

Designing Infrastructure and Deployment Solutions

Part 1: Office Roleplay Dialogue

Scenario: A DevOps Engineer, Aiko, is collaborating with her colleague, Daniel, to improve their **cloud infrastructure** and develop an effective **deployment strategy**.

Daniel: Aiko, the development team wants to improve the **cloud infrastructure** for our new application.

Aiko: That makes sense. Are they considering **Infrastructure as Code (IaC)** to automate provisioning?

Daniel: Yes, they want to define everything in code. That way, we can scale easily.

Aiko: Exactly. Using **IaC** will make deployments more consistent and manageable.

Daniel: What about the **deployment strategy**? Are we using rolling updates or blue-green deployments?

Aiko: I'd recommend blue-green. It minimizes downtime by keeping two environments live.

Daniel: Sounds good. Also, the team is adopting a **microservices** architecture.

Aiko: That's a smart move. It makes updates and scaling much easier than with a monolithic system.

Daniel: Agreed. But we need solid **collaboration** between DevOps and developers to make it work.

Aiko: Absolutely. Let's set up a meeting to align everyone on the strategy.

Part 2: Comprehension Questions

1. What is the main goal of Aiko and Daniel's discussion?

- (A) Designing a new website
- (B) Improving cloud infrastructure
- (C) Hiring new employees
- (D) Creating social media campaigns

2. What is one benefit of Infrastructure as Code (IaC)?

- (A) It reduces paperwork
- (B) It makes software more expensive
- (C) It eliminates the need for developers
- (D) It allows for automated provisioning

3. What deployment strategy does Aiko suggest?

- (A) Rolling updates
- (B) Manual server restarts
- (C) Blue-green deployments
- (D) Randomized scaling

4. Why is the development team adopting a microservices architecture?

- (A) To improve scalability and updates
 - (B) To create a monolithic system
 - (C) To reduce the number of developers
 - (D) To eliminate the need for infrastructure
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Part 3: Key Vocabulary Definitions in Japanese

1. **Collaboration (コラボレーション)** – チーム間で協力し、共同作業を行うこと。
 2. **Infrastructure as Code (IaC) (コードとしてのインフラ)** – サーバーやネットワークの管理をコードで自動化する手法。
 3. **Cloud Infrastructure (クラウドインフラ)** – クラウドベースのサーバーやネットワークの環境。
 4. **Deployment Strategy (デプロイ戦略)** – 新しいコードを本番環境にリリースする方法。
 5. **Microservices (マイクロサービス)** – アプリケーションを独立した小さなサービスに分割する設計手法。
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Part 4: Questions & Correct Answers

1. **What is the main goal of Aiko and Daniel's discussion?**
 (B) Improving cloud infrastructure
2. **What is one benefit of Infrastructure as Code (IaC)?**
 (D) It allows for automated provisioning
3. **What deployment strategy does Aiko suggest?**
 (C) Blue-green deployments

4. Why is the development team adopting a microservices architecture?

(A) To improve scalability and updates