DCC Major Incident Summary Report

Major Incident Description:	Central Switching Service Interruption of Gate Closure Messages
Report Version:	1.0
Incident Date:	06/07/2023
Major Incident Ticket Reference:	INC0216074

Document Control

Documentation Control

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1.0	08/09/2023	DCC Major Incident Summary Report	Shona Wallace – Gibson

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DCC Major Incident Summary Report – Central Switching Service

Date Of Incident	DCC Incident Reference Number	Service Impacted	Incident Reported Date/Time	Resolution Date/Time	Met with in SLA (Yes or No)	Time Taken to Resolve (In Hours)
06/07/2023	INC0216074	Central Switching Service – Interruption to Gate Closure Messages	06/07/2023 18:29	11/09/2023 16:06	No	1605.6 hours

Nature of the Major Incident/Short Description

During a planned change to complete part of the Business Continuity Disaster Recovery (BCDR) work that started in June 2023, was scheduled to conclude on the 6 July 2023, the CSS Provider successfully completed the failover from UK West (UKW) to UK South (UKS) following the runbook created for the failover process for BCDR.
At the 5pm Gate Closure (GC) later the same day, only 638 switches were processed at Gate Closure, rather than the expected (approximately) 60,000 switches.

Upon investigation, it was identified that the volume of data expected to be in the message queues at this time was incorrect.

Whilst no data was lost, the data which was needed to populate the queue with future dated gate closure messages was not readily available so was unable to be loaded at the correct time. It was determined that future dated switches submitted prior to 9am on 6 July 2023 were unable to be processed with impact to up to 28 days from this date.

Summary of Impact/Likely future impact of the Major Incident

It has been confirmed at 200,762 switches and initial registrations were impacted. Parties did not receive secured active or secured inactive messages at the appropriate gate closure between 6 July 2023 and 2 August 2023.
The consumer impact was that switches that were expected to become effective the day following each respective Gate closure, did not happen within the CSS.

Smart metering was also impacted with 39 incidents to the DCC Smart Service centre being raised where suppliers were unable to action Change of Supplier gains. A number of suppliers had already acted on the assumption that Secured Active messages would have been sent at the Gate Closure rather than waiting for those Gate Closure messages to be sent. As a result, there were a number of emergency installs having to be carried out and in a few cases loss of supply for a short period of time.

Business impact has meant that teams have had to stand up resource to make manual correction to a small number of the impacted switches where suppliers withdrew switches after the supply start date.

After the fix had been applied by the CSS Provider, three of the switches were in an incorrect status and required action to resolve by either the market participant or further activity by Landmark.

Resolving Actions Taken

Following the incident, it is important to note that the CSS continued processing any new messages that were received with no manual intervention being required.

The actions taken to resolve the issues with the impacted switches was to re-queue the switches for processing as if they had been processed at Gate Closure. This re-queuing of switches took place over a period from 2 August 2023 to 7 August 2023. As a result of the switches being re-queued, Secured Active messages and Secured Inactive messages were issued by CSS. These messages contained the original data had the switch been processes at their original respective Gate Closures.

A Reconciliation plan was established which included activities for Xoserve, DNOs and the CSS Provider.
As part of its reconciliation, the CSS Provider checked error messages it had received in response to messages sent out during the execution window of the data rectification activities. Where there were errors received by CSS that related to the market participant's gateway being unavailable (500 errors), they were replayed to the market participant systems by the CSS Provider.

During the reconciliation, it was identified that there was misalignment between CSS and MPRS relating to 60 electricity meters. Data was provided to the relevant DNO, and a correction was made in MPRS by that DNO. Where necessary, parties were encouraged to resend the relevant Service Request to their meters to record the change of supplier within the Smart Metering systems.

Root Cause (if known)

The underlying cause has been attributed to an issue with load balancing due to a spike in Central Processing Unit (CPU) and Transactions Per Second (TPS) which contributed to a lag with Geo-replication across the regions. The load balancer was prioritising live traffic rather than the replication between regions.

No capacity issues or data loss was experienced.

Investigations between CSS Provider and the Platform Provider into the root cause of these spikes, which affected other tenants on the platform, have completed. The Provider is unable to share the reason why the high CPU utilisation rate occurred concurrently with the BCDR failover event.

Further Root Cause Analysis is being confirmed and will be provided through PRB0040672.