

DSB Production Root Cause Analysis

ADSB-38315 – Brief Disconnection on DSB Services (FIX and Web)

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Revision History

Version	Date	Reason
1.0	April 17 th 2024	Initial RCA draft

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IMPACT ASSESSMENT & CATEGORIZATION

Major Impact Severity One (S1)

Start	02:42 UTC 17 th April 2024
Resolved	02:55 UTC 17 th April 2024
Total Time	13 minutes
Incident	ADSB-38315
Impact	Brief Disconnection on DSB Services (FIX and Web)

For details of classification of Incidents please see [Appendix 1](#) on page 5.

INTRODUCTION

This document presents the Root Cause Analysis (RCA) for the brief disconnection on some of the DSB services on April 17th 2024. In line with the scheduled mid-week UAT maintenance, Production services (1 FIX endpoint and all Web services) were inadvertently put into maintenance causing both ISIN and UPI users to encounter disconnection errors.

This document provides an overview of the incident, findings, root cause analysis, corrective actions taken, and planned actions to prevent similar incidents in the future.

EXECUTIVE SUMMARY – FINDINGS AND ROOT CAUSE

The DSB has a regular midweek maintenance window for the UAT environments during which approved UAT changes are applied. On Wednesday 17th April 2024, the job to put the UAT service into maintenance mode failed. The team then followed a manual procedure to put the UAT services into maintenance mode, however, due to human error the Production servers were put into maintenance mode by mistake.

The root cause of the failed UAT job was a technology change made on Saturday 13th April 2024 which turned off some newly created UAT servers to ensure costs are maintained. The UAT job, which puts the UAT service into maintenance mode, referred to these servers and errored when trying to put them into maintenance mode. This error caused the team to manually intervene to take down the UAT environments. Unfortunately, a mistake made by the team targeted the wrong environment, taking down the production environment instead of UAT. The root cause of the production outage is therefore deemed to be human error.

DETAILED EVENT DESCRIPTION

The DSB was performing a midweek deployment in UAT which needs to be in maintenance mode for the changes to be completely applied. When the deployment started, the DSB tried to put the UAT environment into maintenance using an automated job. The job failed, which resulted in the team needing to manually intervene to put the UAT environment in maintenance. The team prepared the manual procedure; however they targeted the Production environment by mistake which resulted in the disconnection issue.

Both the ISIN and UPI Production services were impacted, users of the following interfaces were unable to send transactions from 02:42 UTC to 02:55 UTC, an outage of 13 minutes:

FIX: fix2-prod.anna-dsb.com

REST: prod.anna-dsb.com/api

GUI: prod.anna-dsb.com

Please note that the DSB's legacy ISIN FIX endpoints below were unaffected by this incident:

FIX: fix1-int-prod.anna-dsb.com

fix1-prod.anna-dsb.com

Existing DSB monitoring alerted the team that the Production interfaces had gone down. The team quickly identified that they had placed the wrong environment into maintenance mode. The affected interfaces were immediately restarted.

CORRECTIVE ACTIONS TAKEN & PLANNED

#	Action	Incident/JIRA/Change/Problem Task	Assigned To	Status	Completion / Target Completion Date
1	Incident ticket raised and affected endpoints were restarted	ADSB-38315	TS	Completed	17-Apr-24
2	Sent email notification to clients about the incident	ADSB-38315	TS	Completed	17-Apr-24
3	Update internal process document to include peer review when performing manual maintenance	PRB-23/PRB-25/ADSB-38316	TS	Completed	18-Apr-24
4	Maintenance job improvement	PRB-23/PRB-24/DDT-8199	DevOps	In Progress	24-Apr-24
5	Ensure the CAB is aware of the references to the downtime jobs when reviewing changes to switch off servers	PRB-23/PRB-26/ADSB-38327	TS	Pending	24-Apr-24
6	Review access controls between UAT and Production	PRB-23/PRB-27/ADSB-38328	TS	Pending	01-May-24

7	Create a user in ubuntu environment for support	PRB-23/PRB-28/DSB-3945	Dev	Pending	01-May-24
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TIMELINE OF EVENTS

Wednesday, April 17, 2024

Time (UTC)	Description
02:19	Support started the deployment of TCM-1571
02:28	Support ran the automated job to put UAT in maintenance and the job failed
02:42	Support manually stopped the FIX servers in Production inadvertently
02:46	Support manually put the Web servers in maintenance for Production inadvertently
02:53	Support removed the maintenance in Production and confirmed that clients were able to access the Production GUI and send REST transactions
02:54	Support started the first FIX server for fix2-prod.anna-dsb.com endpoint in Production
02:55	First client has reconnected in FIX
03:24	Support started all the affected FIX servers in Production
04:53	Support sent out a wider notification to clients informing of the brief disconnection of the DSB services

APPENDIX 1

Classification of Incidents

Severity	Definition
Critical (S1)	Critical production issue that severely impacts the DSB Service for all Users. The situation halts business operations and no procedural workaround exists. 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.
Major (S2)	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. 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.
Minor (S3)	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.
Cosmetic (S4)	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.

Reference: [DSB Service Level Policy 2023](#)