

STORE_RUNBOOK

Store rebuild and recovery runbook

Last verified against build: dev_rc1_20261005 (development copy, release candidate 3.2.0-RC1, store design), 2026-10-05. Decisions: DECISIONS_P3 P3-79 to P3-104. For: Administrators and IT.

What makes up the store

Part	Where	Written by	Can be rebuilt from
STORE_PAY.csv	Archive folder	Close, Backfill, Rebuild store (copy-and-swap; read-only between writes)	the inbox (Rebuild store)
Inbox<LoadBatch>\	Archive folder	Close, Backfill (read-only copies of the stored source files; never deleted)	backup only
ArchiveLog (one row per batch: rows, totals, digest, StoreSHA256, ChainHash)	workbook	the same commands	backup of the workbook only
tblStoreSummary (totals per batch x company x currency)	workbook (STG_Store)	the same commands	Rebuild store
Controls files CONTROLS_PAY_.xlsx	Archive folder	Close	backup only (evidence)
Superseded\	Archive folder	Re-open (controls file), Rebuild store (old store)	-

The workbook and the Archive folder belong together: the ArchiveLog chain in the workbook describes exactly the batches in the store. Back them up together (daily) and restore them together.

Rules

- Never edit, sort, re-save or open-and-save STORE_PAY.csv in Excel or any editor; never delete or rename anything in the Archive folder. Read it read-only if you must look at it.
- Every repair below is a command: it is logged, and it leaves the old state in Superseded.
- Before any repair: everyone closes the workbook; take a copy of the Archive folder and the workbook (keep it until the repair is verified).

Diagnose first

1. Home > Refresh (or read the last refresh). ControlPanel: ARCHIVE_INTEGRITY, ARCHIVE_COMPLETE.
2. ArchiveLog: IntegrityStatus per batch; the cells archChainStatus (ArchiveLog X3) and archStoreStatus (ArchiveLog AD3) give the reason: store file changed (SHA-256), chain broken, unknown batch in the file, header differs from the dictionary.
3. Sign in; Home > Verify log. It re-verifies the ActivityLog chain and re-reads every batch of the store (rows and CRC-32, STG_StoreCheck): the result names the batches that differ.

Finding	Likely cause	Go to
Store SHA-256 differs, every batch reads back OK	The file was opened and re-saved (line endings, quoting) or touched by a tool	A

Finding	Likely cause	Go to
One or more batches differ (rows / CRC-32), or the file is missing / unreadable	Edited, truncated or lost store	A
Store header differs from STG_StoreHeader	A model field was added or removed in the dictionary	B
Chain broken (archChainStatus)	ArchiveLog edited by hand, or the workbook restored without its Archive folder	C
Unknown batch in the store / batch missing	Workbook and store from different days	C
Model totals (ModelRows / ModelGross) differ, the store reads back OK	A failed or partial refresh	Refresh again; if it stays, run Verify log and report
A .tmp file next to the store, ACP.lock left behind	A write was interrupted (Excel or network failure)	D

A. Rebuild the store from the inbox

Preconditions: the inbox holds a folder for every CURRENT batch (the command checks it and refuses otherwise); the column map is locked; nobody else has the workbook open.

1. Sign in. Home > Rebuild store; type REBUILD.
2. The command reads every CURRENT batch from Archive\Inbox<LoadBatch>\ (BulkChunkMonths months per refresh), requires each batch to reproduce its recorded rows, HashTotal and GrossTRY, writes a new store, moves the old one to Archive\Superseded, rewrites tblStoreSummary, re-records the digests that changed (with a note in ArchiveLog[Notes]) and seals the chain again.
3. Expected result: "OK: store rebuilt from the inbox in s: batch(es), line(s), rows and totals equal to ArchiveLog; digest(s) re-recorded". With unchanged parameters the new store is byte identical and k = 0; k > 0 means derived columns were recomputed with parameters changed since the close (P3-94) — note the reason in the changelog.
4. If it says "BLOCKED: the inbox has no folder for batch(es) ...": restore those inbox folders from backup and run it again. If no backup exists: re-open those months and close them again from the source folder (their source files must still be there).
5. If it says "FAILED: ... — the store was not replaced": the old store is untouched; the message names the batch that did not reproduce (an inbox file changed or missing). Restore that inbox folder from backup.
6. Afterwards: Refresh; ARCHIVE_INTEGRITY OK; Verify log OK. Duration: about the bulk build time (rehearsal: 119 months in about 25 minutes):

~~B. Planned rebuild after a dictionary change~~

~~Unlock column map (reason) > change ColumnMap > Refresh (MAPPING_DQ OK) > Lock column map > Rebuild store (A) > Refresh. Until the rebuild, ARCHIVE_INTEGRITY is REVIEW and the close is blocked (P3-93). Stored months get the new field from their inbox files.~~

~~C. Workbook and store out of step~~

~~The chain lives in the workbook, the batches in the Archive folder: they must come from the same moment.~~

1. ~~Restore the workbook, ACP_Settings.ini and the whole Archive folder from the same backup (IT):~~
2. ~~Refresh; ARCHIVE_INTEGRITY OK; Verify log OK.~~
3. ~~Months closed after that backup are lost from both: the Preparer and Reviewer prepare and close them again (their source files are in the source folder; their inbox copies, if they survived, can be compared). The external Log folder keeps the events of the lost closes as evidence (they show as INFO "not in this workbook").~~
4. ~~Do not try to repair ArchiveLog by hand or to accept a broken chain.~~

~~D. Interrupted write~~

- ~~• A close or a rebuild writes the new content to STORE_PAY.csv.tmp and swaps it in only after the size and line count are checked: an interruption before the swap leaves the old store intact (the .tmp file is ignored and replaced at the next write). An inbox folder of a batch that ArchiveLog does not list is renamed *aborted* at the next write, never deleted.~~
- ~~• After an Excel crash during a long command: wait 2 hours or have an Administrator clear the lock (Home > Clear lock, logged HGH), open the workbook, Refresh, Verify log. If the interrupted command was a close, the month is still open (SignOff and ArchiveLog were not written): close it again.~~

Rehearse

~~Rehearse a rebuild on a copy in the lab folder (C:\Dev\ActuarialClosingPlatform\lab after the project move, today C:\Dev\ACP_StoreTest): tools/dev/Test_Store.ps1 covers close, re-open, rebuild and tampering (wp/HARDEN/T_store_tamper.md: 7 of 7 detected).~~