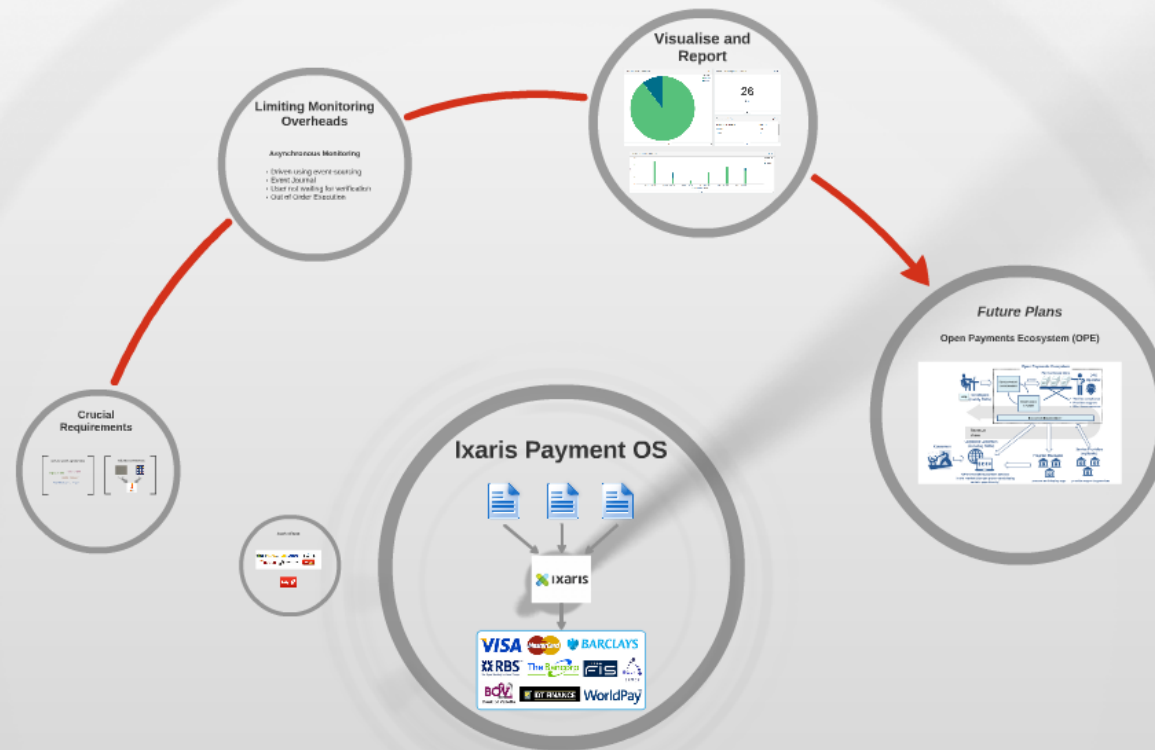


Runtime Verification for a Payments Platform

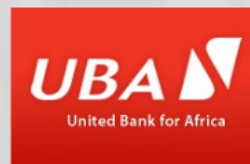


Runtime Verification for a Payments Platform

Ixaris Payment OS



Ixaris Clients



Crucial Requirements

Service Level Agreements

High Availability Zero Downtime
Quality of Support
Issue Virtual Card < 1 second

Balance Correctness



Service Level Agreements

High Availability

Zero Downtime

Quality of Support

Issue Virtual Card < 1 second

Monitoring for Performance

- Model our system as an FSM
- Extract logs during execution
- Dynamic monitoring configuration
- Application performance monitoring

Balance Correctness



EUR 10



EUR 5

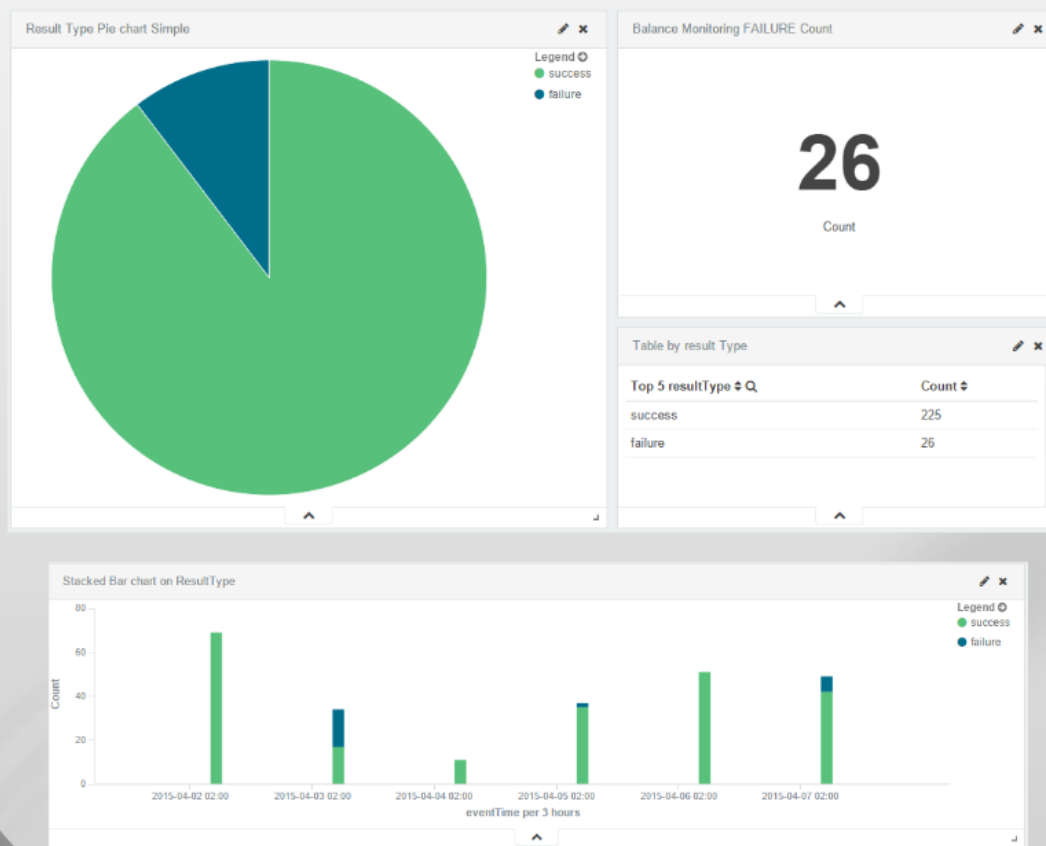


Limiting Monitoring Overheads

Asynchronous Monitoring

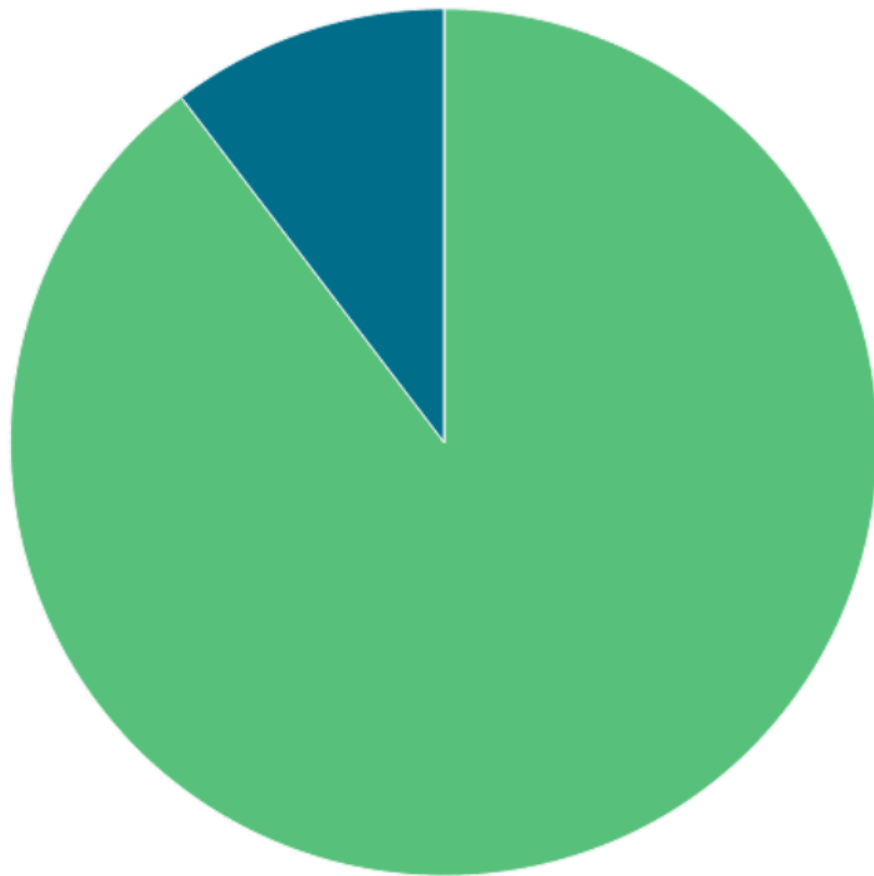
- Driven using event-sourcing
- Event Journal
- User not waiting for verification
- Out of Order Execution

Visualise and Report



Report

Result Type Pie chart Simple



Legend

- success
- failure

Balance Monitoring FAILURE Count

26

Count

Table by result Type

Top 5 resultType	Count
success	225
failure	26

Stacked Bar chart on ResultType



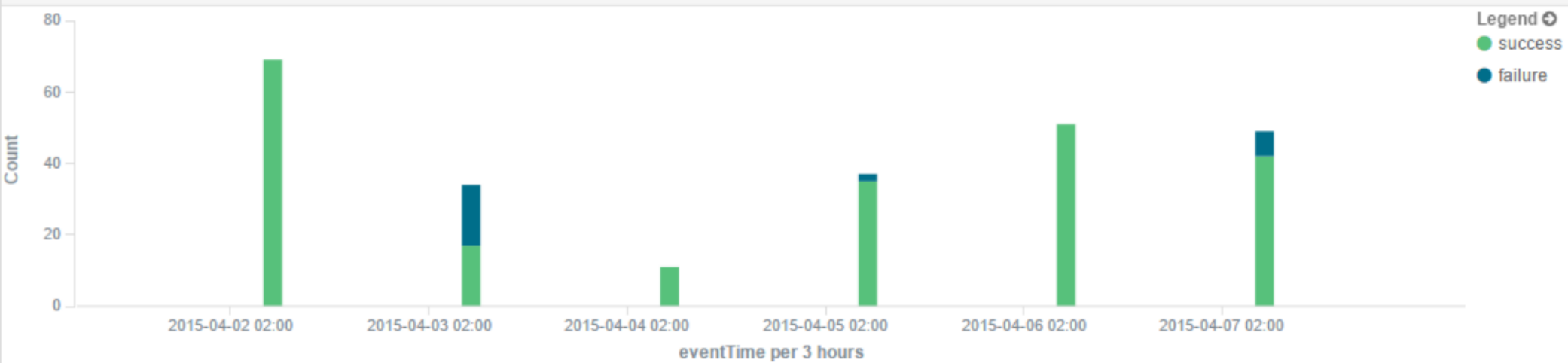
Legend

- success
- failure

Table by result Type

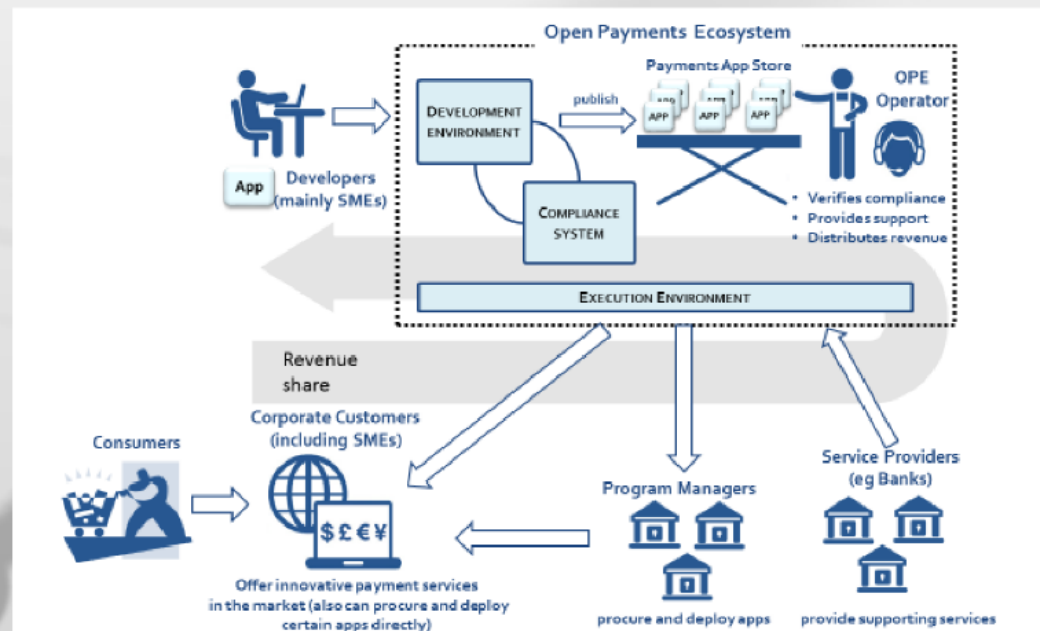
Top 5 resultType ↕ Q	Count ↕
success	225
failure	26

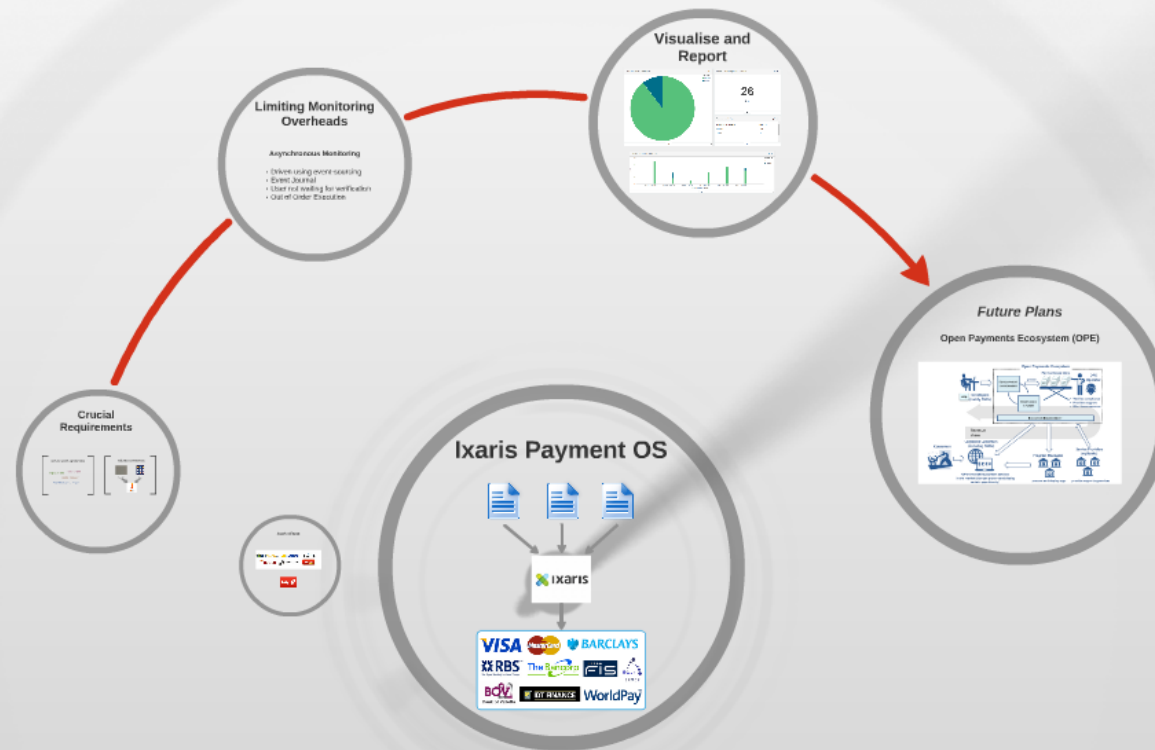
Stacked Bar chart on ResultType



Future Plans

Open Payments Ecosystem (OPE)





Runtime Verification for a Payments Platform