

RUTH Analysis

Root Cause Analysis Details

Root Cause

The root cause of the incident is a misconfiguration in the integration of the new payment gateway, which has been causing strain on system resources and leading to transaction failures.

RCA Executive Summary

Based on the email thread, a critical issue with the point-of-sale system has been disrupting transactions and impacting client operations. The collaborative approach of the team has led to the identification of potential leads, including a misconfigured payment gateway integration, unusual behavior in the payment processing code, and database deadlocks. System Administrator Tyrone Guevarra observed spikes in CPU and memory usage during transaction failures, hinting at a misconfiguration impacting system resources. Consultant Mary Rose Ann Guansing discovered a possible misconfiguration in the payment gateway integration, which could be contributing to system hang-ups. Business Analyst Johndell Kitts investigated the recent introduction of the new payment gateway as a potential cause of the issues. Senior Developer John Michael Dy found intriguing behavior in the payment processing code, warranting further investigation. Database Administrator Redner Cabra detected an increase in deadlock incidents during the timeframe of the issue, impacting transaction processes. It is crucial to address these issues promptly to prevent customer dissatisfaction and lost sales.

Investigation & Resolution

Key dates that led to investigation and resolution:- August 9, 2023: The initial email was sent by Development Manager Andrei Cyril F. Gimoros, highlighting the urgent point-of-sale system issue.- August 10, 2023: System Administrator Tyrone Guevarra noticed spikes in CPU and memory usage, prompting further investigation.- August 10, 2023: Consultant Mary Rose Ann Guansing discovered a possible misconfiguration in the payment gateway integration.- August 10, 2023: Business Analyst Johndell Kitts analyzed the recent changes, including the introduction of the new payment gateway.- August 9, 2023: Senior Developer John Michael Dy identified intriguing behavior in the payment processing code.- August 9, 2023: Database Administrator Redner Cabra found an increase in deadlock incidents. Each of these dates marked significant progress and insights during the investigation, leading the team closer to a resolution.

Contributing Factors

The key factors that contributed to the existing issue are:- Misconfigured payment gateway integration: This misconfiguration caused strain on system resources and led to transaction failures.- Unusual behavior in payment processing code: The identified behavior in the code was impacting the transaction processes, causing disruptions.- Database deadlocks: The increase in deadlock incidents affected crucial transaction processes, contributing to system hang-ups.- Spike in CPU and memory usage: The excessive strain on system resources due to misconfiguration led to spikes in CPU and memory usage during transaction failures. These factors, when combined, resulted in the disruptions and failures observed in the point-of-sale system.

Incident Timeline

Date	Time	Contents
August 10, 2023	11:26 AM	Development Manager Andrei Cyril F. Gimoros expresses appreciation for the collaborative approach and proposes exploring potential leads to uncover the root cause of the point- of-sale system issue.
August 10, 2023	10:50 AM	System Administrator Tyrone Guevarra notes spikes in CPU and memory usage coinciding with transaction failures, suggesting a possible misconfiguration causing strain on system resources.
August 10, 2023	10:36 AM	Consultant Mary Rose Ann Guansing discovers a possible misconfiguration in the integration of the new payment gateway, potentially contributing to system hang-ups and transaction failures.
August 10, 2023	8:45 AM	Business Analyst Johndell Kitts analyzes recent

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		changes, particularly the introduction of a new payment gateway, to investigate potential connections with the system issues.
August 9, 2023	7:26 PM	Senior Developer John Michael Dy reviews the transaction-handling codebase and observes intriguing behavior in a specific code block related to payment processing.
August 9, 2023	7:11 PM	Database Administrator Redner Cabra investigates database logs and discovers a surge in deadlock incidents during the time when the system issues occur.
August 9, 2023	6:38 PM	Debbie May Balagtas stresses the urgency of resolving the issue to prevent customer dissatisfaction and lost sales.
August 9, 2023	6:36 PM	Development Manager Andrei Cyril F. Gimoros sends an urgent email highlighting the critical issue with the point-of-sale system and the impact on client operations.



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