

# DSB Production Root Cause Analysis

For Production Outage on 14<sup>th</sup> February 2021

Prepared by: technical.support@anna-dsb.com  
Date: 26<sup>th</sup> February 2021

## Revision History

Version	Date	Reason
1.0	26 <sup>th</sup> February 2021	RCA

## Table of Contents

IMPACT ASSESSMENT & CATEGORIZATION.....	2
INTRODUCTION .....	2
EXECUTIVE SUMMARY - FINDINGS AND ROOT CAUSE .....	2
CORRECTIVE ACTIONS TAKEN & PLANNED .....	2
DETAILED EVENT DESCRIPTION .....	3
TIMELINE OF EVENTS .....	3
Sunday 14 <sup>th</sup> February 2021 .....	3
Monday 15 <sup>th</sup> February 2021.....	3
APPENDIX 1.....	4

## IMPACT ASSESSMENT & CATEGORIZATION

### Major Impact (Severity Two - S2)

Start: 11:30 AM UTC – 14<sup>th</sup> February 2021

Resolved: 10:43 AM UTC 15<sup>th</sup> February 2021

Impact: 7% of create and search transactions were affected

(6,402 of 96,059 transactions between 14 February 2021 11:30 AM UTC and 15 February 2021 10:43 AM UTC)

Total: 23 hours, 13 minutes

For details of classification of Incidents please see [Appendix 1](#) on page 4.

## INTRODUCTION

The purpose of this Root Cause Analysis (RCA) is to determine the cause of the *Unable to parse requestContext* errors encountered by DSB users in the DSB Production environment on 14<sup>th</sup> February 2021 between the hours of 11:30 AM UTC – 14<sup>th</sup> February 2021 and 10:43 AM UTC 15<sup>th</sup> February 2021. This RCA determines what happened during the event, how it happened, and why it happened. An investigation took place internally during and after the incident by the DSB Technical Support and the DSB Development teams to ascertain the primary root cause that contributed to this issue.

## EXECUTIVE SUMMARY - FINDINGS AND ROOT CAUSE

The root cause has been determined to be a sequencing issue between two distinct changes - one of the DSB core ISIN engine servers targeted for the update as part of the [2021 Feb Strike Price Release](#) was restarted earlier in the release due to a separate change. The server started on the previous software version which triggered the new (previously unencountered) *Unable to parse requestContext* errors experienced by DSB users. The issue was resolved when the server was restarted as part of a controlled rolling restart of the core ISIN engine service on all Production instances.

## CORRECTIVE ACTIONS TAKEN & PLANNED

- Prohibit all other changes, even server restarts, during a schedule change window
- Add software version checks for all ISIN engine services on startup after the release of a new software version
- Improve application monitoring of this type of issue

## DETAILED EVENT DESCRIPTION

On 14<sup>th</sup> February 2021 at 11:43 AM UTC, DSB Technical Support encountered the first error "Unable to parse requestContext" during Production service start up checks.

At 10:43 AM UTC on 15<sup>th</sup> February 2021, services stabilized after DSB Technical Support performed a rolling restart of the DSB core ISIN engine service on all affected Production instances. DSB Technical Support have verified in the logs that the error *Unable to parse requestContext* stopped being generated at 08:09AM when one of the specific servers was restarted. DSB users who had previously reported the issue also confirmed that the errors were no longer being generated.

## TIMELINE OF EVENTS

Sunday 14<sup>th</sup> February 2021

Time (UTC)	Description
11:30 AM	DSB Technical Support encountered the first error "Unable to parse requestContext" during Production service start up checks.
11:41 AM	DSB Technical Support started the thorough investigation and escalated at the same time to the DSB Development team to perform parallel investigations.
12:59 PM	The DSB received a notification a client who had experienced the error.
09:49 PM	The DSB received a second notification from a different client who had also experienced the error.
11:37 PM	DSB Technical Support continuing the investigation including a review of all changes that took place on Sunday 14 <sup>th</sup> February 2021 to see what specific change can be correlated to the cause of the issue.

Monday 15<sup>th</sup> February 2021

Time (UTC)	Description
02:15 AM	DSB Technical Support is still seeing the error in the logs continuously occurring across all the DSB Production endpoints.
04:45 AM	DSB Development team noticed on their investigation that a particular Production core ISIN engine server was started using an old version of software.
05:47 AM	The DSB development team recommended to undertake a rolling restart of the ISIN engine services on all production instances.
06:15 AM	Approval received to undertake the corrective action.
06:48 AM	DSB Technical Support began the process of restarting the DSB core ISIN engine services on all affected Production instances to resolve the issue.
08:09 AM	Services stabilized, the error is no longer being seen in the logs.
10:43 AM	Notification email was sent to all DSB Production Users advising that the issue had been resolved.

## APPENDIX 1

### Classification of Incidents

Severity	Definition
Critical (S1)	<p>Critical production issue that severely impacts the DSB Service for all Users. The situation halts business operations and no procedural workaround exists.</p> <p>DSB Service is down or unavailable. Major data elements are corrupted or lost and must be restored from backup. A critical documented feature / function is not available.</p>
Major (S2)	<p>Major functionality is impacted or significant performance degradation is experienced and is not a Critical Incident. The situation is causing a high impact to some Users' business operations and no reasonable workaround exists.</p> <p>DSB Service is operational but highly degraded performance to the point of major impact on usage. Important features of the system offering are unavailable with no acceptable workaround; however, operations can continue in a restricted fashion.</p>
Minor (S3)	<p>There is a partial, loss of use of the DSB Service with a medium-to-low impact on your business, but your business continues to function that is not a Critical Incident or a Major Incident. Short-term workaround is available, but not scalable.</p>
Cosmetic (S4)	<p>Inquiry regarding a routine technical issue; information requested on application capabilities, navigation, installation or configuration; bug affecting a small number of users. Acceptable workaround available.</p>

Reference: [DSB Service Level Policy 2020](#)