Workers Coordination

Kafka Topic	Redis	Worker 1	Worker 2	Worker 3	MongoDB

Initial State: 3 available workers

Kafka Topic → Redis: Message 1 arrives

Redis → Worker 1: Assign to Worker 1

Worker 1 → MongoDB: Processing Message 1

Kafka Topic → Redis: Message 2 arrives

Redis → Worker 2: Assign to Worker 2

Worker 2 → MongoDB: Processing Message 2

Kafka Topic → Redis: Message 3 arrives

Redis → Worker 3: Assign to Worker 3

Worker 3 → MongoDB: Processing Message 3

All workers busy

Kafka Topic → Redis: Message 4 arrives

Message 4 waits in queue

Worker 1 → Redis: Complete Message 1

Redis → Worker 1: Assign Message 4

Worker 1 → MongoDB: Processing Message 4

Kafka Topic	Redis	Worker 1	Worker 2	Worker 3	MongoDB