

Puzzle-type questions focusing on cloud deployment models can test your understanding of public, private, hybrid, and community clouds, and how to apply these models effectively. Here are some thought-provoking puzzle questions:

1. Deployment Model Selection Puzzle

You're designing a system for a multinational corporation with the following requirements:

- High security and compliance standards
- Global accessibility
- Variable workloads with high peak times

The company wants to use a cloud solution that offers both flexibility and strict security controls. Given these requirements, which cloud deployment model would you recommend and why? Consider the trade-offs between public, private, and hybrid clouds.

2. Cost Optimization Puzzle

A company is running several applications on a private cloud but wants to explore ways to reduce costs. They're considering moving some workloads to a public cloud. The company's private cloud has a fixed cost of \$10,000 per month with predictable resource usage. The public cloud has a pay-as-you-go model with the following costs:

- Compute: \$0.05 per hour per instance
- Storage: \$0.01 per GB per month

The company estimates that 30% of their workload could benefit from the public cloud due to its variable nature. How should they distribute their workloads between the private and public clouds to achieve cost savings, assuming the public cloud costs are 30% lower than their private cloud costs for similar resources?

3. Compliance and Scalability Puzzle

An organization in the healthcare industry needs to deploy a new application that must comply with strict regulations and also handle sudden spikes in user traffic. The application should be available globally and must ensure data protection.

Which deployment model should the organization use, and how can they ensure compliance while achieving scalability? Explain the advantages and disadvantages of the chosen model.

4. Hybrid Cloud Integration Puzzle

You are tasked with integrating a new application into an existing IT infrastructure where some services are hosted on a public cloud, and others are on a private cloud. The application needs to interact with both environments seamlessly.

Design a strategy for integrating the application into this hybrid cloud setup, considering factors such as data synchronization, security, and network latency. What are the key challenges, and how would you address them?

5. Community Cloud Decision Puzzle

A group of non-profit organizations wants to share a common IT infrastructure to reduce costs and enhance collaboration on joint projects. They are considering using a community cloud but are concerned about data security and the potential for resource contention.

How should they set up their community cloud to ensure both security and efficient resource use? What specific features or strategies would be necessary to address these concerns?

6. Deployment Model Trade-Off Puzzle

You are advising a startup with rapidly growing infrastructure needs. They are considering three deployment models:

- **Public Cloud:** Low initial cost, scalable, but less control over security.
- **Private Cloud:** High initial investment, full control over security, but less flexibility.
- **Hybrid Cloud:** Combination of both, but complexity in management.

Given the startup's needs for rapid scaling, initial cost constraints, and a desire for some level of control over security, how should they choose their deployment model? What trade-offs should they be aware of?

7. Disaster Recovery and Redundancy Puzzle

A financial services company requires a disaster recovery solution with minimal downtime and data loss. They have a primary data center in a public cloud and are considering options for a secondary disaster recovery site.

Which deployment model would best suit their needs for disaster recovery and redundancy, and how should they implement it? What are the considerations for ensuring minimal downtime and data loss?

These puzzles are designed to challenge your understanding of the different cloud deployment models and how to apply them to real-world scenarios. They require a deep dive into cost, security, scalability, and compliance considerations in the context of cloud computing.