

Requirements Traceability Matrix (Sample Scenario)

This matrix ensures traceability from business goal to implementation of the new feature Pet Insurance for the mobile app Lucky

BR — Business Requirement

JS — Job Story / User Requirement

FR — Functional Requirement

NFR — Non-Functional Requirement

ARCH — Architectural constraints

INT — Integration points

Artifacts — Supporting design & analysis artifacts

Traceability flow: BR → JS → FR → NFR → ARCH → INT → Artifacts

| BR ID | Business Requirement | Job Story / User Requirement |
|-------|--|---|
| BR-01 | Implement Pet Insurance to quickly enter the growing pet insurance market and increase revenue | JS-01: As an owner of an active and curious pet, I want to purchase insurance for my pet so that in case of injury or illness I can quickly get professional help |

| FR ID | Functional Requirement |
|-------|---|
| FR-01 | User can view insurance details |
| FR-02 | User can add insurance to the shopping cart |
| FR-03 | User can pay for insurance |

| NFR ID | Non-Functional Requirement |
|--------|--|
| NFR-01 | Service response time ≤ 10 seconds |
| NFR-02 | Throughput: ~5,000 interested users/day, ~100 purchases/day (~4–5 req/min) |

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|---------------|---|
| NFR-03 | Integration with Shopping Cart via Kafka |
| NFR-04 | Support for internationalization (Russian + English) |
| NFR-05 | Operations are secure and synchronous |

| ARCH ID | Architectural Constraint |
|----------------|--|
| ARCH-01 | New Insurance microservice using MongoDB for storing insurance descriptions |
| ARCH-02 | Access via API Gateway, Service Registry, Load Balancer |
| ARCH-03 | REST-style API, JSON data format |
| ARCH-04 | No new integrations with external systems (except existing) |

| INT ID | Integration / Notes |
|---------------|--|
| INT-01 | No additional load on Shipping (insurance requires no delivery) |
| INT-02 | CRM reads shopping cart via existing service |
| INT-03 | External systems remain unchanged: PAY-PAY, SHIP-SHIP, CRM, Amazon S3 |

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|-------------------------------------|
| Artifacts |
| API Model |
| C4 Diagram |
| OpenAPI Specification (YAML) |