Rally Software
A Broadcom Company

Root Cause Analysis:

Rally outage causing 503s

The following is a detailed accounting of the service outage that Rally users experienced on 10/19/2021 and 10/27/2021.

Root Cause Analysis Summary

Event Date	10/19/2021	10/27/2021
Event Start	07:28 AM MDT	08:26 AM MDT
Time Detected	06:00 AM MDT	06:00 AM MDT
Time Resolved	08:18 AM MDT	08:38 AM MDT
Event End Time	08:18 AM MDT	08:36 AM MDT
Root Cause	The Rally application recently experienced 2 outages, one on 10/19 and one on 10/27. After a thorough investigation by the Rally engineering and DevOps teams we have identified and remediated the root cause. As part of the engineering teams continual efforts to keep the Rally application and its dependent libraries up to date, a specific library used to help isolate and prevent cascading failures was removed. As part of this removal the internal request processing pipeline was inadvertently changed such that requests to both the main application and the analytics application competed for the same internal processing resources. In order to ensure that every request has adequate resources to process the request the Rally application queues requests that would not be able to get the needed resources until these resources are available. This ensures that all requests can be processed in a timely manner. Due to this change, analytics queries started to back up in the request processing threads and caused application queries to be queued longer than usual. This resulted in an overall slowdown of the application to such a point that it became unavailable. Due to the nature of the issue it took a large scale engineering effort to track down the root cause of the issue. Once the problem was identified and a code fix was implemented and deployed to the Rally production servers on 10/27.	
Customer Impact	Degraded application performance and application unavailable	

Future Preventative Measures

Actions that should be taken to prevent this Event in the future.

Actions	Description
Metrics Collection	Increased our metrics collection around this area of code