PIR - INC#90634085/PBI#71627-Delay in sales data availability on the Retail Dashboard.

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Incident/ Problem Reference: 90634085/71627

Incident Date: 28/02/2025

PIR Date: 06/03/2025

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PIR Reviewer: Phil Torkington/Shahzad

1. Incident Summary :

On 28/02, Retail Dashboard Inday sales reports were not updated with latest sales information between 06:30 and 09:00. The root cause has been attributed to an incorrect code deployment during the MQ upgrade activity which was reverted to restore services.

Impact:

- Availability of live sales feed to EZORA (Franchise partner) impacting their planning activity.
- Delay in Retail Dashboard data availability, impacting the visibility of hourly trading information to leadership teams between 06:30 and 09:30.

2. Incident Chronology :

07:47 BEAM communication has been sent to stakeholders.

07:50 Data team report that after the MQ 9.4 rollout, Retail dashboard report has not refreshed since 05:30

08:00 A banner has been displayed on the Retail dashboard indicating that the data is not updated from 06:00.

08:17 Decision being made on the communication

08:28 Team is recreating the subscription

08:38 Both Food and Data team have started receiving the messages

08:40 Once also the Sales data have been processed, ETA for the Retail report refresh is around 09:45

08:42 For Food franchise sales data, ETA is being calculated

08:45 Retail dashboard has been refreshed manually, however the sales data till 08:00 has not been updated in it.

08:50 Foods team confirmed that they are back to BAU and the live sales feed to EZORA - franchise partner (7)

08:53 Sales data processing is back to normal for BEAM and planning to let the automatic batch refresh at 09:30

09:00 MQ team confirmed that all the messages have been processed at their end

3. Incident Resolution

To mitigate the immediate impact, the changes on the MQ subscription related to another project (UPC decoupling) was reverted manually, Subsequently, a proper deployment of code changes was executed through GitHub to implement the necessary adjustments.

4. Root Cause

The root cause has been attributed to an incorrect code deployment on MQ subscriptions during the scheduled MQ version upgrade.

Context:

There was a planned MQ version 9.4 Rollout for Shared Services portfolio GW, PG and RP MQ Queue managers on 28th March between 5AM and 7AM on the Q managers (A2MQRP02, A2MQPG02, A2MQGW02, A2MQRP01, A2MQPG01, A2MQGW01) and this roll-out was done through the Github pipeline based on the test results from the non-prod. After which, message pileups were observed on the dead letter Q (Queue responsible for storing the failed messages) within the POS shared gateway (responsible for retail dashboard data), subsequently impacting the Inday daily sales Dashboard refresh. However, other messages to the cloud consumers (FOA, RVS, DTA,FITS) were working as expected.

Upon investigations, it was identified that there has been changes on the MQ subscriptions of the POS gateway. These changes on the MQ subscription were made on the Master branch (within GitHub) by the integration services team for a separate project (UPC decoupling) without notifying the Cloud integration team.

To facilitate the version upgrade, the cloud integration team generated a binary file from GitHub. This file inadvertently included MQ subscription modifications made by the integration team. Since the version upgrade code and the MQ subscription changes were part of the same Master branch, the change implementation team (Cloud integration) failed to identify the incorrect code. Consequently, when the binary file was deployed through the CD/CI pipeline for the MQ version upgrade, the unintended MQ subscription changes were also applied, leading to the incident.

Testing and Post validations: Though we had the same binary file used for testing, the issue did not surface itself during the testing as the retail messages were not processing during the testing phase. Therefore, no message failures were observed within the POS gateway. There has been an action agreed to improvise the testing scenarios.

Post validations: All the downstream systems like (FOA, RVS, DTA, FITS and POS) were involved in the post validations checks, during the initial checks there were no issues with any of the message flow. Whilst performing further checks, incident was raised by the data team reporting issues with the retail dashboard data. Though we had the right alerts in Dynatrace to notify the integration team on the message failures within POS gateways, there was a gap in handling the alert as the alert was triggered to the incorrect product team. The alert configuration has been corrected now to proactively identify any message failures within POS gateway.

5. Findings

5.1. Observability –

Integration: Alerts were triggered from Dynatrace as there were message pile-ups in the dead letter queue (integration layer) However, due to incorrect configuration the alerts were not received by the right audience/support team . This configuration has been corrected now, going forward for any message failures and message pile-up in the dead letter queue sev1 alerts will be triggered immediately to the integration support team.

Beam Alerting: Beam team has received timely alerts indicating issue with data refresh on the Inday retail sales Dashboard. The issue was proactively identified and was raised with the integration team.

5.2. Technical Challenges -

Initially there was a challenge in root cause identification as integration team was unable to determine the cause for the message failures, since alerts from Dynatrace also did not trigger to the right group. Based on the triage, it has been understood to review the commit histories in Github to identify any anomalies with code deployments, which would have given a clear picture on the root cause at the first place. Once the RC was identified, the recovery was immediate to restore the services.

5.3. MIM involvement & impact assessment -

Though Integration team was aware of the issue by 06:16 as part of hypercare, they did not understand the impact due to the failed messages. Internal troubleshooting was performed and once BEAM has reported the issue with the Inday dashboard, it was highlighted to MIM around 07:30 and IM bridge was initiated. This is a lesson learnt, going forward during any message failure scenario in POS gateway the retail Dashboard team (BEAM) will be informed proactively as part of impact assessment. Also, the alerts severity has been amended and the technical teams are advised to involve MIM as soon as they receive the sev alerts.

5.4. Incident handling/ stakeholder management –

There were no major challenges during the incident triage and recovery.

5.5. Business Communication –

Business and Tech colleagues were kept informed via Business communication, incident channels and Loop updates.

5.6. Supplier Engagement – .

There is no involvement of third-party suppliers in the incident.

Mitigation Actions:

👉 *Agree actions for each of the findings to prevent recurrence, strengthen system reliability & stability, and improve response efficiency for future incidents*

	Action	Owner	Due date	Remarks/ Updates	Action Category
1	Review all the changes made to the Master branch within the Github and ensure all changes go through proper approval process.	Pandurangan, Saranya	Thu, Mar 6, 20...	Action item Completed. Going forward any changes to the Master branch will be committed only after the proper approval from the cloud frameworks team.	Problem Avoidance
2	Enable access restrictions to Master branch, so that any changes to the Master branch is being performed only by the right team.	Subramanian, Rajasekar	Thu, Mar 6, 20...	All the admin dev access has been revoked, keeping the permissions limited to the senior SME's for any code changes to be performed on the MQ gateway and repository through proper approval process.	Problem Avoidance
3	Ensure code comparison is performed before any deployment.	Vijendra Rao, Swathika	Thu, Mar 6, 20...	Going forward for any version upgrades/changes via Github, a code comparison will be performed between the Production version and the intended version to ensure the right code deployment. This step will be added as part of the implementation plan. SOP are updated to include the code comparison step on the implementation plan for any version upgrade/code changes.	Problem Avoidance
4	Amend the alert configurations within MQ to trigger the alerts to the appropriate product teams for efficient issue identification and recovery	Subramanian, Rajasekar	Thu, Mar 6, 20...	Alerting set-up has been reviewed, for any future reoccurrence of the issue, alerts are expected to be triggered to the right audience.	Problem Identification & Alerting
5	Review and refine the testing scenario, ensure we cover all the aspects during testing.	Vijendra Rao, Swathika	Thu, Mar 6, 20...	Due to inadequate testing, we were not able to identify the subscription changes in the lower environment due to the time of testing. It has been agreed to include more testing scenarios and to have extended hypercare to capture all the observations with the message flow across all the interfaces.	Problem Identification & Alerting