
APAC Data Center RCA April 3, 2016

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Introduction

This document serves as a Root Cause Analysis for the Data Center service interruption experienced by Ex Libris customers on April 3, 2016

The goal of this document is to share our findings regarding the event, specify the root cause analysis, outline actions to be taken to solve the downtime event, as well as preventive measures Ex Libris is taking to avoid similar cases in future.

Event Timeline

Service interruption was experienced by Ex Libris customers served at the APAC Data Center during the following hours:

April 3, 2016 from 09:40 AM until 11:40 AM Singapore time zone.

April 3, 2016 from 02:20 PM until 04:40 PM Singapore time zone.

During these times slowness, timeout and disconnects were experienced.

Root Cause Analysis

Ex Libris Engineers investigated this event to determine the root cause analysis with the following results:

Ex Libris engineers found that the issue was caused by a high amount of packet loss on the Firewall. The issue was triggered after a firmware upgrade of the

firewall and the packet loss had been identified as a mismatch between a configuration and the license on the firewall. The issue was resolved by removal of

the problematic configuration.

Technical Action Items and Preventive Measures

Ex Libris has taken the following action and preventive measures to avoid such an occurrence in future:

- During the event, Ex Libris Cloud and Network Engineers worked closely with the Firewall vendor to identify the cause and potential solutions.
- In order to prevent this type of service interruption from reoccurring, all relevant configurations of the firewall nodes across our Data Centers were tested and updated based upon the recommendations of the Firewall vendor.
- Close monitoring of all APAC systems took place and is still being conducted. No further issues have been identified since the time of the event.

Customer Communication

ExLibris is committed to providing customers with prompt and ongoing updates during Cloud events. Ongoing and prompt updates on service interruptions appear in the system status portal at this address: <http://status.exlibrisgroup.com/>