Assignment Mate

A comprehensive compilation of important questions

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Questions and Answers

> 1. Identify the main security threats for the SaaS cloud delivery model on a public cloud.

The SaaS cloud delivery model on a public cloud poses several security threats, including:

- Data breaches and unauthorized access
- Inadequate network and endpoint security
- Insufficient user authentication and authorization
- Lack of data encryption and backup
- Compliance and regulatory issues
- Risk of data loss or damage due to human error or natural disasters

2. What are the main characteristics of a PaaS.

Platform as a Service (PaaS) has the following main characteristics:

- Provides a complete development and deployment environment
- Typically includes an integrated development environment (IDE) and a build system
- Offers a library of pre-built assets and tools
- Supports a variety of programming languages and frameworks
- Automates many tasks, such as server management and patching
- Offers scalability and reliability

3. Compare the benefits and the potential problems due to virtualization on public, private, and hybrid clouds.

Virtualization has both benefits and potential problems across public, private, and hybrid clouds:

- Faster deployment
- Increased scalability
- Reduced costs

- Security concerns
- Data sovereignty issues
- Lack of control over infrastructure

- Improved security
- Control over infrastructure
- Compliance with regulations

- Highest costs
- Management and maintenance complexity

- Best of both worlds (public and private cloud)
- Flexibility and scalability

- Improved disaster recovery

- Increased complexity
- Interoperability challenges
- Security and compliance risks

4. Describe Amazon EC2 and its basic features.

Amazon Elastic Compute Cloud (EC2) is a cloud computing service offered by Amazon Web Services (AWS) that allows users to run applications on virtual servers, known as instances. The basic features of Amazon EC2 include:

- On-demand access to virtual instances
- Choice of operating systems and configurations
- Pay-per-use pricing model
- Scalability and flexibility
- Integration with other AWS services
- Wide range of instance types and storage options

5. Describe the core components of App Engine. 1

Google App Engine is a cloud-based platform that provides a comprehensive set of features and tools for building and deploying web applications. The core components of App Engine include:

- Default Services: built-in services such as URL routing, authentication, and logging
- Custom Services: user-defined services, such as storing data in a database
- Datastore: NoSQL database for storing and retrieving data
- Memcache: memory caching service for improving performance
- Images: image processing and manipulation

- Task Queue: queue-based task processing

6. How does cloud computing help to reduce the time to market applications and to cut down capital expenses.

Cloud computing helps reduce the time to market and cut down capital expenses in several ways:

- Faster deployment: cloud resources can be spun up quickly, reducing deployment time
- No upfront costs: cloud resources are available on-demand, eliminating the need for upfront capital expenditures
- Scalability: clouds can scale up or down as needed, reducing waste and increasing efficiency
- Increased flexibility: clouds provide flexibility in terms of resource allocation and relocation

7. What are the development technologies currently supported by App Engine?

Google App Engine supports a wide range of development technologies, including:

- Java
- Python
- Go
- Ruby
- PHP
- Django
- Spring

8. What are the differences between Amazon Simple DB and Amazon RDS?

Amazon SimpleDB is a NoSQL database service that provides fast and flexible storage for large data sets. Amazon RDS, on the other hand, is a relational database service that provides a managed relational database experience. Key differences include:

- Data model: SimpleDB uses a key-value data model, while RDS uses a relational data model
- Scalability: Both services can scale, but RDS provides more control over scalability
- Data retrieval: SimpleDB provides fast retrieval of large data sets, while RDS provides faster transaction processing

9. Explain Software as a service.

Software as a Service (SaaS) is a cloud-based software delivery model where software applications are provided over the internet, eliminating the need for installation and maintenance on the user's end. Key characteristics of SaaS include:

- Software applications are provided over the internet
- No installation or maintenance required on the user's end
- Easy accessibility and scalability
- Often subscription-based

10. Describe the fundamental features of the economic and business model behind cloud computing.

The economic and business model behind cloud computing is based on the following fundamental features:

- Resource pooling: resources are pooled together to provide a multi-tenant environment
- Multi-tenancy: multiple customers share the same physical resources
- Rapid elasticity: resources can be quickly scaled up or down
- Measured service: customers only pay for the resources they use

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