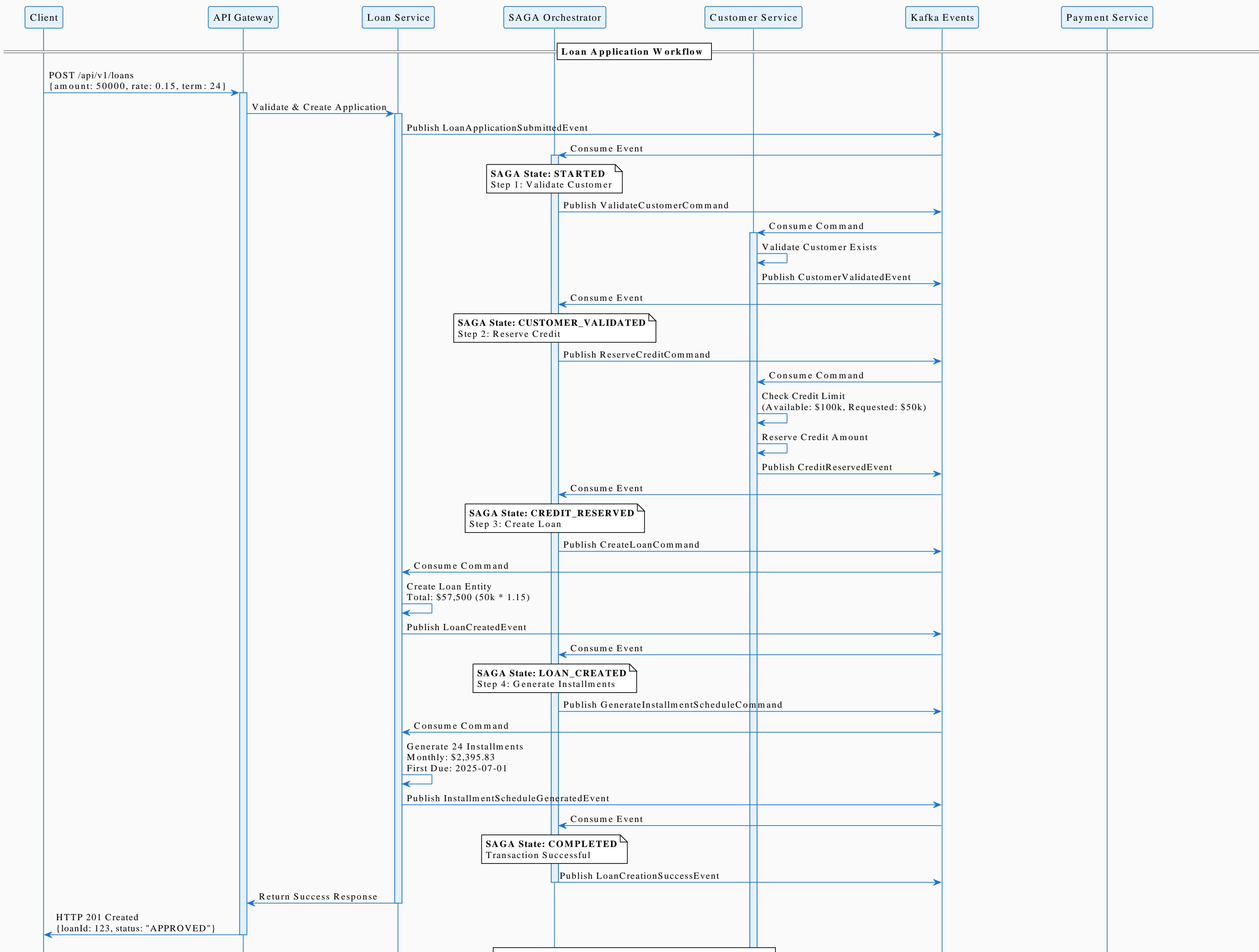
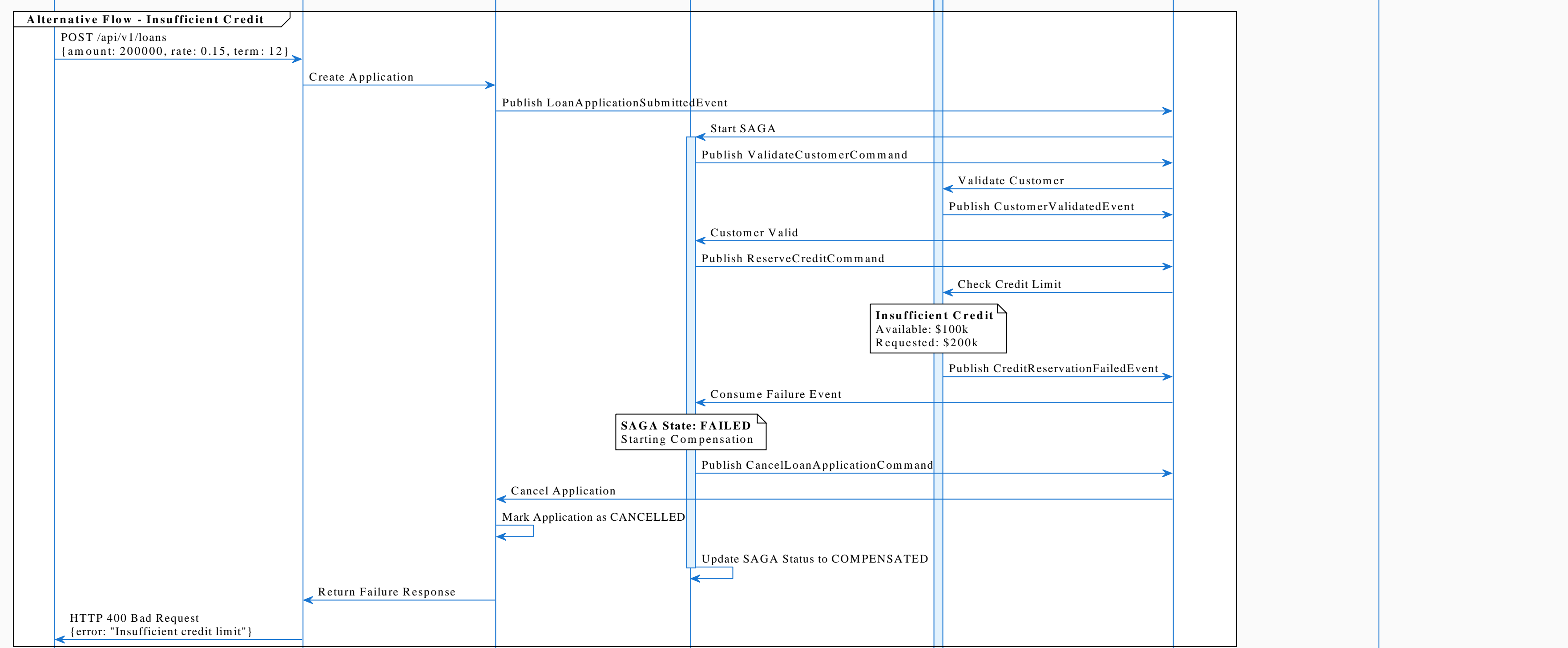


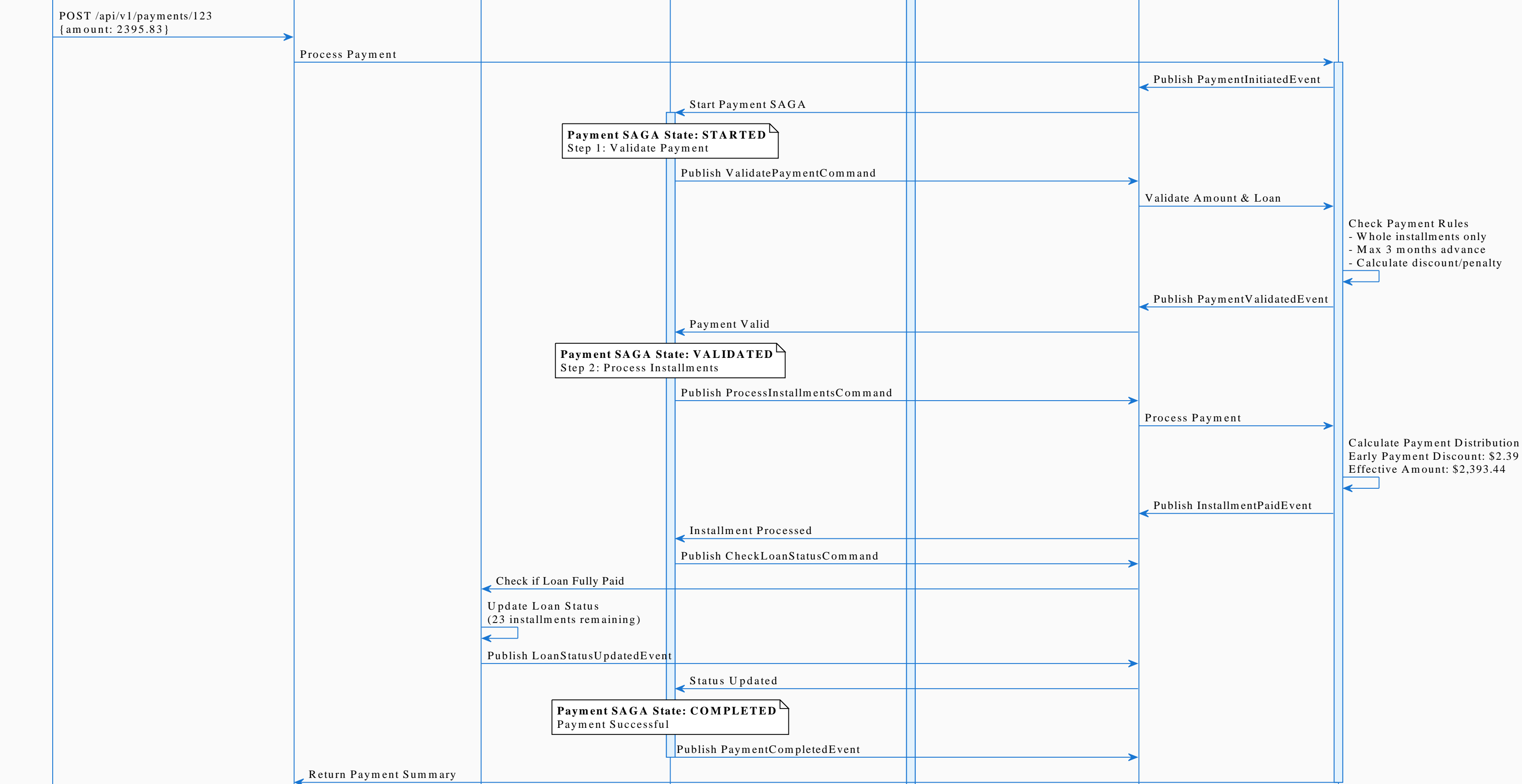
SAGA Pattern - Distributed Transaction Workflow



Compensation Scenario: Credit Reservation Failure



Payment Processing SAGA



SAGA State Management

<p>SAGA State Persistence:</p> <ul style="list-style-type: none">- saga_states table in banking_gateway DB- Timeout detection: 5 minutes- Automatic compensation on timeout- Event sourcing for audit trail <p>Compensation Patterns:</p> <ul style="list-style-type: none">- Credit release on loan failure- Payment reversal on processing failure- Application cancellation on validation failure- Eventual consistency guarantees

- Event Topics:**
 - customer-events (validation, credit operations)
 - loan-events (creation, status updates)
 - payment-events (processing, completion)
 - credit-events (reservation, release)
 - saga-events (orchestration, compensation)
- Event Reliability:**
 - At-least-once delivery
 - Idempotent consumers
 - Dead letter queues for failures
 - Event replay capability