

Message Queue - Discussion Topics

Architecture & Design

1. **When would you choose Kafka over RabbitMQ or SQS?**
 - Event streaming vs task queues
 - Replay requirements
 - Throughput considerations
2. **How do you decide between choreography and orchestration?**
 - Workflow complexity
 - Visibility requirements
 - Team boundaries
3. **What are the trade-offs of event sourcing?**
 - Storage growth
 - Query complexity
 - Event schema evolution

Real-World Scenarios

4. **Design an order processing pipeline for an e-commerce platform**
 - Service boundaries
 - Failure handling
 - Consistency guarantees
5. **How would you handle a consumer that can't keep up with message volume?**
 - Scaling strategies
 - Backpressure mechanisms
 - Priority queuing
6. **Your payment service is down - how do you handle pending orders?**
 - Saga compensation
 - Retry strategies
 - Dead letter queue handling

Performance & Reliability

7. **How do you ensure exactly-once message processing?**
 - Idempotency patterns
 - Deduplication strategies
 - Transaction support
8. **What's your approach to message schema evolution?**
 - Backward compatibility
 - Versioning strategies
 - Consumer migration

Advanced Topics

9. **When would you use CQRS in your architecture?**
 - Read/write ratio considerations
 - Consistency requirements
 - Complexity trade-offs
10. **How do you debug issues in an event-driven system?**
 - Distributed tracing
 - Correlation IDs
 - Event replay for debugging