Started on	Monday, 16 September 2024, 9:00 AM
State	Finished
Completed on	Monday, 16 September 2024, 9:13 AM
Time taken	13 mins 7 secs
Marks	19.00/20.00
Grade	**4.75** out of 5.00 (**95**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Design a VPC configuration that allows secure access to a database instance while preventing direct internet exposure. Which of the following configurations is most secure?

- ○ A.   Use a private subnet with a NAT gateway
- ◉ B.   Place the database in a private subnet with no outbound internet access and use a bastion host for access   ✔
- ○ C.   Place the database in a public subnet with a security group allowing inbound traffic
- ○ D.   Use a VPN connection for direct access from the internet

The correct answer is:
Place the database in a private subnet with no outbound internet access and use a bastion host for access

Question **2**

Correct

Mark 1.00 out of 1.00

A company is comparing PaaS and IaaS. Which of the following considerations might lead them to choose IaaS?

- ◉ A.   Desire to control and customize virtual machines   ✔
- ○ B.   Requirement for minimal setup and deployment time
- ○ C.   Interest in using a pre-configured development environment
- ○ D.   Need for less infrastructure management

The correct answer is:
 Desire to control and customize virtual machines

Question **3**

Correct

Mark 1.00 out of 1.00

Assess the security implications of granting IAM users full access to all AWS services. Which of the following would mitigate potential security risks?

- ○ A. Using AWS managed policies without modifications
- ○ B. Enabling multi-factor authentication (MFA) only
- ◉ C. Creating a custom policy with least privilege ✓
- ○ D. Assigning Administrator Access to all users

The correct answer is:
Creating a custom policy with least privilege

Question **4**

Correct

Mark 1.00 out of 1.00

Which of the following is a characteristic of a public cloud?

- ○ A. Exclusive access for a single organization
- ◉ B. Owned and operated by a third-party provider ✓
- ○ C. Requires a private network connection
- ○ D. Hosted on-premises by the organization

The correct answer is:
Owned and operated by a third-party provider

Question **5**

Correct

Mark 1.00 out of 1.00

Evaluate which of the following instance types is most suitable for a high-performance computing cluster.

- ○ A. t2.micro
- ○ B. m5.large
- ◉ C. c5.18xlarge ✓
- ○ D. t3.medium

The correct answer is:
c5.18xlarge

Question **6**

Correct

Mark 1.00 out of 1.00

What is the primary function of a hypervisor in virtualization?

○ A. To manage network traffic

◉ B. To allocate resources to virtual machines ✔

○ C. To encrypt data on virtual machines

○ D. To provide user authentication

The correct answer is:
To allocate resources to virtual machines

Question **7**

Incorrect

Mark 0.00 out of 1.00

Compare and contrast the latency effects of deploying instances in different regions versus multiple Availability Zones within the same region. Which deployment scenario provides the lowest latency?

○ A. Instances in a private data center

○ B. Instances across multiple Availability Zones within the same region

○ C. Instances in multiple regions

◉ D. Instances within a single Availability Zone ✗

The correct answer is:
Instances across multiple Availability Zones within the same region

Question **8**

Correct

Mark 1.00 out of 1.00

A business requires a scalable environment to develop, test, and deploy custom applications. Which cloud service model is most suitable?

○ A. FaaS

○ B. IaaS

◉ C. PaaS ✔

○ D. SaaS

The correct answer is:
PaaS

Question **9**

Correct

Mark 1.00 out of 1.00

Which of the following is a key factor that motivated the development of cloud computing?

- ○ A.   The increasing cost of data storage
- ◉ B.   The emergence of virtualization technologies ✔
- ○ C.   The need for faster data processing
- ○ D.   The decline in the use of personal computers

The correct answer is:
The emergence of virtualization technologies

Question **10**

Correct

Mark 1.00 out of 1.00

Which deployment model is best for organizations with sensitive data?

- ○ A.   Hybrid Cloud
- ○ B.   Community Cloud
- ○ C.   Public Cloud
- ◉ D.   Private Cloud ✔

The correct answer is:
Private Cloud

Question **11**

Correct

Mark 1.00 out of 1.00

Which of the following is a key characteristic of the cloud computing service model known as Platform as a Service (PaaS)?

- ○ A.   Allows users to manage their own operating systems
- ○ B.   Provides access to virtualized hardware resources
- ◉ C.   Offers pre-configured development environments ✔
- ○ D.   Provides access to fully managed applications

The correct answer is:
Offers pre-configured development environments

Question **12**

Correct

Mark 1.00 out of 1.00

Which of the following is a characteristic of IaaS?

- ○ A. Offers a platform allowing customers to develop applications
- ◉ B. Provides virtualized computing resources over the internet ✓
- ○ C. Delivers software applications over the internet
- ○ D. Focuses on data storage and retrieval services

The correct answer is:
Provides virtualized computing resources over the internet

Question **13**

Correct

Mark 1.00 out of 1.00

Design an IAM policy that allows a user to read data from a specific S3 bucket while preventing any data modifications. Which of the following policies would achieve this?

- ○ A. "s3:PutObject" permission only
- ◉ B. "s3:GetObject" permission only ✓
- ○ C. "s3:GetObject" and "s3:PutObject" permissions
- ○ D. "s3:GetObject" and "s3:DeleteObject" permissions

The correct answer is:
"s3:GetObject" permission only

Question **14**

Correct

Mark 1.00 out of 1.00

Assume a task involves developing a security feature for an x86 hypervisor to prevent a guest Virtual Machine (VM) from accessing unauthorized physical memory. What strategy could be devised?

- ○ A. Developing a load balancer to distribute memory usage

- ○ B.   Creating a snapshot system to roll back VMs
- ◉ C. Utilizing Extended Page Tables (EPT) to enforce memory isolation ✓
- ○ D. Implementing a virtual firewall between VMs

The correct answer is:
Utilizing Extended Page Tables (EPT) to enforce memory isolation

Question **15**

Correct

Mark 1.00 out of 1.00

Evaluate which of the following IAM roles should be assigned to an application running on an EC2 instance that needs to upload logs to CloudWatch.

- ◯ A.   AmazonEC2 Role for SSM
- ◯ B.   AmazonS3 Read Only Access
- ◯ C.   AWS Lambda Basic Execution Role
- ◉ D.   Cloud Watch Logs Full Access ✔

The correct answer is:
Cloud Watch Logs Full Access

Question **16**

Correct

Mark 1.00 out of 1.00

Evaluate the cost implications of using multiple Availability Zones in a single region for a high-availability application. Which option is most cost-effective?

- ◯ A.   Utilizing a single Availability Zone
- ◯ B.   Distributing workloads evenly across multiple regions
- ◯ C.   Using a single region without redundancy
- ◉ D.   Deploying across multiple Availability Zones within a region ✔

The correct answer is:
 Deploying across multiple Availability Zones within a region

Question **17**

Correct

Mark 1.00 out of 1.00

Analyze the impact of deploying a multi-region architecture on data availability and redundancy. Which of the following strategies is most effective?

- ◯ A.   Implementing cross-region read replicas only
- ◯ B.   Using multiple Availability Zones within a single region
- ◉ C.   Distributing resources across multiple regions ✔
- ◯ D.   Deploying all resources in a single Availability Zone

The correct answer is:
Distributing resources across multiple regions

Question **18**

Correct

Mark 1.00 out of 1.00

Which of the following is NOT a major virtualization technique?

○ A. Full virtualization

○ B. Operating system-level virtualization

◉ C. Binary translation ✓

○ D.   Paravirtualization

The correct answer is:
Binary translation

Question **19**

Correct

Mark 1.00 out of 1.00

The Shadow Page Table (SPT) mechanism in hardware virtualization is used to

○ A. Limit the guest operating system's access to physical memory

○ B. Translate virtual memory addresses used by guest operating systems

○ C. Isolate the guest operating system's memory from the host operating system

◉ D. Track page table modifications made by guest operating systems ✓

The correct answer is:
Track page table modifications made by guest operating systems

Question **20**

Correct

Mark 1.00 out of 1.00

Determine the best approach to minimize data transfer costs between instances in different VPCs. Which of the following is the most efficient solution?

○ A. Using public IP addresses

◉ B. Establishing VPC Peering ✓

○ C. Deploying an AWS Direct Connect

○ D. Using Elastic Load Balancers

The correct answer is:
Establishing VPC Peering

◄ Quiz 1

Jump to...