From:	steven.browell GRO [GRO]
Sent:	Thur 17/03/2022 1:20:44 PM (UTC)
To:	Breen, Chris[GRO]; Morris, Chris[GRO]
Subject:	FW: Horizon Audit San
Attachment:	Attachment

FYI. Response sent.

Steve Browell
Mob[GRO]

From: Browell, Steven
Sent: Thursday, March 17, 2022 2:20 PM
To: Simon Oldnall <[GRO]>; Warham, Wendy <[GRO]>
Cc: Tony Jowett <[GRO]>; Dean Bessell <[GRO]>; Walton, Daniel <[GRO]>; Jeff Smyth <[GRO]>; Dionne Harvey <[GRO]>
Subject: RE: Horizon Audit San

Dear Simon,

Thank you for your message.

Please see our responses below to the clarifications you have raised on the audit archive harvesting process.

General
The Horizon Audit Facilities provide the mechanisms to record and maintain an audit trail of Transactions and events according to the CCD entitled "Audit Trail Functional Specification" (CR/FSP/006). The Audit Archive is where this audit trail is stored. The Audit Archive is not used in the day-to-day operation of the Horizon or HNG-X/A solutions.
The ARQ process is used by POL to request information retrieval from the Audit Archive. The ARQ process has been intentionally designed and deployed to check for gaps in transaction information extracted from the Audit Archive and to alert the operator (so they check alternative Audit Archive stores) or POL (if a true gap is identified).
In the unlikely event that there are gaps in the Audit Archive, the ARQ process would spot it and if this could not be reconciled by using the second Audit Archive store, POL would be notified of the true gap found. POL would be aware of the gap.

1. The harvesting process
The harvesting process archives the data from BRDB to flat files which are then stored in the Audit Archive. The method of doing this has changed over the years as data storage changed from tape to EMC Centera to Fujitsu Eternus media, and with the use of Riposte pre-HNG-x and the new HNG-X architecture. The current harvesting process for HNG-X has been shared with the Strategic SAN project so there will be a good understanding in POL of how this currently works.

2. The Audit Retrieval Query
We use a Fujitsu developed application known as the AEClient which searches the audit archive in IRE11 (by default) using the provided FAD code and data range requested for the type of content requested (typically branch transaction and event data).

3. The extent of records retained in the Audit Archive
Contractually, the retention periods for data held in the operational audit trail have changed over time. Currently, Schedule B3.2 of the HNG-X Agreement sets out Fujitsu's contractual obligations with respect to the retention of such data. Paragraph 3.9.2 of Schedule B3.2 provides:

"Data within the operational audit trail shall be retained for 18 months, although the set of records associated with a transaction voucher transacted by an APOP Service and Transaction data relating to Transactions originated from the Banking Business Capability and data relating to Transactions that are

settled using the Debit Card or Credit Card Method of Payment shall be retained for seven years."

Data held in the operational audit trail has been retained for much longer than this contractual obligation by mutual agreement. Since 2014, each year POL and Fujitsu have signed a CWO (or a CT as it was originally known) to retain for a further year the data held in the operational audit trail. By way of example, please see CWO0395b (RTQSR0003106) from last year, and CWO0560 (RTQSR0003638) for this year. Dionne Harvey will be able to add further clarity.

4. How are gaps identified and notified to POL

The AEClient initiates a process for the data in the IRE11 audit archive to be made available for query and extract. This process validates the seals on the content and then checks the transaction sequence numbers which are the unique and sequential identifiers of transactions made at a branch. If any gaps in the sequence numbers are identified, this signals that there is a gap in the IRE11 audit archive data.

The presence of a gap is presented to the operator (see Figure 1). If this happens for pre HNG-X then the audit archive in IRE19 is checked. If that also shows a gap for the matching search criteria, then a true gap will have been found. If a true gap had been found, then the ARQ response spreadsheet would highlight this to POL (see Figure 2).
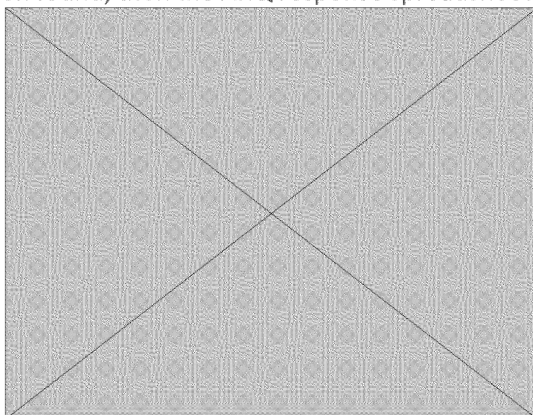

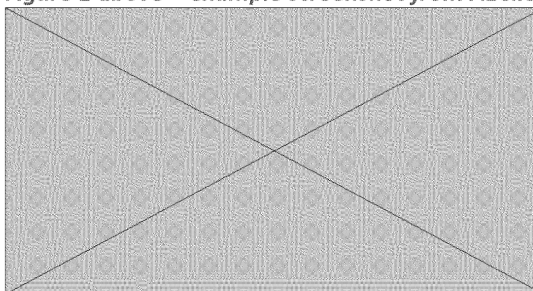*Figure 1 above – example screenshot from AEClient reporting on GAPS*

Figure 2 above – example from ARQ response file showing how POL is notified of Gaps in what it receives

5. Date the current harvesting solution was implemented

The current harvesting solution was introduced with the implementation of HNG-X.

ARC/APP/ARC/0008 (section 2.8) describes harvesting and was part of the solution baseline document set that was issued to POL at HNG-X R1 (v3.0 is within the attached email sent to POL in November 2009). This document also mentions other design matters relating to the Audit Archive.

6. Issues experienced with the current harvesting solution

System monitoring has been used to identify events that require investigation. As explained in our previous message, we are not aware that the IRE11 harvesting process has manifested true gaps in the data held in the operational audit trail.

Kind regards.

_____

Steve Browell
Mob: [GRO]

From: Simon Oldnall <[GRO]>
Sent: Monday, February 14, 2022 3:30 PM
To: Browell, Steven <[GRO]>; Warham, Wendy <[GRO]>
Cc: Tony Jowett <[GRO]>; Dean Bessell <[GRO]>; Walton, Daniel

Subject: RE: Horizon Audit San

Post Office Limited - Document Classification: INTERNAL

Dear Steve

Many thanks for providing this response; As a broad point we request that Fujitsu provide us the records & material used to form the assement below in order that POL can carry out its own analysis.

On the specific responses I have added some supplementary questions/clarifications required (though accepting that the request above may provide the answers to this)

Request:
Copies of Post Office counter transactions gathered prior to HNG-X, which are now stored in the audit archives in both IRE11 and IRE19, are understood to contain gaps and an explanation is required.
Overview:
1. The audit archive is a copy of the live data retained in a highly controlled way for future reference and query. It does not affect the live operation of the solution.
2. It is populated by a harvesting process.

- Please provide a detailed overview of the harvesting process

3. It is queried using an Audit Retrieval Query (ARQ) when historical information is required.

- Please provide details of the query used (parameters defined etc)

4. The audit archive only contains data from October 2007 to the present day. Prior to this date, the data has been purged.

- When was this data purged? Can you provide records of POL approval for this purge?

5. It is the ARQ process that will identify if any gaps are present in the audit archives. This is done when ARQ requests are received by Fujitsu and responses are sent to POL.

- How do these gaps manifest and how are these brought to POL's attention? Please provide example records of when this has occurred

Harvesting:
1. For legacy Horizon, there were 2 independent harvesting processes in Horizon: one in Wigan; and one Bootle. These were migrated to IRE19 and IRE11 respectively.

- What dates were these processes in place for (ie what date was the current solution implemented

2. There is a single harvesting process in HNG-X in IRE11 (the audit archive is replicated to IRE19). The IRE11 harvesting process has not experienced any issues that would lead to gaps.

- What issues have been experienced with the harvesting process?

3. There have been various issues with the harvesting processes over the years – identified by system monitoring, logged as incidents, with action taken at the time.

- As above

Many thanks
SImon

Simon Oldnall
Horizon IT Director

Horizon IT

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GRO
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From: steven.browell GRO < GRO >
Sent: 11 January 2022 16:30
To: Simon Oldnall < GRO >; wendy.warham GRO
Cc: Tony Jowett < GRO >; Dean Bessell < GRO >;
daniel.walton GRO ; Jeff Smyth < GRO >; Dionne Harvey
< GRO >
Subject: RE: Horizon Audit San

Post Office Limited - Document Classification: INTERNAL

Simon,

Please find below the Fujitsu response stating the request and a breakdown of response points. We hope this provides the explanation you require.

Request:
Copies of Post Office counter transactions gathered prior to HNG-X, which are now stored in the audit archives in both IRE11 and IRE19, are understood to contain gaps and an explanation is required.
Overview:
1. The audit archive is a copy of the live data retained in a highly controlled way for future reference and query. It does not affect the live operation of the solution.
2. It is populated by a harvesting process.
3. It is queried using an Audit Retrieval Query (ARQ) when historical information is required.
4. The audit archive only contains data from October 2007 to the present day. Prior to this date, the data has been purged.
5. It is the ARQ process that will identify if any gaps are present in the audit archives. This is done when ARQ requests are received by Fujitsu and responses are sent to POL.

Harvesting:
1. For legacy Horizon, there were 2 independent harvesting processes in Horizon: one in Wigan; and one Bootle. These were migrated to IRE19 and IRE11 respectively.
2. There is a single harvesting process in HNG-X in IRE11 (the audit archive is replicated to IRE19). The IRE11 harvesting process has not experienced any issues that would lead to gaps.
3. There have been various issues with the harvesting processes over the years – identified by system monitoring, logged as incidents, with action taken at the time.

ARQ:
1. The ARQ process checks for gaps when retrievals are run. Any suspected gaps identified are logged and investigated.
2. There have been a small number of suspected gap issues investigated. It is understood that all investigations were resolved, including by re-running the ARQ against the second data store (Horizon) or by extending the date ranges (HNG-X) resulting in no gaps in any ARQ responses.
3. The ARQ process includes the adding of warnings for gaps in the resulting files sent to POL. If there had been any gaps, POL would have been made aware within the ARQ responses supplied.
4. One known gap (for a specific FAD and date) was identified as part of ARQ extracts performed against the Bootle audit archive. That gap is not in the Wigan audit archive though. Therefore, Fujitsu is not aware of any gaps in the audit archive data for Horizon when both archives are used.
5. There have been no gaps identified as part of any ARQ extracts performed against the HNG-X audit archive.

General:
1. POL would have been made aware if there had been any gaps in any ARQ responses supplied.
2. Fujitsu has not historically retained copies of ARQ responses and has deleted them once POL confirmed receipt – either by delivery of the CD or by receipt of a file on the Quatrix system. POL may have copies of all ARQ responses received.
3. During an audit commissioned by POL and performed by Deloitte between May 2016 and November 2016 the audit process and the checking for gaps was validated. Fujitsu did not see the final report but can confirm that the tests were all successful.

Steve Browell
Mob: [GRO]

-----Original Message-----
From: Simon Oldnall <[GRO]>
Sent: Monday, January 10, 2022 9:26 AM
To: Browell, Steven <[GRO]>; Warham, Wendy <[GRO]>
Cc: Tony Jowett <[GRO]>; Dean Bessell <[GRO]>; Walton, Daniel <[GRO]>; Jeff Smyth <[GRO]>; Dionne Harvey <[GRO]>
Subject: RE: Horizon Audit San

Post Office Limited - Document Classification: INTERNAL

Steve/Wendy

Belated happy new year, apologies if I have missed this whilst I was off, but have FJ now provided the position requested below?

Many thanks

Simon

Simon Oldnall
Horizon IT Director

Horizon IT

GRO

-----Original Message-----
From: Simon Oldnall
Sent: 01 December 2021 19:36
To: Steven Browell < GRO >
Cc: Tony Jowett < GRO >; Dean Bessell < GRO >;
daniel.walton GRO
Subject: Horizon Audit San

Hi Steve

The PCI project team have flagged an issue to me and around potential issues with the data integrity of the audit San.

The initial feedback I'm hearing is that this is a historical issue, however this does raise a number of concerns.

I understand that you are catching up with Dean tomorrow morning, I would be grateful if you could provide him a more detailed brief on what the issues were, the history of these issues and any ongoing concerns that may exist.

Jeff is aware of the issue and I would like to give him a high level briefing ahead of our session with Dan and Wendy tomorrow

Many thanks

Simon

Simon Oldnall
Horizon IT Director
20 Finsbury Street
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