8.2.9 Lesson Review

Date: 12/7/2025, 2:49:22 PM

Time Spent: 14:50

Score: 100%

Passing Score: 80%

Question 1   ⊘ **Correct**

Which of the following cloud computing solutions delivers software applications to a client either over the internet or on a local area network?

- ◯ PaaS

- ◯ IaaS

- ◯ DaaS

- ◉ SaaS   ✓ Correct

Explanation

Software as a Service (SaaS) delivers software applications to a client either over the internet or on a local area network.

Infrastructure as a Service (IaaS) delivers infrastructure to a client, such as processing, storage, networks, and virtualized environments. The client deploys and runs software without purchasing servers, data center space, or network equipment.

Platform as a Service (PaaS) delivers everything a developer needs to build an application on the existing cloud infrastructure. The deployment comes without the cost and complexity of buying and managing the underlying hardware and software layers.

Desktop as a Service (DaaS) is a cloud computing solution that delivers virtual desktops to end-users over the internet, allowing them to access their desktop environment and applications from any device, anywhere.

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📄 8.2.5 Common Cloud Service Models

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Question 2   ⊘ **Correct**

A cloud administrator configures a cloud instance to increase its resources during times of high utilization and decrease its resources when peak utilization times end.

What cloud characteristic does this represent?

- ⦿ Rapid elasticity   ✓   Correct
- ◯ Metered utilization
- ◯ HA
- ◯ Scalability

Explanation

Rapid elasticity refers to the system's ability to handle changes in demand in real time. A system with high elasticity will not experience a loss of service or performance if demand suddenly increases.

High availability (HA) means that the service experiences very little downtime. Downtime can occur as a result of scheduled maintenance and unexpected outages.

Scalability means that the costs involved in supplying the service to more users are linear. Technicians can achieve scalability by adding nodes or by adding resources to each node.

The per-use billing for resources consumed by the cloud is metered utilization. The metering measurement is based on the type of resources, such as storage, processing, bandwidth, or active users.

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📄 8.2.1 Cloud Characteristics

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Question 3   ✓ **Correct**

A mid-sized e-commerce company is experiencing rapid growth and needs to expand its IT infrastructure to handle increased website traffic during seasonal sales.

The company has a limited budget and prefers a solution that minimizes upfront costs while allowing it to scale resources as needed. Security is important, but they are willing to accept some shared infrastructure risks to save costs.

Which cloud deployment model would BEST meet their needs?

- ○ Hybrid Cloud

- ○ Private Cloud

- ● Public Cloud   ✓   Correct

- ○ Community Cloud

Explanation

The public cloud is the best fit for this scenario because it offers a cost-effective, scalable solution with minimal upfront investment. The company can use a pay-as-you-go model to scale resources during seasonal sales without the need to purchase and maintain physical infrastructure. While there are shared infrastructure risks, the company has already indicated that it is willing to accept these risks to save costs.

A private cloud is not suitable for this scenario because it requires significant upfront investment and ongoing maintenance costs. While it offers enhanced security and control, these features are not the company's primary concern. The limited budget and need for scalability make the private cloud a less viable option.

A community cloud is designed for organizations with shared concerns, such as standardization or compliance, which are not relevant to the e-commerce company's needs. Additionally, the shared cost model may not align with the company's preference for minimizing upfront expenses and scaling resources dynamically.

While a hybrid cloud could provide a mix of public and private cloud benefits, it is more complex and costly to implement and manage. The company does not require the level of customization or control that a hybrid cloud offers and its primary focus is on scalability and cost-effectiveness, which are better addressed by the public cloud.

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📄 8.2.3 Common Cloud Deployment Models

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Question 4   ✓ **Correct**

A global e-commerce company is experiencing delays in file access for its employees located in different regions. The company uses a cloud file storage solution but has noticed that employees in regions far from the primary datacenter experience slower access times.

After analyzing the situation, the IT team identifies that the current solution does not utilize replication or Content Delivery Networks (CDNs).

Which action should the company take to resolve the issue?

○   Restrict file access to employees located near the primary datacenter

○   Increase the storage capacity of the primary datacenter

◉   Implement file replication across multiple datacenters   ✓ Correct
     and use CDNs

○   Switch to an on-premises file storage solution for all employees

Explanation

The scenario highlights the need to improve file access speeds for employees in different regions. File replication across multiple datacenters ensures that files are stored closer to the users, reducing latency. Additionally, using Content Delivery Networks (CDNs) further optimizes file delivery by caching files in geographically distributed locations, ensuring faster access for remote employees. This approach directly addresses the root cause of the issue.

Switching to an on-premises solution would not solve the problem of global accessibility. On-premises storage is typically centralized, which would still result in delays for employees located far from the storage location. Additionally, it would lack the scalability and flexibility of cloud-based solutions.

Increasing the storage capacity of the primary datacenter does not address the issue of slow access times for employees in distant regions. The problem lies in the geographical distance and lack of replication, not in the storage capacity itself.

Restricting file access would not only fail to solve the problem but would also hinder the company's operations by limiting access for remote employees. The goal is to improve access for all employees, not to exclude certain regions from accessing files.

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📄 8.2.7 Cloud File Storage

📄 12.4.2 Storage

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Question 5   ⊘ **Correct**

Which of the following BEST describes the Platform as a Service (PaaS) cloud computing service model?

○ PaaS delivers software applications to the client either over the internet or on a local area network.

○ PaaS stores and provides data from a centralized location without the need for local collection and storage.

○ PaaS delivers infrastructure to the client, such as processing, storage, networks, and virtualized environments.

◉ PaaS delivers everything a developer needs to build an application on the existing cloud infrastructure.   ✓ Correct

Explanation

Platform as a Service (PaaS) delivers everything a developer needs to build an application on the existing cloud infrastructure. The deployment comes without the cost and complexity of buying and managing the underlying hardware and software layers.

Infrastructure as a Service (IaaS) delivers infrastructure to the client, such as processing, storage, networks, and virtualized environments. The client deploys and runs software without purchasing servers, data center space, or network equipment.

Software as a Service (SaaS) delivers software applications to the client either over the internet or on a local area network.

Data as a Service (DaaS) stores and provides data from a centralized location without the need for local collection and storage.

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🗎 8.2.5 Common Cloud Service Models

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Question 6   ⊘ **Correct**

Google Cloud, Amazon Web Services, and Microsoft Azure are some of the most widely used cloud storage solutions for enterprises. Which of the following factors prompt companies to take advantage of cloud storage? (Select two.)

- ☐ Need for a platform to develop applications
- ☑ Growing demand for storage   ✓   Correct
- ☐ Need for software to manage enterprise applications
- ☐ Need for a storage provider to manage access control
- ☑ Need to bring costs down   ✓   Correct

Explanation

Some of the most widely used cloud storage solutions for enterprises are Google Cloud, Amazon Web Services, and Microsoft Azure. Because of the growing demand for storage and the desire to bring costs down, many companies take advantage of cloud storage.

The need for a storage provider to manage access control is not a deciding factor in taking advantage of cloud services. Most companies want to manage access control to their own data.

Platform as a Service (PaaS) and Software as a Service (SaaS) are cloud service models that companies decide to use once they are prompted to take advantage of cloud storage. They do so in order to develop and manage enterprise applications.

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Question 7   ⊘ **Correct**

A law firm is transitioning to a cloud-based infrastructure to ensure minimal downtime for its critical legal applications.

The firm has strict requirements for maintaining service availability, as even a few minutes of downtime could result in significant financial and reputational losses.

Which of the following cloud features would BEST meet the firm's need for high availability?

- ○   Scalability through horizontal scaling

- ○   Shared resource pooling for cost efficiency

- ○   Rapid Elasticity for handling demand changes

- ◉   Five Nines (99.999%) availability   ✓   Correct

Explanation

"Five Nines" availability ensures minimal downtime, equating to only 5 minutes and 15 seconds of annual downtime. This level of availability is critical for organizations like the law firm in the scenario where even a few minutes of downtime can have severe consequences. High availability is a key characteristic of cloud computing that directly addresses the firm's needs.

While scalability is an important feature of cloud computing, it primarily addresses the ability to handle increased demand by adding more resources (horizontal scaling). It does not directly ensure minimal downtime or high availability, which is the firm's primary concern in this scenario.

Rapid elasticity allows cloud systems to adjust resources in real time based on demand, which is beneficial for cost savings and performance during fluctuating workloads. However, it does not specifically guarantee minimal downtime or high availability, which is the firm's critical requirement.

Shared resource pooling allows cloud providers to allocate resources efficiently across multiple customers, reducing costs. However, this feature is unrelated to ensuring high availability or minimizing downtime, making it an incorrect choice for the firm's needs.

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📄   8.2.1 Cloud Characteristics

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Question 8   ⊘ **Correct**

Which of the following BEST describes a community cloud implementation?

○   Designed to be a combination of public and private cloud resources

○   Designed to be accessed by the general public

◉   Designed to be shared by several organizations   ✓ Correct

○   Designed to be used by a single organization

Explanation

A community cloud is designed to be shared by several organizations. Access is granted only to the users within the organizations who are sharing the community cloud infrastructure.

A public cloud can be accessed by anyone. Cloud-based computing resources such as platforms, applications, and storage are made available to the general public through a cloud service provider.

A private cloud provides resources to a single organization. Access is granted to only the users within the organization.

A hybrid cloud is a combination of public, private, and community cloud resources from different service providers.

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📄 8.2.3 Common Cloud Deployment Models

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Question 9   ⊘ **Correct**

For security reasons, an organization needs to ensure that its information is isolated and managed only by its employees. What cloud model should this organization adopt?

○ Community

○ Public

○ Hybrid

◉ Private   ✓   Correct

Explanation

Private cloud infrastructure is completely private and owned by the organization. This type of delivery method is more appropriate for organizations that require strict access control in their operations.

Public (or multitenant) is a service offered over the internet by cloud service providers (CSPs) who can offer subscriptions or pay-as-you-go financing or even provide lower-tier services free of charge.

Community is where several organizations share the costs of either a hosted private or fully private cloud.

Hybrid is a cloud computing solution that implements some sort of hybrid public/private/community. A hybrid deployment may provide some functions via a public cloud but keep sensitive data on-premises.

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📄 8.2.3 Common Cloud Deployment Models
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Question 10

⊘ **Correct**

A network technician configures a foundational cloud setup that will allow the developers to start all application development using a standardized server and database setup.

What type of cloud service model is the technician configuring?

○ IaaS

○ DaaS

◉ PaaS ✓ Correct

○ SaaS

Explanation

Platform as a service (PaaS) would deploy servers and storage network infrastructure (as per IaaS) but also provide a multi-tier web application/database platform on top.

Software as a service (SaaS) provisions software licenses for a given number of seats so that a business can access software hosted on a supplier's servers on a pay-as-you-go arrangement.

Infrastructure as a service (IaaS) is a means of provisioning IT resources, such as servers, load balancers, and storage area network (SAN) components, quickly.

Provisioning virtual desktop infrastructure (VDI) as a cloud service is known as desktop as a service (DaaS).

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📄 8.2.5 Common Cloud Service Models

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