



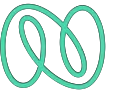
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Reliability Excellence with SLO Management Products

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Agenda



- **Key Principles of SRE and practices**
- **Navigating SLO in Complex Environments**
- **Understand SLO Management**
- **Use case Overview**
- **Introducing SLO Management Product(s)**
- **SLO Products Comparison Table**

Key Principles



SLI
(Service Level
Indicator)

SLO
(Service Level
Objective)

SLA
(Service Level
Agreement)

ERROR
BUDGET

SRE areas of Practices:

- Metrics, monitoring, and alerts
- Change management and Emergency response
- Demand forecasting and capacity planning
- Culture and toil management

Challenges to measure SLO for complex system

Ensuring a clear understanding of the problem



Challenges

- SLOs not align with the business goals.
- Distributed systems and Interdependencies.
- Don't look on priority components.
- Tool limitation
- Dynamic and Evolving system.



Approach

What can we do about it ?

- Understand the system.
- Understand the daily activities of the product's user.
- How would I design SLO
- How would I use it make them effectively.

Understand Service Level Objective (SLO) Management

Solution to overcome from challenges



SLO Management

It covers the entire SLO lifecycle within an organization..

It involves:

- Define SLOs by aligning critical user journeys with business goals
- Set realistic targets for KPIs like uptime, latency, and error rates.
- Composite SLOs offer a user-focused, holistic view of system reliability.
- Measuring and Monitoring



Benefits

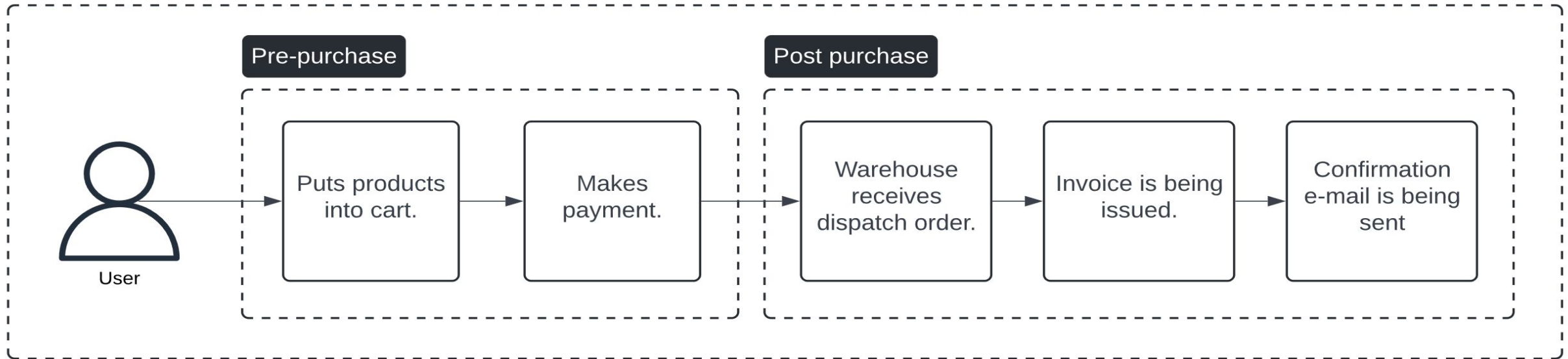
- Improved system reliability and performance through less downtime and better user experience.
- Data driver decision making : To prioritize Improvements.
- Increased efficiency through proactive SLO monitoring and reduced MTTR.
- Improved communication and teamwork through shared understanding..
- Customer satisfaction
- Enhanced Innovation: Faster Time-to-Market

Use case example :

As a User , I use shopping App to purchase products



Purchase User Journey



Key points from Use case:

- The availability is much more important than its latency.
 - Services in the pre-purchase phase are more important than services in the post-purchase state.
 - In a pre-purchase phase website availability is slightly more important than payment availability.
 - In a post-purchase phase warehouse and invoicing are slightly more important than emailing.
- How to measure reliability of complete User Journey:
- Identify services and their dependent components Ex : we have store website, Payments, Invoices, Emailing and warehouses.
 - Define and setup SLOs for each services w.r.t availability and latency .
 - Based on the understanding we will define below composite SLO's.
 - Pre-purchase User exp.
 - Post-purchase User exp.
 - User exp of Purchase user journey (aggregate of above two)

SLO Management Products

Available tools in market



SLO Management Products capabilities & comparisons

(As reported by Public platforms)



CATEGORY	CAPABILITIES	HARNESS	NEW RELIC	SERVICE NOW	FIREHYDRANT	SQUADCAST	NOBL9
SLO Management	Define and manage SLOs	✓	✓	✓	✓	✓	✓
	Real-time error budget tracking	✓	✓	✓	✗	✗	✓
	Collect and analyze SLIs	✓	✓	✓	✓	✓	✓
Business Capability Mapping	Map SLOs to business capabilities	✓	✗	✓	✗	✗	✓
	Impact analysis for breaches	✓	✗	✓	✗	✗	✓
Monitoring and Observability	Real-time monitoring of SLIs and SLOs	✓	✓	✓	✓	✓	✓
	Root Cause Analysis (RCA)	✗	✓	✓	✓	✗	✓
Reporting and Insights	Customizable dashboards and reports	✓	✓	✓	✗	✗	✓
	Correlation of metrics with customer experience	✗	✓	✓	✗	✗	✓
Automation and Integration	Improvement recommendations	✗	✓	✓ (Limited)	✗	✗	✓
	Proactive alerting and notifications	✓	✓	✓	✓	✓	✓
	Workflow automation for remediation	✓	✓	✓	✓	✓	✓
Governance and Collaboration	Integration with Jira, ServiceNow, observability tools	✓	✓	✓	✓	✓	✓
	Versioning and auditing for SLO changes	✗	✗	✓	✗	✗	✓
Scalability and Customization	Collaboration features for business and engineering teams	✗	✓	✓	✗	✓	✓
	Multi-tenancy support for scaling	✓	✓	✓	✓	✗	✓
	Customizable features for business needs	✓	✓	✓	✓	✗	✓



Thank You
