AWS Academy Cloud Foundations Practice Exam (Sample)

Study Guide

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Questions

1. **Access Control Lists are used to make entire buckets public.**

   A. True

   B. False

2. **Which AWS Cloud service is best suited for Online Analytics Processing (OLAP)?**

   A. Amazon Aurora

   B. Amazon RDS

   C. Amazon Redshift

   D. Amazon DynamoDB

3. **What is an optional security control that can be applied at the subnet layer of a VPC?**

   A. Security Groups

   B. Network ACL

   C. Firewall Rules

   D. IAM Policies

4. **Which of the following services is NOT included in the Business Support Plan?**

   A. Support for third-party software

   B. Access to Well-Architected review delivered by AWS Solution Architects

   C. Access to Cloud Support Associates via email

   D. Guidance on using AWS services effectively

5. **What are the four support plans offered by AWS?**

   A. Business, Enterprise, Basic, Developer

   B. Starter, Business, Pro, Premium

   C. Enterprise, Developer, Standard, Basic

   D. Business, Advanced, Basic, Pro

6. Which of the following best describes a system that is always available, without the need for human intervention?

A. Fault tolerant

B. Highly-available

C. Auto-scaling

D. Intermittently available

7. Which service can be used to connect on-premises networks to AWS VPCs?

A. Amazon CloudFront

B. AWS Direct Connect

C. Amazon Route 53

D. Amazon EC2

8. What is AWS Trusted Advisor?

A. Network management tool

B. Billing monitoring service

C. Online tool that helps you configure resources to follow best practices

D. Data migration service

9. True or False? Cloud computing provides a simple way to access servers, storage, databases, and a broad set of application services over the Internet. You own the network connected hardware required for these services and Amazon Web Services provisions what you need.

A. True

B. False

10. What are the minimum elements required to create an Auto Scaling launch configuration?

A. Launch Configuration Name, Instance type, AMI

B. Instance type, Network settings, Security groups

C. AMI, Key pair, Volume type

D. Instance type, Health check type, Service role

Answers

1. B
2. C
3. B
4. B
5. A
6. B
7. B
8. C
9. B
10. A

Explanations

1. Access Control Lists are used to make entire buckets public.

A. True

B. False

Access Control Lists (ACLs) are a feature in AWS that provide a way to manage permissions on buckets and objects in Amazon S3, but they do not directly control whether an entire bucket is public. Instead, ACLs allow you to specify permissions at a more granular level for individual objects or buckets by determining who can access them and what actions those users can perform. To make an entire bucket public, you would need to use bucket policies or other configurations, such as public access settings, rather than relying solely on ACLs. Bucket policies provide a more flexible and powerful mechanism for controlling access at the bucket level, enabling you to define conditions and permissions that apply to all objects within the bucket or to specific objects. In summary, while ACLs are an important part of access management in S3, they do not inherently grant public access to an entire bucket by themselves, which is why the statement regarding their use for making entire buckets public is false.

2. Which AWS Cloud service is best suited for Online Analytics Processing (OLAP)?

A. Amazon Aurora

B. Amazon RDS

C. Amazon Redshift

D. Amazon DynamoDB

Amazon Redshift is the best choice for Online Analytics Processing (OLAP) due to its design and capabilities specifically tailored for complex analytical queries and big data workloads. Redshift is a fully managed data warehouse service that allows you to run sophisticated queries across vast amounts of structured and semi-structured data. It utilizes a columnar storage format and parallel query execution, which enhances performance for analytical processes, making it highly efficient for aggregating and analyzing large datasets. In the context of OLAP, where the focus is on querying and reporting on multi-dimensional data to derive insights from large volumes, Redshift offers optimized querying capabilities and integrates well with business intelligence (BI) tools. This makes it highly suited for data analysts and data scientists who require fast query response times for complex operations. Other options, while being database services, serve different purposes. Amazon Aurora and Amazon RDS are traditional relational database services more suited for Online Transaction Processing (OLTP) applications, focusing on transaction-heavy workloads rather than bulk data analysis. Amazon DynamoDB, while highly scalable for NoSQL use cases, does not provide the same level of analytical processing capabilities as Redshift, as it is primarily designed for low-latency reads and writes rather than intensive analytical queries.

3. What is an optional security control that can be applied at the subnet layer of a VPC?

A. Security Groups

B. Network ACL

C. Firewall Rules

D. IAM Policies

A Network ACL (Access Control List) serves as an optional security control that can be implemented at the subnet level within a Virtual Private Cloud (VPC) on AWS. Network ACLs function as a stateless layer of security, meaning they evaluate each individual request to allow or deny traffic based solely on the rules defined within the ACL. This is particularly useful for controlling incoming and outgoing traffic to and from subnets, thereby adding an additional degree of security to your networking configuration. Network ACLs can be tailored to apply broad rules that govern entire subnets, allowing for simpler management of access controls in settings where multiple resources may share the same subnet. Administrators can define rules based on various criteria, including IP protocols, port numbers, and source and destination IP addresses. In contrast to Network ACLs, security groups operate at the instance level and are stateful, meaning they automatically allow return traffic for established connections, making them suitable for individual instances rather than entire subnets. IAM Policies are used for managing access permissions for AWS service resources rather than network traffic, and while firewall rules might conceptually operate similarly, they are not an AWS-native feature specifically associated with VPCs. Thus, the Network ACL is the correct and relevant choice in the context

4. Which of the following services is NOT included in the Business Support Plan?

A. Support for third-party software

B. Access to Well-Architected review delivered by AWS Solution Architects

C. Access to Cloud Support Associates via email

D. Guidance on using AWS services effectively

The Business Support Plan from AWS provides a range of features to assist users in optimizing their use of AWS services. Among these features, access to support for third-party software, guidance on effectively utilizing AWS services, and email support from Cloud Support Associates are included, ensuring that customers receive comprehensive support for their AWS environment. The Well-Architected review delivered by AWS Solution Architects involves a more specialized level of assistance that is typically found in the higher tiers of support, such as the Enterprise Support Plan. This review includes an assessment according to best practices and tailored recommendations for architecture, which is a more involved service not provided under the Business Support Plan. Therefore, it is correct that this specific offering is not included in the Business Support Plan, making it the right answer for the question regarding services that are not part of this particular support level.

5. What are the four support plans offered by AWS?

A. Business, Enterprise, Basic, Developer

B. Starter, Business, Pro, Premium

C. Enterprise, Developer, Standard, Basic

D. Business, Advanced, Basic, Pro

The four support plans offered by AWS reflect a structured approach to customer support, catering to different needs and levels of service. The correct labels for these support plans are Business, Enterprise, Basic, and Developer. - The Basic support plan is available for all AWS customers at no charge, providing access to documentation, whitepapers, and support forums, but no direct support from AWS. - The Developer support plan is designed for developers experimenting with AWS. It includes business hours access to AWS support engineers and features like guidance on best practices. - The Business support plan offers full access to AWS support, including around-the-clock technical support and a response time of under an hour for urgent issues. - The Enterprise support plan is the most comprehensive, designed for large organizations with mission-critical workloads. It includes a designated technical account manager, full access to support, and support for third-party software. This structured level of service ensures that customers can select a plan that fits their operational needs and can scale as their engagement with AWS grows. Each plan is tailored to provide varying degrees of assistance based on user requirements, thereby making the correct choice the one that clearly lists these established categories.

6. Which of the following best describes a system that is always available, without the need for human intervention?

A. Fault tolerant

B. Highly-available

C. Auto-scaling

D. Intermittently available

A system that is always available without the need for human intervention is best described as highly available. High availability refers to systems that are designed to operate continuously without failure for a long period of time, minimizing downtime and ensuring that services remain operational. This is typically achieved through redundancy and failover mechanisms, allowing the system to continue functioning even in the event of hardware or software failures. In contrast, fault tolerance refers to the capacity of a system to continue operating despite the presence of failures. While fault tolerance is an important aspect of highly available systems, it does not necessarily imply that the system is always available or self-sustaining without human intervention. Auto-scaling involves dynamically adjusting resources based on demand, which helps maintain performance during varying load conditions. However, it does not guarantee continuous availability on its own, as availability also depends on redundancy and infrastructure design. Intermittently available indicates a system that does not maintain consistent uptime, which contradicts the concept of a system being always available. High availability centers on the idea of reliable, uninterrupted service, making it the most accurate description in this context.

7. Which service can be used to connect on-premises networks to AWS VPCs?

A. Amazon CloudFront

B. AWS Direct Connect

C. Amazon Route 53

D. Amazon EC2

AWS Direct Connect is the service that facilitates a dedicated network connection from your on-premises infrastructure to your AWS Virtual Private Clouds (VPCs). This service offers several benefits, including lower latency, more consistent performance, and potentially reduced costs associated with data transfer compared to using standard internet connections. Amazon CloudFront is a content delivery network (CDN) that helps in delivering data, videos, applications, and APIs to customers globally with low latency. It does not provide capabilities to create a private connection between on-premises networks and AWS VPCs. Amazon Route 53 is a scalable Domain Name System (DNS) web service designed for routing internet traffic to resources within AWS and other locations. While it plays a role in directing users to your resources, it does not facilitate a physical or virtual connection between your on-premises network and your AWS environments. Amazon EC2 is a service that provides resizable compute capacity in the cloud. It is used to run applications but does not establish connectivity between on-premises infrastructure and AWS VPCs. In summary, AWS Direct Connect is specifically designed for the purpose of connecting on-premises networks to AWS, making it the correct choice in this scenario.

8. What is AWS Trusted Advisor?

A. Network management tool

B. Billing monitoring service

C. Online tool that helps you configure resources to follow best practices

D. Data migration service

AWS Trusted Advisor is an online tool designed to help users optimize their AWS environment by providing real-time guidance to configure resources according to best practices. It offers insights across various categories such as cost optimization, performance, security, fault tolerance, and service limits. This tool analyzes your AWS account and provides recommendations that can help improve your infrastructure reliability, efficiency, and security posture. The focus on best practices means that Trusted Advisor can identify areas where users might be overprovisioning resources, suggest ways to save on costs, and enhance overall system performance and security. This supportive role is what makes AWS Trusted Advisor particularly valuable for organizations looking to maximize their use of AWS services while minimizing risks and costs associated with misconfigured or underutilized resources.

9. True or False? Cloud computing provides a simple way to access servers, storage, databases, and a broad set of application services over the Internet. You own the network connected hardware required for these services and Amazon Web Services provisions what you need.

A. True

B. False

The statement is False. Cloud computing indeed offers streamlined access to various services such as servers, storage, databases, and applications over the Internet. However, an essential aspect of cloud computing is that the physical hardware and infrastructure—such as servers and storage devices—are owned and managed by the cloud provider, such as Amazon Web Services (AWS). In a cloud environment, users typically do not own the underlying network-connected hardware; instead, they utilize the resources provided by the cloud provider on a pay-as-you-go basis. This is a key characteristic of cloud computing, emphasizing the shift from traditional on-premises infrastructure ownership to a service-based model, where resources are dynamically allocated and scaled as needed. This distinction is important because it highlights the convenience and flexibility of using cloud services without the burden of maintaining physical hardware, which is contrary to the assertion that you own the necessary infrastructure.

10. What are the minimum elements required to create an Auto Scaling launch configuration?

A. Launch Configuration Name, Instance type, AMI

B. Instance type, Network settings, Security groups

C. AMI, Key pair, Volume type

D. Instance type, Health check type, Service role

To create an Auto Scaling launch configuration, the minimum required elements include the launch configuration name, instance type, and Amazon Machine Image (AMI). The launch configuration name serves as a unique identifier for that configuration within the context of Auto Scaling. The instance type defines the hardware specifications for the EC2 instances that Auto Scaling will launch, determining factors such as CPU and memory. The AMI specifies the software that will be loaded onto the server when a new instance is created; it serves as the template for the operating system, applications, and other configuration settings. These elements are crucial because they define what the Auto Scaling group will provision when it needs to add instances. Without these specific details, the Auto Scaling service wouldn't know what kind of instances to create or how to configure them, which would prevent it from functioning effectively.