Cost Savings & Processing Efficiencies related to Industry Member Transaction Processing

March 29, 2022

Agenda

- Overview
- Proposed Changes related to Industry Member ("IM") Reporting
 - Changes to All Environments
 - Retire "Too Late to Link" Warning Messages
 - Eliminate Meta File for IM Transaction Submissions
 - Changes to Test Environments
 - Reduce Named Errors
 - Run Linkage in Production Mirror Environment on a scheduled basis

Proposed Changes for All Environments

1. Retire "Too Late to Link" Linkage Warnings

- Description: Linkage feedback includes a warning for every late event received outside of the processing window, which means it was reported to CAT too late to link.
- Change: Stop providing Late Linkage warnings.

2. Eliminate Metafile for CAT Transaction Data Submissions

- Requirement: CAT Technical Specifications require a metafile paired with one or more data files.
- Change: Remove the metafile requirement. Independently process data files.

Proposed Changes for Test Environments

Deliver Named Errors only to CAT Reporters who have submitted the Industry Test environment

- Description: Named errors are generated to all CAT Reporters based on events reported by other firms to the test environment, and the Plan Participant Production data.
- Change: Provide named errors only when an IM has reported to the Test Environment. In Production Mirror, provide named errors when an IM has reported to Production Mirror and linkage processing is scheduled.

2. Run Linkage Validation in Industry Test Production Mirror on a Scheduled Basis

- Description: Daily, Production Mirror accepts IM submissions, provides file /record level validation and feedback, and performs Linkage validations and feedback of IM submissions against Plan Participant Production data.
- Change: Perform linkage validations in Production Mirror on a scheduled basis and as needed for industry initiatives. Communicate schedule to Industry Members.

Retire Too Late to Link Warning Code

- ➤ Retire Error Code 397 Late Reported Event
 - Indicates an event is unmatched because it was reported beyond the processing window (reported on or after T+5).
- Too Late to Link warnings are not repairable and do not participate in Linkage Compliance Rates.
- Events reported on or after T+5 will continue to be considered as Late Reports and will participate in Late Statistics, which is part of the Total Compliance Rate (as per the current implementation).

Benefits of Retiring Too Late to Link Warnings

Industry Members	CAT Plan Processor
Reduced feedback and related processing as Too Late to Link warnings are combined with other Linkage Errors for which repairs are	Reduced processing and feedback generation, particularly for instances when bulk resubmissions occur.
required.	Reduction in compute and elimination of storage for significant number of late warnings representing large bulk resubmissions.
	➤ Benefits T+1 Noon Processing.

▶ Retirement of Warning Code planned by end of April 2022.

Eliminate Meta File for IM Transaction Submissions

- > Meta files no longer required for Industry Member transaction submissions
- ➤ No change required for Data Files
 - Data files processed individually
 - Retire all File Integrity error codes related to meta files and pairing
 - No changes to Data Ingestion and Linkage Discovery feedback; Feedback Meta and Data files will be returned as per the existing implementation.
- ➤ Minor differences for IM's (covered in subsequent slides)

Benefits of Meta File Elimination

Industry Members	CAT Plan Processor
> Fewer submission and feedback files.	Fewer submission and feedback files.
➤ Elimination of timeout warnings and errors for processing issues related to Meta /Data file pairing.	Ingestion processing can begin immediately when data file is received.
Elimination of hash, schema version, and Done for Day requirement.	Increased system resiliency and simpler operational model without 2-hour pairing requirement.
> Faster Ingestion feedback.	> Benefits T+1 Noon processing.
Reduced complexity and operations time.	Reduced system complexity and operations time.

Proposed Releases

CAT will allow a transition for CAT Reporters

Release 1 - Metafiles Ignored Production Release TBD

Metadata files

- Not required to be submitted by CAT Reporters
- If submitted:
 - Receive Acknowledgement Feedback (.ack)
 - Ignored during File Integrity validations

Data files

 Filename elements and submitter relationships validated using file name

Release 2 - Metafiles Rejected Production Release TBD

Metadata files

 Rejected with Acknowledgement Feedback (.ack.error)

CAT Reporter Portal

- Create CAT Events Metafile will not be created for direct data entry submissions
- File Upload Metafile upload will not be supported

Differences due to Meta Elimination

Meta Information	Change	Difference
doneForDay	Not Required – No Change to Firms.	CAT is performing intravenue linkage throughout the submission period as an alternative to using <i>doneForDay</i> flag.
fileVersion	Not Required – Firms will no longer be required to populate schema versions in files.	Upon go-live of new releases, firms who have not made schema updates as per the Technical Specifications will receive Ingestion Errors.
compressedHash	Not Required	FIF feedback with related concerns for the elimination of this validation which is helpful to determine incomplete / missing records. As an alternative, CAT can enhance Integrity feedback to include record count. Change would be required by all firms to accept this new value.
Validation	Change	Difference
Filename elements validations, including Submitter relationship	Validation will be performed on the Data File.	Feedback Meta is returned indicating the Data File is accepted or rejected

Reduce Named Errors in Test Environments

- ➤ Deliver Named Errors only to firms that report data to the Test Environment on the same processing date.
- Firms who have not submitted to the Test Environment will not receive Named Linkage Errors.
- ➤ Named Errors will be delivered when another venue names your firm and your firm has submitted to the same test environment.
 - If an IM reports to Production Mirror, named errors will be returned in Production Mirror (when linkage processing is scheduled).
 - If an IM reports to CT only, named errors will be returned only in CT.

Benefits of Reducing Named Errors in Test Environments

Industry Members	CAT Plan Processor
Reduced feedback and related processing for warnings that are not applicable to the firm, as they are not testing.	Reduces processing and feedback generation.

> Implementation of this change planned by end of May 2022.

Run Linkage Processing in Production Mirror on a Scheduled Basis

- > Run linkage processing in Production Mirror on a **regular** scheduled basis and as needed to support Industry initiatives.
- > Publish schedule to CAT Reporters on cathmsplan.com.
- ➤ Production Mirror will continue to provide File Integrity and Ingestion validations and related feedback for all submissions daily.

	Validation and Feedback			
Linkage Processing Schedule	File Integrity	Ingestion	Linkage Errors	Outstanding Linker Errors
Daily	X	X		
Scheduled			X	X

No change to CT environment, which supports testing for the next CAT release. Full linkage processing will occur daily in CT when active.

Benefits of Eliminating Daily Linkage Processing in Production Mirror

Industry Members	CAT Plan Processor
Supports coordination of linkage testing between venues	Reduced processing and feedback generation since most
and for Industry initiatives.	firms are not participating in Production Mirror.

Linkage Schedule Options

	File Integrity & Ingestion	Intravenue	Intervenue
1	Daily	Daily	Daily
2a	Daily	Daily	Scheduled 1 Day / Week
2b	Daily	Daily	Scheduled 2 Days / Week
3a	Daily	Scheduled 1 Day / Week	
3b	Daily	Scheduled 2 Days / Week	

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Q&A

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