

From: Allen Graham (BRA01)
Sent: Tue 23/12/2008 11:43:33 AM (UTC)
To: Evans Steve (FEL01)[Steve.A.Evans  GRO]
Subject: RE: Audit and PC0152376

Good description and summary, thanks

Graham Allen
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From: Evans Steve (FEL01)
Sent: 19 December 2008 18:18
To: Denham Steve
Cc: Allen Graham (BRA01); Sewell Peter (FEL01); Holmes Alan; Thomas Penny; Jenkins Gareth GI
Subject: Audit and PC0152376

Steve

Here's my version of event and a summary.

Sorry if this is late, or has too much detail. However, I thought it best to give you all of it should you want to work anything else into the summary.

I have ccd these guys so that they might correct anything that I've got wrong, but I think this is the heart of it.

Summary

An attempt to write a transaction to the message store, where Riposte has already locked the messagestore for access, results in failure.

PC0152376 showed that in one scenario, and in one known case of that scenario, this has happened without the generation of any message to the GUI, or Windows Event data. There is an error message in the 'Audit Log', but these entries do not lead to any kind of alert.

Therefore there would be no immediate warning of the failure.

However, where the problem has lead to an accounting imbalance, that has been investigated and financially written off, or investigated by 4th line-support (as in PC0152376).

The problem shown in PC0152376 existed in Live only between May 2007 and early Nov 2008.

History

As the result of a fix made to CABSPProcess.dll (PC0140715), which is an End-Of-Day (EOD) process, CABSPProcess.dll was changed to write multiple transactions to Riposte atomically.

It would lock the messagestore, collect data for several transactions and then write the accumulated data before freeing the lock.

That fix was delivered to the live estate in

- o LFS_COUNTER 36_1/Release RNT4031/Release PEAK 143079.

It would have become active in Pilot in May 2007, and across the estate on **13-Aug-2007**.

In late Dec 2007, a problem was reported in **PC0152376**.

This was an isolated example of a Stock unit being rolled over on counter 1 at the same time that the various EOD of day processes were being run in the background around 7pm. It was during the CABSPProcess that the following message was written to the audit log (only)...

'Timeout occurred waiting for lock. (0xC1090003) CreateMessageEx: RiposteCreateMessageEx call failed.'

CABSPProcess did not re-attempt to write the required messages, and reported no other error (i.e. no Events)

Therefore this error would go unnoticed until the imbalance was noticed. In this case messages that should have posted a monetary gain in the Stock unit to local suspense failed to be written.

Consequently, when local suspense was cleared (written off to P&L in this case) the gain wasn't taken into account and this resulted in a negative trading position seen on the Branch Trading Statement.

Although it was found by the developer in testing and analysis that attempting to perform Balancing whilst CABSPProcess was running might also lead to this same problem, because **this was (and remains) the only case of it's kind that we know of experienced in Live, a fix was not required, but the issue and corrective actions were documented in KEL dsed5628Q.**

Subsequent investigations have shown that:

- Nowhere else in the EPOSS code is an atomic transaction attempted.
- If the problem of Riposte being locked is falsely introduced into the following scenarios;
 - Selling a stamp
 - Existing Reversals
 - Utilities/AP Manual
 - Remittances of Value and Non-Value Stock
 - Balancing a shared stock unit
 - Adjusting Stock
 - Rolling over the Office

...in all cases tried

- There were multiple windows events generated which could be used to warn of the error
- the actual accounting records written were consistent and so no accounting problems would have occurred.

In early September 2008, it was decided that we should fix the exact problem that was documented in PC0152376 and which was the only known instance of an attempted atomic writing of multiple transactions. This fix was delivered to Pilot on 16 Oct 2008, and across Live on 23 Oct 2008, via

- T86 - LFS_COUNTER 44_1/Release RNT8601/Release PEAK **PC0165710**

Steve

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