main purpose is high availability	Main purpose is disaster recovery and local performance	Main purpose is scalability
Non-Aurora: synchronous replication; Aurora: asynchronous replication	Asynchronous replication	Asynchronous replication
Non-Aurora: only the primary instance is active; Aurora: all instances are active	All regions are accessible and can be used for reads	All read replicas are accessible and can be used for readscaling
Non-Aurora: automated backups are taken from standby; Aurora: automated backups are taken from shared storage layer	Automated backups can be taken in each region	No backups configured by default
Always span at least two Availability Zones within a single region	Each region can have a Multi-AZ deployment	Can be within an Availability Zone, Cross-AZ, or Cross-Region
Non-Aurora: database engine version upgrades happen on primary; Aurora: all instances are updated together	Non-Aurora: database engine version upgrade is independent in each region; Aurora: all instances are updated together	Non-Aurora: database engine version upgrade is independent from source instance; Aurora: all instances are updated together
Automatic failover to standby (non-Aurora) or read replica (Aurora) when a problem is detected	Aurora allows promotion of a secondary region to be the master	Can be manually promoted to a standalone database instance (non-Aurora) or to be the primary instance (Aurora)

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

Incorrect options:

Read Replica enhances database availability - Amazon RDS Multi-AZ deployments provide enhanced availability and durability for RDS database (DB) instances, making them a natural fit for production database workloads. When you provision a Multi-AZ DB Instance, Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ). Read Replica cannot enhance database availability.

Read Replica protects the database from a regional failure - You need to use RDS in Multi-Region deployment configuration to protect from a regional failure. Read Replica cannot protect from a regional failure.

Read Replica reduces database usage costs - Amazon Relational Database Service (Amazon RDS) with Read Replicas increases the database costs compared to the standard deployment. So this option is incorrect.

Reference:

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

Domain

Technology

Question 13Correct

A financial services company wants to migrate from its on-premises data center to AWS Cloud. As a Cloud Practitioner, which AWS service would you recommend so that the company can compare the cost of running their IT infrastructure on-premises vs AWS Cloud?

AWS Trusted Advisor

Your answer is correct

AWS Pricing Calculator

AWS Cost Explorer

AWS Budgets

Overall explanation

Correct option:

AWS Pricing Calculator

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

out setting up a new set of instances and services. AWS Pricing Calculator can be accessed at <https://calculator.aws/#/>.

AWS also offers a complimentary service called Migration Evaluator (Formerly TSO Logic) to create data-driven business cases for AWS Cloud planning and migration.

Incorrect options:

AWS Trusted Advisor - AWS Trusted Advisor provides recommendations that help you follow AWS best practices. Trusted Advisor evaluates your account by using checks. These checks identify ways to optimize your AWS infrastructure, improve security and performance, reduce costs, and monitor service quotas. This service cannot be used to compare the cost of running the IT infrastructure on-premises vs AWS Cloud.

AWS Cost Explorer - 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 includes a default report that helps you visualize the costs and usage associated with your top five cost-accruing AWS services, and gives you a detailed breakdown of all services in the table view. The reports let you adjust the time range to view historical data going back up to twelve months to gain an understanding of your cost trends. AWS Cost Explorer cannot be used to compare the cost of running the IT infrastructure on-premises vs AWS Cloud.

AWS Budgets - AWS Budgets gives the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define. Budgets can be created at the monthly, quarterly, or yearly level, and you can customize the start and end dates. You can further refine your budget to track costs associated with multiple dimensions, such as AWS service, linked account, tag, and others. AWS Budgets cannot be used to compare the cost of running the IT infrastructure on-premises vs AWS Cloud.

Reference:

<https://calculator.aws/#/>

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

<https://aws.amazon.com/migration-evaluator/>

Domain

Billing and Pricing

Question 14Correct

Which AWS Route 53 routing policy would you use to route traffic to multiple resources and also choose how much traffic is routed to each resource?

latency-based routing

Simple routing

Your answer is correct

Weighted routing

Failover routing

Overall explanation

Correct option:

Weighted routing

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

Weighted routing lets you associate multiple resources with a single domain name (example.com) or subdomain name (acme.example.com) and choose how much traffic is routed to each resource. This can be useful for a variety of purposes, including load balancing and testing new versions of software. To configure weighted routing, you create records that have the same name and type for each of your resources. You assign each record a relative weight that corresponds with how much traffic you want to send to each resource. Amazon Route 53 sends traffic to a resource based on the weight that you assign to the record as a proportion of the total weight for all records in the group.

Route 53 Routing Policy Overview:

Choosing a routing policy

[PDF](#) | [Kindle](#) | [RSS](#)

When you create a record, you choose a routing policy, which determines how Amazon Route 53 responds to queries:

- **Simple routing policy** – Use for a single resource that performs a given function for your domain, for example, a web server that serves content for the example.com website.
- **Failover routing policy** – Use when you want to configure active-passive failover.
- **Geolocation routing policy** – Use when you want to route traffic based on the location of your users.
- **Geoproximity routing policy** – Use when you want to route traffic based on the location of your resources and, optionally, shift traffic from resources in one location to resources in another.
- **Latency routing policy** – Use when you have resources in multiple AWS Regions and you want to route traffic to the region that provides the best latency.
- **Multivalue answer routing policy** – Use when you want Route 53 to respond to DNS queries with up to eight healthy records selected at random.
- **Weighted routing policy** – Use to route traffic to multiple resources in proportions that you specify.

via - <https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy.html>

Incorrect options:

Failover routing - This routing policy is used when you want to configure active-passive failover.

Simple routing - With simple routing, you typically route traffic to a single resource, for example, to a web server for your website.

latency-based routing - This routing policy is used when you have resources in multiple AWS Regions and you want to route traffic to the region that provides the best latency.

Reference:

<https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-policy.html>

Domain

Technology

Question 15Correct

Which of the following are correct statements regarding the AWS Shared Responsibility Model? (Select two)

AWS is responsible for training AWS and customer employees on AWS products and services

Your selection is correct

For abstracted services like Amazon S3, AWS operates the infrastructure layer, the operating system, and platforms

Configuration Management is the responsibility of the customer

For a service like Amazon EC2, that falls under Infrastructure as a Service (IaaS), AWS is responsible for maintaining guest operating system

Your selection is correct

AWS is responsible for Security 'of' the Cloud

Overall explanation

Correct options:

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

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

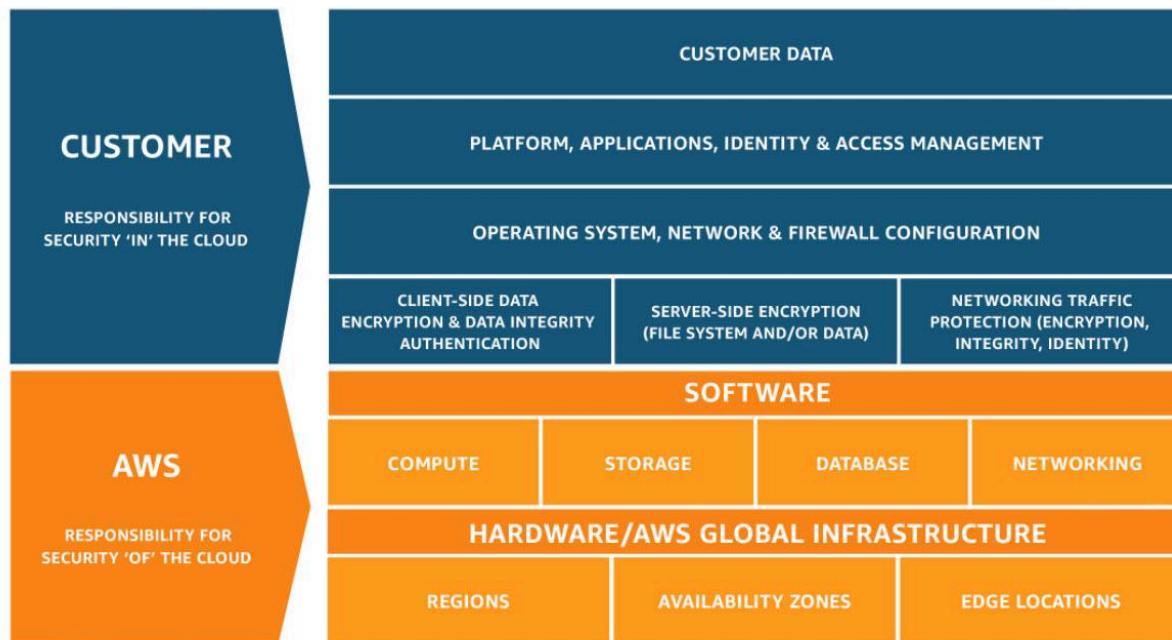
AWS is responsible for Security 'of' the Cloud

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

For abstracted services like Amazon S3, AWS operates the infrastructure layer, the operating system, and platforms

For abstracted services, such as Amazon S3 and Amazon DynamoDB, AWS operates the infrastructure layer, the operating system, and platforms, and customers access the endpoints to store and retrieve data.

AWS Shared Responsibility Model Overview:



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

Incorrect options:

For a service like Amazon EC2, that falls under Infrastructure as a Service (IaaS), AWS is responsible for maintaining guest operating system - A service such as Amazon Elastic Compute Cloud (Amazon EC2) is categorized as Infrastructure as a Service (IaaS) and, as such, requires the customer to perform all of the necessary security configuration and management tasks. Customers are responsible for the management of the guest operating system (including updates and security patches), any application software or utilities installed by the customer on the instances, and the configuration of the AWS-provided firewall (called a security group) on each instance.

Configuration Management is the responsibility of the customer - Configuration management is a shared responsibility. AWS maintains the configuration of its

infrastructure devices, but a customer is responsible for configuring their own guest operating systems, databases, and applications.

AWS is responsible for training AWS and customer employees on AWS products and services - Awareness & Training is also a shared responsibility. AWS trains AWS employees, but a customer must train their own employees.

Reference:

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

Domain

Security and Compliance

Question 16Correct

Which of the following AWS services can be used to forecast your AWS account usage and costs?

Your answer is correct

AWS Cost Explorer

AWS Budgets

AWS Cost & Usage Report (AWS CUR)

AWS Pricing Calculator

Overall explanation

Correct option:

AWS Cost Explorer

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 includes a default report that helps you visualize the costs and usage associated with your top five cost-accruing AWS services, and gives you a detailed breakdown of all services in the table view. The reports let you adjust the time range to view historical data going back up to twelve months to gain an understanding of your cost trends. AWS Cost Explorer also supports forecasting to get a better idea of what your costs and usage may look like in the future so that you can plan.

AWS Cost Explorer Features:

AWS Cost Explorer Features

Get started quickly

A set of default reports are included to help you quickly gain insight into your cost drivers and usage trends.

Forecast future costs and usage

Use forecasting to get a better idea of what your costs and usage may look like in the future, so that you can plan ahead.

Set time interval and granularity

Set a custom time period, and determine whether you would like to view your data at a monthly or daily level of granularity.

Save your progress

Once you arrive at a helpful view, save your progress as a new report that you can refer back to in the future.

Filter/Group your data

Dig deeper into your data by taking advantage of filtering and grouping functionality, using a variety of available dimensions.

Build custom applications

Directly access the interactive, ad-hoc analytics engine that powers AWS Cost Explorer.

via - <https://aws.amazon.com/aws-cost-management/aws-cost-explorer/>

Incorrect options:

AWS Cost & Usage Report (AWS CUR) - The AWS Cost & Usage Report (AWS CUR) contains the most comprehensive set of cost and usage data available. You can use Cost and Usage Reports to publish your AWS billing reports to an Amazon Simple Storage Service (Amazon S3) bucket that you own. You can receive reports that break down your costs by the hour or month, by product or product resource, or by tags that you define yourself. AWS updates the report in your bucket once a day in a comma-separated value (CSV) format. AWS Cost and Usage Reports cannot forecast your AWS account cost and usage.

AWS Budgets - AWS Budgets gives the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define. Budgets can be created at the monthly, quarterly, or yearly level, and you can customize the start and end dates. You can further refine your budget to track costs associated with multiple dimensions, such as AWS service, linked account, tag, and others. AWS Budgets cannot forecast your AWS account cost and usage.

AWS Pricing Calculator - AWS Pricing Calculator lets you explore AWS services and create an estimate for the cost of your use cases on AWS. You can model your solutions before building them, explore the price points and calculations behind your estimate, and find the available instance types and contract terms that meet your needs. This

enables you to make informed decisions about using AWS. You can plan your AWS costs and usage or price out setting up a new set of instances and services. You cannot use this service to forecast your AWS account cost and usage.

Reference:

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

Domain

Billing and Pricing

Question 17Correct

Multi-AZ deployment is an example of which of the following?

Scale up

Scale out

Performance Efficiency

Your answer is correct

High Availability

Overall explanation

Correct option:

High Availability

A system that is available is capable of delivering the designed functionality at a given point in time. Highly available systems are those that can withstand some measure of degradation while still remaining available. On AWS Cloud, you can run instances for an application in a multi-AZ deployment to achieve High Availability.

Incorrect options:

Scale out - The scale out (horizontal scaling) operation refers to an increase in capacity by adding more computers to the system. This is in contrast to a "scale up" operation, which is constrained to running its processes on only one computer; in such systems, the only way to increase performance is to add more resources into one computer in the form of faster (or more) CPUs, memory or storage. Horizontally scalable systems are oftentimes able to outperform vertically scalable systems by enabling parallel execution

of workloads and distributing those across many different computers. Auto Scaling Group is an example of Horizontal Scaling on AWS.

Scale up - The scale up (vertical scaling) operation implies adding more resources (like CPU, RAM) to a single node or machine. Example- Resizing an instance of EC2.

Performance Efficiency - Performance Efficiency is the ability to use computing resources efficiently to meet system requirements and to maintain that efficiency as demand changes and technologies evolve.

References:

<https://wa.aws.amazon.com/wat.concept.availability.en.html>

<https://wa.aws.amazon.com/wat.concept.horizontal-scaling.en.html>

Domain

Cloud Concepts

Question 18Correct

A multi-national corporation wants to get expert professional advice on migrating to AWS and managing their applications on AWS Cloud. Which of the following entities would you recommend for this engagement?

APN Technology Partner

Concierge Support Team

AWS Trusted Advisor

Your answer is correct

APN Consulting Partner

Overall explanation

Correct option:

APN Consulting Partner

The AWS Partner Network (APN) is the global partner program for technology and consulting businesses that leverage Amazon Web Services to build solutions and services for customers.

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

APN Partner Types Overview:

The image shows a screenshot of the 'APN Partner Types' section on the AWS website. At the top, it says 'APN Partner Types'. Below that, there are two main sections: 'APN Consulting Partners' on the left and 'APN Technology Partners' on the right. Each section contains a brief description and a 'Learn more »' link at the bottom.

APN Consulting Partners

APN Consulting Partners are professional services firms that help customers of all types and sizes design, architect, build, migrate, and manage their workloads and applications on AWS, accelerating their journey to the cloud. APN Consulting Partners often implement Technology Partner solutions in addition to the professional services they offer.

APN Consulting Partners include system integrators, strategic consultancies, agencies, managed service providers, and value-added resellers.

[Learn more »](#)

APN Technology Partners

APN Technology Partners provide hardware, connectivity services, or software solutions that are either hosted on or integrated with, the AWS Cloud. Technology Partner products are often delivered as components to broader AWS customer solutions and can be delivered globally by Consulting Partners through AWS Marketplace, bundled solutions, or directly from APN Technology Partners.

APN Technology Partners include original equipment manufacturers (OEMs), semiconductor manufacturers, network carriers, SaaS Providers, and independent software vendors (ISVs).

[Learn more »](#)

via - <https://aws.amazon.com/partners/>

Incorrect options:

APN Technology Partner - APN Technology Partners provide hardware, connectivity services, or software solutions that are either hosted on or integrated with, the AWS Cloud. APN Technology Partners cannot help in migrating to AWS and managing applications on AWS Cloud.

AWS Trusted Advisor - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits, and performance improvement. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally. All AWS customers get access to the seven core Trusted Advisor checks to help increase the security and performance of the AWS environment. Trusted Advisor cannot be used to migrate to AWS and manage applications on AWS Cloud.

Concierge Support Team - The Concierge Support Team are AWS billing and account experts that specialize in working with enterprise accounts. They will quickly and efficiently assist you with your billing and account inquiries. The Concierge Support Team is only available for the Enterprise Support plan. Concierge Support Team cannot help in migrating to AWS and managing applications on AWS Cloud.

Reference:

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

Domain

Cloud Concepts

Question 19Correct

Which pillar of the AWS Well-Architected Framework recommends maintaining infrastructure as code (IaC)?

Performance Efficiency

Your answer is correct

Operational Excellence

Security

Cost Optimization

Overall explanation

Correct option:

Operational Excellence

The AWS Well-Architected Framework helps you understand the pros and cons of decisions you make while building systems on AWS. By using the Framework you will learn architectural best practices for designing and operating reliable, secure, efficient, and cost-effective systems in the cloud. It provides a way for you to consistently measure your architectures against best practices and identify areas for improvement.

The AWS Well-Architected Framework is based on six pillars – Operational Excellence, Security, Reliability, Performance Efficiency, Cost Optimization and Sustainability.

The Operational Excellence pillar includes the ability to run and monitor systems to deliver business value and to continually improve supporting processes and procedures.

In the cloud, you can apply the same engineering discipline that you use for application code to your entire environment. You can define your entire workload (applications, infrastructure) as code and update it with code. You can implement your operations procedures as code and automate their execution by triggering them in response to events.

Incorrect options:

Cost Optimization - Cost Optimization focuses on avoiding un-needed costs. Key topics include understanding and controlling where the money is being spent, selecting the most appropriate and right number of resource types, analyzing spend over time, and scaling to meet business needs without overspending.

Performance Efficiency - The performance efficiency pillar focuses on using IT and computing resources efficiently. Key topics include selecting the right resource types and sizes based on workload requirements, monitoring performance, and making informed decisions to maintain efficiency as business needs evolve.

Security - The security pillar focuses on protecting information & systems. Key topics include confidentiality and integrity of data, identifying and managing who can do what with privilege management, protecting systems, and establishing controls to detect security events.

Reference:

<https://wa.aws.amazon.com/wat.pillar.operationalExcellence.en.html>

Domain

Cloud Concepts

Question 20Correct

Which of the following AWS services are always free to use (Select two)?

Your selection is correct

AWS Identity and Access Management (AWS IAM)

Amazon DynamoDB

Amazon Simple Storage Service (Amazon S3)

Amazon Elastic Compute Cloud (Amazon EC2)

Your selection is correct

AWS Auto Scaling

Overall explanation

Correct options:

AWS Identity and Access Management (AWS IAM) - AWS Identity and Access

Management (AWS IAM) enables you to manage access to AWS services and resources securely. Using IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources. IAM is a feature of your AWS account offered at no additional charge.

AWS Auto Scaling - AWS Auto Scaling monitors your applications and automatically adjusts the capacity to maintain steady, predictable performance at the lowest possible cost. Using AWS Auto Scaling, it's easy to setup application scaling for multiple resources across multiple services in minutes. AWS Auto Scaling is available at no additional charge. You pay only for the AWS resources needed to run your applications and Amazon CloudWatch monitoring fees.

Incorrect options:

Amazon Elastic Compute Cloud (Amazon EC2) - Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. This is not a free service. You pay for what you use or depending on the plan you choose.

Amazon Simple Storage Service (Amazon S3) - Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. S3 service is not free and you pay to depend on the storage class you choose for your data.

Amazon DynamoDB - Amazon DynamoDB is a key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multi-Region, multi-master, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. DynamoDB is not free and you

are charged for reading, writing, and storing data in your DynamoDB tables, along with any optional features you choose to enable.

References:

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

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

Domain

Cloud Concepts

Question 21Correct

A company wants to improve the resiliency of its flagship application so it wants to move from its traditional database system to a managed AWS NoSQL database service to support active-active configuration in both the East and West US AWS regions. The active-active configuration with cross-region support is the prime criteria for any database solution that the company considers.

Which AWS database service is the right fit for this requirement?

Amazon DynamoDB with DynamoDB Accelerator

Amazon Aurora with multi-master clusters

Amazon Relational Database Service (Amazon RDS) for MySQL

Your answer is correct

Amazon DynamoDB with global tables

Overall explanation

Correct option:

Amazon DynamoDB with global tables

Amazon DynamoDB is a fully managed, serverless, key-value NoSQL database designed to run high-performance applications at any scale. DynamoDB offers built-in security, continuous backups, automated multi-region replication, in-memory caching, and data export tools.

DynamoDB global tables replicate data automatically across your choice of AWS Regions and automatically scale capacity to accommodate your workloads. With global

tables, your globally distributed applications can access data locally in the selected regions to get single-digit millisecond read and write performance. DynamoDB offers active-active cross-region support that is needed for the company.

Incorrect options:

Amazon DynamoDB with DynamoDB Accelerator - DynamoDB Accelerator (DAX) is an in-memory cache that delivers fast read performance for your tables at scale by enabling you to use a fully managed in-memory cache. Using DAX, you can improve the read performance of your DynamoDB tables by up to 10 times—taking the time required for reads from milliseconds to microseconds, even at millions of requests per second. DAX does not offer active-active cross-Region configuration.

Amazon Aurora with multi-master clusters - Amazon Aurora (Aurora) is a fully managed relational database engine that's compatible with MySQL and PostgreSQL. With some workloads, Aurora can deliver up to five times the throughput of MySQL and up to three times the throughput of PostgreSQL without requiring changes to most of your existing applications. In a multi-master cluster, all DB instances have read/write capability. Aurora is not a NoSQL database, so this option is incorrect.

Amazon Relational Database Service (Amazon RDS) for MYSQL - Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need. RDS is not a NoSQL database, so this option is incorrect.

References:

<https://aws.amazon.com/dynamodb/features/>

<https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/aurora-multi-master.html>

Domain

Technology

Question 22Correct

A cyber-security agency uses AWS Cloud and wants to carry out security assessments on its own AWS infrastructure without any prior approval from AWS. Which of the following describes/facilitates this practice?

Your answer is correct

Penetration Testing

Network Stress Testing

AWS Secrets Manager

Amazon Inspector

Overall explanation

Correct option:

Penetration Testing

AWS customers can carry out security assessments or penetration tests against their AWS infrastructure without prior approval for few common AWS services. Customers are not permitted to conduct any security assessments of AWS infrastructure, or the AWS services themselves.

Incorrect options:

Network Stress Testing - AWS considers "network stress test" to be when a test sends a large volume of legitimate or test traffic to a specific intended target application. The endpoint and infrastructure are expected to be able to handle this traffic.

Amazon Inspector - Amazon Inspector is an automated, security assessment service that helps you check for unintended network accessibility of your Amazon EC2 instances and for vulnerabilities on those Amazon EC2 instances. Amazon Inspector assessments are offered to you as pre-defined rules packages mapped to common security best practices and vulnerability definitions.

AWS Secrets Manager - AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle. Users and applications retrieve secrets with a call to AWS

Secrets Manager APIs, eliminating the need to hardcode sensitive information in plain text.

Reference:

<https://aws.amazon.com/security/penetration-testing/>

Domain

Security and Compliance

Question 23Correct

Which of the following options are the benefits of using AWS Elastic Load Balancing (ELB)? (Select TWO)

Agility

Less costly

Your selection is correct

High availability

Storage

Your selection is correct

Fault tolerance

Overall explanation

Correct options:

High availability

Fault tolerance

Elastic Load Balancing (ELB) automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses. It can handle the varying load of your application traffic in a single Availability Zone (AZ) or across multiple Availability Zones (AZs).

Elastic Load Balancing (ELB) offers three types of load balancers that all feature the high availability, automatic scaling, and robust security necessary to make your applications fault-tolerant: Application Load Balancer (best suited for HTTP and HTTPS traffic), Network Load Balancer (best suited for TCP traffic), and Classic Load Balancer.

Incorrect options:

Agility - Agility refers to new IT resources being only a click away, which means that you reduce the time to make those resources available to your developers from weeks to just minutes. AWS Elastic Load Balancing (ELB) does not help with agility.

Less costly - AWS Elastic Load Balancing (ELB) does not help with reducing costs.

Storage - AWS Elastic Load Balancing (ELB) does not offer storage benefits. It is not a storage-related service.

Reference:

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

Domain

Cloud Concepts

Question 24Correct

An intern at an IT company provisioned a Linux based On-demand EC2 instance with per-second billing but terminated it within 30 seconds as he wanted to provision another instance type. What is the duration for which the instance would be charged?

Your answer is correct

60 seconds

600 seconds

30 seconds

300 seconds

Overall explanation

Correct option:

60 seconds

There is a one-minute minimum charge for Linux based EC2 instances, so this is the correct option.

Incorrect options:

30 seconds

300 seconds

600 seconds

These three options contradict the details provided earlier in the explanation, so these options are incorrect.

Reference:

<https://aws.amazon.com/blogs/aws/new-per-second-billing-for-ec2-instances-and-ebs-volumes/>

Domain

Billing and Pricing

Question 25Correct

A corporation would like to simplify access management to multiple AWS accounts as well as facilitate AWS Single Sign-On (AWS SSO) access to its AWS accounts. As a Cloud Practitioner, which AWS service would you use for this task?

AWS Identity and Access Management (AWS IAM)

AWS Cognito

Your answer is correct

AWS IAM Identity Center

AWS Command Line Interface (CLI)

Overall explanation

Correct option:

AWS IAM Identity Center

AWS IAM Identity Center is the successor to AWS Single Sign-On (AWS SSO). It is built on top of AWS Identity and Access Management (IAM) to simplify access management to multiple AWS accounts, AWS applications, and other SAML-enabled cloud applications. In IAM Identity Center, you create or connect your workforce users for use across AWS. You can choose to manage access just to your AWS accounts, just to your cloud applications, or to both.

You can create users directly in IAM Identity Center, or you can bring them from your existing workforce directory. With IAM Identity Center, you get a unified administration

experience to define, customize, and assign fine-grained access. Your workforce users get a user portal to access their assigned AWS accounts or cloud applications.

You can use IAM Identity Center to quickly and easily assign and manage your employees' access to multiple AWS accounts, SAML-enabled cloud applications (such as Salesforce, Microsoft 365, and Box), and custom-built in-house applications, all from a central place.

How AWS IAM Identity Center works:



via - <https://aws.amazon.com/iam/identity-center/>

Incorrect options:

AWS Cognito - Amazon Cognito lets you add user sign-up, sign-in, and access control to your web and mobile apps quickly and easily. With Amazon Cognito, you also have the option to authenticate users through social identity providers such as Facebook, Twitter, or Amazon, with SAML identity solutions, or by using your own identity system. It is an identity management solution for customers/developers building B2C or B2B apps for their customers.

AWS Identity and Access Management (AWS IAM) - AWS Identity and Access Management (AWS IAM) enables you to securely control access to AWS services and resources for your users. Using AWS IAM, you can create and manage AWS users and groups, and use permissions to allow and deny their access to AWS resources. It is not used to log in but to manage users and roles.

AWS Command Line Interface (CLI) - The AWS Command Line Interface (CLI) is a unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from the command line and automate them through scripts. It is not a central user portal.

Reference:

<https://aws.amazon.com/iam/identity-center/>

Domain

Technology

Question 26Correct

A developer would like to automate operations on his on-premises environment using Chef and Puppet. Which AWS service can help with this task?

AWS CloudFormation

AWS CodeDeploy

Your answer is correct

AWS OpsWorks

AWS Batch

Overall explanation

Correct option:

AWS OpsWorks

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

Incorrect options:

AWS CloudFormation - AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion. It does

not use Chef and Puppet and is more focused on what and how AWS resources are procured.

AWS CodeDeploy - AWS CodeDeploy is a service that automates code deployments to any instance, including Amazon Elastic Compute Cloud (Amazon EC2) instances and instances running on-premises. It does not use Chef and Puppet, and does not deal with infrastructure configuration and orchestration.

AWS Batch - AWS Batch enables developers, scientists, and engineers to easily and efficiently run hundreds of thousands of batch computing jobs on AWS. It is not used to automate operations on his on-premises environment using Chef and Puppet.

Reference:

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

Domain

Technology

Question 27Correct

Which AWS service can help you analyze your infrastructure to identify unattached or underutilized Amazon EBS Elastic Volumes?

Your answer is correct

AWS Trusted Advisor

Amazon Inspector

AWS Config

Amazon CloudWatch

Overall explanation

Correct option:

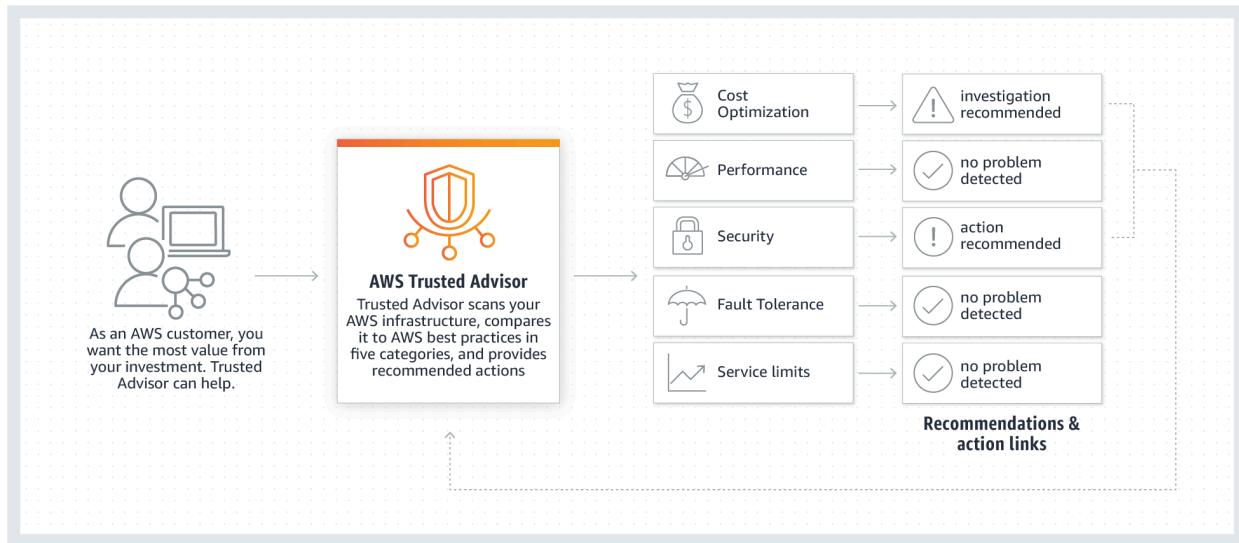
AWS Trusted Advisor

AWS Trusted Advisor is an online tool that provides real-time guidance to help provision your resources following AWS best practices. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally. AWS Trusted Advisor analyzes your AWS environment and provides best practice

recommendations in five categories: Cost Optimization, Performance, Security, Fault Tolerance, Service Limits.

AWS Trusted Advisor can check Amazon Elastic Block Store (Amazon EBS) volume configurations and warns when volumes appear to be underused. Charges begin when a volume is created. If a volume remains unattached or has very low write activity (excluding boot volumes) for a period of time, the volume is probably not being used.

How AWS Trusted Advisor Works:



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

Incorrect options:

AWS Config - AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations. Think resource-specific change history, audit, and compliance; think Config. Its a configuration tracking service and not an infrastructure tracking service.

Amazon CloudWatch - Amazon CloudWatch is a monitoring and observability service built for DevOps engineers, developers, site reliability engineers (SREs), and IT managers. CloudWatch provides data and actionable insights to monitor applications, respond to system-wide performance changes, optimize resource utilization, and get a

unified view of operational health. Amazon EBS emits notifications based on Amazon CloudWatch Events for a variety of volume, snapshot, and encryption status changes. With CloudWatch Events, you can establish rules that trigger programmatic actions in response to a change in volume, snapshot, or encryption key state (though not for underutilized volume usage).

Amazon Inspector - Amazon Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on your Amazon EC2 instances. Amazon Inspector automatically assesses applications for exposure, vulnerabilities, and deviations from best practices. Its a security assessment service and not an infrastructure tracking service.

References:

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

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-cloud-watch-events.html>

Domain

Billing and Pricing

Question 28Correct

Which of the following AWS authentication mechanisms supports an AWS Multi-Factor Authentication (AWS MFA) device that you can plug into a USB port on your computer?

SMS text message-based Multi-Factor Authentication (AWS MFA)

Virtual Multi-Factor Authentication (AWS MFA) device

Hardware Multi-Factor Authentication (AWS MFA) device

Your answer is correct

U2F security key

Overall explanation

Correct option:

U2F security key

Universal 2nd Factor (U2F) Security Key is a device that you can plug into a USB port on your computer. U2F is an open authentication standard hosted by the FIDO Alliance.

When you enable a U2F security key, you sign in by entering your credentials and then tapping the device instead of manually entering a code.

How to enable the U2F Security Key for your own IAM user:

To enable a U2F security key for your own IAM user (console)

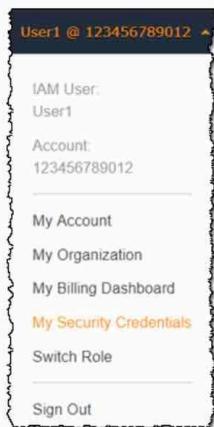
1. Use your AWS account ID or account alias, your IAM user name, and your password to sign in to the [IAM console](#).

Note

For your convenience, the AWS sign-in page uses a browser cookie to remember your IAM user name and account information. If you previously signed in as a different user, choose **Sign in to a different account** near the bottom of the page to return to the main sign-in page. From there, you can type your AWS account ID or account alias to be redirected to the IAM user sign-in page for your account.

To get your AWS account ID, contact your administrator.

2. In the navigation bar on the upper right, choose your user name, and then choose **My Security Credentials**.



3. On the **AWS IAM credentials** tab, in the **Multi-factor authentication** section, choose **Manage MFA device**.

4. In the **Manage MFA device** wizard, choose **U2F security key**, and then choose **Continue**.

5. Insert the U2F security key into your computer's USB port.



6. Tap the U2F security key, and then choose **Close** when U2F setup is complete.

via -

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa_enable_u2f.html

Incorrect options:

Virtual Multi-Factor Authentication (AWS MFA) device - This is a software app that runs on a phone or other device and emulates a physical device. The device generates a six-digit numeric code based upon a time-synchronized one-time password algorithm. The user must type a valid code from the device on a second webpage during sign-in. Each virtual MFA device assigned to a user must be unique.

Hardware Multi-Factor Authentication (AWS MFA) device - This is a hardware device that generates a six-digit numeric code based upon a time-synchronized one-time password algorithm. The user must type a valid code from the device on a second webpage during sign-in. Each MFA device assigned to a user must be unique. A user cannot type a code from another user's device to be authenticated.

SMS text message-based Multi-Factor Authentication (AWS MFA) - This is a type of MFA in which the IAM user settings include the phone number of the user's SMS-compatible mobile device. When the user signs in, AWS sends a six-digit numeric code by SMS text message to the user's mobile device. The user is required to type that code on a second webpage during sign-in.

References:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa.html

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa_enable_u2f.html

Domain

Security and Compliance

Question 29Correct

A company's flagship application runs on a fleet of Amazon Elastic Compute Cloud (Amazon EC2) instances. As per the new policies, the system administrators are looking for the best way to provide secure shell access to Amazon Elastic Compute Cloud (Amazon EC2) instances without opening new ports or using public IP addresses.

Which tool/service will help you achieve this requirement?

Your answer is correct

AWS Systems Manager Session Manager

Amazon Elastic Compute Cloud (Amazon EC2) Instance Connect

Amazon Route 53

Amazon Inspector

Overall explanation

Correct option:

AWS Systems Manager Session Manager

AWS Systems Manager Session Manager is a fully-managed service that provides you with an interactive browser-based shell and CLI experience. It helps provide secure and auditable instance management without the need to open inbound ports, maintain bastion hosts, and manage SSH keys. AWS Systems Manager Session Manager helps to enable compliance with corporate policies that require controlled access to instances, increase security and auditability of access to the instances while providing simplicity and cross-platform instance access to end-users.

Incorrect options:

Amazon Elastic Compute Cloud (Amazon EC2) Instance Connect - Amazon Elastic Compute Cloud (Amazon EC2) Instance Connect provides a simple and secure way to connect to your Linux instances using Secure Shell (SSH). With EC2 Instance Connect, you use AWS Identity and Access Management (IAM) policies and principals to control SSH access to your instances, removing the need to share and manage SSH keys. EC2 Instance Connect will need port 22 to be open for traffic. Therefore, not the correct option here.

Amazon Inspector - 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. Amazon Inspector cannot provide secure shell access to EC2 instances.

Amazon Route 53 - Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service. It is designed to give developers and businesses an

extremely reliable and cost-effective way to route end users to Internet applications by translating names like www.example.com into the numeric IP addresses like 192.0.2.1 that computers use to connect to each other. Amazon Route 53 cannot provide secure shell access to EC2 instances.

Reference:

<https://aws.amazon.com/systems-manager/faq/>

Domain

Technology

Question 30Correct

A financial services company wants to ensure that its AWS account activity meets the governance, compliance and auditing norms. As a Cloud Practitioner, which AWS service would you recommend for this use-case?

Amazon CloudWatch

Your answer is correct

AWS CloudTrail

AWS Trusted Advisor

AWS Config

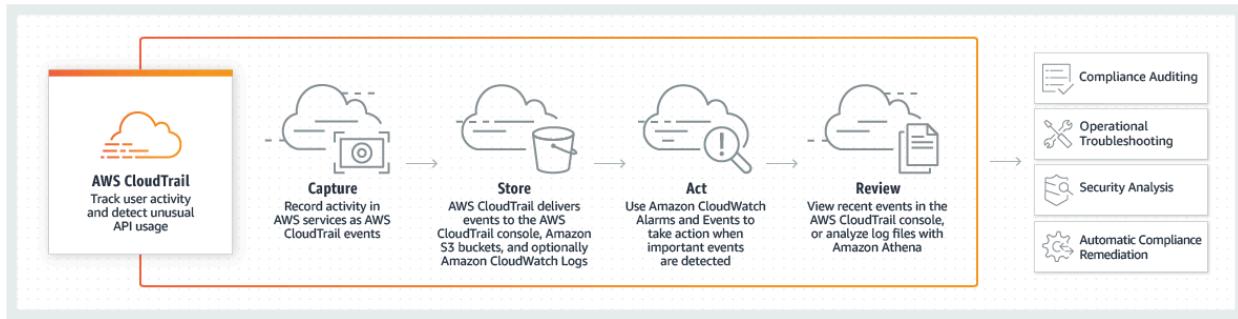
Overall explanation

Correct option:

AWS CloudTrail

You can use CloudTrail to log, monitor and retain account activity related to actions across your AWS infrastructure. CloudTrail provides an event history of your AWS account activity, including actions taken through the AWS Management Console, AWS SDKs, command-line tools, and other AWS services.

How CloudTrail Works:



via - <https://aws.amazon.com/cloudtrail/>

Incorrect options:

AWS Config - AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations.

Amazon CloudWatch - Amazon CloudWatch is a monitoring and observability service built for DevOps engineers, developers, site reliability engineers (SREs), and IT managers. CloudWatch provides data and actionable insights to monitor applications, respond to system-wide performance changes, optimize resource utilization, and get a unified view of operational health. This is an excellent service for building Resilient systems.

AWS Trusted Advisor - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits and performance improvement.

Exam Alert:

You may see use-cases asking you to select one of CloudWatch vs CloudTrail vs Config. Just remember this thumb rule -

Think resource performance monitoring, events, and alerts; think CloudWatch.

Think account-specific activity and audit; think CloudTrail.

Think resource-specific change history, audit, and compliance; think Config.

Reference:

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

Domain

Cloud Concepts

Question 31Correct

The DevOps team at an e-commerce company is trying to debug performance issues for its serverless application built using a microservices architecture. As a Cloud Practitioner, which AWS service would you recommend addressing this use-case?

Amazon Pinpoint

Your answer is correct

AWS X-Ray

AWS Trusted Advisor

AWS CloudFormation

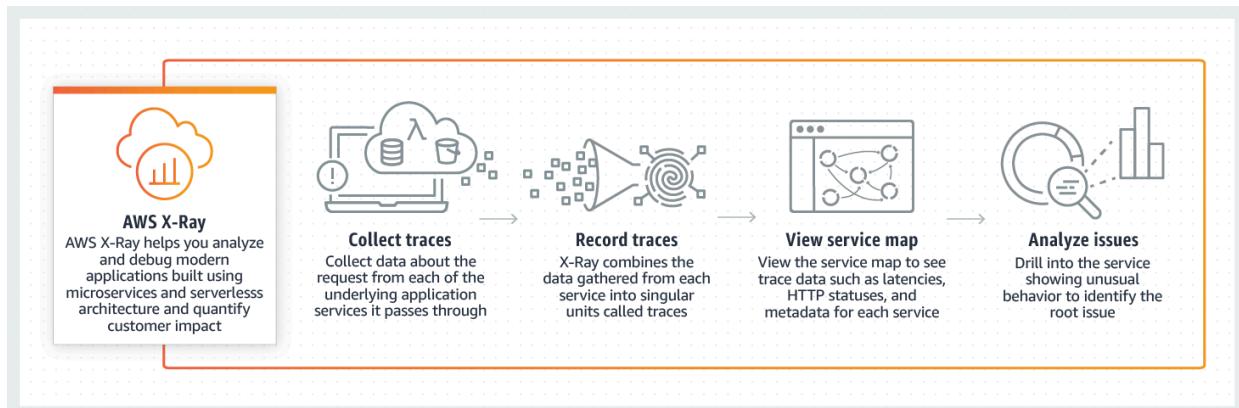
Overall explanation

Correct option:

AWS X-Ray

You can use AWS X-Ray to analyze and debug serverless and distributed applications such as those built using a microservices architecture. With X-Ray, you can understand how your application and its underlying services are performing to identify and troubleshoot the root cause of performance issues and errors.

How AWS X-Ray Works:



via - <https://aws.amazon.com/xray/>

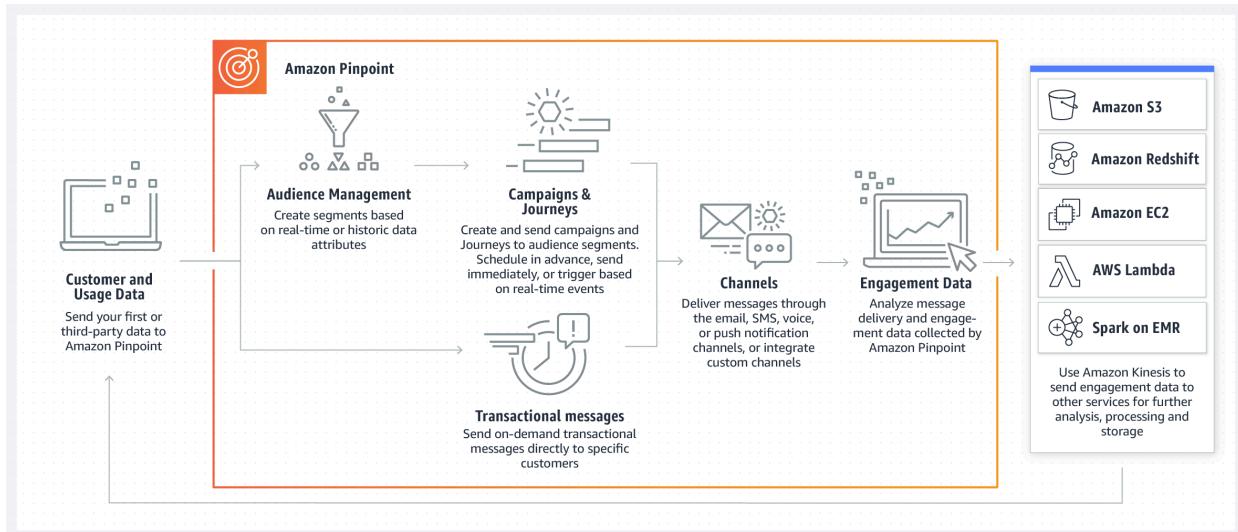
Incorrect options:

AWS Trusted Advisor - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits and performance improvement. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally. Trusted Advisor cannot be used to debug performance issues for this serverless application built using a microservices architecture.

Amazon Pinpoint - Amazon Pinpoint allows marketers and developers to deliver customer-centric engagement experiences by capturing customer usage data to draw real-time insights. Pinpoint cannot be used to debug performance issues for this serverless application built using a microservices architecture.

AWS CloudFormation - AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all Regions and accounts. Think infrastructure as code; think CloudFormation. CloudFormation cannot be used to debug performance issues for this serverless application built using a microservices architecture.

How Amazon Pinpoint Works:



via - <https://aws.amazon.com/pinpoint/>

Reference:

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

Domain

Technology

Question 32 Incorrect

Which of the following AWS services have data encryption automatically enabled?

(Select two)?

Amazon Elastic Block Store (Amazon EBS)

Amazon Elastic File System (Amazon EFS)

Your selection is correct

AWS Storage Gateway

Your selection is incorrect

Amazon Redshift

Correct selection

Amazon Simple Storage Service (Amazon S3)

Overall explanation

Correct option:

Amazon Simple Storage Service (Amazon S3)

All Amazon S3 buckets have encryption configured by default, and objects are automatically encrypted by using server-side encryption with Amazon S3 managed keys (SSE-S3). This encryption setting applies to all objects in your Amazon S3 buckets.

AWS Storage Gateway

AWS Storage Gateway is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage. All data transferred between the gateway and AWS storage is encrypted using SSL (for all three types of gateways - File, Volume and Tape Gateways).

Incorrect options:

Amazon Elastic Block Store (Amazon EBS) - Amazon Elastic Block Store (Amazon EBS) volumes are not encrypted, by default. You can configure your AWS account to enforce the encryption of the new EBS volumes and snapshot copies that you create.

Amazon Redshift - Encryption is an optional setting in Amazon Redshift. When you enable encryption for a cluster, the data-blocks and system metadata are encrypted for the cluster and its snapshots.

Amazon Elastic File System (Amazon EFS) - Encryption is not a default setting, but an optional configuration for Amazon EFS drives. Amazon EFS supports two forms of encryption for file systems, encryption of data in transit and encryption at rest.

References:

<https://aws.amazon.com/storagegateway/faqs/>

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/bucket-encryption.html>

Domain

Security and Compliance

Question 33 Correct

A Cloud Practitioner would like to get operational insights of its resources to quickly identify any issues that might impact applications using those resources. Which AWS service can help with this task?

AWS Trusted Advisor

Your answer is correct

AWS Systems Manager

AWS Health Dashboard - Your Account Health

Amazon Inspector

Overall explanation

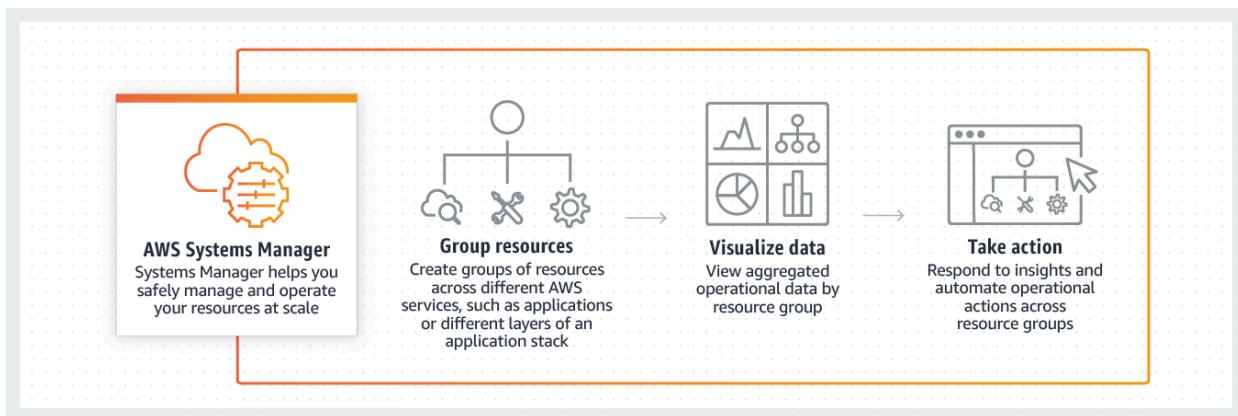
Correct option:

AWS Systems Manager

AWS Systems Manager allows you to centralize operational data from multiple AWS services and automate tasks across your AWS resources. You can create logical groups of resources such as applications, different layers of an application stack, or production versus development environments.

With AWS Systems Manager, you can select a resource group and view its recent API activity, resource configuration changes, related notifications, operational alerts, software inventory, and patch compliance status. You can also take action on each resource group depending on your operational needs. AWS Systems Manager provides a central place to view and manage your AWS resources, so you can have complete visibility and control over your operations.

How AWS Systems Manager works:



via - <https://aws.amazon.com/systems-manager/>

Incorrect options:

Amazon Inspector - Amazon Inspector is an automated security assessment service that helps improve the security and compliance of applications deployed on AWS. It is not used to get operational insights of AWS resources.

AWS Health Dashboard - Your Account Health - AWS Health Dashboard - Your Account Health provides alerts and remediation guidance when AWS is experiencing events that may impact you. It is not used to get operational insights of AWS resources.

AWS Trusted Advisor - AWS Trusted Advisor is an online resource to help you reduce cost, increase performance, and improve security by optimizing your AWS environment. AWS Trusted Advisor provides real-time guidance to help you provision your resources following AWS best practices. It is not used to get operational insights of AWS resources.

Reference:

<https://aws.amazon.com/systems-manager/>

Domain

Security and Compliance

Question 34Correct

A financial services enterprise plans to enable Multi-Factor Authentication (MFA) for its employees. For ease of travel, they prefer not to use any physical devices to implement Multi-Factor Authentication (MFA). Which of the below options is best suited for this use case?

Hardware Multi-Factor Authentication (MFA) device

Your answer is correct

Virtual Multi-Factor Authentication (MFA) device

Soft Token Multi-Factor Authentication (MFA) device

U2F security key

Overall explanation

Correct option:

Virtual Multi-Factor Authentication (MFA) device

A software app that runs on a phone or other device and emulates a physical device. The device generates a six-digit numeric code based upon a time-synchronized one-time password algorithm. The user must type a valid code from the device on a second webpage during sign-in. Each virtual Multi-Factor Authentication (MFA) device assigned to a user must be unique. A user cannot type a code from another user's virtual Multi-Factor Authentication (MFA) device to authenticate.

Google Authenticator is an example of a Virtual Multi-Factor Authentication (MFA) device:



Authenticator



972 321



Amazon Web Services

361 806



Amazon Web Services

710 897



Incorrect options:

U2F security key - A device that you plug into a USB port on your computer. U2F is an open authentication standard hosted by the FIDO Alliance. When you enable a U2F security key, you sign in by entering your credentials and then tapping the device instead of manually entering a code.

Hardware Multi-Factor Authentication (MFA) device - A hardware device that generates a six-digit numeric code based upon a time-synchronized one-time password algorithm. The user must type a valid code from the device on a second webpage during sign-in. Each Multi-Factor Authentication (MFA) device assigned to a user must be unique. A user cannot type a code from another user's device to be authenticated.

Soft Token Multi-Factor Authentication (MFA) device - This is a made-up option and has been added as a distractor.

Reference:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa.html

Domain

Security and Compliance

Question 35Correct

Which of the following is a container service of AWS?

Amazon Simple Notification Service (Amazon SNS)

Amazon SageMaker

Your answer is correct

AWS Fargate

AWS Elastic Beanstalk

Overall explanation

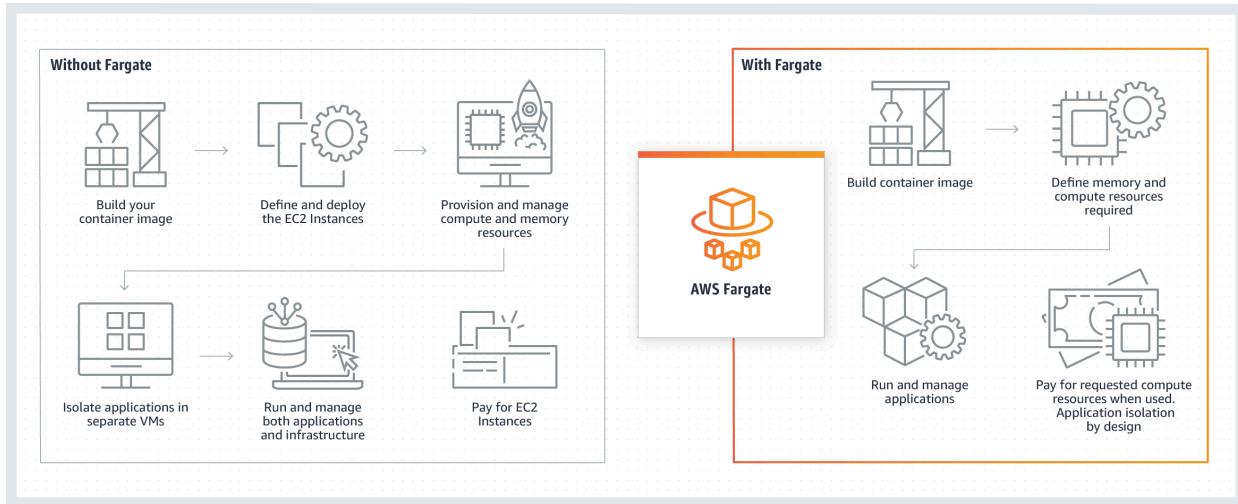
Correct option:

AWS Fargate

AWS Fargate is a serverless compute engine for containers that works with both Amazon Elastic Container Service (ECS) and Amazon Elastic Kubernetes Service (EKS). Fargate makes it easy for you to focus on building your applications. Fargate removes

the need to provision and manage servers, lets you specify and pay for resources per application, and improves security through application isolation by design.

How AWS Fargate Works:



via - <https://aws.amazon.com/fargate/>

Incorrect options:

AWS Elastic Beanstalk - AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services. You simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. Beanstalk provisions servers so it is not a serverless service.

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

Amazon SageMaker - Amazon SageMaker is a fully managed service that provides every developer and data scientist with the ability to build, train, and deploy machine learning (ML) models quickly. SageMaker removes the heavy lifting from each step of the machine learning process to make it easier to develop high-quality models.

Reference:

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

Domain

Technology

Question 36Correct

A Cloud Practitioner would like to deploy identical resources across all AWS regions and accounts using templates while estimating costs. Which AWS service can assist with this task?

Amazon LightSail

AWS Directory Service for Microsoft Active Directory (AWS Managed Microsoft AD)

AWS CodeDeploy

Your answer is correct

AWS CloudFormation

Overall explanation

Correct option:

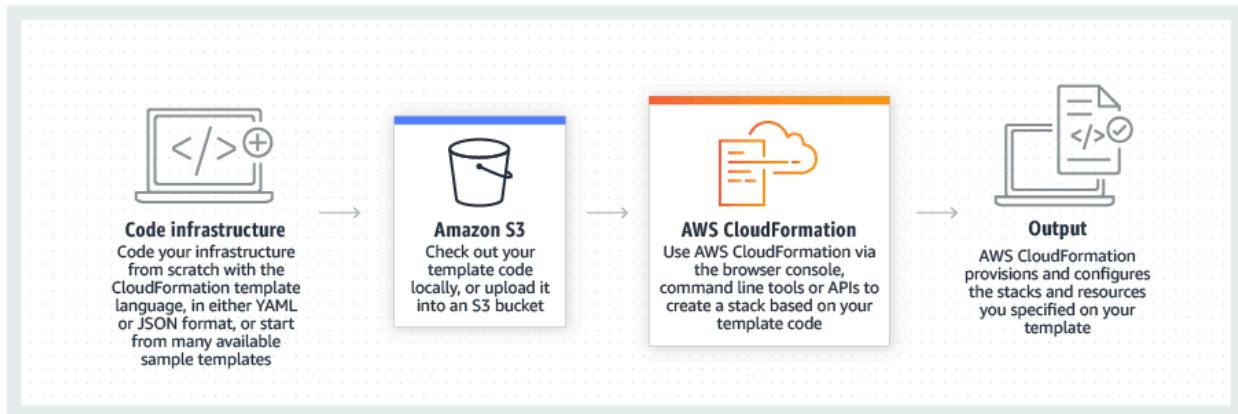
AWS CloudFormation

AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion.

You can use the AWS CloudFormation sample templates or create your own templates to describe your AWS resources, and any associated dependencies or runtime parameters, required to run your application. This provides a single source of truth for all your resources and helps you to standardize infrastructure components used across your organization, enabling configuration compliance and faster troubleshooting.

AWS CloudFormation templates allow you to estimate the cost of your resources.

How AWS CloudFormation works:



via - <https://aws.amazon.com/cloudformation/>

Incorrect options:

AWS Directory Service for Microsoft Active Directory (AWS Managed Microsoft AD) -

AWS Directory Service for Microsoft Active Directory (AWS Managed Microsoft AD), also known as AWS Managed Microsoft AD, enables your directory-aware workloads and AWS resources to use managed Active Directory in the AWS Cloud. It is not used to deploy resources.

Amazon LightSail - Amazon Lightsail is designed to be the easiest way to launch and manage a virtual private server with AWS. It is not best suited when deploying more complex resources, while AWS CloudFormation can.

AWS CodeDeploy - AWS CodeDeploy is a service that automates code deployments to any instance, including Amazon EC2 instances and instances running on-premises. Unlike AWS CloudFormation, it does not deal with infrastructure configuration and orchestration.

Reference:

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

Domain

Technology

Question 37Correct

Which of the following AWS services offer block-level storage? (Select two)

Your selection is correct

Instance Store

Your selection is correct

Amazon Elastic Block Store (Amazon EBS)

Amazon Elastic Container Service (Amazon ECS)

Amazon Elastic File System (Amazon EFS)

Amazon Simple Storage Service (Amazon S3)

Overall explanation

Correct options:

Amazon Elastic Block Store (Amazon EBS)

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

Instance Store

An instance store provides temporary block-level storage for your EC2 instance. This storage is located on disks that are physically attached to the host computer. Instance store is ideal for the temporary storage of information that changes frequently, such as buffers, caches, scratch data, and other temporary content, or for data that is replicated across a fleet of instances, such as a load-balanced pool of web servers. Instance storage is temporary, data is lost if instance experiences failure or is terminated.

Amazon EC2 instance store cannot be used for file sharing between instances.

Incorrect options:

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

massively parallel shared access to thousands of Amazon EC2 instances, enabling your applications to achieve high levels of aggregate throughput and IOPS with consistent low latencies.

Amazon Simple Storage Service (Amazon S3) - Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. This means customers of all sizes and industries can use it to store and protect any amount of data for a range of use cases, such as websites, mobile applications, backup and restore, archive, enterprise applications, IoT devices, and big data analytics.

Amazon Elastic Container Service (Amazon ECS) - Amazon Elastic Container Service (Amazon 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. This is not a storage service and has been added as a distractor.

References:

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

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

Domain

Technology

Question 38Correct

A startup wants to provision an EC2 instance for the lowest possible cost for a long-term duration but needs to make sure that the instance would never be interrupted. As a Cloud Practitioner, which of the following options would you recommend?

EC2 Spot Instance

EC2 On-Demand Instance

EC2 Dedicated Host

Your answer is correct

EC2 Reserved Instance (RI)

Overall explanation

Correct option:

EC2 Reserved Instance (RI)

An EC2 Reserved Instance (RI) provides you with significant savings (up to 75%) on your Amazon EC2 costs compared to On-Demand Instance pricing. A Reserved Instance (RI) is not a physical instance, but rather a billing discount applied to the use of On-Demand Instances in your account. You can purchase a Reserved Instance (RI) for a one-year or three-year commitment, with the three-year commitment offering a bigger discount. A reserved instance (RI) cannot be interrupted. So this is the correct option.

EC2 Pricing Options Overview:

On-Demand	Spot instances
<p>With On-Demand instances, you pay for compute capacity by the hour or the second depending on which instances you run. No longer-term commitments or upfront payments are needed. You can increase or decrease your compute capacity depending on the demands of your application and only pay the specified per hourly rates for the instance you use.</p> <p>On-Demand instances are recommended for:</p> <ul style="list-style-type: none">• Users that prefer the low cost and flexibility of Amazon EC2 without any up-front payment or long-term commitment• Applications with short-term, spiky, or unpredictable workloads that cannot be interrupted• Applications being developed or tested on Amazon EC2 for the first time <p>See On-Demand pricing »</p>	<p>Amazon EC2 Spot instances allow you to request spare Amazon EC2 computing capacity for up to 90% off the On-Demand price. Learn More.</p> <p>Spot instances are recommended for:</p> <ul style="list-style-type: none">• Applications that have flexible start and end times• Applications that are only feasible at very low compute prices• Users with urgent computing needs for large amounts of additional capacity <p>See Spot pricing »</p>
<h3>Savings Plans</h3> <p>Savings Plans are a flexible pricing model that offer low prices on EC2 and Fargate usage, in exchange for a commitment to a consistent amount of usage (measured in \$/hour) for a 1 or 3 year term.</p>	<h3>Reserved Instances</h3> <p>Reserved Instances provide you with a significant discount (up to 75%) compared to On-Demand instance pricing. In addition, when Reserved Instances are assigned to a specific Availability Zone, they provide a capacity reservation, giving you additional confidence in your ability to launch instances when you need them.</p>
<h3>Dedicated Hosts</h3> <p>A Dedicated Host is a physical EC2 server dedicated for your use. Dedicated Hosts can help you reduce costs by allowing you to use your existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server (subject to your license terms), and can also help you meet compliance requirements. Learn more.</p> <ul style="list-style-type: none">• Can be purchased On-Demand (hourly).• Can be purchased as a Reservation for up to 70% off the On-Demand price. <p>See Dedicated pricing »</p>	<p>For applications that have steady state or predictable usage, Reserved Instances can provide significant savings compared to using On-Demand instances. See How to Purchase Reserved Instances for more information.</p> <p>Reserved Instances are recommended for:</p> <ul style="list-style-type: none">• Applications with steady state usage• Applications that may require reserved capacity• Customers that can commit to using EC2 over a 1 or 3 year term to reduce their total computing costs

via - <https://aws.amazon.com/ec2/pricing/>

Incorrect options:

EC2 On-Demand Instance - An EC2 On-Demand Instance is an instance that you use on-demand. You have full control over its lifecycle – you decide when to launch, stop,

hibernate, start, reboot, or terminate it. There is no long-term commitment required when you purchase On-Demand Instances. There is no upfront payment and you pay only for the seconds that your On-Demand Instances are running. The price per second for running an On-Demand Instance is fixed. On-demand instances cannot be interrupted. However, On-demand instances are not as cost-effective as Reserved instances, so this option is not correct.

EC2 Spot Instance - An EC2 Spot Instance is an unused EC2 instance that is available for less than the On-Demand price. Because Spot Instances enable you to request unused EC2 instances at steep discounts (up to 90%), you can lower your Amazon EC2 costs significantly. Spot Instances are well-suited for data analysis, batch jobs, background processing, and optional tasks. These can be terminated at short notice, so these are not suitable for critical workloads that need to run at a specific point in time. So this option is not correct for the given use-case.

EC2 Dedicated Host - An Amazon EC2 Dedicated Host allows 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 licenses, but with the resiliency, simplicity, and elasticity of AWS. An Amazon EC2 Dedicated Host is a physical server fully dedicated for your use, so you can help address corporate compliance requirement. It is not cost-efficient compared to an On-Demand instance. So this option is not correct.

Reference:

<https://aws.amazon.com/ec2/pricing/>

Domain

Billing and Pricing

Question 39Correct

Which of the following options is NOT a feature of Amazon Inspector?

Analyze against unintended network accessibility

Your answer is correct

Track configuration changes

Automate security assessments

Inspect running operating systems (OS) against known vulnerabilities

Overall explanation

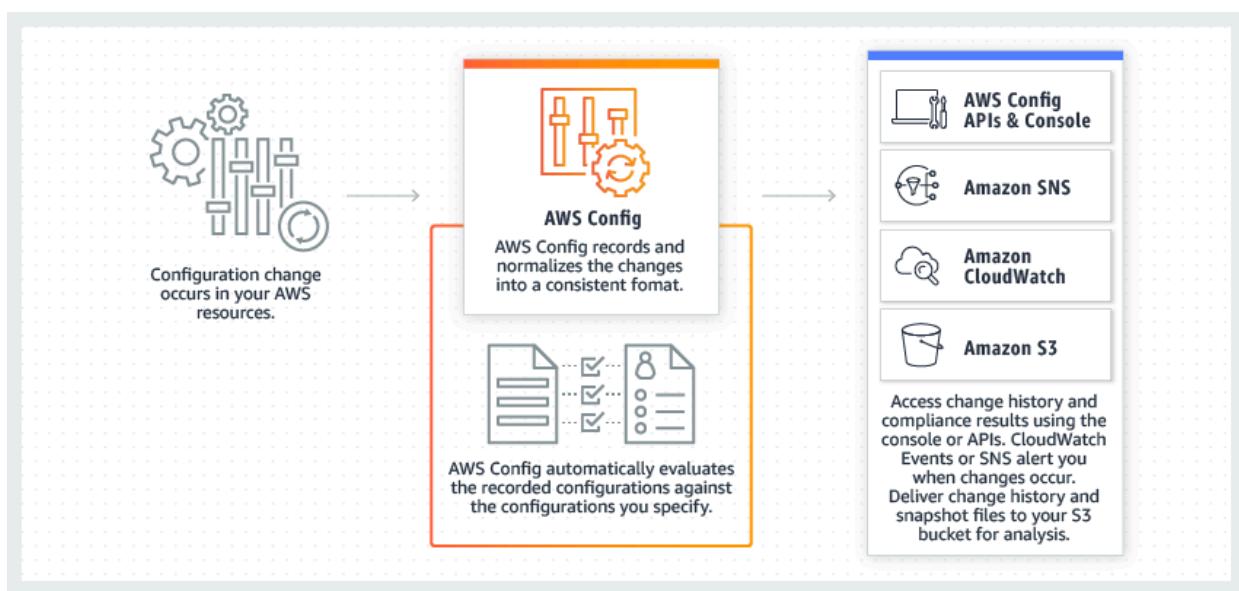
Correct option:

Track configuration changes

Tracking configuration changes is a feature of AWS Config.

AWS Config is a service that enables you to assess, audit, and evaluate the configurations of your AWS resources. Config continuously monitors and records your AWS resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations.

How AWS Config works:



via - <https://aws.amazon.com/config/>

Incorrect options:

Automate security assessments

Analyze against unintended network accessibility

Inspect running operating systems (OS) against known vulnerabilities

These options are all features of Amazon Inspector.

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.

Amazon Inspector security assessments help you check for unintended network accessibility of your Amazon EC2 instances and for vulnerabilities on those EC2 instances.

Amazon Inspector also offers predefined software called an agent that you can optionally install in the operating system of the EC2 instances that you want to assess. The agent monitors the behavior of the EC2 instances, including network, file system, and process activity. It also collects a wide set of behavior and configuration data (telemetry).

References:

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

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

Domain

Security and Compliance

Question 40Correct

Which benefit of Cloud Computing allows AWS to offer lower pay-as-you-go prices as usage from hundreds of thousands of customers is aggregated in the cloud?

Your answer is correct

Massive economies of scale

Trade capital expense for variable expense

Increased speed and agility

Go global in minutes

Overall explanation

Correct option:

Massive economies of scale

Cloud computing is the on-demand delivery of IT resources over the Internet with pay-as-you-go pricing. Instead of buying, owning, and maintaining physical data centers and servers, you can access technology services, such as computing power, storage, and databases, on an as-needed basis.

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.

Exam Alert:

Please check out the following six advantages of Cloud Computing. You would certainly be asked questions on the advantages of Cloud Computing compared to a traditional on-premises setup:

Six Advantages of Cloud Computing

[PDF](#) | [RSS](#)

- **Trade capital expense for variable expense** – Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can pay only when you consume computing resources, and pay only for how much you consume.
- **Benefit from massive economies of scale** – By using cloud computing, you can achieve a lower variable cost than you can get on your own. Because usage from hundreds of thousands of customers is aggregated in the cloud, providers such as AWS can achieve higher economies of scale, which translates into lower pay-as-you-go prices.
- **Stop guessing capacity** – Eliminate guessing on your infrastructure capacity needs. When you make a capacity decision prior to deploying an application, you often end up either sitting on expensive idle resources or dealing with limited capacity. With cloud computing, these problems go away. You can access as much or as little capacity as you need, and scale up and down as required with only a few minutes' notice.
- **Increase speed and agility** – In a cloud computing environment, new IT resources are only a click away, which means that you reduce the time to make those resources available to your developers from weeks to just minutes. This results in a dramatic increase in agility for the organization, since the cost and time it takes to experiment and develop is significantly lower.
- **Stop spending money running and maintaining data centers** – Focus on projects that differentiate your business, not the infrastructure. Cloud computing lets you focus on your own customers, rather than on the heavy lifting of racking, stacking, and powering servers.
- **Go global in minutes** – Easily deploy your application in multiple regions around the world with just a few clicks. This means you can provide lower latency and a better experience for your customers at minimal cost.

via -

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

Incorrect options:

Trade capital expense for variable expense - Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can pay only when you consume computing resources, and pay only for how much you consume.

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

Go global in minutes - Easily deploy your application in multiple regions around the world with just a few clicks. This means you can provide lower latency and a better experience for your customers at minimal cost.

Although these three options are also benefits of Cloud Computing, it is the massive economies of scale that allow AWS to offer lower pay-as-you-go prices as usage from hundreds of thousands of customers is aggregated in the cloud.

References:

<https://aws.amazon.com/what-is-cloud-computing/>

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

Domain

Cloud Concepts

Question 41Correct

Which of the following are the serverless computing services offered by AWS ? (Select two)

Amazon Lightsail

AWS Elastic Beanstalk

Your selection is correct

AWS Lambda

Amazon Elastic Compute Cloud (Amazon EC2)

Your selection is correct

AWS Fargate

Overall explanation

Correct options:

Serverless is the native architecture of the cloud that enables you to shift more of your operational responsibilities to AWS, increasing your agility and innovation. Serverless allows you to build and run applications and services without thinking about servers. It eliminates infrastructure management tasks such as server or cluster provisioning, patching, operating system maintenance, and capacity provisioning.

The AWS serverless platform overview:

Compute <p>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.</p> <p>Lambda@Edge allows you to run Lambda functions at AWS Edge locations in response to Amazon CloudFront events.</p> <p>AWS Fargate is a purpose-built serverless compute engine for containers. Fargate scales and manages the infrastructure required to run your containers.</p>	Storage <p>Amazon Simple Storage Service (Amazon S3) provides developers and IT teams with secure, durable, highly-scalable object storage. Amazon S3 is easy to use, with a simple web service interface to store and retrieve any amount of data from anywhere on the web.</p> <p>Amazon Elastic File System (Amazon EFS) provides simple, scalable, elastic file storage. It is built to elastically scale on demand, growing and shrinking automatically as you add and remove files.</p>	Data stores <p>Amazon DynamoDB is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale.</p> <p>Amazon Aurora Serverless is an on-demand, auto-scaling configuration for Amazon Aurora (MySQL-compatible edition), where the database will automatically start up, shut down, and scale capacity up or down based on your application's needs.</p> <p>Amazon RDS Proxy is a highly available database proxy that manages thousands of concurrent connections to relational databases, allowing you to build highly scalable,</p>	API Proxy <p>Amazon API Gateway is a fully managed service that makes it easy for developers to create, publish, maintain, monitor, and secure APIs at any scale. It offers a comprehensive platform for API management. API Gateway allows you to process hundreds of thousands of concurrent API calls and handles traffic management, authorization and access control, monitoring, and API version management.</p>
Application integration <p>Amazon SNS is a fully managed pub/sub messaging service that makes it easy to decouple and scale microservices, distributed systems, and serverless applications.</p> <p>Amazon SQS is a fully managed message queuing service that makes it easy to decouple and scale microservices, distributed systems, and serverless applications.</p> <p>AWS AppSync simplifies application development by letting you create a flexible GraphQL API to securely access, manipulate, and combine data from one or more data sources.</p>	Orchestration <p>AWS Step Functions makes it easy to coordinate the components of distributed applications and microservices using visual workflows. Building applications from individual components that each perform a discrete function lets you scale and change applications quickly. Step Functions is a reliable way to coordinate components and step through the functions of your application.</p>	Analytics <p>Amazon Kinesis is a platform for streaming data on AWS, offering powerful services to make it easy to load and analyze streaming data, and also providing the ability for you to build custom streaming data applications for specialized needs.</p> <p>Amazon Athena is an interactive query service that makes it easy to analyze data in Amazon S3 using standard SQL. Athena is serverless, so there is no infrastructure to manage, and you pay only for the queries that you run.</p>	Developer tooling <p>AWS provides tools and services that aid developers in the serverless application development process. AWS and its partner ecosystem offer tools for continuous integration and delivery, testing, deployments, monitoring and diagnostics, SDKs, frameworks, and integrated development environment (IDE) plugins.</p>

via - <https://aws.amazon.com/serverless/>

AWS Lambda

With AWS Lambda, you can run code for virtually any type of application or backend service - all with zero administration. Just upload your code and Lambda takes care of everything required to run and scale your code with high availability. You can set up your

code to automatically trigger from other AWS services or call it directly from any web or mobile app.

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.

AWS Fargate

AWS Fargate is a serverless compute engine for containers that works with both Amazon Elastic Container Service (ECS) and Amazon Elastic Kubernetes Service (EKS). Fargate makes it easy for you to focus on building your applications. Fargate removes the need to provision and manage servers, lets you specify and pay for resources per application, and improves security through application isolation by design.

AWS Fargate is a purpose-built serverless compute engine for containers. Fargate scales and manages the infrastructure required to run your containers.

Incorrect options:

Amazon Elastic Compute Cloud (Amazon EC2) - Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud with support for per-second billing. It is the easiest way to provision servers on AWS Cloud and access the underlying OS. Amazon EC2 reduces the time required to obtain and boot new server instances to minutes, allowing you to quickly scale capacity, both up and down, as your computing requirements change.

AWS Elastic Beanstalk - AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services. You simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. Beanstalk provisions servers so it is not a serverless service.

Amazon Lightsail - Amazon Lightsail is an easy-to-use cloud platform that offers you everything needed to build an application or website, plus a cost-effective, monthly plan. Lightsail offers several preconfigured, one-click-to-launch operating systems,

development stacks, and web applications, including Linux, Windows OS, and WordPress.

References:

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

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

Domain

Cloud Concepts

Question 42Correct

Due to regulatory and compliance reasons, an organization is supposed to use a hardware device for any data encryption operations in the cloud. Which AWS service can be used to meet this compliance requirement?

AWS Trusted Advisor

Your answer is correct

AWS CloudHSM

AWS Secrets Manager

AWS Key Management Service (AWS KMS)

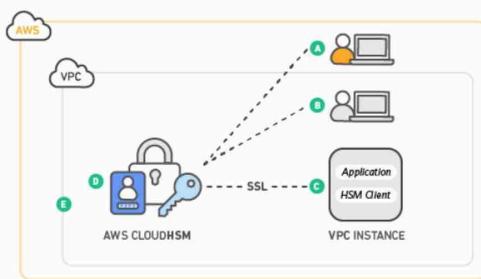
Overall explanation

Correct option:

AWS CloudHSM

AWS CloudHSM is a cloud-based Hardware Security Module (HSM) that enables you to easily generate and use your encryption keys on the AWS Cloud. With CloudHSM, you can manage your encryption keys using FIPS 140-2 Level 3 validated HSMs. It is a fully-managed service that automates time-consuming administrative tasks for you, such as hardware provisioning, software patching, high-availability, and backups.

Please review this detailed description for CloudHSM:



AWS CloudHSM runs in your own Amazon Virtual Private Cloud (VPC), enabling you to easily use your HSMs with applications running on your Amazon EC2 instances. With CloudHSM, you can use standard VPC security controls to manage access to your HSMs. Your applications connect to your HSMs using mutually authenticated SSL channels established by your HSM client software. Since your HSMs are located in Amazon datacenters near your EC2 instances, you can reduce the network latency between your applications and HSMs versus an on-premises HSM.

A: AWS manages the hardware security module (HSM) appliance, but does not have access to your keys.

B: You control and manage your own keys

C: Application performance improves (due to close proximity with AWS workloads)

D: Secure key storage in tamper-resistant hardware available in multiple Availability Zones (AZs)

E: Your HSMs are in your Virtual Private Cloud (VPC) and isolated from other AWS networks.

Separation of duties and role-based access control is inherent in the design of the AWS CloudHSM. AWS monitors the health and network availability of your HSMs but is not involved in the creation and management of the key material stored within your HSMs. You control the HSMs and the generation and use of your encryption keys.

via - <https://aws.amazon.com/cloudhsm/>

Incorrect options:

AWS Key Management Service (AWS KMS) - AWS Key Management Service (AWS KMS) makes it easy for you to create and manage cryptographic keys and control their use across a wide range of AWS services and in your applications. It is a secure and resilient service that uses hardware security modules that have been validated under FIPS 140-2, or are in the process of being validated, to protect your keys. It cannot be used as a Hardware Security Module for data encryption operations in AWS Cloud.

AWS Secrets Manager - AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle. Users and applications retrieve secrets with a call to Secrets Manager APIs, eliminating the need to hardcode sensitive information in plain text. Secrets Manager cannot be used as a Hardware Security Module for data encryption operations in AWS Cloud.

AWS Trusted Advisor - AWS Trusted Advisor is an online tool that provides you real-time guidance to help you provision your resources following AWS best practices on cost optimization, security, fault tolerance, service limits, and performance improvement. Whether establishing new workflows, developing applications, or as part of ongoing improvement, recommendations provided by Trusted Advisor regularly help keep your solutions provisioned optimally.

Reference:

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

Domain

Security and Compliance

Question 43Correct

AWS Organizations provides which of the following benefits? (Select two)

Provision Amazon EC2 Spot instances across the member AWS accounts

Your selection is correct

Share the reserved Amazon EC2 instances amongst the member AWS accounts

Your selection is correct

Volume discounts for Amazon EC2 and Amazon S3 aggregated across the member AWS accounts

Deploy patches on Amazon EC2 instances across the member AWS accounts

Check vulnerabilities on Amazon EC2 instances across the member AWS accounts

Overall explanation

Correct options:

Volume discounts for Amazon EC2 and Amazon S3 aggregated across the member AWS accounts

Share the reserved Amazon EC2 instances amongst the member AWS accounts

AWS Organizations helps you to centrally manage billing; control access, compliance, and security; and share resources such as reserved Amazon EC2 instances across your AWS accounts.

Using AWS Organizations, you can automate account creation, create groups of accounts to reflect your business needs, and apply policies for these groups for governance. You can also simplify billing by setting up a single payment method for all of your AWS accounts. AWS Organizations is available to all AWS customers at no additional charge.

You can use AWS Organizations to set up a single payment method for all the AWS accounts in your organization through consolidated billing. With consolidated billing, you can see a combined view of charges incurred by all your accounts, as well as take advantage of pricing benefits from aggregated usage, such as volume discounts for Amazon EC2 and Amazon S3.

Key benefits of AWS Organizations:

CENTRALLY MANAGE POLICIES ACROSS MULTIPLE AWS ACCOUNTS

To improve control over your AWS environment, you can use AWS Organizations to create groups of accounts, and then attach policies to a group to ensure the correct policies are applied across the accounts without requiring custom scripts and manual processes.

GOVERN ACCESS TO AWS SERVICES, RESOURCES, AND REGIONS

AWS Organizations allows you to restrict what services and actions are allowed in your accounts. You can use Service Control Policies (SCPs) to apply permission guardrails on [AWS Identity and Access Management \(IAM\)](#) users and roles. For example, you can apply an SCP that restricts users in accounts in your organization from launching any resources in regions that you do not explicitly allow.

AUTOMATE AWS ACCOUNT CREATION AND MANAGEMENT

AWS Organizations helps you simplify IT operations by automating AWS account creation and management. The Organizations APIs enable you to create new accounts programmatically, and to add the new accounts to a group. The policies attached to the group are automatically applied to the new account. For example, you can automate the creation of new accounts for workload or application isolation and grant entities in those accounts access only to the necessary AWS services.

CONFIGURE AWS SERVICES ACROSS MULTIPLE ACCOUNTS

AWS Organizations helps you configure [AWS services](#) and share resources across accounts in your organization. For example, Organizations integrates with [AWS Single Sign-on](#) to enable you to easily provision access for all of your developers to accounts in your organization from a single place. You can make central changes to access permissions and have them automatically updated on accounts in your organization.

CONSOLIDATE BILLING ACROSS MULTIPLE AWS ACCOUNTS

You can use AWS Organizations to set up a single payment method for all the AWS accounts in your organization through consolidated billing. With consolidated billing, you can see a combined view of charges incurred by all your accounts, as well as take advantage of pricing benefits from aggregated usage, such as volume discounts for [Amazon EC2](#) and [Amazon S3](#).

via - <https://aws.amazon.com/organizations/>

Incorrect options:

Check vulnerabilities on Amazon EC2 instances across the member AWS accounts

Deploy patches on Amazon EC2 instances across the member AWS accounts

Provision Amazon EC2 Spot instances across the member AWS accounts

These three options contradict the details provided earlier in the explanation, so these options are incorrect.

Reference:

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

Domain

Billing and Pricing

Question 44Correct

What is the primary benefit of deploying an Amazon RDS Multi-AZ database with one standby?

Amazon RDS Multi-AZ reduces database usage costs

Amazon RDS Multi-AZ protects the database from a regional failure

Your answer is correct

Amazon RDS Multi-AZ enhances database availability

Amazon RDS Multi-AZ improves database performance for read-heavy workloads

Overall explanation

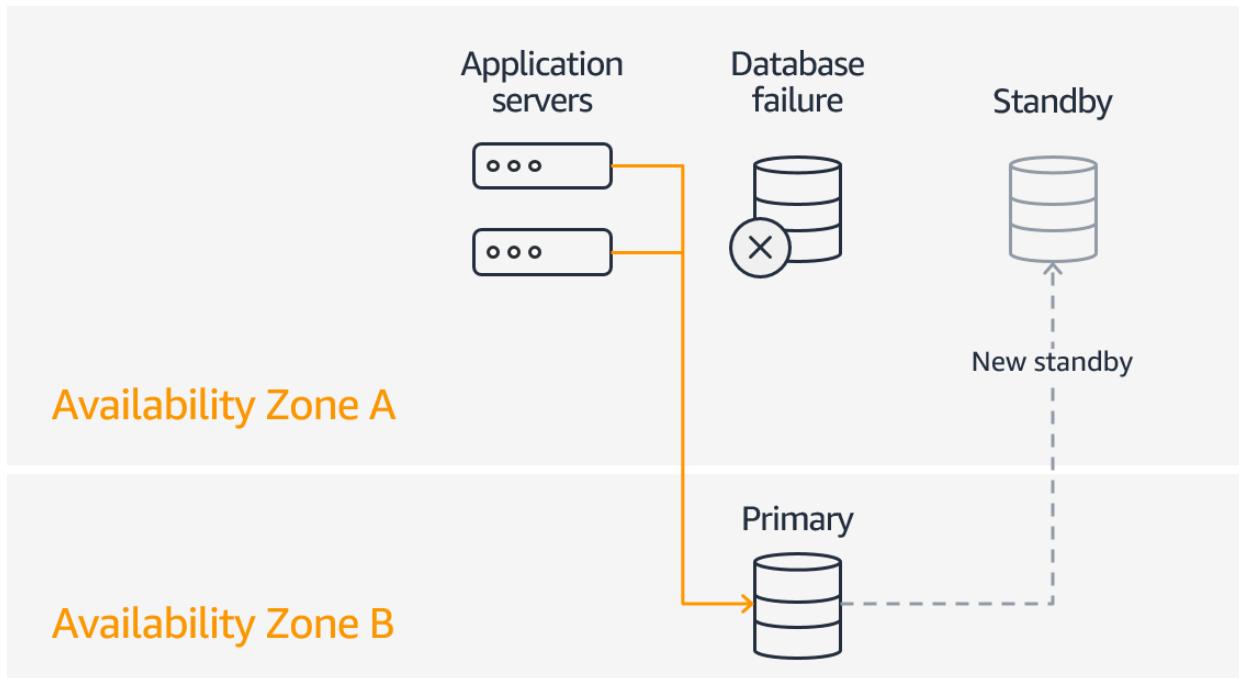
Correct option:

Amazon RDS Multi-AZ enhances database availability

Amazon RDS Multi-AZ deployments provide enhanced availability and durability for Amazon Relational Database Service (Amazon RDS) instances, making them a natural fit for production database workloads. When you provision an Amazon RDS Multi-AZ Instance with one standby, Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ).

In case of an infrastructure failure, Amazon RDS performs an automatic failover to the standby so that you can resume database operations as soon as the failover is complete.

How Amazon RDS Multi-AZ Works:



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

Exam Alert:

Please review the differences between Multi-AZ, Multi-Region and Read Replica deployments for RDS:

Read replicas, Multi-AZ deployments, and multi-region deployments

Amazon RDS read replicas complement [Multi-AZ deployments](#). While both features maintain a second copy of your data, there are differences between the two:

Multi-AZ deployments	Multi-Region deployments	Read replicas
Main purpose is high availability	Main purpose is disaster recovery and local performance	Main purpose is scalability
Non-Aurora: synchronous replication; Aurora: asynchronous replication	Asynchronous replication	Asynchronous replication
Non-Aurora: only the primary instance is active; Aurora: all instances are active	All regions are accessible and can be used for reads	All read replicas are accessible and can be used for readscaling
Non-Aurora: automated backups are taken from standby; Aurora: automated backups are taken from shared storage layer	Automated backups can be taken in each region	No backups configured by default
Always span at least two Availability Zones within a single region	Each region can have a Multi-AZ deployment	Can be within an Availability Zone, Cross-AZ, or Cross-Region
Non-Aurora: database engine version upgrades happen on primary; Aurora: all instances are updated together	Non-Aurora: database engine version upgrade is independent in each region; Aurora: all instances are updated together	Non-Aurora: database engine version upgrade is independent from source instance; Aurora: all instances are updated together
Automatic failover to standby (non-Aurora) or read replica (Aurora) when a problem is detected	Aurora allows promotion of a secondary region to be the master	Can be manually promoted to a standalone database instance (non-Aurora) or to be the primary instance (Aurora)

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

Incorrect options:

Amazon RDS Multi-AZ improves database performance for read-heavy workloads -

Amazon RDS Multi-AZ with one standby does not allow read operations from the standby. Read Replicas allow you to create read-only copies that are synchronized with your master database. Read Replicas are used for improved read performance.

Therefore, this option is incorrect.

Amazon RDS Multi-AZ protects the database from a regional failure - You need to use RDS in Multi-Region deployment configuration to protect from a regional failure.

Amazon RDS Multi-AZ cannot protect from a regional failure.

Amazon RDS Multi-AZ reduces database usage costs - Amazon RDS Multi-AZ increases the database costs compared to the standard deployment. So this option is incorrect.

Reference:

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

Domain

Technology

Question 45Correct

A startup runs its proprietary application on docker containers. As a Cloud Practitioner, which AWS service would you recommend so that the startup can run containers and still have access to the underlying servers?

AWS Fargate

Your answer is correct

Amazon Elastic Container Service (Amazon ECS)

AWS Lambda

Amazon Elastic Container Registry (Amazon ECR)

Overall explanation

Correct option:

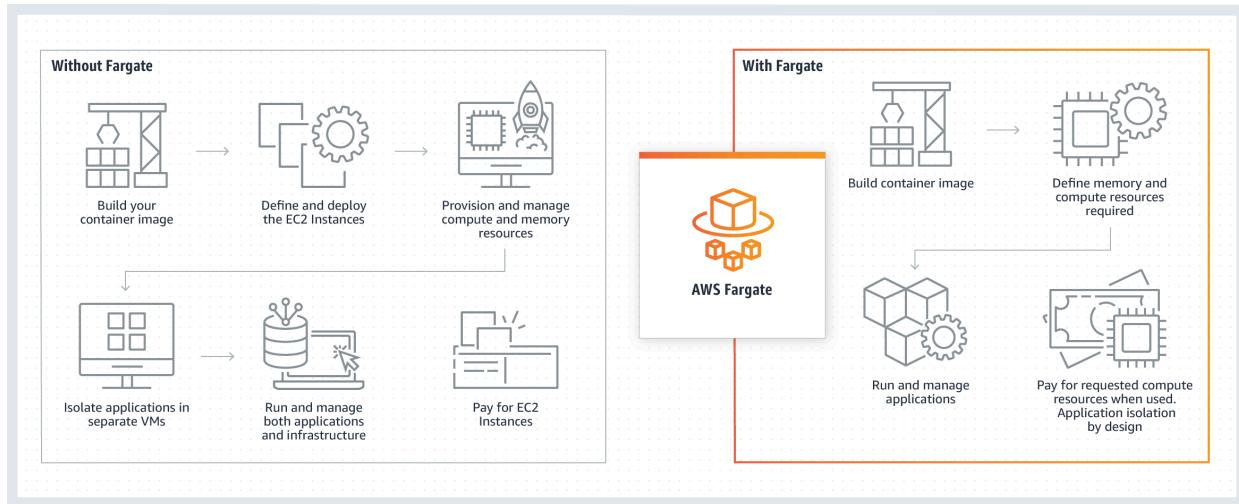
Amazon Elastic Container Service (Amazon ECS)

Amazon Elastic Container Service (Amazon ECS) is a highly scalable, fast, container management service that makes it easy to run, stop, and manage Docker containers on a cluster. This is not a fully managed service and you can manage the underlying servers yourself.

Incorrect options:

AWS Fargate - AWS Fargate is a serverless compute engine for containers. It works with both Amazon Elastic Container Service (Amazon ECS) and Amazon Elastic Kubernetes Service (Amazon EKS). AWS Fargate makes it easy for you to focus on building your applications. AWS Fargate removes the need to provision and manage servers, lets you specify and pay for resources per application, and improves security through application isolation by design. With AWS Fargate, you do not have access to the underlying servers, so this option is incorrect.

How AWS Fargate Works:



via - <https://aws.amazon.com/fargate/>

AWS Lambda - AWS Lambda is a compute service that lets you run code without provisioning or managing servers. AWS Lambda executes your code only when needed and scales automatically, from a few requests per day to thousands per second. AWS Lambda does not support running container applications.

Amazon Elastic Container Registry (Amazon ECR) - Amazon Elastic Container Registry (Amazon ECR) can be used to store, manage, and deploy Docker container images. Amazon Elastic Container Registry (Amazon ECR) eliminates the need to operate your container repositories. Amazon Elastic Container Registry (Amazon ECR) does not support running container applications.

Reference:

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

Domain

Technology

Question 46Correct

Which AWS service would you choose for a data processing project that needs a schemaless database?

Amazon Aurora

Your answer is correct

Amazon DynamoDB

Amazon RedShift

Amazon Relational Database Service (Amazon RDS)

Overall explanation

Correct option:

Amazon DynamoDB

Amazon DynamoDB is a key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multi-Region, multi-master, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. DynamoDB is schemaless. DynamoDB can manage structured or semistructured data, including JSON documents.

Incorrect options:

Amazon RedShift - Amazon Redshift is a fully-managed petabyte-scale cloud-based data warehouse product designed for large scale data set storage and analysis.

Amazon Redshift requires a well-defined schema.

Amazon Aurora - Amazon Aurora is an AWS service for relational databases. Aurora requires a well-defined schema.

Amazon Relational Database Service (Amazon RDS) - Amazon Relational Database Service (Amazon RDS) is an AWS service for relational databases. RDS requires a well-defined schema.

References:

<https://aws.amazon.com/dynamodb/features/>

https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/SOLtoNoSQL_WhyDynamoDB.html

Domain

Technology

Question 47 **Correct**

An AWS user is trying to launch an Amazon Elastic Compute Cloud (Amazon EC2) instance in a given region. What is the region-specific constraint that the Amazon Machine Image (AMI) must meet so that it can be used for this Amazon Elastic Compute Cloud (Amazon EC2) instance?

Your answer is correct

You must use an Amazon Machine Image (AMI) from the same region as that of the Amazon EC2 instance. The region of the Amazon Machine Image (AMI) has no bearing on the performance of the Amazon EC2 instance

An Amazon Machine Image (AMI) is a global entity, so the region is not applicable

You can use an Amazon Machine Image (AMI) from a different region, but it degrades the performance of the Amazon EC2 instance

You should use an Amazon Machine Image (AMI) from the same region, as it improves the performance of the Amazon EC2 instance

Overall explanation

Correct option:

You must use an Amazon Machine Image (AMI) from the same region as that of the Amazon EC2 instance. The region of the Amazon Machine Image (AMI) has no bearing on the performance of the Amazon EC2 instance

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

The Amazon Machine Image (AMI) must be in the same region as that of the Amazon EC2 instance to be launched. If the Amazon Machine Image (AMI) exists in a different region, you can copy that Amazon Machine Image (AMI) to the region where you want to launch the EC2 instance. The region of Amazon Machine Image (AMI) has no bearing on the performance of the Amazon EC2 instance.

Amazon Machine Images (AMI) Overview:

Amazon Machine Images (AMI)

[PDF](#) | [Kindle](#) | [RSS](#)

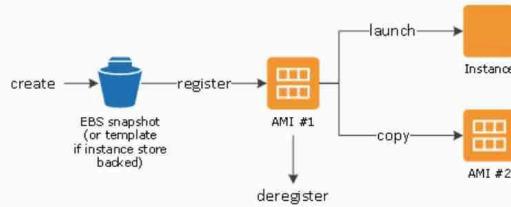
An Amazon Machine Image (AMI) provides the information required to launch an instance. You must specify an AMI when you launch an instance. You can launch multiple instances from a single AMI when you need multiple instances with the same configuration. You can use different AMIs to launch instances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

An AMI includes the following:

- One or more EBS snapshots, or, for instance-store-backed AMIs, a template for the root volume of the instance (for example, an operating system, an application server, and applications).
- Launch permissions that control which AWS accounts can use the AMI to launch instances.
- A block device mapping that specifies the volumes to attach to the instance when it's launched.

Using an AMI

The following diagram summarizes the AMI lifecycle. After you create and register an AMI, you can use it to launch new instances. (You can also launch instances from an AMI if the AMI owner grants you launch permissions.) You can copy an AMI within the same Region or to different Regions. When you no longer require an AMI, you can deregister it.



You can search for an AMI that meets the criteria for your instance. You can search for AMIs provided by AWS or AMIs provided by the community. For more information, see [AMI types](#) and [Finding a Linux AMI](#).

After you launch an instance from an AMI, you can connect to it. When you are connected to an instance, you can use it just like you use any other server. For information about launching, connecting, and using your instance, see [Amazon EC2 instances](#).

via - <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

Incorrect options:

You can use an Amazon Machine Image (AMI) from a different region, but it degrades the performance of the Amazon EC2 instance

You should use an Amazon Machine Image (AMI) from the same region, as it improves the performance of the Amazon EC2 instance

An Amazon Machine Image (AMI) is a global entity, so the region is not applicable

These three options contradict the details provided earlier in the explanation, so these options are incorrect.

Reference:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html>

Domain

Technology

Question 48Correct

A data analytics company is running a proprietary batch analytics application on AWS and wants to use a storage service which would be accessed by hundreds of EC2 instances simultaneously to append data to existing files. As a Cloud Practitioner, which AWS service would you suggest for this use-case?

Instance Store

Amazon Simple Storage Service (Amazon S3)

Amazon Elastic Block Store (Amazon EBS)

Your answer is correct

Amazon Elastic File System (Amazon EFS)

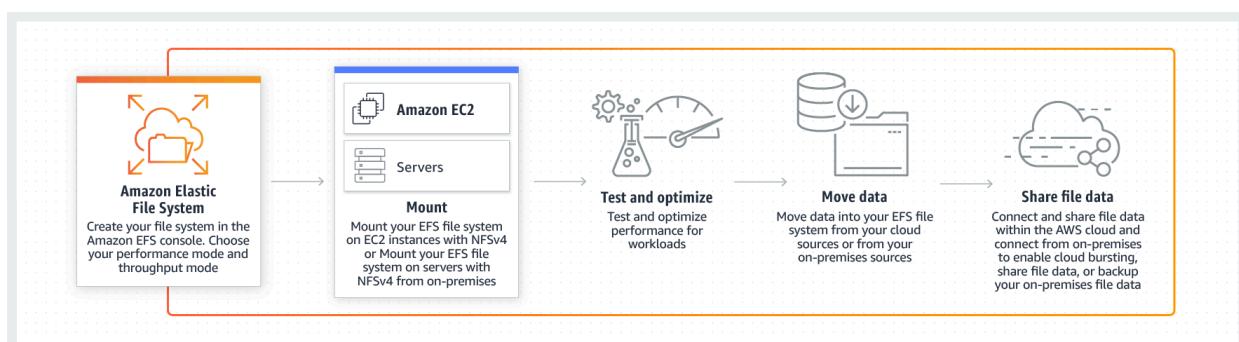
Overall explanation

Correct option:

Amazon Elastic File System (Amazon EFS)

Amazon EFS is a file storage service for use with Amazon EC2. Amazon EFS provides a file system interface, file system access semantics, and concurrently-accessible storage for up to thousands of Amazon EC2 instances. Amazon EFS uses the Network File System protocol.

How EFS works:



via - <https://aws.amazon.com/efs/>

Incorrect options:

Amazon Elastic Block Store (Amazon EBS) - Amazon Elastic Block Store (EBS) is an easy to use, high-performance block storage service designed for use with Amazon Elastic Compute Cloud (EC2) for both throughput and transaction-intensive workloads at any scale. EBS volumes cannot be accessed simultaneously by multiple EC2 instances, so this option is incorrect.

Instance Store - An instance store provides temporary block-level storage for your instance. This storage is located on disks that are physically attached to the host computer. Instance Store volumes cannot be accessed simultaneously by multiple EC2 instances, so this option is incorrect.

Amazon Simple Storage Service (Amazon S3) - Amazon Simple Storage Service (Amazon S3) is an object storage service that offers industry-leading scalability, data availability, security, and performance. S3 is object storage and it does not support file append operations, so this option is incorrect.

Reference:

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

Domain

Technology

Question 49 **Incorrect**

A gaming company is looking at a technology/service that can deliver a consistent low-latency gameplay to ensure a great user experience for end-users in various locations.

Which AWS technology/service will provide the necessary low-latency access to the end-users?

AWS Wavelength

AWS Direct Connect

Your answer is incorrect

AWS Edge Locations

Correct answer

AWS Local Zones

Overall explanation

Correct option:

AWS Local Zones

AWS Local Zones allow you to use select AWS services, like compute and storage services, closer to more end-users, providing them very low latency access to the applications running locally. AWS Local Zones are also connected to the parent region via Amazon's redundant and very high bandwidth private network, giving applications running in AWS Local Zones fast, secure, and seamless access to the rest of AWS services.

You should use AWS Local Zones to deploy workloads closer to your end-users for low-latency requirements. AWS Local Zones have their connection to the internet and support AWS Direct Connect, so resources created in the Local Zone can serve local end-users with very low-latency communications.

Various AWS services such as Amazon Elastic Compute Cloud (EC2), Amazon Virtual Private Cloud (VPC), Amazon Elastic Block Store (EBS), Amazon FSx, Amazon Elastic Load Balancing, Amazon EMR, Amazon ElastiCache, and Amazon Relational Database Service (RDS) are available locally in the AWS Local Zones. You can also use services that orchestrate or work with local services such as Amazon EC2 Auto Scaling, Amazon EKS clusters, Amazon ECS clusters, Amazon EC2 Systems Manager, Amazon CloudWatch, AWS CloudTrail, and AWS CloudFormation. AWS Local Zones also provide a high-bandwidth, secure connection to the AWS Region, allowing you to seamlessly connect to the full range of services in the AWS Region through the same APIs and toolsets.

Incorrect options:

AWS Edge Locations - An AWS Edge location is a site that CloudFront uses to cache copies of the content for faster delivery to users at any location.

AWS Wavelength - AWS Wavelength extends the AWS cloud to a global network of 5G edge locations to enable developers to innovate and build a whole new class of applications that require ultra-low latency. Wavelength Zones provide a high-bandwidth, secure connection to the parent AWS Region, allowing developers to seamlessly connect to the full range of services in the AWS Region through the same APIs and toolsets.

AWS Direct Connect - AWS Direct Connect is a cloud service that links your network directly to AWS, bypassing the internet to deliver more consistent, lower-latency performance. When creating a new connection, you can choose a hosted connection provided by an AWS Direct Connect Delivery Partner, or choose a dedicated connection from AWS—and deploy at over 100 AWS Direct Connect locations around the world. AWS Direct Connect provides consistently high bandwidth, low-latency access and it is generally used between on-premises data centers and AWS network. Direct Connect is overkill for the given requirement.

Reference:

<https://aws.amazon.com/about-aws/global-infrastructure/localzones/>

Domain

Technology

Question 50Correct

An IT company wants to run a log backup process every Monday at 2 AM. The usual runtime of the process is 5 minutes. As a Cloud Practitioner, which AWS services would you recommend to build a serverless solution for this use-case? (Select two)

AWS Step Function

Your selection is correct

AWS Lambda

Amazon Elastic Compute Cloud (Amazon EC2)

Your selection is correct

Amazon Eventbridge

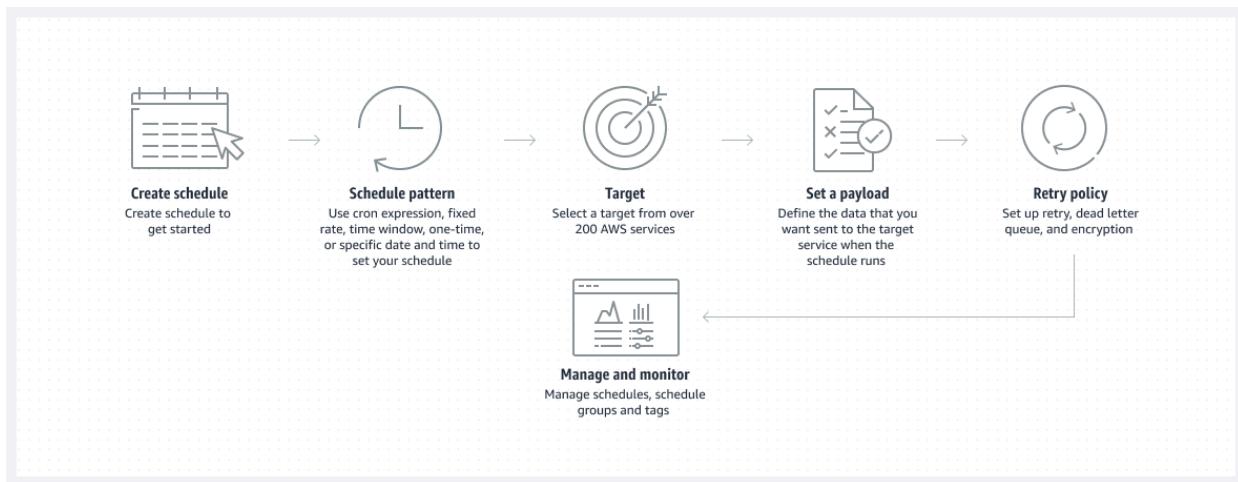
AWS Systems Manager

Overall explanation

Correct option:

Amazon Eventbridge - Amazon EventBridge is a service that provides real-time access to changes in data in AWS services, your own applications, and software as a service (SaaS) applications without writing code. Amazon EventBridge Scheduler is a serverless task scheduler that simplifies creating, executing, and managing millions of schedules across AWS services without provisioning or managing underlying infrastructure.

Amazon Eventbridge Scheduler:



via - <https://aws.amazon.com/eventbridge/>

AWS Lambda - AWS Lambda lets you run code without provisioning or managing servers. You pay only for the compute time you consume. The lambda has a maximum execution time of 15 minutes, so it can be used to run this log backup process.

To build the solution for the given use-case, you can leverage the Amazon EventBridge Scheduler to trigger on a schedule. You can then set the Lambda as the target for this rule.

Incorrect options:

AWS Systems Manager - 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. With Systems Manager, you can group resources, like Amazon EC2 instances, Amazon S3 buckets, or Amazon RDS instances,

by application, view operational data for monitoring and troubleshooting, and take action on your groups of resources. Secrets Manager cannot be used to run a process on a schedule.

Amazon Elastic Compute Cloud (Amazon EC2) - Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud with support for per-second billing. It is the easiest way to provision servers on AWS Cloud and access the underlying OS. As the company wants a serverless solution, so this option is ruled out.

AWS Step Function - AWS Step Function lets you coordinate multiple AWS services into serverless workflows. You can design and run workflows that stitch together services such as AWS Lambda, AWS Glue and Amazon SageMaker. Step Function cannot be used to run a process on a schedule.

Reference:

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

Domain

Technology

Question 51Correct

A medical device company is looking for a durable and cost-effective way of storing their historic data. Due to compliance requirements, the data must be stored for 10 years. Which AWS Storage solution will you suggest?

AWS Storage Gateway

Amazon S3 Glacier Flexible Retrieval

Amazon Elastic File System (Amazon EFS)

Your answer is correct

Amazon S3 Glacier Deep Archive

Overall explanation

Correct option:

Amazon S3 Glacier Deep Archive

Amazon S3 Glacier Deep Archive is Amazon S3's lowest-cost storage class and supports long-term retention and digital preservation for data that may be accessed once or twice in a year. It is designed for customers — particularly those in highly-regulated industries, such as the Financial Services, Healthcare, and Public Sectors — that retain data sets for 7-10 years or longer to meet regulatory compliance requirements. Amazon S3 Glacier Deep Archive can also be used for backup and disaster recovery use cases. It has a retrieval time (first byte latency) of 12 to 48 hours.

Amazon S3 Glacier Deep Archive Overview:

Amazon S3 Glacier Deep Archive (S3 Glacier Deep Archive)

S3 Glacier Deep Archive is Amazon S3's lowest-cost storage class and supports long-term retention and digital preservation for data that may be accessed once or twice in a year. It is designed for customers — particularly those in highly-regulated industries, such as the Financial Services, Healthcare, and Public Sectors — that retain data sets for 7-10 years or longer to meet regulatory compliance requirements. S3 Glacier Deep Archive can also be used for backup and disaster recovery use cases, and is a cost-effective and easy-to-manage alternative to magnetic tape systems, whether they are on-premises libraries or off-premises services. S3 Glacier Deep Archive complements Amazon S3 Glacier, which is ideal for archives where data is regularly retrieved and some of the data may be needed in minutes. All objects stored in S3 Glacier Deep Archive are replicated and stored across at least three geographically-dispersed Availability Zones, protected by 99.99999999% of durability, and can be restored within 12 hours.

Key Features:

- Designed for durability of 99.99999999% of objects across multiple Availability Zones
- Lowest cost storage class designed for long-term retention of data that will be retained for 7-10 years
- Ideal alternative to magnetic tape libraries
- Retrieval time within 12 hours
- S3 PUT API for direct uploads to S3 Glacier Deep Archive, and S3 Lifecycle management for automatic migration of objects

via - <https://aws.amazon.com/s3/storage-classes/>

Incorrect options:

Amazon S3 Glacier Flexible Retrieval - Amazon S3 Glacier Flexible Retrieval (formerly S3 Glacier) is the ideal storage class for archiving data that does not require immediate access but needs the flexibility to retrieve large sets of data at no cost, such as backup or disaster recovery use cases. Amazon S3 Glacier Deep Archive is a better fit as it is more cost-optimal than Amazon S3 Glacier Flexible Retrieval for the given use-case.

AWS Storage Gateway - AWS Storage Gateway is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage. All data transferred between the gateway and AWS storage is encrypted using SSL (for all three types of

gateways - File, Volume and Tape Gateways). AWS Storage Gateway cannot be used for data archival.

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

Reference:

<https://aws.amazon.com/s3/storage-classes/>

Domain

Technology

Question 52Correct

A company would like to optimize Amazon Elastic Compute Cloud (Amazon EC2) costs.

Which of the following actions can help with this task? (Select TWO)

Opt for a higher AWS Support plan

Vertically scale the EC2 instances

Build its own servers

Your selection is correct

Purchase Amazon EC2 Reserved instances (RIs)

Your selection is correct

Set up Auto Scaling groups to align the number of instances with the demand

Overall explanation

Correct options:

Set up Auto Scaling groups to align the number of instances with the demand

Purchase Amazon EC2 Reserved instances (RIs)

An Auto Scaling group contains a collection of Amazon EC2 instances that are treated as a logical grouping for automatic scaling and management. You can adjust its size to meet demand, either manually or by using automatic scaling.

AWS Auto Scaling can help you optimize your utilization and cost efficiencies when consuming AWS services so you only pay for the resources you need.

How AWS Auto Scaling works:



via - <https://aws.amazon.com/autoscaling/>

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

EC2 Pricing Options Overview:

<p>On-Demand</p> <p>With On-Demand instances, you pay for compute capacity by the hour or the second depending on which instances you run. No longer-term commitments or upfront payments are needed. You can increase or decrease your compute capacity depending on the demands of your application and only pay the specified per hourly rates for the instance you use.</p> <p>On-Demand instances are recommended for:</p> <ul style="list-style-type: none"> • Users that prefer the low cost and flexibility of Amazon EC2 without any up-front payment or long-term commitment • Applications with short-term, spiky, or unpredictable workloads that cannot be interrupted • Applications being developed or tested on Amazon EC2 for the first time <p>See On-Demand pricing »</p>	<p>Spot instances</p> <p>Amazon EC2 Spot instances allow you to request spare Amazon EC2 computing capacity for up to 90% off the On-Demand price. Learn More.</p> <p>Spot instances are recommended for:</p> <ul style="list-style-type: none"> • Applications that have flexible start and end times • Applications that are only feasible at very low compute prices • Users with urgent computing needs for large amounts of additional capacity <p>See Spot pricing »</p>
<p>Savings Plans</p> <p>Savings Plans are a flexible pricing model that offer low prices on EC2 and Fargate usage, in exchange for a commitment to a consistent amount of usage (measured in \$/hour) for a 1 or 3 year term.</p> <p>Dedicated Hosts</p> <p>A Dedicated Host is a physical EC2 server dedicated for your use. Dedicated Hosts can help you reduce costs by allowing you to use your existing server-bound software licenses, including Windows Server, SQL Server, and SUSE Linux Enterprise Server (subject to your license terms), and can also help you meet compliance requirements. Learn more.</p> <ul style="list-style-type: none"> • Can be purchased On-Demand (hourly). • Can be purchased as a Reservation for up to 70% off the On-Demand price. <p>See Dedicated pricing »</p>	<p>Reserved Instances</p> <p>Reserved Instances provide you with a significant discount (up to 75%) compared to On-Demand instance pricing. In addition, when Reserved Instances are assigned to a specific Availability Zone, they provide a capacity reservation, giving you additional confidence in your ability to launch instances when you need them.</p> <p>For applications that have steady state or predictable usage, Reserved Instances can provide significant savings compared to using On-Demand instances. See How to Purchase Reserved Instances for more information.</p> <p>Reserved Instances are recommended for:</p> <ul style="list-style-type: none"> • Applications with steady state usage • Applications that may require reserved capacity • Customers that can commit to using EC2 over a 1 or 3 year term to reduce their total computing costs

via - <https://aws.amazon.com/ec2/pricing/>

Incorrect options:

Vertically scale the EC2 instances - Vertically scaling EC2 instances (increasing one computer performance by adding CPUs, memory, and storage) is limited and is way more expensive than scaling horizontally (adding more computers to the system).

Opt for a higher AWS Support plan - The AWS Support plans do not help with EC2 costs.

Build its own servers - Building your own servers is more expensive than using EC2 instances in the cloud. You're more likely to spend more money than saving money.

References:

<https://docs.aws.amazon.com/autoscaling/ec2/userguide/AutoScalingGroup.html>

<https://aws.amazon.com/ec2/pricing/reserved-instances/>

<https://wa.aws.amazon.com/wat.concept.horizontal-scaling.en.html>

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

Domain

Billing and Pricing

Question 53Correct

A silicon valley based healthcare startup stores anonymized patient health data on Amazon S3. The CTO further wants to ensure that any sensitive data on S3 is discovered and identified to prevent any sensitive data leaks. As a Cloud Practitioner, which AWS service would you recommend addressing this use-case?

Your answer is correct

Amazon Macie

AWS Glue

Amazon Polly

AWS Secrets Manager

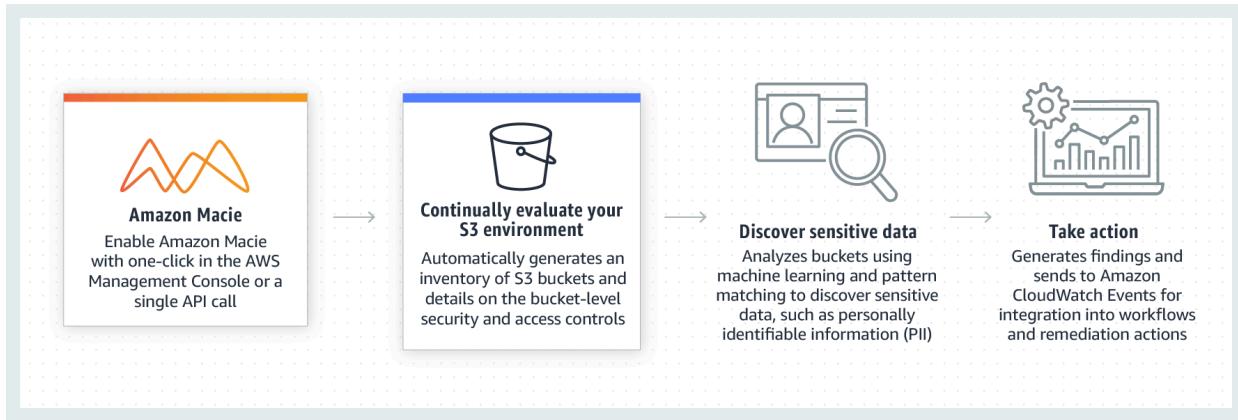
Overall explanation

Correct option:

Amazon Macie

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. 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).

How Macie Works:



via - <https://aws.amazon.com/macie/>

Incorrect options:

AWS Glue - AWS Glue is a fully managed extract, transform, and load (ETL) service that makes it easy for customers to prepare and load their data for analytics. AWS Glue job is meant to be used for batch ETL data processing. It cannot be used to discover and protect your sensitive data in AWS.

Amazon Polly - Amazon Polly is a service that turns text into lifelike speech, allowing you to create applications that talk, and build entirely new categories of speech-enabled products. Polly's Text-to-Speech (TTS) service uses advanced deep learning technologies to synthesize natural sounding human speech. It cannot be used to discover and protect your sensitive data in AWS.

AWS Secrets Manager - AWS Secrets Manager helps you protect secrets needed to access your applications, services, and IT resources. The service enables you to easily rotate, manage, and retrieve database credentials, API keys, and other secrets throughout their lifecycle. Users and applications retrieve secrets with a call to Secrets Manager APIs, eliminating the need to hardcode sensitive information in plain text. It cannot be used to discover and protect your sensitive data in AWS.

Reference:

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

Domain

Technology

Question 54Correct

Which AWS service will you use to provision the same AWS infrastructure across multiple AWS accounts and regions?

AWS Systems Manager

AWS CodeDeploy

AWS OpsWorks

Your answer is correct

AWS CloudFormation

Overall explanation

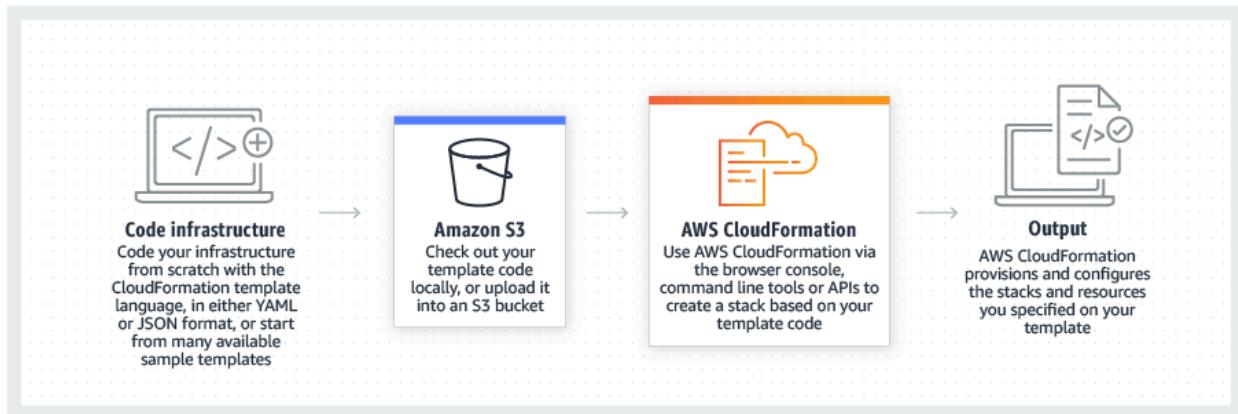
Correct option:

AWS CloudFormation

AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all Regions and accounts. A stack is a collection of AWS resources that you can manage as a single unit. In other words, you can create, update, or delete a collection of resources by creating, updating, or deleting stacks.

AWS CloudFormation StackSets extends the functionality of stacks by enabling you to create, update, or delete stacks across multiple accounts and regions with a single operation. Using an administrator account, you define and manage an AWS CloudFormation template, and use the template as the basis for provisioning stacks into selected target accounts across specified regions.

How CloudFormation Works:



via - <https://aws.amazon.com/cloudformation/>

Incorrect options:

AWS CodeDeploy - AWS CodeDeploy is a fully managed deployment service that automates software deployments to a variety of compute services such as Amazon EC2, AWS Fargate, AWS Lambda, and your on-premises servers. AWS CodeDeploy makes it easier for you to rapidly release new features, helps you avoid downtime during application deployment, and handles the complexity of updating your applications. You cannot use this service to provision AWS infrastructure.

AWS OpsWorks - AWS OpsWorks is a configuration management service that provides managed instances of Chef and Puppet. OpsWorks lets you use Chef and Puppet to automate how servers are configured, deployed and managed across your Amazon EC2 instances or on-premises compute environments. You cannot use OpsWorks for running commands or managing patches on servers. You cannot use this service to provision AWS infrastructure.

AWS Systems Manager - 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. With Systems Manager, you can group resources, like Amazon EC2 instances, Amazon S3 buckets, or Amazon RDS instances, by application, view operational data for monitoring and troubleshooting, and take action on your groups of resources. You cannot use this service to provision AWS infrastructure.

Reference:

<https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/what-is-cfnstack-sets.html>

Domain

Technology

Question 55Correct

Which AWS service can be used to subscribe to an RSS feed to be notified of the status of all AWS service interruptions?

AWS Lambda

Your answer is correct

AWS Health Dashboard - Service Health

AWS Health Dashboard - Your Account Health

Amazon Simple Notification Service (Amazon SNS)

Overall explanation

Correct option:

AWS Health Dashboard - Service Health

The AWS Health Dashboard – Service health is the single place to learn about the availability and operations of AWS services. You can view the overall status of AWS services, and you can sign in to view personalized communications about your particular AWS account or organization.

You can check on this page <https://health.aws.amazon.com/health/status> to get current status information.

The AWS Health Dashboard – Service health offers the possibility to subscribe to an RSS feed to be notified of interruptions to each service.

Incorrect options:

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

and serverless applications. It can be used to deliver notifications, but it does not provide the current services' status.

AWS Health Dashboard - Your Account Health - Your AWS Health Dashboard – Your Account Health provides alerts and remediation guidance when AWS is experiencing events that may impact you.

AWS Lambda - AWS Lambda lets you run code without provisioning or managing servers. It does not provide all AWS services' status.

Reference:

<https://health.aws.amazon.com/health/status>

Domain

Technology

Question 56Correct

Which AWS service can be used to automate code deployment to Amazon Elastic Compute Cloud (Amazon EC2) instances as well as on-premises instances?

Your answer is correct

AWS CodeDeploy

AWS CodeCommit

AWS CloudFormation

AWS CodePipeline

Overall explanation

Correct option:

AWS CodeDeploy

AWS CodeDeploy is a service that automates code deployments to any instance, including Amazon EC2 instances and instances running on-premises. AWS CodeDeploy makes it easier for you to rapidly release new features, helps you avoid downtime during deployment, and handles the complexity of updating your applications. You can use AWS CodeDeploy to automate deployments, eliminating the need for error-prone manual operations, and the service scales with your infrastructure so you can easily deploy to one instance or thousands.

Incorrect options:

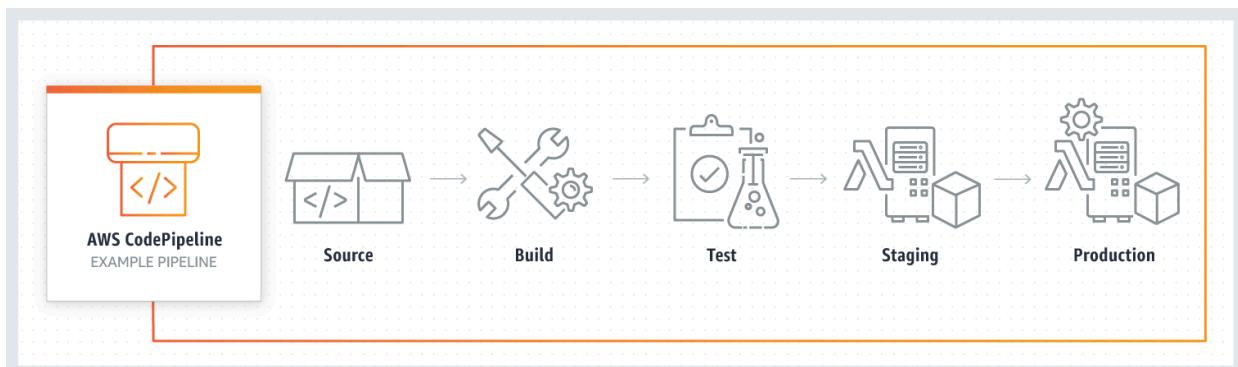
AWS CodeCommit - AWS CodeCommit is a fully-managed source control service that hosts secure Git-based repositories. It makes it easy for teams to collaborate on code in a secure and highly scalable ecosystem. CodeCommit eliminates the need to operate your own source control system or worry about scaling its infrastructure. It cannot be used to automate code deployment.

AWS CloudFormation - AWS CloudFormation allows you to use programming languages or a simple text file to model and provision, in an automated and secure manner, all the resources needed for your applications across all regions and accounts. It cannot be used to automate code deployment.

AWS CodePipeline - AWS CodePipeline is a continuous delivery service that enables you to model, visualize, and automate the steps required to release your software. With AWS CodePipeline, you model the full release process for building your code, deploying to pre-production environments, testing your application and releasing it to production.

AWS CodePipeline integrates with AWS services such as AWS CodeCommit, Amazon S3, AWS CodeBuild, AWS CodeDeploy, AWS Elastic Beanstalk, AWS CloudFormation, AWS OpsWorks, Amazon ECS, and AWS Lambda. To further elucidate, CodePipeline cannot by itself deploy the code, it can integrate with CodeDeploy for the actual deployment.

How AWS CodePipeline Works:



via - <https://aws.amazon.com/codepipeline/>

Reference:

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

Domain

Technology

Question 57Correct

An e-commerce company wants to store data from a recommendation engine in a database. As a Cloud Practitioner, which AWS service would you recommend to provide this functionality with the LEAST operational overhead for any scale?

Your answer is correct

Amazon DynamoDB

Amazon Simple Storage Service (Amazon S3)

Amazon Neptune

Amazon Relational Database Service (Amazon RDS)

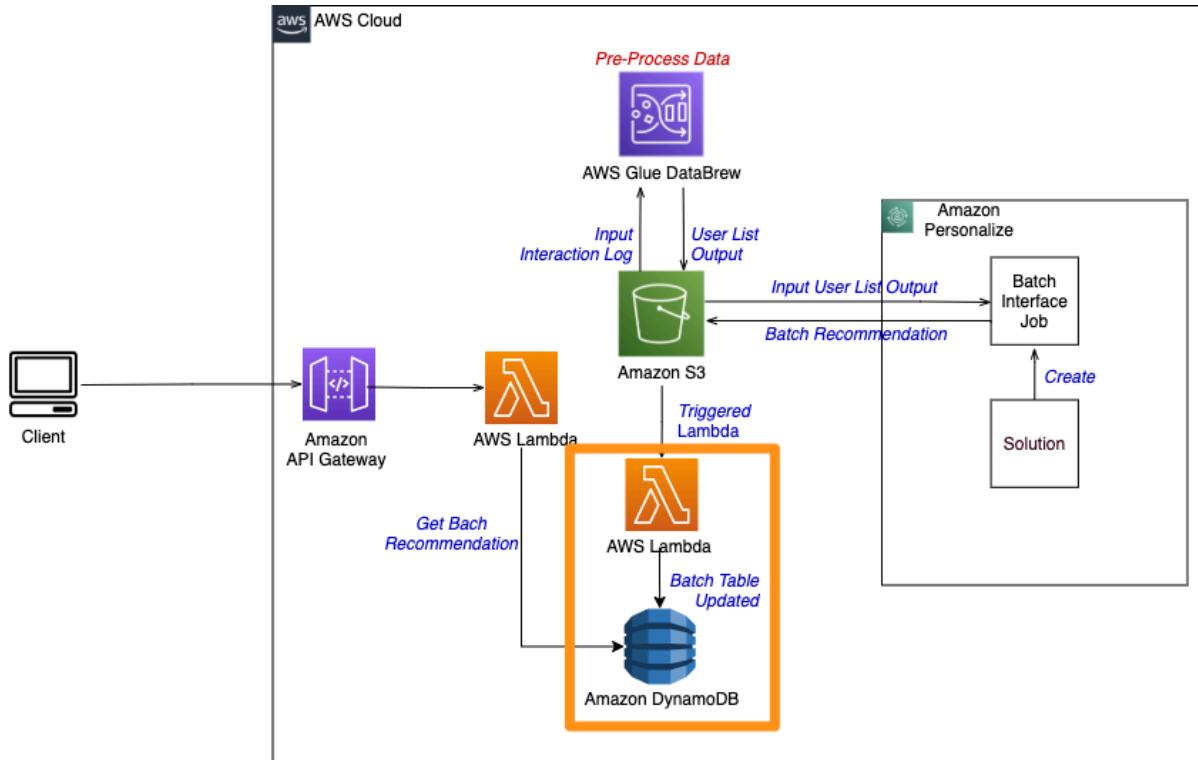
Overall explanation

Correct options:

Amazon DynamoDB

Amazon DynamoDB is a key-value and document database that delivers sub-millisecond performance at any scale. Amazon DynamoDB enables customers to offload the administrative burdens of operating and scaling distributed databases to AWS so that they don't have to worry about hardware provisioning, setup and configuration, throughput capacity planning, replication, software patching, or cluster scaling.

You can use Amazon DynamoDB to store recommendation results with the LEAST operational overhead for any scale.



via -

<https://catalog.us-east-1.prod.workshops.aws/workshops/ed82a5d4-6630-41f0-a6a1-9345898fa6ec/en-US/batch/dynamodb>

Incorrect options:

Amazon Relational Database Service (Amazon RDS) - Amazon Relational Database Service (Amazon RDS) is a relational database service from AWS. Amazon RDS is less operationally efficient than Amazon DynamoDB while building a highly scalable solution.

Amazon Simple Storage Service (Amazon S3) - Amazon Simple Storage Service (Amazon S3) is an object storage service and not a database service.

Amazon Neptune - Amazon Neptune is a fully managed database service built for the cloud that makes it easier to build and run graph applications. It's not the right fit to store recommendation results with the LEAST operational overhead for any scale.

Reference:

<https://catalog.us-east-1.prod.workshops.aws/workshops/ed82a5d4-6630-41f0-a6a1-9345898fa6ec/en-US/batch/dynamodb>

Domain

Technology

Question 58Correct

An organization maintains a separate Virtual Private Cloud (VPC) for each of its business units. Two units need to privately share data. Which is the most optimal way of privately sharing data between the two VPCs?

VPC Endpoint

AWS Direct Connect

Your answer is correct

VPC peering connection

AWS Site-to-Site VPN

Overall explanation

Correct option:

VPC peering connection

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately. Instances in either VPC can communicate with each other as if they are within the same network. You can create a VPC peering connection between your VPCs, with a VPC in another AWS account, or with a VPC in a different AWS Region.

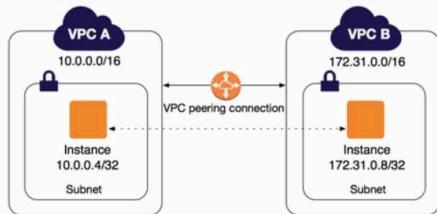
VPC Peering Overview:

What is VPC peering?

PDF

Amazon Virtual Private Cloud (Amazon VPC) enables you to launch AWS resources into a virtual network that you've defined.

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



AWS uses the existing infrastructure of a VPC to create a VPC peering connection; it is neither a gateway nor a VPN connection, and does not rely on a separate piece of physical hardware. There is no single point of failure for communication or a bandwidth bottleneck.

A VPC peering connection helps you to facilitate the transfer of data. For example, if you have more than one AWS account, you can peer the VPCs across those accounts to create a file sharing network. You can also use a VPC peering connection to allow other VPCs to access resources you have in one of your VPCs.

via - <https://docs.aws.amazon.com/vpc/latest/peering/what-is-vpc-peering.html>

Incorrect options:

AWS Site-to-Site VPN - AWS Site-to-Site VPN creates a secure connection between your data center or branch office and your AWS cloud resources. This connection goes over the public internet. Site to Site VPN cannot be used to interconnect VPCs.

AWS Direct Connect - AWS Direct Connect creates a dedicated private connection from a remote network to your VPC. This is a private connection and does not use the public internet. Takes at least a month to establish this connection. AWS Direct Connect cannot be used to interconnect VPCs.

VPC Endpoint - A VPC endpoint enables you to privately connect your VPC to supported AWS services and VPC endpoint services powered by AWS PrivateLink without requiring an internet gateway, NAT device, VPN connection, or AWS Direct Connect connection. You cannot connect two VPCs using a VPC endpoint.

Reference:

<https://docs.aws.amazon.com/vpc/latest/peering/what-is-vpc-peering.html>

Domain

Cloud Concepts

Question 59Correct

Which of the following are the best practices when using AWS Organizations? (Select TWO)

Your selection is correct

Restrict account privileges using Service Control Policies (SCP)

Disable AWS CloudTrail on several accounts

Never use tags for billing

Your selection is correct

Create AWS accounts per department

Do not use AWS Organizations to automate AWS account creation

Overall explanation

Correct options:

Create AWS accounts per department

Restrict account privileges using Service Control Policies (SCP)

AWS Organizations helps you centrally govern your environment as you grow and scale your workloads on AWS. Whether you are a growing startup or a large enterprise, AWS Organizations help you to centrally manage billing; control access, compliance, and security; and share resources across your AWS accounts.

Using AWS Organizations, you can automate account creation, create groups of accounts to reflect your business needs, and apply policies for these groups for governance. You can also simplify billing by setting up a single payment method for all of your AWS accounts. Through integrations with other AWS services, you can use AWS Organizations to define central configurations and resource sharing across accounts in your organization. AWS Organizations is available to all AWS customers at no additional charge.

You should create accounts per department based on regulatory restrictions (using Service Control Policies (SCP)) for better resource isolation, and to have separate per-account service limits.

AWS Organizations allows you to restrict what services and actions are allowed in your accounts. You can use the Service Control Policies (SCP) to apply permission guardrails on AWS Identity and Access Management (IAM) users and roles.

Incorrect options:

Never use tags for billing - You should use tags standards to categorize AWS resources for billing purposes.

Disable AWS CloudTrail on several accounts - You should enable AWS CloudTrail to monitor activity on all accounts for governance, compliance, risk, and auditing purposes.

Do not use AWS Organizations to automate AWS account creation - AWS Organizations helps you simplify IT operations by automating AWS account creation and management. The AWS Organizations APIs enable you to create new accounts programmatically and to add new accounts to a group. The policies attached to the group are automatically applied to the new account.

Reference:

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

Domain

Billing and Pricing

Question 60Correct

A unicorn startup is building an analytics application with support for a speech-based interface. The application will accept speech-based input from users and then convey results via speech. As a Cloud Practitioner, which solution would you recommend for the given use-case?

Your answer is correct

Use Amazon Transcribe to convert speech to text for downstream analysis. Then use Amazon Polly to convey the text results via speech

Use Amazon Polly to convert speech to text for downstream analysis. Then use Amazon Transcribe to convey the text results via speech

Use Amazon Polly to convert speech to text for downstream analysis. Then use Amazon Translate to convey the text results via speech

Use Amazon Translate to convert speech to text for downstream analysis. Then use Amazon Polly to convey the text results via speech

Overall explanation

Correct option:

Use Amazon Transcribe to convert speech to text for downstream analysis. Then use Amazon Polly to convey the text results via speech

You can use Amazon Transcribe to add speech-to-text capability to your applications. Amazon Transcribe uses a deep learning process called automatic speech recognition (ASR) to convert speech to text quickly and accurately. Amazon Transcribe can be used to transcribe customer service calls, to automate closed captioning and subtitling, and to generate metadata for media assets.

Amazon Transcribe Use-Cases:

Improving Customer Service	Captioning & Subtitling Workflows	Cataloging Audio Archives
By converting audio input into text, Amazon Transcribe helps you build text analytics applications that can search and analyze voice input. Customer contact centers can use Amazon Transcribe to transcribe calls, and mine the data for insights using other AWS services like Amazon Comprehend to extract meaning and intent from conversations.	Amazon Transcribe can help content producers and media distributors improve reach and accessibility by automatically generating time-stamped subtitles that can be displayed along with the video content. By combining this text with Amazon Translate , you can also easily localize videos.	You can use Amazon Transcribe to transcribe audio and video assets into fully searchable archives for compliance monitoring and risk management. Convert audio to text and use Amazon Elasticsearch to index and search across your audio/video library.

via - <https://aws.amazon.com/transcribe/>

You can use Amazon Polly to turn text into lifelike speech thereby allowing you to create applications that talk. Polly's Text-to-Speech (TTS) service uses advanced deep learning technologies to synthesize natural sounding human speech.

Amazon Polly Benefits:

Natural sounding voices	Store & redistribute speech	Real-time streaming
Amazon Polly provides dozens of languages and a wide selection of natural-sounding male and female voices. Amazon Polly's fluid pronunciation of text enables you to deliver high-quality voice output for a global audience.	Amazon Polly allows for unlimited replays of generated speech without any additional fees. You can create speech files in standard formats like MP3 and OGG, and serve them from the cloud or locally with apps or devices for offline playback.	Delivering lifelike voices and conversational user experiences requires consistently fast response times. When you send text to Amazon Polly's API, it returns the audio to your application as a stream so you can play the voices immediately.
Customize & control speech output	Low cost	
Modify Amazon Polly voices to best suit your needs – Amazon Polly supports lexicons and SSML tags which enable you to control aspects of speech, such as pronunciation, volume, pitch, speed rate, etc.	Amazon Polly's pay-as-you-go pricing, low cost per character converted, and unlimited replays make it a cost-effective way to voice your applications.	

via - <https://aws.amazon.com/polly/>

Amazon Translate is used for language translation. Amazon Translate uses neural machine translation via deep learning models to deliver more accurate and more natural-sounding translation than traditional statistical and rule-based translation algorithms.

Incorrect options:

Use Amazon Polly to convert speech to text for downstream analysis. Then use Amazon Transcribe to convey the text results via speech - Amazon Polly cannot be used to convert speech to text, so this option is incorrect.

Use Amazon Translate to convert speech to text for downstream analysis. Then use Amazon Polly to convey the text results via speech - Amazon Translate cannot convert speech to text, so this option is incorrect.

Use Amazon Polly to convert speech to text for downstream analysis. Then use Amazon Translate to convey the text results via speech - Amazon Polly cannot be used to convert speech to text, so this option is incorrect.

References:

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

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

Domain

Technology

Question 61Correct

A company would like to separate cost for AWS services by the department for cost allocation. Which of the following is the simplest way to achieve this task?

Create one account for all departments and share this account

Create different accounts for different departments

Your answer is correct

Create tags for each department

Create different virtual private cloud (VPCs) for different departments

Overall explanation

Correct option:

Create tags for each department

You can assign metadata to your AWS resources in the form of tags. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources. You can create tags to categorize resources by purpose, owner, environment, or other criteria.

Typically, you use business tags such as cost center/business unit, customer, or project to associate AWS costs with traditional cost-allocation dimensions. But a cost allocation report can include any tag. This lets you associate costs with technical or security dimensions, such as specific applications, environments, or compliance programs.

Example of tagging for cost optimization:

Total Cost	user:Owner	user:Stack	user:Cost Center	user:Application
0.95	DbAdmin	Test	80432	Widget2
0.01	DbAdmin	Test	80432	Widget2
3.84	DbAdmin	Prod	80432	Widget2
6.00	DbAdmin	Test	78925	Widget1
234.63	SysEng	Prod	78925	Widget1
0.73	DbAdmin	Test	78925	Widget1
0.00	DbAdmin	Prod	80432	Portal
2.47	DbAdmin	Prod	78925	Portal

via - https://docs.aws.amazon.com/general/latest/gr/aws_tagging.html

Incorrect options:

Create different accounts for different departments - Users can belong to several departments. Therefore, having different accounts for different departments would imply some users having several accounts. This is contrary to the security best practice: one physical user = one account. Also, it is much simpler to set up tags for tracking costs for each department.

Create one account for all departments and share this account - Sharing accounts is not a security best practice, and is not recommended.

Create different virtual private cloud (VPCs) for different departments - Creating different VPCs will not help with separating costs.

Reference:

https://docs.aws.amazon.com/general/latest/gr/aws_tagging.html

Domain

Billing and Pricing

Question 62Correct

Which of the following are the advantages of using the AWS Cloud? (Select TWO)

Trade operational expense for capital expense

Your selection is correct

Increase speed and agility

Your selection is correct

Stop guessing about capacity

AWS is responsible for security in the cloud

Limited scaling

Overall explanation

Correct options:

Increase speed and agility

Stop guessing about capacity

Exam Alert:

Please check out the following six advantages of Cloud Computing. You would certainly be asked questions on the advantages of Cloud Computing compared to a traditional on-premises setup:

Six Advantages of Cloud Computing

[PDF](#) | [RSS](#)

- **Trade capital expense for variable expense** – Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can pay only when you consume computing resources, and pay only for how much you consume.
- **Benefit from massive economies of scale** – By using cloud computing, you can achieve a lower variable cost than you can get on your own. Because usage from hundreds of thousands of customers is aggregated in the cloud, providers such as AWS can achieve higher economies of scale, which translates into lower pay-as-you-go prices.
- **Stop guessing capacity** – Eliminate guessing on your infrastructure capacity needs. When you make a capacity decision prior to deploying an application, you often end up either sitting on expensive idle resources or dealing with limited capacity. With cloud computing, these problems go away. You can access as much or as little capacity as you need, and scale up and down as required with only a few minutes' notice.
- **Increase speed and agility** – In a cloud computing environment, new IT resources are only a click away, which means that you reduce the time to make those resources available to your developers from weeks to just minutes. This results in a dramatic increase in agility for the organization, since the cost and time it takes to experiment and develop is significantly lower.
- **Stop spending money running and maintaining data centers** – Focus on projects that differentiate your business, not the infrastructure. Cloud computing lets you focus on your own customers, rather than on the heavy lifting of racking, stacking, and powering servers.
- **Go global in minutes** – Easily deploy your application in multiple regions around the world with just a few clicks. This means you can provide lower latency and a better experience for your customers at minimal cost.

via -

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

Incorrect options:

Limited scaling - Scaling is not limited in the cloud. You can access as much or as little capacity as you need, and scale up and down as required with only a few minutes' notice.

AWS is responsible for security in the cloud - AWS is responsible for the security OF the cloud, which means AWS is responsible for protecting the infrastructure that runs all the services offered in the AWS Cloud.

Trade operational expense for capital expense - In the cloud, you trade capital expense (CAPEX) for the operational expense (OPEX). Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can pay only when you consume computing resources, and pay only for how much you consume.

Reference:

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

Domain

Cloud Concepts

Question 63Correct

AWS Compute Optimizer delivers recommendations for which of the following AWS resources? (Select two)

AWS Lambda functions, Amazon Simple Storage Service (Amazon S3)

Your selection is correct

Amazon Elastic Compute Cloud (Amazon EC2) instances, Amazon EC2 Auto Scaling groups

Amazon Elastic Compute Cloud (Amazon EC2) instances, Amazon Elastic File System (Amazon EFS)

Amazon Elastic File System (Amazon EFS), AWS Lambda functions

Your selection is correct

Amazon Elastic Block Store (Amazon EBS), AWS Lambda functions

Overall explanation

Correct options:

Amazon Elastic Compute Cloud (Amazon EC2) instances, Amazon EC2 Auto Scaling groups

Amazon Elastic Block Store (Amazon EBS), AWS Lambda functions

AWS Compute Optimizer helps you identify the optimal AWS resource configurations, such as Amazon EC2 instance types, Amazon EBS volume configurations, and AWS Lambda function memory sizes, using machine learning to analyze historical utilization metrics. AWS Compute Optimizer delivers recommendations for selected types of EC2 instances, EC2 Auto Scaling groups, Amazon EBS volumes, and AWS Lambda functions.

AWS Compute Optimizer calculates an individual performance risk score for each resource dimension of the recommended instance, including CPU, memory, EBS throughput, EBS IOPS, disk throughput, disk throughput, network throughput, and network packets per second (PPS).

AWS Compute Optimizer provides EC2 instance type and size recommendations for EC2 Auto Scaling groups with a fixed group size, meaning desired, minimum, and maximum are all set to the same value and have no scaling policy attached.

AWS Compute Optimizer supports IOPS and throughput recommendations for General Purpose (SSD) (gp3) volumes and IOPS recommendations for Provisioned IOPS (io1 and io2) volumes.

AWS Compute Optimizer helps you optimize two categories of Lambda functions. The first category includes Lambda functions that may be over-provisioned in memory sizes. The second category includes compute-intensive Lambda functions that may benefit from additional CPU power.

Incorrect options:

Amazon Elastic Compute Cloud (Amazon EC2) instances, Amazon Elastic File System (Amazon EFS)

Amazon Elastic File System (Amazon EFS), AWS Lambda functions

AWS Lambda functions, Amazon Simple Storage Service (Amazon S3)

AWS Compute Optimizer does not provide optimization recommendations for S3 and EFS, so these options are incorrect.

Reference:

<https://aws.amazon.com/compute-optimizer/faqs/>

Domain

Technology

Question 64Correct

Which service gives a personalized view of the status of the AWS services that are part of your Cloud architecture so that you can quickly assess the impact on your business when AWS service(s) are experiencing issues?

Your answer is correct

AWS Health - Your Account Health Dashboard

Amazon CloudWatch

Amazon Inspector

AWS Health - Service Health Dashboard

Overall explanation

Correct option:

AWS Health - Your Account Health Dashboard

AWS Health - Your Account Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you.

With AWS Health - Your Account Health Dashboard, alerts are triggered by changes in the health of your AWS resources, giving you event visibility, and guidance to help quickly diagnose and resolve issues.

You can check on this page <https://phd.aws.amazon.com/phd/home> to get current status information.

Incorrect options:

Amazon Inspector - 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. Amazon Inspector cannot be used to prevent Distributed Denial-of-Service (DDoS) attack. It cannot provide the status of your AWS resources.

Amazon CloudWatch - Amazon CloudWatch is a monitoring and observability service built for DevOps engineers, developers, site reliability engineers (SREs), and IT managers. CloudWatch provides data and actionable insights to monitor applications, respond to system-wide performance changes, optimize resource utilization, and get a unified view of operational health. This is an excellent service for building Resilient systems. Think resource performance monitoring, events, and alerts; think CloudWatch. It cannot provide the status of your AWS resources.

AWS Health - Service Health Dashboard - The AWS Health - Service Health Dashboard is the single place to learn about the availability and operations of AWS services. You

can view the overall status of AWS services, and you can sign in to view personalized communications about your particular AWS account or organization.

You can check on this page <https://health.aws.amazon.com/health/status> to get current status information.

Exam Alert:

While the AWS Health - Service Health Dashboard displays the general status of AWS services; the AWS Health - Your Account Health Dashboard gives you a personalized view of the performance and availability of the AWS services underlying your AWS resources.

Reference:

<https://docs.aws.amazon.com/health/latest/ug/what-is-aws-health.html>

Domain

Cloud Concepts

Question 65Incorrect

A start-up would like to quickly deploy a popular technology on AWS. As a Cloud Practitioner, which AWS tool would you use for this task?

Correct answer

AWS Partner Solutions (formerly Quick Starts)

Your answer is incorrect

AWS CodeDeploy

AWS Forums

AWS Whitepapers

Overall explanation

Correct option:

AWS Partner Solutions (formerly Quick Starts)

AWS Partner Solutions are automated reference deployments built by Amazon Web Services (AWS) solutions architects and AWS Partners. Partner Solutions help you deploy popular technologies to AWS according to AWS best practices. You can reduce

hundreds of manual procedures to a few steps and start using your environment within minutes.

AWS Partner Solutions are automated reference deployments for key workloads on the AWS Cloud. Each Partner Solution launches, configures, and runs the AWS compute, network, storage, and other services required to deploy a specific workload on AWS, using AWS best practices for security and availability.

Incorrect options:

AWS Forums - AWS Forums is an AWS community platform where people can help each other. It is not used to deploy technologies on AWS.

AWS CodeDeploy - AWS CodeDeploy is a service that automates code deployments to any instance, including Amazon EC2 instances and instances running on-premises. It is not suited to rapidly deploy popular technologies on AWS ready to be used immediately.

AWS Whitepapers - AWS Whitepapers are technical content authored by AWS and the AWS community to expand your knowledge of the cloud. They include technical whitepapers, technical guides, reference material, and reference architecture diagrams. You can find useful content for your deployment, but it is not a service that will deploy technologies.

Reference:

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

Domain

Technology