

Case Study Quick Reference

Three Patterns That Cover Most Interview Questions

<p>CASE STUDY 1: VIDEO STREAMING</p> <ul style="list-style-type: none">• Core Challenge: Bandwidth & storage at global scale• Key Components: CDN, Transcoding, Adaptive Bitrate• Critical Trade-off: Storage cost vs. transcoding latency• Deep Dive: HLS/DASH protocols, chunk-based delivery	<p>CASE STUDY 2: FLASH SALE / TICKETING</p> <ul style="list-style-type: none">• Core Challenge: High concurrency, limited inventory• Key Components: Queue, Atomic reservation, Idempotency• Critical Trade-off: UX vs. inventory accuracy• Deep Dive: Redis Lua scripts, distributed locks	<p>CASE STUDY 3: REAL-TIME CHAT</p> <ul style="list-style-type: none">• Core Challenge: Persistent connections at scale• Key Components: WebSocket gateway, Presence, Message queue• Critical Trade-off: Statefulness vs. scalability• Deep Dive: Message ordering, delivery guarantees
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How to use (30 seconds): Pick the closest pattern, name the core challenge, list the three key components, then state the trade-off before deep diving.