Industry CAT CAIS Release Status

August 17th, 2022

Agenda

- Full CAIS Release Update
- Open Issues
- Planned Enhancements
- Specification Updates
- General Announcements & Reminders
- Q&A

Industry CAT Full CAIS Release Update

Industry Member Release Rollout - Pre-Full CAIS Production

Full CAIS Release 1
Industry Test – 1/31/2022
Production – 4/25/2022

Ingestion

- Industry Test Open for Machine-to-Machine File & Data Integrity Validations, Material Inconsistencies, and Feedback
- Feedback file contains up to 1,000 Rejections

CAIS Reporter Portal

- Manual File Upload
- Manual Submission
- Submission Feedback
- Inconsistencies Feedback
- Nightly Inconsistencies Report

Full CAIS Certification opened on 2/1/2022

Full CAIS Release 2a
Industry Test – 3/28/2022
Production – 4/25/2022

Ingestion

- New DRIVERLICENSE Foreign TID Type
- EIN Validation changed to format validation
- Feedback file enhanced to include all Rejections feedback

CAIS Reporter Portal

 FDID Reconciliation Report updated with Full CAIS information (count of CAT Customers and Version information) Full CAIS Release 2b
Industry Test – 4/11/2022
Production – 4/25/2022

Ingestion

- Remove OTHBKR and CP customerType values for Legal Entity Customer Records
- Remove BROKERAGE and ADVISED values for accountType
- Remove primeBrokerID and bankDepositoryID fields and add a new DVPCustodianID field

Industry Member Release Rollout - Full CAIS Production

Full CAIS Release 3a
Industry Test – 5/25/2022
Production – 6/13/2022

Ingestion

- New Authorized Trader
 Names List on FDID record
- Increase *lastName* field length to 200 characters

Reports

 FDID Version Report posted to SFTP weekly, containing active LTID Phase FDIDs not updated to Full CAIS Phase

CAIS Reporter Portal

 FDID Version Report available on-demand, containing active LTID Phase FDIDs not updated to Full CAIS Phase Full CAIS Release 4
Industry Test – 6/26/2022
Production – 7/1/2022

Ingestion

• New OTHGOVT Foreign TID Type

Performance Enhancements

 CAIS file processing improvements

Minor Enhancements and Bug Fixes

Full CAIS Release 5
Industry Test – 9/12/2022
Production – 9/26/2022

Performance Enhancements

 CAIS file processing improvements **CAIS Report Card Release**

Report Card

- Full CAIS Compliance begins with the January Report Card published on February 15th, 2023
- Compliance Rates distinguished for Correspondent data

Industry Member Release Rollout - Planned Future Enhancements

Industry Test – TBD Production – TBD

- INACTIVE End Reason
- Automated Transfer Procedure
- Optimization of error feedback

| | Industry Test Environment | | | | | | | | | | | | |
|-------------------------------|--|--|--|--|--|---|---|--|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | | |
| Number of Total Submitters | 31 | 28 | 33 | 34 | 29 | 11 | 2 | | | | | | |
| Number of Unique Firms | 100 | 52 | 266 | 213 | 289 | 150 | 2 | | | | | | |
| Number of Files Received | Total: 283 Reporter Portal: 65 SFTP: 218 | Total: 219 Reporter Portal: 49 SFTP: 170 | Total: 3,698 Reporter Portal: 42 SFTP: 3,656 | Total: 1,908 Reporter Portal: 35 SFTP: 1,873 | Total: 1,685 Reporter Portal: 1,655 SFTP: 30 | Total: 1,043 Reporter Portal: 0 SFTP: 1,043 | Total: 2 Reporter Portal: 0 SFTP: 2 | | | | | | |
| Number of Files Rejected | 6 | 8 | 14 | 27 | 105 | 6 | 2 | | | | | | |
| File Reject Rate | 2.12% | 3.65% | 0.38% | 1.42% | 0.03% | 0.01% | 0.00% | | | | | | |

| | Industry Test Environment | | | | | | | | | | | | | |
|-------------------------------|---------------------------|--------------|-----------------|----------------|--------------|----------------|--------------|--|--|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | | | |
| FDID Records Accepted | 310,338 | 1,258,353 | 6,866,687 | 10,744,610 | 1,803,987 | 380,146 | 0 | | | | | | | |
| FDID Records Rejected | 103,094 | 11,378,753 | 278,592 | 742,726 | 784,095 | 11,710 | 0 | | | | | | | |
| FDID Records Submitted | 413,432 | 12,637,106 | 7,145,279 | 11,487,336 | 2,588,082 | 391,856 | 0 | | | | | | | |
| FDID Record Rejection Rate | 24.94% | 90.04% | 3.90% | 6.47% | 30.30% | 2.99% | 0.00% | | | | | | | |

| Industry Test Environment | | | | | | | | | | | | |
|-----------------------------------|-------------|--------------|-----------------|----------------|--------------|----------------|--------------|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | |
| Customer Records Accepted | 261,967 | 1,370,027 | 7,253,055 | 13,368,393 | 2,131,229 | 469,132 | 0 | | | | | |
| Customer Records Rejected | 104,740 | 12,266,160 | 381,290 | 1,139,608 | 929,233 | 14,789 | 0 | | | | | |
| Customer Records Submitted | 366,707 | 13,636,187 | 7,634.345 | 14,508,001 | 3,060,462 | 483,921 | 0 | | | | | |
| Customer Record Rejection Rate | 28.56% | 89.95% | 4.99% | 7.86% | 30.36% | 3.01% | 0.00% | | | | | |

| | Production Environment | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|--|--|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | | | |
| Number of Total Submitters | 9 | 9 | 10 | 9 | 12 | 1 | 0 | | | | | | | |
| Number of Unique Firms | 9 | 9 | 10 | 9 | 12 | 1 | 0 | | | | | | | |
| Number of Files Received | Total: 35 Reporter Portal: 30 SFTP: 5 | Total: 41 Reporter Portal: 36 SFTP: 5 | Total: 57 Reporter Portal: 52 SFTP: 5 | Total: 20 Reporter Portal: 15 SFTP: 5 | Total: 69 Reporter Portal: 7 SFTP: 62 | Total: 1 Reporter Portal: 0 SFTP: 1 | Total: 0 Reporter Portal: 0 SFTP: 0 | | | | | | | |
| Number of Files Rejected | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| File Reject Rate | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | | | | | | | |

| | Production Environment | | | | | | | | | | | | | |
|-------------------------------|------------------------|--------------|-----------------|----------------|--------------|----------------|--------------|--|--|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | | | |
| FDID Records Accepted | 1,197 | 1,210 | 1,240 | 1,183 | 1,886 | 18 | 0 | | | | | | | |
| FDID Records Rejected | 4 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| FDID Records Submitted | 1,201 | 1,212 | 1,241 | 1,183 | 1,886 | 18 | 0 | | | | | | | |
| FDID Record Rejection Rate | 0.33% | 0.17% | 0.08% | 0.00% | 0.00% | 0.00% | 0.00% | | | | | | | |

| Production Environment | | | | | | | | | | | | |
|-----------------------------------|-------------|--------------|-----------------|----------------|--------------|----------------|--------------|--|--|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | | | | |
| Customer Records Accepted | 1,129 | 1,142 | 1,172 | 1,115 | 1,797 | 18 | 0 | | | | | |
| Customer Records Rejected | 6 | 3 | 1 | 1 0 | 0 | 0 | 0 | | | | | |
| Customer Records Submitted | 1,135 | 1,145 | 1,173 | 1,115 | 1,797 | 18 | 0 | | | | | |
| Customer Record Rejection Rate | 0.53% | 0.26% | 0.09% | 0.00% | 0.00% | 0.00% | 0.00% | | | | | |

Full CAIS Phase Rejection Observations

| Rejection Source | Top Rejection Reasons |
|---------------------|--|
| File | Invalid correspondentCRD Paired Identifiers file not received Duplicate file CAIS file not readable Missing or invalid Legal Entity customer record count |
| FDID | No customer association with trading capabilities FDID rejected because an associated customer record was rejected Missing or invalid <i>DVPCustodianID</i> Missing ADDRESS1 type address record Multiple active roles for customer within <i>fdidCustomerList</i> |
| Customer | •Customer rejected because an associated FDID was rejected •Legal Entity customer reported with improper <i>tidType</i> •Multiple instances of customer with differing data •Malformed TID record |

Open Issues, Planned Enhancements, and Specification Updates

CAT Full CAIS Open Issues List – As of 8/17/2022 Release Planned/Workaround Provided

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date/Workaround | Production Environment Targeted Release Date/Workaround | Area Affected |
|---|--------|---------------|---|-----------------|----------|--|--|-----------------|
| 1 | Open | 22041 | Instances of CAIS Data feedback containing 22041 errors when the customerRecordID is present in the file on either a Natural Person or Legal Entity customer record, and the same customerRecordID has a malformed TID warning in the CAIS TIDS feedback. A 22048 error is expected instead of the 22041 error. | Code Release | Medium | Fix: 9/12/2022 | Fix: 9/26/22 | Data Validation |
| 2 | Open | N/A | Intermittent instances where feedback file versions are not correctly being generated for a submission. Final feedback is provided including all status transitions, however one or more feedback file versions contain duplicate status values. | Code Release | Low | Fix: 9/12/2022 | Fix: 9/26/22 | Feedback Files |
| 3 | Open | N/A | Instances when an error occurs for a customer record where the same CAT customer is reported with multiple customerRecordID values, SFTP feedback will include only one of the customerRecordIDs. The portal feedback will include all customerRecordIDs related to the error. | | Medium | Fix: TBD | Workaround: All affected customerRecordIDs are displayed within the CAIS Reporter Portal UI. Fix: TBD | Feedback Files |

CAT Full CAIS Open Issues List - As of 8/17/2022 Release Planned/Workaround Provided

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date/Workaround | Production Environment Targeted Release Date/Workaround | Area Affected |
|---|--------|---------------|---|--------------|----------|--|--|----------------------|
| 4 | Open | N/A | Within the CAIS Reporter Portal Submission Report, counts of customer records repaired and outstanding are counted by TID rather than <i>customerRecordID</i> . Repaired and outstanding rejections counts may not match the count of records rejected. | Code Release | Low | Fix: No later than 9/12/22 | Fix: No later than 9/26/22 | Submission Report |
| 5 | Open | N/A | The 365-day grace period is currently only provided for 'IMPACTED' inconsistencies. This fix will apply the grace period to 'TRIGOTHER' inconsistencies as well. | Code Release | Medium | Fix: TBD | Workaround: Provide updateNotification=true for each affected Customer record. Fix: TBD | Inconsistencies |
| 6 | Open | N/A | The customerRejectionEventID attribute within the CAIS Data Feedback File is not present for rejections against customer records. However, this attribute is present within the CAIS Reporter Portal UI. | Code Release | Low | Fix: TBD | Fix: TBD | Feedback Files |
| 7 | Open | N/A | The Rejections and Inconsistencies pages may take longer than expected to load. | Code Release | High | Fix: TBD | Fix: TBD | Reporter Portal |

CAT Full CAIS Open Issues List – As of 8/17/2022 Release Planned/Workaround Provided

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date/Workaround | Production Environment Targeted Release Date/Workaround | Area Affected |
|----|--------|---------------|---|--------------|----------|--|--|---|
| 8 | Open | N/A | Timestamps in the Nightly Inconsistencies Feedback File are in ISO format (e.g., 2022-08- 01T23:29:29.9712) instead of the Timestamp format prescribed in the CAIS Technical Specifications. | Code Release | High | Fix: No later than 9/12/22 | Fix: No later than 9/26/22 | Inconsistencies |
| 9 | Open | N/A | The reporterCRD attribute within the Nightly Inconsistencies Feedback File is being output as a String data type instead of Unsigned. | Code Release | High | Fix: No later than 9/12/22 | Fix: No later than 9/26/22 | Inconsistencies |
| 10 | Open | N/A | Instances of rejections and inconsistencies not being repaired due to database load backlog. | Code Release | High | Fix: 9/12/22 | Fix: 9/26/22 | Error Repairs and Inconsistencies |
| 11 | Open | N/A | Duplicate rows are present in the downloaded file when downloading the Rejections table from the Reporter UI. | Code Release | Medium | Fix: TBD | Fix: TBD | Reporter UI |
| 12 | Open | 22041, | Incorrect error codes produced (22041, 22042) when a customerRecordID has an entry in the CAIS Data File but no entry in the TIDs File. 22526 is expected to be returned in this scenario. | Code Release | Medium | Fix: 9/12/22 | Fix: 9/26/22 | Feedback Files |

CAT Full CAIS Open Issues List - As of 8/17/2022 Release Planned/Workaround Provided

| # | # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date/Workaround | Production Environment Targeted Release Date/Workaround | Area Affected |
|---|---|---------------|---------------|--|--------------|----------|--|--|----------------|
| 1 | 3 | NEW – Open | N/A | Files containing more than 6 Million total records (FDIDs + CAT Customers) may not return feedback in the times specified within the Full CAIS Technical Specifications. | Code Release | Medium | Fix: TBD | Fix: TBD | Feedback Files |

CAT Full CAIS Recently Closed Issues List As of 8/17/2022

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date/Workaround | Production Environment Targeted Release Date/Workaround | Area Affected |
|---|--------|---------------|---|--------------|----------|---|---|-----------------|
| 1 | Closed | N/A | Intermittent instances where not all TIDs feedback file versions are being generated for a submission. Final feedback is provided including all status transitions, however one or more feedback file versions are missing. | Code Release | Medium | Fix: Deployed 7/31/22 | Fix: Deployed 8/13/22 | Data Validation |
| 2 | Closed | N/A | Large files containing over 15 million records failed to complete processing. | Code Release | High | Fix: Deployed 7/31/22 | Fix: Deployed 8/13/22 | Validation |
| 3 | Closed | 22042 | A single customer cannot currently have a new role which starts on the same date that a previous role was ended. | Code Release | High | Fix: Deployed 7/31/22 | Fix: Deployed 8/13/22 | Validation |
| 4 | Closed | N/A | The inconsistencyEventID attribute within the Submission Inconsistencies Feedback File is not present for any inconsistency. However, this attribute is present within the CAIS Reporter Portal UI. | Code Release | High | Fix: Deployed 8/11/22 | Fix: Deployed 8/13/22 | Feedback Files |
| 5 | Closed | N/A | Files containing postalCode values that are not set as string data types do not result in the record being rejected but instead transition to an Incomplete Processing Failure status. | | High | Fix: Deployed 8/11/22 | Fix: Deployed 8/13/22 | Validation |

CAT CAIS Planned Enhancements – Open

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date | Production Environment Targeted Release Date | Area |
|---|--------|---------------|---|--------------|----------|---|--|---------------------------|
| 1 | Open | N/A | The Update button on a Manual Form Submission is enabled when viewing a previously added record. The button should be disabled until at least one field is updated by the user. | Code Release | Low | Fix: TBD | Fix: TBD | Manual Form Submission |
| 2 | Open | N/A | When selecting date values in the Manual Form Submission, the date is not selected when the user first clicks a date. The date is only selected on the second click. | Code Release | Low | Fix: TBD | Fix: TBD | Manual Form Submission |
| 3 | Open | N/A | Certain columns are not displayed in the Submission Report by default. | Code Release | Low | Workaround: User may add the columns to their view. Fix: TBD | Fix: TBD | Reporter Portal |

CAT CAIS Planned Enhancements - Recently Closed

| # | Status | Error Code | Summary | Resolution | Priority | Test Environment Targeted Release Date | Production Environment Targeted Release Date | Area |
|---|--------|---------------|---|--------------|----------|--|--|--------------------|
| 1 | Closed | 23999 | Increase the current 100 Customer Record limit on number of CAT Customers that can be associated with an FDID Record. The increased limit will allow 2,000 Customer Records to be associated to the FDID. | Code Release | High | Fix: Deployed 7/31/2022 | Fix: Deployed 8/13/2022 | Data Validation |

CAT CAIS-Planned Full CAIS Phase Specification Updates

| # | Status | Summary | Publish Date | Spec Version | Effective Date - Test | Effective Date - Prod |
|---|-----------|---|--------------|--------------|--------------------------|--------------------------|
| 1 | Published | Add a new <i>fdidEndReason</i> value of 'INACTIVE' as option to end FDIDs that have had no CAT-reportable activity events (e.g., MENO, MEOR, MEOT, etc.) associated with the Account in the prior six months. For the purposes of periodic refresh requirements, monthly refresh report excludes any FDID with an <i>fdidEndReason</i> of 'INACTIVE' populated and an <i>fdidEndDate</i> set on or before the date of the report. | 3/9/2022 | 2.0r7 | TBD | TBD |
| 2 | Open | Update the description of Error Code 22523 – Customer Record rejected because an associated FDID was rejected – to include that the Error Code is also returned in the event the Customer Record is not associated to at least one FDID within the submission file. | TBD | 2.0r10 | N/A | N/A |
| 3 | Open | Update the October 11, 2022 date in the description of the role value of 'AUTH3RD' to be consistent with revised FAQ T7. Specifically, Prior to January 16, 2023, this role may be used when the Industry Member itself has authority to place orders for the Account without prior approval of the account holder(s) and is not the holder of the account. Effective January 16, 2023, the role for the Industry Member must be reported as 'AUTHREP'. | TBD | 2.0 r10 | N/A | N/A |
| 4 | Open | Clarify the description of the customerType value of 'RIC'- Customer is a Registered Investment Company, as defined in the Investment Company Act of 1940 (15 U.S.C. § 80a–3(a)(1)), if maintained in the Industry Member's general customer and account records. | TBD | 2.0 r10 | N/A | N/A |
| 5 | Open | Update the definition of the sentinel file for the Nightly Inconsistencies scans to remove the .bz2 compression. The sentinel file does not contain any significant data and does not require the compression. | TBD | 2.0r10 | N/A | N/A |
| 6 | Open | Clarify that a total of 2,000 Customer Records can currently be associated with an FDID Record. Create additional Error Code for more granularity on this validation, currently feedback provided under Error Code 23999 (Unhandled Exception). | TBD | 2.0r10 | 7/31/2022 | 8/8/2022 |
| 7 | Open | Update the Table 17 and Table 18 entries for the file status of COMPLETED_FILE_TIMEOUT to include the status is also returned in the CAIS Data Feedback or TIDS Feedback files in the event the paired file is received but reaches a COMPLETED_INTEGRITY_ERROR state. | TBD | 2.0r10 | N/A | N/A |

^{*} Planned Technical Specification updates are subject to approval by the CAT NMS Plan Operating Committee.

CAT CAIS-Planned Full CAIS Phase Specification Updates

| # | Status | Summary | Publish Date | Spec Version | Effective Date - Test | Effective Date - Prod |
|----|--------|---|--------------|--------------|--------------------------|--------------------------|
| 8 | Open | Clarify that the nightly inconsistencies scan feedback for Material Inconsistencies where the Industry Member is Impacted by submissions of another Industry Member is provided to the Impacted Industry Member no later than 8AM ET each processing day. | TBD | 2.0 r10 | N/A | N/A |
| 9 | Open | Remove submissionStatus from Submission Inconsistencies Feedback File. | TBD | 2.0 r10 | TBD | TBD |
| 10 | Open | Remove error code 22066 (<i>roleStartDate</i> set prior to <i>fdidDate</i>). | TBD | 2.0 r10 | 7/31/2022 | 8/8/2022 |
| 11 | Open | Add warning code 24008 (Data Type Violation within <i>correctionList</i>) – present in LTID Specification but was not copied over to Full CAIS Specification | TBD | 2.0 r10 | N/A | N/A |

^{*} Planned Technical Specification updates are subject to approval by the CAT NMS Plan Operating Committee.

General Announcements and Reminders

FINRA CAT Announcements and Reminders

- CAT CAIS Checkpoint Calls are being held weekly. The next call will be on August 24th.
- Connectivity Guides, Reporting Scenarios, Use Cases, and updated FAQs available at catnmsplan.com

FINRA CAT Helpdesk

Questions may be directed to the FINRA CAT Helpdesk at 888-696-3348 or help@finracat.com

How to Ask a Question during Today's Call

For participants using computer audio:

- Click the "Raise Hand" button at the bottom of the participants window.
- A visual prompt will indicate that your line has been unmuted.

For participants using phone audio:

- Enter *9 on your phone keypad.
- An audio prompt will indicate that your line has been unmuted.

Appendix A: Industry CAT CAIS LTID Release Update

| Production Environment | | | | | | | | | |
|-------------------------------|--|---|--|--|--|---|--|--|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | | |
| Number of Total Submitters | 47 | 56 | 60 | 59 | 54 | 20 | 4 | | |
| Number of Unique Firms | 245 | 542 | 580 | 582 | 527 | 385 | 51 | | |
| Number of Files Received | Total: 289 Reporter Portal: 31 SFTP: 258 | Total: 1,071 Portal: 65 SFTP: 1,011 | Total: 1,162 Portal: 140 SFTP: 1,022 | Total: 1,111 Reporter Portal: 80 SFTP: 1,031 | Total: 974 Reporter Portal: 16 SFTP: 958 | Total: 778 Reporter Portal: 0 SFTP: 778 | Total: 10 Reporter Portal: 5 SFTP: 5 | | |
| Number of Files Rejected | 0 | 0 | 0 | 0 | 3 | 8 | 0 | | |
| File Reject Rate | 0.00% | 0.00% | 0.00% | 0.00% | 0.31% | 1.02% | 0.00% | | |

| Production Environment | | | | | | | | |
|------------------------|-------------|--------------|-----------------|----------------|--------------|----------------|--------------|--|
| | Monday, 8/8 | Tuesday, 8/9 | Wednesday, 8/10 | Thursday, 8/11 | Friday, 8/12 | Saturday, 8/13 | Sunday, 8/14 | |
| Records Accepted | 329,883 | 1,658,435 | 1,178,113 | 1,004,008 | 1,083,909 | 783,044 | 618 | |
| Records Rejected | 12 | 154 | 24 | 36 | 31 | 67 | 0 | |
| Records Submitted | 329,895 | 1,658,589 | 1,178,137 | 1,004,044 | 1,083,940 | 783,111 | 618 | |
| Record Rejection Rate | 0.00% | 0.01% | 0.00% | 0.00% | 0.00% | 0.01% | 0.00% | |

CAT CAIS-Planned LTID Phase Specification Updates

| # | Status | Summary | Publish Date | Spec Version |
|---|--------|---|--------------|--------------|
| 1 | Open | Clarify that malformed LTID can be corrected by sending the same FDID with corrected LTID entry - does NOT require correctionAction message | TBD | V1.2.3 |