

Ensuring Scalable, Reliable, and Secure IT Infrastructure

Part 1: Roleplay Dialogue

Characters:

- **Hiroshi** – CIO
- **Lisa** – IT Infrastructure Manager

Scene: Hiroshi and Lisa are discussing strategies to ensure the company's IT infrastructure is scalable, reliable, and secure.

Hiroshi: Lisa, as we continue expanding, we need to ensure our IT **infrastructure** can support future growth. How are we handling **scalability**?

Lisa: We're leveraging **cloud computing** to adjust resources dynamically. This allows us to scale up or down based on demand.

Hiroshi: That's great, but we also need to focus on **reliability**. Are we minimizing downtime risks?

Lisa: Absolutely. We've implemented redundant systems and failover mechanisms to maintain operations even in case of system failures.

Hiroshi: Good. Security is another priority. How are we strengthening our **security architecture**?

Lisa: We've adopted a zero-trust model and multi-layered security measures to protect our data and infrastructure from threats.

Part 2: Comprehension Questions

1. What is one way the company ensures **scalability**?
 - (A) By hiring more IT staff
 - (B) By upgrading physical servers frequently
 - (C) By leveraging cloud computing for dynamic resource allocation
 - (D) By limiting system access to executives only
 2. How does the company maintain **reliability**?
 - (A) By reducing IT staff workload
 - (B) By outsourcing all IT operations
 - (C) By running fewer security updates
 - (D) By implementing redundant systems and failover mechanisms
 3. What security approach has the company adopted?
 - (A) A basic firewall system
 - (B) A zero-trust model with multi-layered security
 - (C) A security model that grants all employees unrestricted access
 - (D) A single-layer security solution
 4. What is Hiroshi's main concern regarding IT infrastructure?
 - (A) Reducing IT spending
 - (B) Hiring more cybersecurity personnel
 - (C) Ensuring scalability, reliability, and security
 - (D) Replacing all cloud systems with local storage
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Part 3: Key Vocabulary & Definitions

1. **Scalability** (スケーラビリティ) – The ability of a system to handle growth efficiently.
 2. **Infrastructure** (インフラストラクチャ) – The foundational IT components, including networks, servers, and storage.
 3. **Cloud computing** (クラウドコンピューティング) – The use of remote servers for storage, processing, and computing.
 4. **Reliability** (信頼性) – The ability of a system to function consistently without failure.
 5. **Security architecture** (セキュリティアーキテクチャ) – The framework and design used to ensure IT security.
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Part 4: Answer Key

1. What is one way the company ensures **scalability**?
☒ (C) By leveraging cloud computing for dynamic resource allocation
2. How does the company maintain **reliability**?
☒ (D) By implementing redundant systems and failover mechanisms
3. What security approach has the company adopted?
☒ (B) A zero-trust model with multi-layered security

4. What is Hiroshi's main concern regarding IT infrastructure?



(C) Ensuring scalability, reliability, and security