

**Exam Code: CLF-C02**

**Exam Name: AWS Certified Cloud Practitioner**

## Exam A

### QUESTION 1

Which AWS service can a company use to perform complex analytical queries?

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

**Correct Answer: C**

**Section:**

**Explanation:**

Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the cloud. You can start with just a few hundred gigabytes of data and scale to a petabyte or more. This enables you to use your data to acquire new insights for your business and customers. Amazon Redshift is designed for complex analytical queries that often involve aggregations and joins across very large tables. Amazon Redshift supports standard SQL and integrates with many existing business intelligence tools<sup>1</sup>.

### QUESTION 2

A company wants to track its AWS account's service costs. The company also wants to receive notifications when costs are forecasted to reach a specific level. Which AWS service or tool provides this functionality?

- A. AWS Budgets
- B. AWS Cost Explorer
- C. Savings Plans
- D. AWS Billing Conductor

**Correct Answer: A**

**Section:**

**Explanation:**

AWS Budgets gives you the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. You can also use AWS Budgets to set reservation utilization or coverage targets and receive alerts when your utilization drops below the threshold you define<sup>2</sup>.

### QUESTION 3

An ecommerce company has migrated its IT infrastructure from an on-premises data center to the AWS Cloud. Which AWS service is used to track, record, and audit configuration changes made to AWS resources?

- A. AWS Shield
- B. AWS Config
- C. AWS IAM
- D. Amazon Inspector

**Correct Answer: B**

**Section:**

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**Explanation:**

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

**QUESTION 4**

A company needs to test a new application that was written in Python. The code will activate when new images are stored in an Amazon S3 bucket. The application will put a watermark on each image and then will store the images in a different S3 bucket.

Which AWS service should the company use to conduct the test with the LEAST amount of operational overhead?

- A. Amazon EC2
- B. AWS CodeDeploy
- C. AWS Lambda
- D. Amazon Lightsail

**Correct Answer: C****Section:****Explanation:**

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. You pay only for the compute time you consume - there is no charge when your code is not running. With AWS Lambda, you can run code for virtually any type of application or backend service - all with zero administration. AWS Lambda runs your code on a highavailability compute infrastructure and performs all of the administration of the compute resources, including server and operating system maintenance, capacity provisioning and automatic scaling, code monitoring and logging

**QUESTION 5**

Which of the following are benefits that a company receives when it moves an on-premises production workload to AWS? (Select TWO.)

- A. AWS trains the company's staff on the use of all the AWS services.
- B. AWS manages all security in the cloud.
- C. AWS offers free support from technical account managers (TAMs).
- D. AWS offers high availability.
- E. AWS provides economies of scale.

**Correct Answer: D, E****Section:****Explanation:**

The correct answers are D and E because AWS offers high availability and AWS provides economies of scale are benefits that a company receives when it moves an on-premises production workload to AWS. High availability means that AWS has a global infrastructure that allows customers to deploy their applications and data across multiple regions and availability zones. This increases the fault tolerance and resilience of their applications and reduces the impact of failures. Economies of scale means that AWS can achieve lower variable costs than customers can get on their own. This allows customers to pay only for the resources they use and scale up or down as needed. The other options are incorrect because they are not benefits that a company receives when it moves an on-premises production workload to AWS. AWS trains the company's staff on the use of all the AWS services is not a benefit that a company receives when it moves an on-premises production workload to AWS. AWS does provide various learning resources and training courses for customers, but it does not train the company's staff on the use of all the AWS services. AWS manages all security in the cloud is not a benefit that a company receives when it moves an on-premises production workload to AWS. AWS is responsible for the security of the cloud, but the customer is responsible for the security in the cloud. AWS offers free support from technical account managers (TAMs) is not a benefit that a company receives when it moves an on-premises production workload to AWS. AWS does offer support from TAMs, but only for customers who have the AWS Enterprise Support plan, which is not free.

Reference: What is Cloud Computing?, [AWS Shared Responsibility Model], [AWS Support Plans]

**QUESTION 6**

A company needs a content delivery network that provides secure delivery of data, videos, applications, and APIs to users globally with low latency and high transfer speeds. Which AWS service meets these requirements?

- A. Amazon CloudFront
- B. Elastic Load Balancing
- C. Amazon S3
- D. Amazon Elastic Transcoder

**Correct Answer: A**

**Section:**

**Explanation:**

The correct answer is A because Amazon CloudFront is an AWS service that provides secure delivery of data, videos, applications, and APIs to users globally with low latency and high transfer speeds. Amazon CloudFront is a fast content delivery network (CDN) that integrates with other AWS services, such as Amazon S3, Amazon EC2, AWS Lambda, and AWS Shield. Amazon CloudFront delivers content through a worldwide network of edge locations that are located close to the end users. The other options are incorrect because they are not AWS services that provide secure delivery of data, videos, applications, and APIs to users globally with low latency and high transfer speeds. Elastic Load Balancing is an AWS service that distributes incoming traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses. Amazon S3 is an AWS service that provides object storage for data of any size and type. Amazon Elastic Transcoder is an AWS service that converts media files from their original source format into different formats that will play on various devices. Reference: Amazon CloudFront FAQs

#### QUESTION 7

An application is running on multiple Amazon EC2 instances. The company wants to make the application highly available by configuring a load balancer with requests forwarded to the EC2 instances based on URL paths.

Which AWS load balancer will meet these requirements and take the LEAST amount of effort to deploy?

- A. Network Load Balancer
- B. Application Load Balancer
- C. AWS OpsWorks Load Balancer
- D. Custom Load Balancer on Amazon EC2

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**Correct Answer: B**

**Section:**

**Explanation:**

The correct answer is B because Application Load Balancer is an AWS load balancer that will meet the requirements and take the least amount of effort to deploy. Application Load Balancer is a type of Elastic Load Balancing that operates at the application layer (layer 7) of the OSI model and routes requests to targets based on the content of the request. Application Load Balancer supports advanced features, such as path-based routing, host-based routing, and HTTP header-based routing.

The other options are incorrect because they are not AWS load balancers that will meet the requirements and take the least amount of effort to deploy. Network Load Balancer is a type of Elastic Load Balancing that operates at the transport layer (layer 4) of the OSI model and routes requests to targets based on the destination IP address and port. Network Load Balancer does not support path-based routing. AWS OpsWorks Load Balancer is not an AWS load balancer, but rather a feature of AWS OpsWorks that enables users to attach an Elastic Load Balancing load balancer to a layer of their stack. Custom Load Balancer on Amazon EC2 is not an AWS load balancer, but rather a user-defined load balancer that runs on an Amazon EC2 instance. Custom Load Balancer on Amazon EC2 requires more effort to deploy and maintain than an AWS load balancer. Reference: Elastic Load Balancing

#### QUESTION 8

A large company has a workload that requires hardware to remain on premises. The company wants to use the same management and control plane services that it currently uses on AWS.

Which AWS service should the company use to meet these requirements?

- A. AWS Device Farm
- B. AWS Fargate

- C. AWS Outposts
- D. AWS Ground Station

**Correct Answer: C**

**Section:**

**Explanation:**

The correct answer is C because AWS Outposts is an AWS service that enables the company to meet the requirements. AWS Outposts is a fully managed service that extends AWS infrastructure, services, APIs, and tools to virtually any datacenter, co-location space, or on-premises facility. AWS Outposts allows customers to run their workloads on the same hardware and software that AWS uses in its cloud, while maintaining local access and control. The other options are incorrect because they are not AWS services that enable the company to meet the requirements. AWS Device Farm is an AWS service that enables customers to test their mobile and web applications on real devices in the AWS Cloud. AWS Fargate is an AWS service that enables customers to run containers without having to manage servers or clusters. AWS Ground Station is an AWS service that enables customers to communicate with satellites and downlink data from orbit. Reference: AWS Outposts FAQs

#### QUESTION 9

A company needs to use dashboards and charts to analyze insights from business data. Which AWS service will provide the dashboards and charts for these insights?

- A. Amazon Macie
- B. Amazon Aurora
- C. Amazon QuickSight
- D. AWS CloudTrail

**Correct Answer: C**

**Section:**

**Explanation:**

The correct answer is C because Amazon QuickSight is an AWS service that will provide the dashboards and charts for the insights from business data. Amazon QuickSight is a fully managed, scalable, and serverless business intelligence service that enables users to create and share interactive dashboards and charts. Amazon QuickSight can connect to various data sources, such as Amazon S3, Amazon RDS, Amazon Redshift, and more. Amazon QuickSight also provides users with machine learning insights, such as anomaly detection, forecasting, and natural language narratives.

The other options are incorrect because they are not AWS services that will provide the dashboards and charts for the insights from business data. Amazon Macie is an AWS service that helps users discover, classify, and protect sensitive data stored in Amazon S3. Amazon Aurora is an AWS service that provides a relational database that is compatible with MySQL and PostgreSQL. AWS CloudTrail is an AWS service that enables users to track user activity and API usage across their AWS account.

Reference: Amazon QuickSight FAQs

#### QUESTION 10

When a user wants to utilize their existing per-socket, per-core, or per-virtual machine software licenses for a Microsoft Windows server running on AWS, which Amazon EC2 instance type is required?

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

**Correct Answer: C**

**Section:**

**Explanation:**

The correct answer is C because Dedicated Hosts are Amazon EC2 instances that are required when a user wants to utilize their existing per-socket, per-core, or per-virtual machine software licenses for a Microsoft Windows server running on AWS. Dedicated Hosts are physical servers that are dedicated to a single customer. Dedicated Hosts allow customers to use their existing server-bound software licenses, such as Windows Server, SQL Server, and SUSE Linux Enterprise Server, subject to their license terms. The other options are incorrect because they are not Amazon EC2 instances that are required when a user wants to utilize their existing per-socket, per-core, or per-virtual machine software licenses for a Microsoft Windows server running on AWS. Spot Instances are spare Amazon EC2 instances that are available at up to 90%

discount compared to On-Demand prices. Spot Instances are suitable for stateless, fault-tolerant, and flexible workloads that can recover from interruptions easily. Dedicated Instances are Amazon EC2 instances that run on hardware that is dedicated to a single customer, but not to a specific physical server. Dedicated Instances do not allow customers to use their existing server-bound software licenses. Reserved Instances are Amazon EC2 instances that are reserved for a specific period of time (one or three years) in exchange for a lower hourly rate. Reserved Instances are suitable for steady-state or predictable workloads that run for a long duration. Reserved Instances do not allow customers to use their existing server-bound software licenses. Reference: Dedicated Hosts, Amazon EC2 Instance Purchasing Options

#### QUESTION 11

Which AWS service should a cloud engineer use to view API calls to AWS services?

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

**Correct Answer: B**

**Section:**

**Explanation:**

The correct answer is B because AWS CloudTrail is an AWS service that a cloud engineer can use to view API calls to AWS services. AWS CloudTrail is a service that enables customers to track user activity and API usage across their AWS account. AWS CloudTrail records the details of every API call made to AWS services, such as the identity of the caller, the time of the call, the source IP address of the caller, the parameters and responses of the call, and more. Customers can use AWS CloudTrail to audit, monitor, and troubleshoot their AWS resources and actions. The other options are incorrect because they are not AWS services that a cloud engineer can use to view API calls to AWS services.

Amazon CloudWatch is an AWS service that enables customers to collect, analyze, and visualize metrics, logs, and events from their AWS resources and applications. AWS Config is an AWS service that enables customers to assess, audit, and evaluate the configurations of their AWS resources. AWS Artifact is an AWS service that provides customers with on-demand access to AWS compliance reports and select online agreements. Reference: AWS CloudTrail FAQs

#### QUESTION 12

A company uses Amazon Workspaces. What can a user accomplish using AWS CloudTrail?

- A. Generate an IAM user credentials report.
- B. Record API calls made to AWS services.
- C. Assess the compliance of AWS resource configurations with policies and guidelines.
- D. Ensure that Amazon EC2 instances are patched with the latest security updates.

**Correct Answer: B**

**Section:**

**Explanation:**

AWS CloudTrail is an AWS service that enables users to accomplish the task of recording API calls made to AWS services. AWS CloudTrail is a service that tracks user activity and API usage across the AWS account. AWS CloudTrail records the details of every API call made to AWS services, such as the identity of the caller, the time of the call, the source IP address of the caller, the parameters and responses of the call, and more. Users can use AWS CloudTrail to audit, monitor, and troubleshoot their AWS resources and actions. The other options are incorrect because they are not tasks that users can accomplish using AWS CloudTrail. Generating an IAM user credentials report is a task that users can accomplish using IAM, which is an AWS service that enables users to manage access and permissions to AWS resources and services. Assessing the compliance of AWS resource configurations with policies and guidelines is a task that users can accomplish using AWS Config, which is an AWS service that enables users to assess, audit, and evaluate the configurations of their AWS resources. Ensuring that Amazon EC2 instances are patched with the latest security updates is a task that users can accomplish using AWS Systems Manager, which is an AWS service that enables users to automate operational tasks, manage configuration and compliance, and monitor system health and performance. Reference: AWS CloudTrail FAQs

#### QUESTION 13

A company stores data in an Amazon S3 bucket. The company must control who has permission to read, write, or delete objects that the company stores in the S3 bucket. Which task is the responsibility of AWS, according to the AWS shared responsibility model?

- A. Set up multi-factor authentication (MFA) for each Workspaces user account.
- B. Ensure the environmental safety and security of the AWS infrastructure that hosts Workspaces.
- C. Provide security for Workspaces user accounts through AWS Identity and Access Management (IAM).
- D. Configure AWS CloudTrail to log API calls and user activity.

**Correct Answer: B**

**Section:**

**Explanation:**

The correct answer is B because ensuring the environmental safety and security of the AWS infrastructure that hosts Workspaces is the responsibility of AWS, according to the AWS shared responsibility model. The AWS shared responsibility model is a framework that defines the division of responsibilities between AWS and the customer for security and compliance. AWS is responsible for the security of the cloud, which includes the global infrastructure, such as the regions, availability zones, and edge locations; the hardware, software, networking, and facilities that run the AWS services; and the virtualization layer that separates the customer instances and storage. The customer is responsible for the security in the cloud, which includes the customer data, the guest operating systems, the applications, the identity and access management, the firewall configuration, and the encryption. The other options are incorrect because they are the responsibility of the customer, according to the AWS shared responsibility model. Setting up multi-factor authentication (MFA) for each Workspaces user account, providing security for Workspaces user accounts through AWS Identity and Access Management (IAM), configuring AWS CloudTrail to log API calls and user activity, and encrypting data at rest and in transit are all tasks that the customer has to perform to secure their Workspaces environment. Reference: AWS Shared Responsibility Model, Amazon WorkSpaces Security

#### QUESTION 14

Which database engine is compatible with Amazon RDS?

- A. Apache Cassandra
- B. MongoDB
- C. Neo4j
- D. PostgreSQL

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**Correct Answer: D**

**Section:**

**Explanation:**

Amazon RDS supports six database engines: Amazon Aurora, MySQL, MariaDB, PostgreSQL, Oracle, and SQL Server. Apache Cassandra, MongoDB, and Neo4j are not compatible with Amazon RDS. Therefore, the correct answer is D. You can learn more about Amazon RDS and its supported database engines from this page.

#### QUESTION 15

A company needs to run code in response to an event notification that occurs when objects are uploaded to an Amazon S3 bucket.

Which AWS service will integrate directly with the event notification?

- A. AWS Lambda
- B. Amazon EC2
- C. Amazon Elastic Container Registry (Amazon ECR)
- D. AWS Elastic Beanstalk

**Correct Answer: A**

**Section:**

**Explanation:**

AWS Lambda is a service that lets you run code without provisioning or managing servers. You can use Lambda to process event notifications from Amazon S3 when objects are uploaded or deleted.

Lambda integrates directly with the event notification and invokes your code automatically.

Therefore, the correct answer is A.

**QUESTION 16**

A company wants to centrally manage security policies and billing services within a multi-account AWS environment. Which AWS service should the company use to meet these requirements?

- A. AWS Identity and Access Management (IAM)
- B. AWS Organizations
- C. AWS Resource Access Manager (AWS RAM)
- D. AWS Config

**Correct Answer: B**

**Section:**

**Explanation:**

AWS Organizations is a service that helps you centrally manage and govern your environment as you grow and scale your AWS resources. You can use AWS Organizations to create groups of accounts and apply policies to them. You can also use AWS Organizations to consolidate billing for multiple accounts. Therefore, the correct answer is B. You can learn more about AWS Organizations and its features from this page.

**QUESTION 17**

What are the characteristics of Availability Zones? (Select TWO.)

- A. All Availability Zones in an AWS Region are interconnected with high-bandwidth, low-latency networking
- B. Availability Zones are physically separated by a minimum of distance of 150 km (100 miles).
- C. All traffic between Availability Zones is encrypted.
- D. Availability Zones within an AWS Region share redundant power, networking, and connectivity.
- E. Every Availability Zone contains a single data center.

**Correct Answer: A, D**

**Section:**

**Explanation:**

Availability Zones are physically separate locations within an AWS Region that are engineered to be isolated from failures. Each Availability Zone has independent power, cooling, and physical security, and is connected to other Availability Zones in the same Region by a low-latency network. Therefore, the correct answers are A and D. You can learn more about Availability Zones and their characteristics from this page.

**QUESTION 18**

Which AWS Well-Architected Framework concept represents a system's ability to remain functional when the system encounters operational problems?

- A. Consistency
- B. Elasticity
- C. Durability
- D. Latency

**Correct Answer: B**

**Section:**

**Explanation:**

The AWS Well-Architected Framework is a set of best practices and guidelines for designing and operating systems in the cloud. The framework consists of five pillars: operational excellence, security, reliability, performance efficiency, and cost optimization. The concept of elasticity represents a system's ability to adapt to changes in demand by scaling resources up or down automatically. Therefore, the correct answer is B. You can learn more about the AWS Well-Architected Framework and its pillars from this page.

**QUESTION 19**

Which AWS service or tool does AWS Control Tower use to create resources?



- A. AWS CloudFormation
- B. AWS Trusted Advisor
- C. AWS Directory Service
- D. AWS Cost Explorer

**Correct Answer: A**

**Section:**

**Explanation:**

AWS Control Tower uses AWS CloudFormation to create resources in your landing zone. AWS CloudFormation is a service that helps you model and set up your AWS resources using templates.

AWS Control Tower supports creating AWS::ControlTower::EnabledControl resources in AWS CloudFormation. Therefore, the correct answer is A. You can learn more about AWS Control Tower and AWS CloudFormation from this page.

#### QUESTION 20

What are some advantages of using Amazon EC2 instances to host applications in the AWS Cloud instead of on premises? (Select TWO.)

- A. EC2 includes operating system patch management
- B. EC2 integrates with Amazon VPC, AWS CloudTrail, and AWS Identity and Access Management (IAM)
- C. EC2 has a 100% service level agreement (SLA).
- D. EC2 has a flexible, pay-as-you-go pricing model.
- E. EC2 has automatic storage cost optimization.

**Correct Answer: B, D**

**Section:**

**Explanation:**

Some of the advantages of using Amazon EC2 instances to host applications in the AWS Cloud instead of on premises are:

EC2 integrates with Amazon VPC, AWS CloudTrail, and AWS Identity and Access Management (IAM).

Amazon VPC lets you provision a logically isolated section of the AWS Cloud where you can launch AWS resources in a virtual network that you define. AWS CloudTrail enables governance, compliance, operational auditing, and risk auditing of your AWS account. AWS IAM enables you to manage access to AWS services and resources securely. Therefore, the correct answer is B. You can learn more about Amazon EC2 and its integration with other AWS services from this page.

EC2 has a flexible, pay-as-you-go pricing model. You only pay for the compute capacity you use, and you can scale up and down as needed. You can also choose from different pricing options, such as On-Demand, Savings Plans, Reserved Instances, and Spot Instances, to optimize your costs.

Therefore, the correct answer is D. You can learn more about Amazon EC2 pricing from this page.

The other options are incorrect because:

EC2 does not include operating system patch management. You are responsible for managing and maintaining your own operating systems on EC2 instances. You can use AWS Systems Manager to automate common maintenance tasks, such as applying patches, or use Amazon EC2 Image Builder to create and maintain secure images. Therefore, the incorrect answer is A.

EC2 does not have a 100% service level agreement (SLA). The EC2 SLA guarantees 99.99% availability for each EC2 Region, not for each individual instance. Therefore, the incorrect answer is C.

EC2 does not have automatic storage cost optimization. You are responsible for choosing the right storage option for your EC2 instances, such as Amazon Elastic Block Store (EBS) or Amazon Elastic File System (EFS), and monitoring and optimizing your storage costs. You can use AWS Cost Explorer or

AWS Trusted Advisor to analyze and reduce your storage spending. Therefore, the incorrect answer is E.

#### QUESTION 21

Which option is an advantage of AWS Cloud computing that minimizes variable costs?

- A. High availability
- B. Economies of scale

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- C. Global reach
- D. Agility

**Correct Answer: B**

**Section:**

**Explanation:**

One of the advantages of AWS Cloud computing is that it minimizes variable costs by leveraging economies of scale. This means that AWS can achieve lower costs per unit of computing resources by spreading the fixed costs of building and maintaining data centers over a large number of customers.

As a result, AWS can offer lower and more predictable prices to its customers, who only pay for the resources they consume. Therefore, the correct answer is B. You can learn more about AWS pricing and economies of scale from this page.

#### **QUESTION 22**

Which pillar of the AWS Well-Architected Framework focuses on the ability to run workloads effectively, gain insight into operations, and continuously improve supporting processes and procedures?

- A. Cost optimization
- B. Reliability
- C. Operational excellence
- D. Performance efficiency

**Correct Answer: C**

**Section:**

**Explanation:**

The AWS Well-Architected Framework is a set of best practices and guidelines for designing and operating systems in the cloud. The framework consists of five pillars: operational excellence, security, reliability, performance efficiency, and cost optimization. The operational excellence pillar focuses on the ability to run workloads effectively, gain insight into operations, and continuously improve supporting processes and procedures. Therefore, the correct answer is C. You can learn more about the AWS Well-Architected Framework and its pillars from this page.

#### **QUESTION 23**

Which benefit is included with an AWS Enterprise Support plan?

- A. AWS Partner Network (APN) support at no cost
- B. Designated support from an AWS technical account manager (TAM)
- C. On-site support from AWS engineers
- D. AWS managed compliance as code with AWS Config

**Correct Answer: B**

**Section:**

**Explanation:**

AWS offers different support plans to meet the needs of different customers. The AWS Enterprise Support plan is the highest level of support that provides customers with concierge-like service, where the main focus is helping them achieve their outcomes and find success in the cloud. One of the benefits of the AWS Enterprise Support plan is that customers get designated support from an AWS technical account manager (TAM), who provides consultative architectural and operational guidance based on their applications and use cases. Therefore, the correct answer is B. You can learn more about AWS support plans and their benefits from this page.

#### **QUESTION 24**

A company plans to migrate to AWS and wants to create cost estimates for its AWS use cases.

Which AWS service or tool can the company use to meet these requirements?

- A. AWS Pricing Calculator
- B. Amazon CloudWatch
- C. AWS Cost Explorer
- D. AWS Budgets

**Correct Answer: A**

**Section:**

**Explanation:**

AWS Pricing Calculator is a web-based planning tool that customers can use to create estimates for their AWS use cases. They can use it to model their solutions before building them, explore the AWS service price points, and review the calculations behind their estimates. Therefore, the correct answer is A. You can learn more about AWS Pricing Calculator and how it works from this page.

#### QUESTION 25

A developer needs to build an application for a retail company. The application must provide realtime product recommendations that are based on machine learning. Which AWS service should the developer use to meet this requirement?

- A. AWS Health Dashboard
- B. Amazon Personalize
- C. Amazon Forecast
- D. Amazon Transcribe

**Correct Answer: B**

**Section:**

**Explanation:**

Amazon Personalize is a fully managed machine learning service that customers can use to generate personalized recommendations for their users. It can also generate user segments based on the users' affinity for certain items or item metadata. Amazon Personalize uses the customers' data to train and deploy custom recommendation models that can be integrated into their applications. Therefore, the correct answer is B. You can learn more about Amazon Personalize and its use cases from this page.

#### QUESTION 26

A company deploys its application on Amazon EC2 instances. The application occasionally experiences sudden increases in demand. The company wants to ensure that its application can respond to changes in demand at the lowest possible cost.

Which AWS service or tool will meet these requirements?

- A. AWS Auto Scaling
- B. AWS Compute Optimizer
- C. AWS Cost Explorer
- D. AWS Well-Architected Framework

**Correct Answer: A**

**Section:**

**Explanation:**

AWS Auto Scaling is the AWS service or tool that will meet the requirements of ensuring that the application can respond to changes in demand at the lowest possible cost. AWS Auto Scaling allows users to automatically adjust the number of Amazon EC2 instances based on the application's performance and availability needs. AWS Auto Scaling can also optimize costs by helping users select the most cost-effective EC2 instances for their application1

#### QUESTION 27

Which AWS service or tool provides recommendations to help users get rightsized Amazon EC2 instances based on historical workload usage data?

- A. AWS Pricing Calculator
- B. AWS Compute Optimizer
- C. AWS App Runner
- D. AWS Systems Manager

**Correct Answer: B**

**Section:**

**Explanation:**

AWS Compute Optimizer is the AWS service or tool that provides recommendations to help users get rightsized Amazon EC2 instances based on historical workload usage data. AWS Compute Optimizer analyzes the configuration and performance characteristics of the EC2 instances and delivers recommendations for optimal instance types, sizes, and configurations. AWS Compute Optimizer helps users improve performance, reduce costs, and eliminate underutilized resources

#### QUESTION 28

A company wants to use a managed service to simplify the setup, operation, and scaling of its MySQL database in the AWS Cloud. Which AWS service will meet these requirements?

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

**Correct Answer: B**

**Section:**

**Explanation:**

Amazon RDS is the AWS service that will meet the requirements of using a managed service to simplify the setup, operation, and scaling of a MySQL database in the AWS Cloud. Amazon RDS is a relational database service that supports MySQL and other popular database engines. Amazon RDS handles routine database tasks such as provisioning, patching, backup, recovery, and scaling. Amazon RDS also offers high availability, security, and compatibility features<sup>3</sup>

#### QUESTION 29

A company deploys its application to multiple AWS Regions and configures automatic failover between those Regions. Which cloud concept does this architecture represent?

- A. Security
- B. Reliability
- C. Scalability
- D. Cost optimization

**Correct Answer: B**

**Section:**

**Explanation:**

Reliability is the cloud concept that this architecture represents. Reliability is the ability of a system to recover from infrastructure or service disruptions, dynamically acquire computing resources to meet demand, and mitigate disruptions such as misconfigurations or transient network issues. Deploying an application to multiple AWS Regions and configuring automatic failover between those Regions enhances the reliability of the application by reducing the impact of regional failures and increasing the availability of the application<sup>4</sup>

#### QUESTION 30

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A company's IT team is managing MySQL database server clusters. The IT team has to patch the database and take backup snapshots of the data in the clusters. The company wants to move this workload to AWS so that these tasks will be completed automatically.

What should the company do to meet these requirements?

- A. Deploy MySQL database server clusters on Amazon EC2 instances.
- B. Use Amazon RDS with a MySQL database.
- C. Use an AWS CloudFormation template to deploy MySQL database servers on Amazon EC2 instances.
- D. Migrate all the MySQL database data to Amazon S3.

**Correct Answer: B**

**Section:**

**Explanation:**

The company should use Amazon RDS with a MySQL database to meet the requirements of moving its workload to AWS so that the tasks of patching the database and taking backup snapshots of the data in the clusters will be completed automatically. Amazon RDS is a managed service that simplifies the setup, operation, and scaling of relational databases in the AWS Cloud. Amazon RDS automates common database administration tasks such as patching, backup, and recovery. Amazon RDS also supports MySQL and other popular database engines.

### QUESTION 31

A company recently migrated to the AWS Cloud. The company needs to determine whether its newly imported Amazon EC2 instances are the appropriate size and type.

Which AWS services can provide this information to the company? (Select TWO.)

- A. AWS Auto Scaling
- B. AWS Control Tower
- C. AWS Trusted Advisor
- D. AWS Compute Optimizer
- E. Amazon Forecast

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**Correct Answer: C, D**

**Section:**

**Explanation:**

AWS Trusted Advisor and AWS Compute Optimizer are the AWS services that can provide information to the company about whether its newly imported Amazon EC2 instances are the appropriate size and type. AWS Trusted Advisor is an online tool that provides best practices recommendations in five categories: cost optimization, performance, security, fault tolerance, and service limits. AWS Trusted Advisor can help users identify underutilized or idle EC2 instances, and suggest ways to reduce costs and improve performance. AWS Compute Optimizer is a service that analyzes the configuration and utilization metrics of EC2 instances and delivers recommendations for optimal instance types, sizes, and configurations. AWS Compute Optimizer helps users improve performance, reduce costs, and eliminate underutilized resources.

### QUESTION 32

A company has a social media platform in which users upload and share photos with other users. The company wants to identify and remove inappropriate photos. The company has no machine learning (ML) scientists and must build this detection capability with no ML expertise.

Which AWS service should the company use to build this capability?

- A. Amazon SageMaker
- B. Amazon Textract
- C. Amazon Rekognition
- D. Amazon Comprehend

**Correct Answer: C**

**Section:**

**Explanation:**

Amazon Rekognition is the AWS service that the company should use to build the capability of identifying and removing inappropriate photos. Amazon Rekognition is a service that uses deep learning technology to analyze images and videos for various purposes, such as face detection, object recognition, text extraction, and content moderation. Amazon Rekognition can help users detect unsafe or inappropriate content in images and videos, such as nudity, violence, or drugs, and provide confidence scores for each label. Amazon Rekognition does not require any machine learning expertise, and users can easily integrate it with other AWS services

**QUESTION 33**

A company's user base needs to remotely access virtual desktop computers from the internet Which AWS service provides this functionality?

- A. Amazon Connect
- B. Amazon Cognito
- C. Amazon Workspaces
- D. Amazon Upstream 2.0

**Correct Answer: C****Section:****Explanation:**

Amazon Workspaces is the AWS service that provides the functionality of remotely accessing virtual desktop computers from the internet. Amazon Workspaces is a fully managed, secure desktop-as-a-service (DaaS) solution that allows users to provision cloud-based virtual desktops and access them from anywhere, using any supported device. Amazon Workspaces helps users reduce the complexity and cost of managing and maintaining physical desktops, and provides a consistent and secure user experience

**QUESTION 34**

Amazon Elastic File System (Amazon EFS) and Amazon FSx offer which type of storage?

- A. File storage
- B. Object storage
- C. Block storage
- D. Instance store

**Correct Answer: A****Section:****Explanation:**

Amazon Elastic File System (Amazon EFS) and Amazon FSx offer file storage. File storage is a type of storage that organizes data into files and folders, and allows multiple users or applications to access and share the same files over a network. Amazon EFS is a fully managed, scalable, and elastic file system that supports the Network File System (NFS) protocol and can be used with Amazon EC2 instances and AWS Lambda functions. Amazon FSx is a fully managed service that provides two file system options: Amazon FSx for Windows File Server, which supports the Server Message Block (SMB) protocol and is compatible with Microsoft Windows applications; and Amazon FSx for Lustre, which is a high-performance file system that is optimized for compute-intensive workloads

**QUESTION 35**

Which AWS service or feature is used to Troubleshoot network connectivity issues between Amazon EC2 instances?

- A. AWS Certificate Manager (ACM)
- B. Internet gateway
- C. VPC Flow Logs
- D. AWS CloudHSM

**Correct Answer: C**

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**Section:****Explanation:**

VPC Flow Logs is the AWS service or feature that is used to troubleshoot network connectivity issues between Amazon EC2 instances. VPC Flow Logs is a feature that enables users to capture information about the IP traffic going to and from network interfaces in their VPC. VPC Flow Logs can help users monitor and diagnose network-related issues, such as traffic not reaching an instance, or an instance not responding to requests. VPC Flow Logs can be published to Amazon CloudWatch Logs, Amazon S3, or Amazon Kinesis Data Firehose for analysis and storage.

**QUESTION 36**

Which factors affect costs in the AWS Cloud? (Select TWO.)

- A. The number of unused AWS Lambda functions
- B. The number of configured Amazon S3 buckets
- C. Inbound data transfers without acceleration
- D. Outbound data transfers without acceleration
- E. Compute resources that are currently in use

**Correct Answer: D, E**

**Section:****Explanation:**

Outbound data transfers without acceleration and compute resources that are currently in use are the factors that affect costs in the AWS Cloud. Outbound data transfers without acceleration refer to the amount of data that is transferred from AWS to the internet, without using any service that can optimize the speed and cost of the data transfer, such as AWS Global Accelerator or Amazon CloudFront. Outbound data transfers are charged at different rates depending on the source and destination AWS Regions, and the volume of data transferred. Compute resources that are currently in use refer to the AWS services and resources that provide computing capacity, such as Amazon EC2 instances, AWS Lambda functions, or Amazon ECS tasks. Compute resources are charged based on the type, size, and configuration of the resources, and the duration and frequency of their usage.

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**QUESTION 37**

Which design principles support the reliability pillar of the AWS Well-Architected Framework? (Select TWO.)

- A. Perform operations as code.
- B. Enable traceability.
- C. Automatically scale to meet demand.
- D. Deploy resources globally to improve response time.
- E. Automatically recover from failure.

**Correct Answer: C, E**

**Section:****Explanation:**

The design principles that support the reliability pillar of the AWS Well-Architected Framework are:

automatically scale to meet demand, and automatically recover from failure. These principles help users design systems that can handle changes in load, avoid disruptions, and resume normal operations quickly.

Automatically scaling to meet demand means adjusting the capacity of the system based on the current and anticipated workload, using services such as AWS Auto Scaling, Amazon EC2, and AWS Lambda.

Automatically recovering from failure means detecting and resolving issues, using services such as Amazon CloudWatch, AWS CloudFormation, and AWS CloudTrail

**QUESTION 38**

Which of the following are user authentication services managed by AWS? (Select TWO.)

- A. Amazon Cognito
- B. AWS Lambda

- C. AWS License Manager
- D. AWS Identity and Access Management (IAM)
- E. AWS CodeStar

**Correct Answer: A, D**

**Section:**

**Explanation:**

The user authentication services managed by AWS are: Amazon Cognito and AWS Identity and Access Management (IAM). These services help users securely manage and control access to their AWS resources and applications. Amazon Cognito is a service that provides user sign-up, sign-in, and access control for web and mobile applications. Amazon Cognito supports various identity providers, such as Facebook, Google, and Amazon, as well as custom user pools. AWS IAM is a service that enables users to create and manage users, groups, roles, and permissions for AWS services and resources. AWS IAM supports various authentication methods, such as passwords, access keys, and multi-factor authentication (MFA)

#### QUESTION 39

company wants to protect its AWS Cloud information, systems, and assets while performing risk assessment and mitigation tasks. Which pillar of the AWS Well-Architected Framework is supported by these goals?

- A. Reliability
- B. Security
- C. Operational excellence
- D. Performance efficiency

**Correct Answer: B**

**Section:**

**Explanation:**

The pillar of the AWS Well-Architected Framework that is supported by the goals of protecting AWS Cloud information, systems, and assets while performing risk assessment and mitigation tasks is security. Security is the ability to protect information, systems, and assets while delivering business value through risk assessments and mitigation strategies. The security pillar covers topics such as identity and access management, data protection, infrastructure protection, detective controls, incident response, and compliance

#### QUESTION 40

A company is configuring its AWS Cloud environment. The company's administrators need to group users together and apply permissions to the group. Which AWS service or feature can the company use to meet these requirements?

- A. AWS Organizations
- B. Resource groups
- C. Resource tagging
- D. AWS Identity and Access Management (IAM)

**Correct Answer: D**

**Section:**

**Explanation:**

The AWS service or feature that the company can use to group users together and apply permissions to the group is AWS Identity and Access Management (IAM). AWS IAM is a service that enables users to create and manage users, groups, roles, and permissions for AWS services and resources. Users can use IAM groups to organize multiple users that have similar access requirements, and attach policies to the groups that define the permissions for the users in the group. This simplifies the management and administration of user access

#### QUESTION 41

A company has two AWS accounts in an organization in AWS Organizations for consolidated billing.



All of the company's AWS resources are hosted in one AWS Region.

Account A has purchased five Amazon EC2 Standard Reserved Instances (RIs) and has four EC2 instances running. Account B has not purchased any RIs and also has four EC2 instances running.

Which statement is true regarding pricing for these eight instances?

- A. The eight instances will be charged as regular instances.
- B. Four instances will be charged as RIs, and four will be charged as regular instances.
- C. Five instances will be charged as RIs, and three will be charged as regular instances.
- D. The eight instances will be charged as RIs.

**Correct Answer: B**

**Section:**

**Explanation:**

The statement that is true regarding pricing for these eight instances is: four instances will be charged as RIs, and four will be charged as regular instances. Amazon EC2 Reserved Instances (RIs) are a pricing model that allows users to reserve EC2 instances for a specific term and benefit from discounted hourly rates and capacity reservation. RIs are purchased for a specific AWS Region, and can be shared across multiple accounts in an organization in AWS Organizations for consolidated billing. However, RIs are applied on a first-come, first-served basis, and there is no guarantee that all instances in the organization will be charged at the RI rate. In this case, Account A has purchased five

RIs and has four instances running, so all four instances will be charged at the RI rate. Account B has not purchased any RIs and also has four instances running, so all four instances will be charged at the regular rate. The remaining RI in Account A will not be applied to any instance in Account B, and will be wasted.

#### QUESTION 42

Which of the following is an advantage that users experience when they move on-premises workloads to the AWS Cloud?

- A. Elimination of expenses for running and maintaining data centers
- B. Price discounts that are identical to discounts from hardware providers
- C. Distribution of all operational controls to AWS
- D. Elimination of operational expenses

**Correct Answer: A**

**Section:**

**Explanation:**

The advantage that users experience when they move on-premises workloads to the AWS Cloud is:

elimination of expenses for running and maintaining data centers. By moving on-premises workloads to the AWS Cloud, users can reduce or eliminate the costs associated with owning and operating physical servers, storage, network equipment, and facilities. These costs include hardware purchase, maintenance, repair, power, cooling, security, and staff. Users can also benefit from the pay-as-you-go pricing model of AWS, which allows them to pay only for the resources they use, and scale up or down as needed.

#### QUESTION 43

Which of the following is a cost efficiency principle related to the AWS Cloud?

- A. Right-size services based on capacity requirements.
- B. Use the Billing Dashboard to access information about monthly bills.
- C. Use AWS Organizations to combine the expenses of multiple accounts into a single bill.
- D. Tag all AWS resources.

**Correct Answer: A**

**Section:**

**Explanation:**

One of the cost efficiency principles related to the AWS Cloud is to right-size services based on capacity requirements. This means choosing the most appropriate type and size of AWS resources to meet the performance and scalability needs of the applications, while avoiding over-provisioning or under-provisioning. By right-sizing services, users can optimize the costs and benefits of using the AWS Cloud1

#### QUESTION 44

A cloud engineer needs to download AWS security and compliance documents for an upcoming audit. Which AWS service can provide the documents?

- A. AWS Trusted Advisor
- B. AWS Artifact
- C. AWS Well-Architected Tool
- D. AWS Systems Manager

**Correct Answer: B**

**Section:**

**Explanation:**

AWS Artifact is the AWS service that can provide security and compliance documents for an upcoming audit. AWS Artifact is a self-service portal that allows users to access and download AWS compliance reports and agreements. These documents provide evidence of AWS's compliance with global, regional, and industry-specific security standards and regulations

#### QUESTION 45

A company has been storing monthly reports in an Amazon S3 bucket. The company exports the report data into comma-separated values (.csv) files. A developer wants to write a simple query that can read all of these files and generate a summary report.

Which AWS service or feature should the developer use to meet these requirements with the LEAST amount of operational overhead?

- A. Amazon S3 Select
- B. Amazon Athena
- C. Amazon Redshift
- D. Amazon EC2

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**Correct Answer: B**

**Section:**

**Explanation:**

Amazon Athena is the AWS service that the developer should use to write a simple query that can read all of the .csv files stored in an Amazon S3 bucket and generate a summary report. Amazon Athena is an interactive query service that allows users to analyze data in Amazon S3 using standard SQL. Amazon Athena does not require any server setup or management, and users only pay for the queries they run. Amazon Athena can handle various data formats, including .csv, and can integrate with other AWS services such as Amazon QuickSight for data visualization

#### QUESTION 46

Which task requires the use of AWS account root user credentials?

- A. The deletion of IAM users
- B. The change to a different AWS Support plan
- C. The creation of an organization in AWS Organizations
- D. The deletion of Amazon EC2 instances

**Correct Answer: C**

**Section:**

**Explanation:**

The creation of an organization in AWS Organizations requires the use of AWS account root user credentials. The AWS account root user is the email address that was used to create the AWS account. The root user has complete access to all AWS services and resources in the account, and can perform sensitive tasks such as changing the account settings, closing the account, or creating an organization. The root user credentials should be used sparingly and securely, and only for tasks that cannot be performed by IAM users or roles<sup>4</sup>

#### QUESTION 47

Which feature of the AWS Cloud gives users the ability to pay based on current needs rather than forecasted needs?

- A. AWS Budgets
- B. Pay-as-you-go pricing
- C. Volume discounts
- D. Savings Plans

**Correct Answer: B**

**Section:**

**Explanation:**

Pay-as-you-go pricing is the feature of the AWS Cloud that gives users the ability to pay based on current needs rather than forecasted needs. Pay-as-you-go pricing means that users only pay for the AWS services and resources they use, without any upfront or long-term commitments. This allows users to scale up or down their usage depending on their changing business requirements, and avoid paying for idle or unused capacity. Pay-as-you-go pricing also enables users to benefit from the economies of scale and lower costs of AWS as they grow their business<sup>5</sup>

#### QUESTION 48

What does the Amazon S3 Intelligent-Tiering storage class offer?

- A. Payment flexibility by reserving storage capacity
- B. Long-term retention of data by copying the data to an encrypted Amazon Elastic Block Store (Amazon EBS) volume
- C. Automatic cost savings by moving objects between tiers based on access pattern changes
- D. Secure, durable, and lowest cost storage for data archival

**Correct Answer: C**

**Section:**

**Explanation:**

The Amazon S3 Intelligent-Tiering storage class offers automatic cost savings by moving objects between tiers based on access pattern changes. This storage class is designed for data with unknown or changing access patterns. It has two access tiers: frequent access and infrequent access. Objects are stored in the frequent access tier by default, and are moved to the infrequent access tier after 30 consecutive days of no access. If an object in the infrequent access tier is accessed, it is moved back to the frequent access tier. There are no retrieval fees in S3 Intelligent-Tiering, and no additional tiering fees when objects are moved between access tiers within the S3 Intelligent-Tiering storage class<sup>1</sup>.

#### QUESTION 49

Which AWS service gives users the ability to provision a dedicated and private network connection from their internal network to AWS?

- A. AWS CloudHSM
- B. AWS Direct Connect
- C. AWS VPN
- D. Amazon Connect

**Correct Answer: B**

**Section:**

**Explanation:**

AWS Direct Connect gives users the ability to provision a dedicated and private network connection from their internal network to AWS. AWS Direct Connect links the user's internal network to an AWS Direct Connect location over a standard Ethernet fiber-optic cable. One end of the cable is connected to the user's router, the other to an AWS Direct Connect router. With this connection in place, the user can create virtual interfaces directly to the AWS cloud and Amazon Virtual Private Cloud (Amazon VPC), bypassing internet service providers in the network path<sup>2</sup>.

#### QUESTION 50

A company is hosting a web application in a Docker container on Amazon EC2. AWS is responsible for which of the following tasks?

- A. Scaling the web application and services developed with Docker
- B. Provisioning or scheduling containers to run on clusters and maintain their availability
- C. Performing hardware maintenance in the AWS facilities that run the AWS Cloud
- D. Managing the guest operating system, including updates and security patches

**Correct Answer: C**

**Section:**

**Explanation:**

AWS is responsible for performing hardware maintenance in the AWS facilities that run the AWS Cloud. This is part of the shared responsibility model, where AWS is responsible for the security of the cloud, and the customer is responsible for security in the cloud. AWS is also responsible for the global infrastructure that runs all of the services offered in the AWS Cloud, including the hardware, software, networking, and facilities that run AWS Cloud services<sup>3</sup>. The customer is responsible for the guest operating system, including updates and security patches, as well as the web application and services developed with Docker<sup>4</sup>.

#### QUESTION 51

Which design principle should be considered when architecting in the AWS Cloud?

- A. Think of servers as non-disposable resources.
- B. Use synchronous integration of services.
- C. Design loosely coupled components.
- D. Implement the least permissive rules for security groups.

**Correct Answer: C**

**Section:**

**Explanation:**

Designing loosely coupled components is a design principle that should be considered when architecting in the AWS Cloud. Loose coupling is a way of designing systems to reduce interdependencies and minimize the impact of changes. Loose coupling allows components to interact with each other through well-defined interfaces, rather than direct references. This reduces the risk of failures and errors propagating across the system, and enables greater scalability, availability, and maintainability<sup>5</sup>.

#### QUESTION 52

Which AWS service or tool helps to centrally manage billing and allow controlled access to resources across AWS accounts?

- A. AWS Identity and Access Management (IAM)
- B. AWS Organizations
- C. AWS Cost Explorer
- D. AWS Budgets

**Correct Answer: B**

**Section:**

**Explanation:**

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AWS Organizations helps to centrally manage billing and allow controlled access to resources across AWS accounts. AWS Organizations is a service that enables the user to consolidate multiple AWS accounts into an organization that can be managed as a single unit. AWS Organizations allows the user to create groups of accounts and apply policies to them, such as service control policies (SCPs) that specify the services and actions that users and roles can access in the accounts. AWS Organizations also enables the user to use consolidated billing, which combines the usage and charges from all the accounts in the organization into a single bill.

**QUESTION 53**

Which AWS service or feature can be used to estimate costs before deployment?

- A. AWS Free Tier
- B. AWS Pricing Calculator
- C. AWS Billing and Cost Management
- D. AWS Cost and Usage Report

**Correct Answer: B**

**Section:**

**Explanation:**

AWS Pricing Calculator can be used to estimate costs before deployment. AWS Pricing Calculator is a tool that helps the user to compare the cost of AWS services for different use cases and configurations. The user can create estimates for various AWS services, such as Amazon EC2, Amazon S3, Amazon RDS, and more. The user can also adjust the parameters, such as region, instance type, storage size, and duration, to see how they affect the cost. AWS Pricing Calculator provides a detailed breakdown of the estimated cost, as well as a summary of the key drivers of the cost.

**QUESTION 54**

Which of the following promotes AWS Cloud architectural best practices for designing and operating reliable, secure, efficient, and cost-effective systems?

- A. AWS Serverless Application Model framework
- B. AWS Business Support
- C. Principle of least privilege
- D. AWS Well-Architected Framework

**Correct Answer: D**

**Section:**

**Explanation:**

AWS Well-Architected Framework promotes AWS Cloud architectural best practices for designing and operating reliable, secure, efficient, and cost-effective systems. AWS Well-Architected Framework is a set of guidelines and best practices that help the user to evaluate and improve the architecture of their applications and workloads on AWS. AWS Well-Architected Framework consists of five pillars: operational excellence, security, reliability, performance efficiency, and cost optimization. Each pillar provides a set of design principles, questions, and best practices that help the user to achieve the desired outcomes for their systems.

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