

Non-Functional Testing: a Quest for the Big Button

29 June 2017

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Defining NFT

EXTENT
CONFERENCE



Failover

KPI

Baseline

Recovery

Stress testing

Latency

Performance

Capacity & Stress Testing

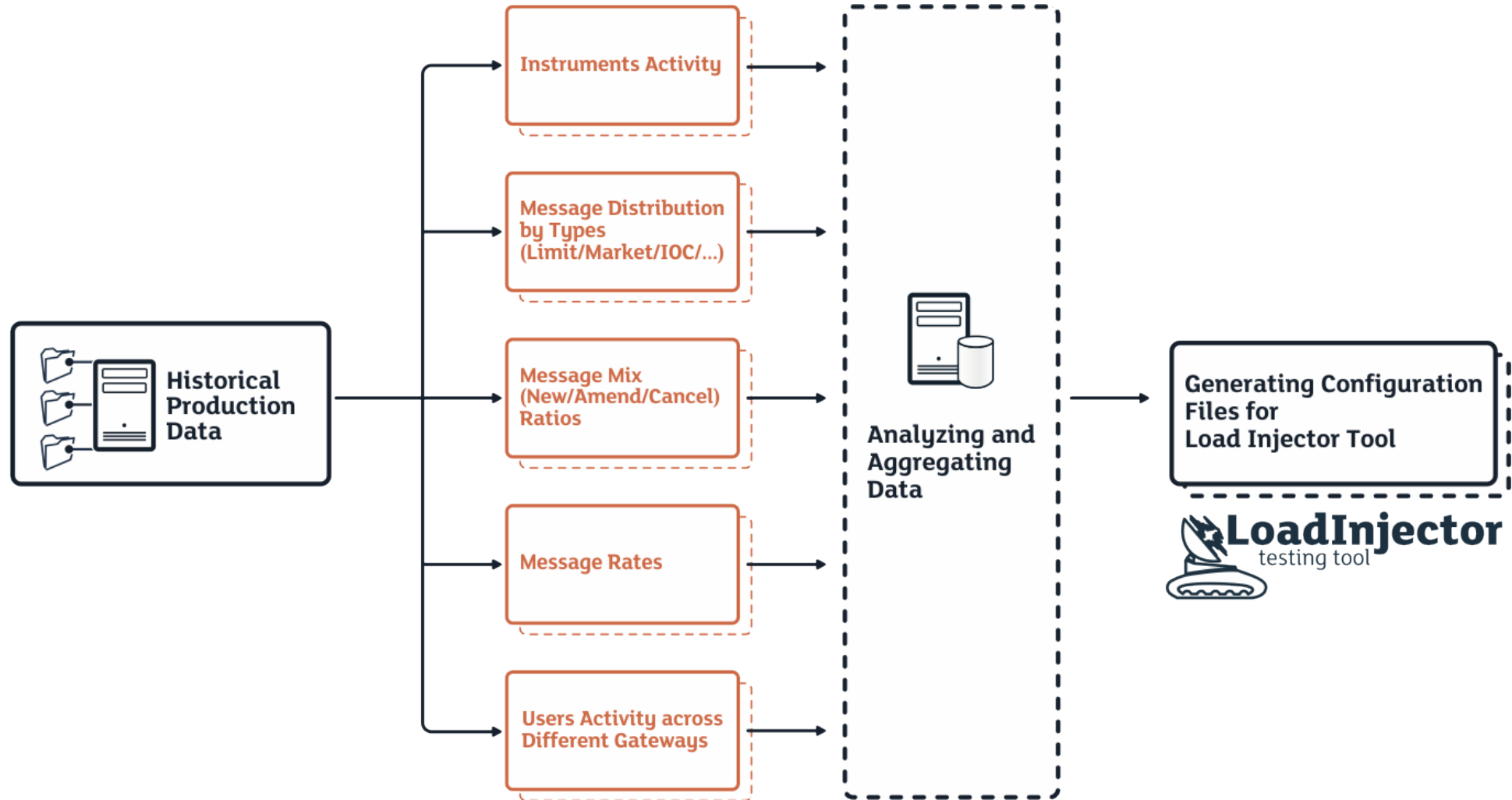
Resilience

Test Preparation

Load testing

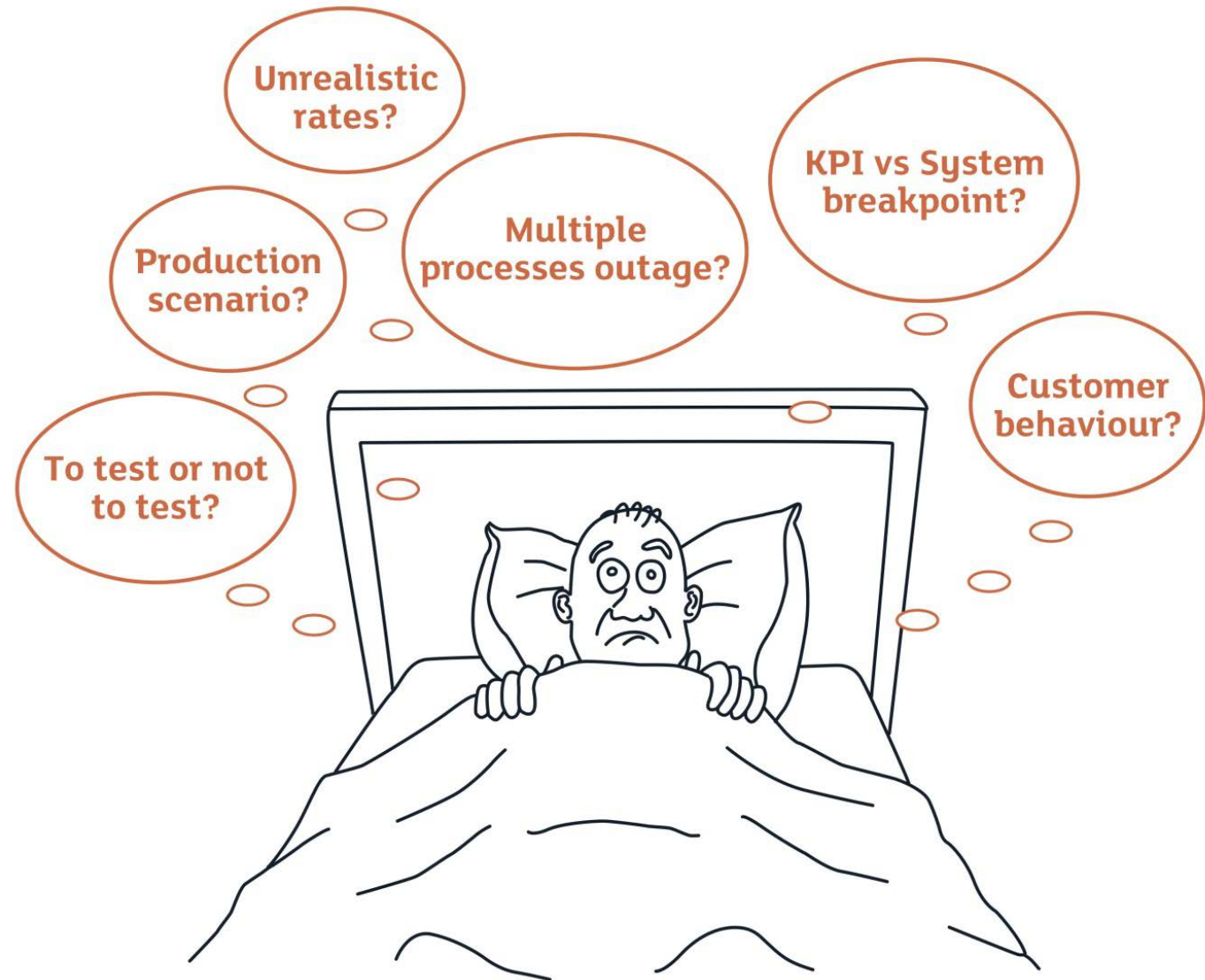
Scalability

Test Preparation



The Dilemma

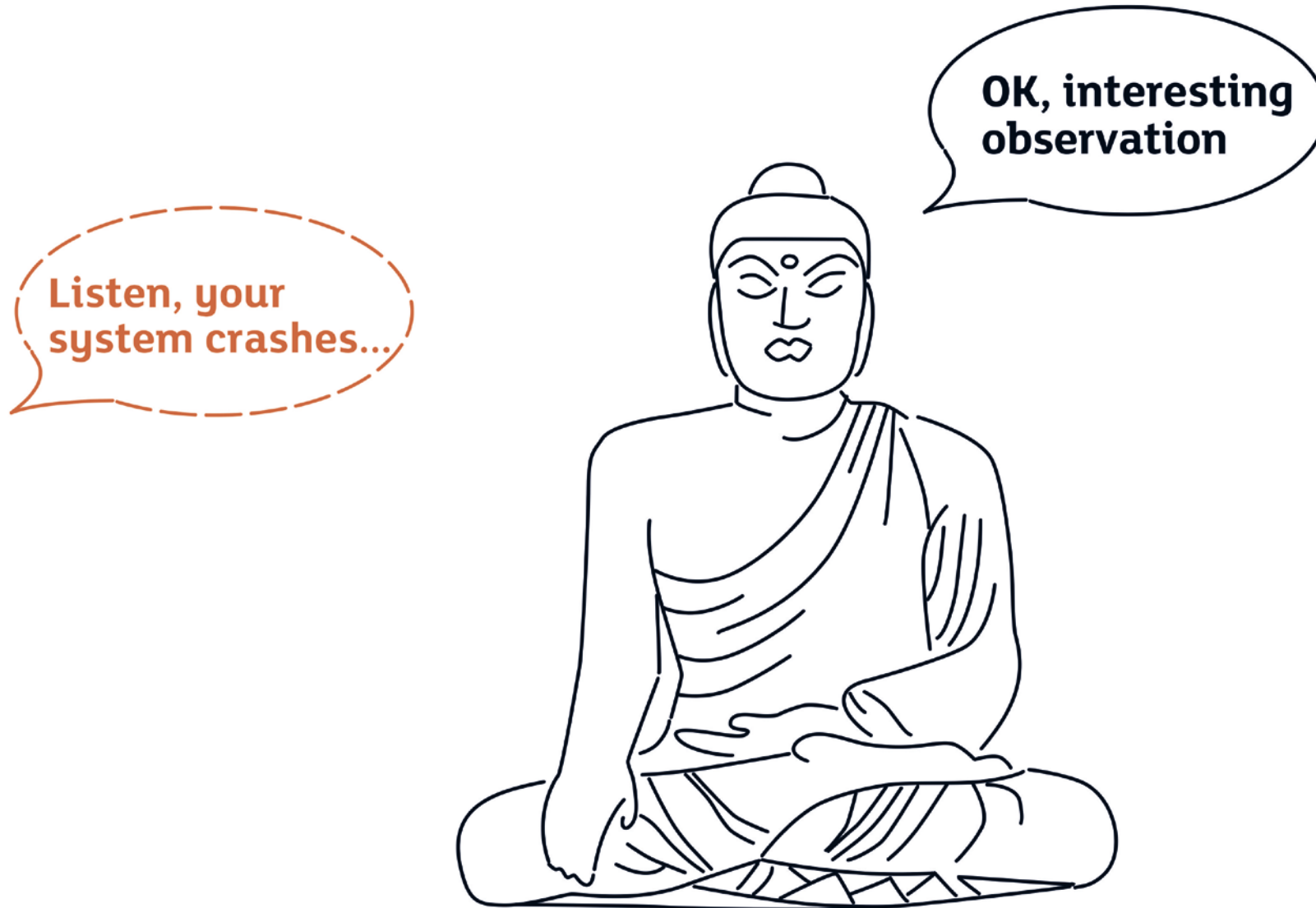
- Production-like
- Stress



Article 14

1. Trading venues shall, in the context of the self-assessment to be performed in accordance with Article 2, evaluate the performance and capacity of their algorithmic trading systems and associated processes for governance, accountability, approval and business continuity arrangements.
2. As part of the evaluation referred to in paragraph 1, trading venues shall perform stress tests where they simulate adverse scenarios to verify the performance of the hardware, software and communications and identify the scenarios under which the trading system or parts of the trading system perform their functions with systems failures, outages or errors in matching transactions.
3. Stress tests shall cover all trading phases, trading segments and types of instruments traded by the trading venue and shall simulate members' activities with the existing connectivity set-up.
4. The adverse scenarios referred to in paragraph 2 shall be based on the following:
 - a) an increased number of messages received, starting at the highest number of messages managed by the trading venue's system during the previous five years;
 - b) unexpected behaviour of the trading venue's operational functions;
 - c) random combination of stressed and normal market conditions and unexpected behaviour of the trading venue's operational functions.

Passed/Failed?



Subject to the Auditing

- Test scenario
- Implementation
- Test data
- Load profile and distribution
- System settings
- Hardware/firmware setup
- The phase of the Moon ☺

Results Processing





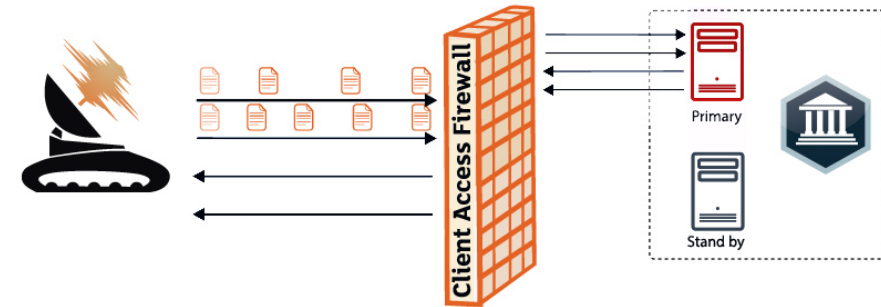
Build Software to Test Software



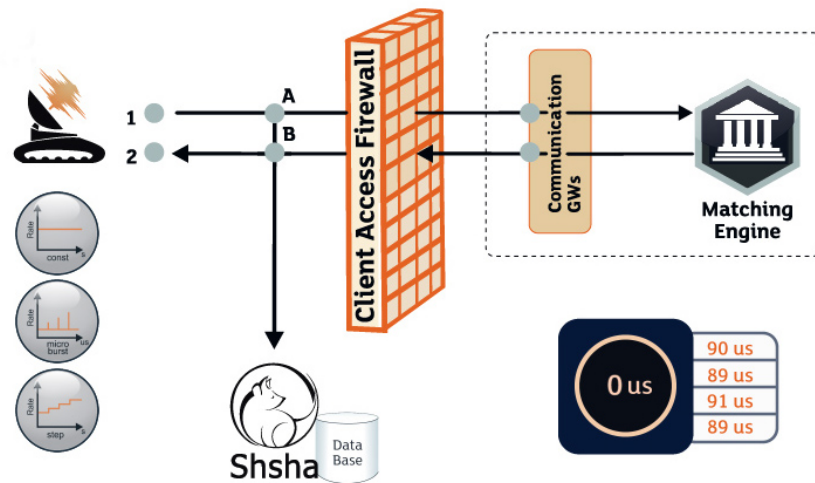
Specific Test – Specific Test Tool



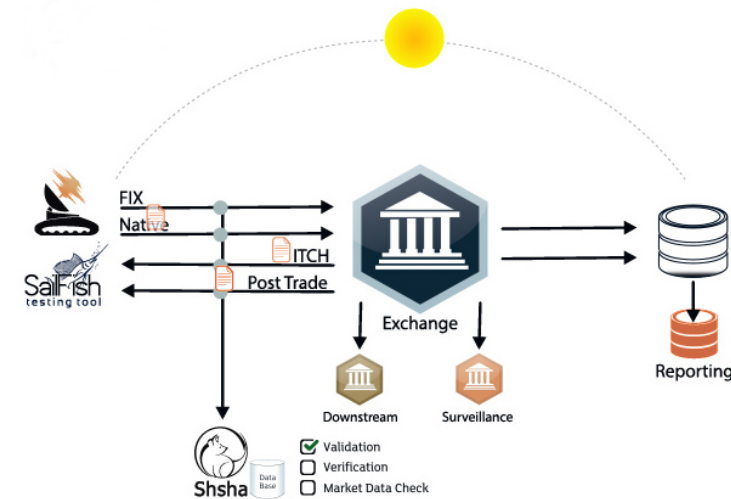
Capacity & Stress Testing



Failover



Latency



Daily Life Cycle

Thank You!