serviceaide®

Root Cause Analysis (RCA) Report

Serviceaide's supporting cross-functional teams have conducted a root cause analysis on the event reported. This report captures the findings and provides an insight into:

- Causes that contributed to the recent event observed.
- Corrective actions taken by Serviceaide support team to remediate.

Overview

Product/Service Impacted	CSM3 production server down	Incident ID Number	500-1341
Type of Outage	☐ Unplanned Outage ☒ Performance Degradation ☐ Other	Start Date:	Dec 15th, 2019
		Time when resolved	Dec 18th ,2019* *issue was intermittent and not observed throughout the above-mentioned period
Affected Components and/or Applications	CSM3 Production Environment (https://csm3.serviceaide.com)		
Customer Impact	User observed performance and/or access issues		

Event Timeline

Summary	During their peak business hours between 15th Dec and 18th Dec, several users experienced slowness or access issues in their Production environment
Timeline	The issue spanned from few minutes to few hours between 7:00 AM PT and 10:00 AM PT

Immediate Mitigation Steps

☐	Replaced Hardware	• As an immediate mitigation, we have restarted the application and fine-tuned few queries in database.
☒	Configuration Changes	
☐	Procedural Changes	

Root Cause Analysis

☒	Application	Based on analysis and investigation of the issue, following is the cause of the issue.
☒	Database	• Observed high CPU utilization on one of the database servers initially, further investigation showed several high CPU intensive queries were running during the incident time resulting in application server performance degradation
☐	Hardware	
☐	Network	
☐	Product Defect	• Our further review of application logs and database monitoring information has revealed an unusual load generated by few customers during the incident time. We have also observed few Adhoc Report queries from these customers running during the reported time causing high resource utilization impacting several users
☐	Third Party/Vendor	
☐	Configuration/Process	
☐	Other	

Long Term Preventative Measures

☒	Architecture/Infrastructure Change	While we continue to monitor the system closely, we have 1. Provisioned additional database resources to cater the needs of unusual load and demand during year immediately. 2. All the Identified high load generating customers were moved to a bigger server. Also, as long-term measures, we will 1. Place Selective governors on ad-hoc mechanisms to prevent spikes from causing fatal errors and overrunning the CPU and resource pools. We will also place additional guardrails in webservice call, adhoc report etc., to prevent heavy load on system which might cause instability. 2. Have ISM enhancements released by end of Q2 2020, which will provide isolation of ad-hoc usage from affecting online transactions and provide higher performance for ad-hoc searches and data downloads.
☒	Product/Feature Enhancement	
☐	Procedure/Process Changes	
☐	Monitoring/Alerting Change	
☐	Other	
☐	N/A	