

CAT Reporting Customer & Account Technical Specifications for Industry Members

6/30/2020

DRAFT Version 2.0

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Preface

Rule 613 of the Securities Exchange Act of 1934 requires national securities exchanges and national securities associations (“SROs”) to submit a national market system plan to the Securities and Exchange Commission (“Commission” or “SEC”) to create, implement, and maintain a consolidated audit trail (the “CAT”) that would allow regulators to more efficiently and accurately track all activity in U.S. equity and listed options markets. Pursuant to Rule 613, the SROs filed with the Commission the National Market System Plan Governing the Consolidated Audit Trail (“CAT NMS Plan”), which was approved by the Commission on November 15, 2016.

Under Rule 613(g)(2), each member of a national securities exchange or national securities association is required to comply with all the provisions of the CAT NMS Plan. Relatedly, as mandated under Rule 613, the CAT NMS Plan requires each SRO to adopt rules requiring its members to comply with Rule 613 and the CAT NMS Plan, and to agree to enforce compliance by its members in that regard. Accordingly, each SRO has adopted rules requiring its members to comply with Rule 613 and the CAT NMS Plan. See, e.g., FINRA Rule 6800 Series.

The SROs jointly own Consolidated Audit Trail, LLC, which was formed by the SROs to arrange for and oversee the creation, implementation, and maintenance of the CAT as required under Rule 613. Thus, the CAT is a facility of each SRO.

This Customer and Account Technical Specification represents the second of the two phase approach to Industry Member reporting of Customer and Account data, including the full Customer and Account information required under the CAT NMS Plan.

Table 1: Industry Customer & Account Specifications Phased Approach

LTID Phase Production – 12/2020 Compliance Dates: 4/2021 Equity Large Firms 12/2021 2d Options and Small Firms	Full Customer and Account Reporting Go live July 2022
FDID, FDID Account Opening Date, LTID and LTID Effective Date	Remainder of account information and all customer information

Executive Summary

This initial draft document describes the requirements for the reporting of customer and account data to CAT by Industry Members, including detailed information about data elements and file submission. It also describes how Industry Members submit files to CAT, including access instructions, network and transport options, and testing requirements. The final version of the CAT Customer & Account Reporting Technical Specification includes information regarding full Customer data submission.

A separate companion document containing detailed reporting scenarios entitled CAT Customer & Account Industry Member Reporting Scenarios should be used as a guide for determining how the field values laid out in this document must be applied when reporting various scenarios for customer and account data.

Table 2: Revision / Change Process

Version	Date	Author	Description
DRAFT 1.0	12/13/2019	Consolidated Audit Trail, LLC	Initial draft
1.0	1/31/2020	Consolidated Audit Trail, LLC	Publication of initial version
1.1	4/17/2020	Consolidated Audit Trail, LLC	<p>Addition of Boolean data type</p> <p>Addition of <i>fdidEndDateNULL</i>, <i>fdidEndReasonNULL</i>, <i>replacedByFDIDNULL</i>, <i>ltidEndDateNULL</i>, and <i>ltidEndReasonNULL</i> attributes</p> <p>Removal of NULL acceptable values from <i>fdidEndDate</i>, <i>fdidEndReason</i>, <i>replacedByFDIDNULL</i>, <i>ltidEndDate</i>, and <i>ltidEndReason</i> attributes</p> <p>Addition of <i>failedCorrectionItems</i> array in Feedback file</p> <p>Modified guidance on nullifying previously populated attributes</p> <p>Modified submission and feedback examples to include additions/removals of attributes</p> <p>Modified schema field descriptions</p> <p>Replacement of CAT CAIS Reporter Portal with CAT Reporter Portal – CAIS</p> <p>Addition and modification of Error Codes</p> <p>Separation of Data Validation Warnings from Data Validation Errors</p> <p>Addition of Data Layer Validation Error Codes</p> <p>Addition of optional Group attribute for submission file names</p> <p>Replaced usage of Status with Feedback for feedback file</p>
1.1.1	6/4/2020	Consolidated Audit Trail, LLC	<p>Inclusion of 'Entity ID' as example in FDID Definition</p> <p>Inclusion of 'ENTITY' as a valid FDID Type</p> <p>Correction of CAT CAIS Validation Warnings table Error Code numbering</p> <p>Clarification of 'Trading Day' as 'CAT Trading Day' and definition of 'CAT Trading Day'</p>

Version	Date	Author	Description
			<p>Explicit listing of 'false' as an acceptable value for Boolean attributes</p> <p>Inclusion of Error Code 22006 for duplicated largeTraderID within a single FDID record submission</p>
DRAFT 2.0	6/30/2020	Consolidated Audit Trail, LLC	<p>Addition of Customer data, definitions, and reporting requirements</p> <p>Addition of separate Transformed Identifiers file</p> <p>Modified Feedback file to include Customer Data and Inconsistencies</p> <p>Expanded guidance for Reference Data File Submission</p> <p>Addition and modification of Error Codes</p> <p>Addition and modification of Data Layer Validation Error Codes</p> <p>Addition of Data Inconsistency Codes</p>

1. Introduction

1.1. CAT Overview

The Securities and Exchange Commission (SEC) approved Rule 613 under the Securities Exchange Act of 1934, which requires national securities exchanges and national securities associations (collectively, the Participants) to submit a national market system plan to create, implement, and maintain a consolidated audit trail ([CAT NMS Plan](#)) that would capture customer and order event information for orders in NMS Securities and OTC Equity Securities (Eligible Securities), across all markets, from the time of order inception through routing, cancellation, modification, execution, and allocation. The SEC approved the CAT NMS Plan on November 15, 2016.

In accordance with SEC Rule 613, the CAT NMS Plan requires a Central Repository that will comprehensively track orders throughout their lifecycle and identify the Participants and Industry Members handling them, as well as the account holders and authorized traders for any account that originates an order (Customers¹). Specific data elements will be submitted to the Central Repository by Participants, Industry Members, and CAT Reporting Agents. CAT Reporting Agents may be third-party firms reporting on behalf of other entities, or may be outside parties that are not required to submit data to the CAT, but from which CAT may receive data per the CAT NMS Plan, such as the Securities Information Processors (SIPs).

The CAT NMS Plan also requires the selection of an entity as the Plan Processor to be responsible for performing the processing functions required by Rule 613 and the Plan. The Operating Committee of Consolidated Audit Trail, LLC, a governing body composed of representatives of the Participants, oversees the operation of the CAT. The duties of the Operating Committee are further described in Article IV of the CAT NMS Plan.

The CAT Customer & Account Information System (CAIS²) is the separate system for submission of customer and account data. As part of the transition from Phase 1 reporting of only account and LTID data, it will now be required for CAT Reporter Firms to submit full customer and account data.

¹ Customers are defined in SEC Rule 613(j)(3) as: (i) the account holder(s) of the account at a registered broker-dealer originating the order; and (ii) any person from whom the broker-dealer is authorized to accept trading instructions for such account, if different from the account holder(s).

² References to CAIS throughout this document are asserted to include both CAIS and the separate CCID Subsystem, unless otherwise explicitly noted.

Refer to SEC Rule 613, available at: <https://www.sec.gov/rules/final/2012/34-67457.pdf> for more details.
Refer also to CAT NMS Plan, available at: <https://www.catnmsplan.com/home/about-cat/cat-nms-plan/index.html>.

2. CAT Customer & Account Reporting Fundamentals

2.1. Key Data Elements

The sections below describe the key data elements of CAT used in CAT CAIS submission files. A CAT CAIS submission is comprised of two file – a CAIS Data file and a Transformed Identifiers file – in order to facilitate separation of the customer and account data from the Transformed Identifier used to uniquely reference a single customer.

2.1.1. Firm Identifiers in File Submissions

The CAT submissions process relies on certain firm identifiers to determine whose data is being reported, to determine and verify the authorization of the submitter of the data, and to obtain and verify the authorization of the third party that may take action on the data.

CAT Reporter CRD

The CAT Reporter CRD is the Industry Member's Central Registration Depository (CRD) number, used to ensure all account and customer reporting activity of a single Industry Member CAT reporter can be consolidated at the firm level in CAT CAIS.

CAT Submitter ID

The CAT Submitter ID is a CAT assigned identifier for a firm that submits data to CAT. The Submitter ID uniquely identifies the Submitter and may be a different identifier than the CAT Reporter CRD. CAT Reporters may submit data for themselves or may authorize a separate Submitter firm to report on the CAT Reporter's behalf.

Authorization between CAT Reporters and Submitter is granted through a reporting relationship that will be entered by the CAT Reporter using the CAT Reporter Portal. When a file is received, CAT CAIS will verify that the CAT Reporter has authorized the Submitter to submit on their behalf.

2.2. Reference Data

2.2.1. Firm Designated ID (FDID)

FDID is defined in Section 1.1 of the CAT NMS Plan as a unique identifier for each trading account. Industry Members must assign a single FDID to each trading account that is unique within the firm and unique across time (with limited exceptions, such as closed accounts). For example, if an Industry Member uses multiple vendors for reporting, the Industry Member must ensure that the same FDID is

used by all vendors submitting Reportable Events to CAT involving the same unique trading account at the Industry Member.

Examples of what an FDID would represent include:

- Individual Customer Account Number
- Institutional Customer Account Number
- Account Number of Average Price Account Designated for a Specific Customer (e.g., Master Account or agency Representative Order scenarios)
- Account Number of Firm Average Price Account Shared Across Customers (e.g., Master Account, Account Used For Agency Representative Order Flows)
- Entity ID of the firm when an employee of the firm is exercising discretion over multiple customer accounts
- Proprietary Trading Account Number
- Firm assigned identifier representing a trading relationship (Relationship ID) can be used when the trading account structure is unavailable at the time the order was placed
- Firm assigned identifier (Entity ID³) representing the firm's discretionary relationship with the client when an employee of the Industry Member is exercising discretion over multiple client accounts and creates an aggregated order for which a trading account number of the Industry Member is unavailable at the time of order origination;

An actual account number may not be used as the FDID for a customer account for CAT reporting. See [CAT FAQ M2](#) for more information on the prohibition on use of actual account numbers. Refer to the [CAT Industry Presentation](#) on FDID for additional information.

2.2.2. Large Trader ID (LTID) and Unidentified Large Trader ID (ULTID)

LTID is an identifier assigned by the SEC to a "large trader," defined as a person whose transactions in NMS securities equal or exceed:

- 2 Million shares or \$20 Million in any single calendar day; OR
- 20 Million shares or \$200 Million in any calendar month

A person qualifying as a large trader is required to submit Form 13H to the Commission, and be assigned an LTID. In accordance with the CAT NMS plan as amended for LTID, CAT Reporter firms are required to

³ Usage of Entity ID is subject to SEC approval of the CAT NMS Plan Amendment filed on April 14, 2020

report all LTIDs associated to their FDIDs as part of their customer and account reporting. Thus, CAT Reporter firms are required to obtain the LTID for each account (to the extent that an LTID exists).

In the scenario a CAT Reporter that is a clearing firm determines a person (which includes both natural persons and legal entities under Section 13(h)(8)(e) of the Exchange Act) would qualify as a large trader, but the firm has not yet been provided with an LTID by the person, the clearing firm is required to assign an ULTID to the person until such time as the person provides their LTID. Any CAT Reporter that is a clearing firm with an obligation to assign an ULTID under the large trader rule is required to report any assigned ULTIDs associated to their reported customers as part of their customer and account reporting. CAT Reporters that are not self-clearing and do not have an obligation to assign ULTIDs are not required to report ULTIDs to CAT as they will have no such number to report.

As part of the transition from the initial FDID and LTID reporting to the full Customer and Account reporting in Phase 2 of the CAT CAIS, LTID and ULTID details will be collected as attributes of the Customer record, where applicable. Collection of the LTID and ULTID details on the Customer record will enable CAIS to clearly associate the LTID or ULTID to all relevant FDIDs of the Customer.

Please refer to Section 4 – CAIS Reporting – for information regarding the format requirements of the LTID and ULTID. For purposes of the CAT CAIS Reporting Technical Specification, references to LTID attributes and scenarios throughout the document are intended to cover both LTID and ULTID usage in accordance with the reporting obligations noted above.

2.2.3. FDID Open Date

The FDID open date is included in the CAIS data schema as *fdidDate*. The *fdidDate* field must be populated with either:

- Date in which the account was opened, or
- The Account Effective Date, as defined in Section 1.1 of the Plan, in the following circumstances:
 - The Industry Member has established a trading relationship, but not an account, with an institution or client
 - Proprietary trading accounts of the Industry Member
 - Accounts opened prior to the implementation date of the CAT NMS Plan applicable to the relevant CAT Reporter
 - The Industry Member has acquired another Industry Member and the Account Open Date was changed to a date value on or after the completion of the merger

2.2.4. Customer

The CAT NMS Plan defines the term “Customer” as having the same meaning provided in SEC Rule 613(j)(3), which is as follows:

- (i) The account holder(s) of the account at a registered broker-dealer originating the order;
- and (ii) any person from whom the broker-dealer is authorized to accept trading instructions for such account, if different from the account holder(s).

2.2.5. Tax Identifiers

Tax Identifiers is a generic term for the types of identifiers used to identify unique customer records.

These identifiers include:

- Social Security Number (SSN)
- Individual Taxpayer Identification Number (ITIN)
- Employer Identification Number (EIN)

Tax Identifiers are always translated to Transformed Identifier (TID) values in accordance with the guidance in Section 3.3, Translation of Tax Identifiers to TID Values, prior to submission to CAT within the Transformed Identifiers file.

Social Security Number and Individual Taxpayer Identification Number are considered Sensitive Identifiers and **must not** be submitted in the CAIS Data file. However, the Employer Identification Number (EIN) is not a Sensitive Identifier and therefore must be submitted in the CAIS Data file as a plain text data element for a Legal Entity Customer when the EIN was used to generate the TID of the customer.

Other unique customer identifiers, such as foreign tax identifiers, will be included in future versions of the specification.

2.2.6. Transformed Identifier (TID)

The Transformed Identifier (TID) is a hashed version of the Tax Identifier, submitted by the CAT Reporter to CAT in place of the Tax Identifier, in accordance with the exemptive relief granted by the SEC on March 17, 2020. The CAT Reporter has the responsibility to translate Tax Identifiers to TID values prior to submission, in accordance with the mathematical logic provided in Section 3.3 – Translation of Tax Identifiers to TID Values. Tax Identifiers used to generate TID values must be input in valid format – that is, 999-99-9999 for SSN or ITIN, and 99-9999999 for EIN.

2.2.7. Customer ID

The Customer ID, also known as CAT Customer ID or CCID, is a unique identifier generated by the Plan Processor, that is defined within SEC Rule 613(j)(5) as “with respect to a customer, a code that uniquely and consistently identifies such customer for purposes of providing data to the central repository.’ The CCID is a globally unique identifier generated for each unique TID value generated from a well-formated and valid Tax Identifier, in a way that is not reversible to the TID or textual Tax Identifier value. The translation of TID to CCID is completed in the CCID Subsystem, in isolation from any of the Customer or Account reference data.

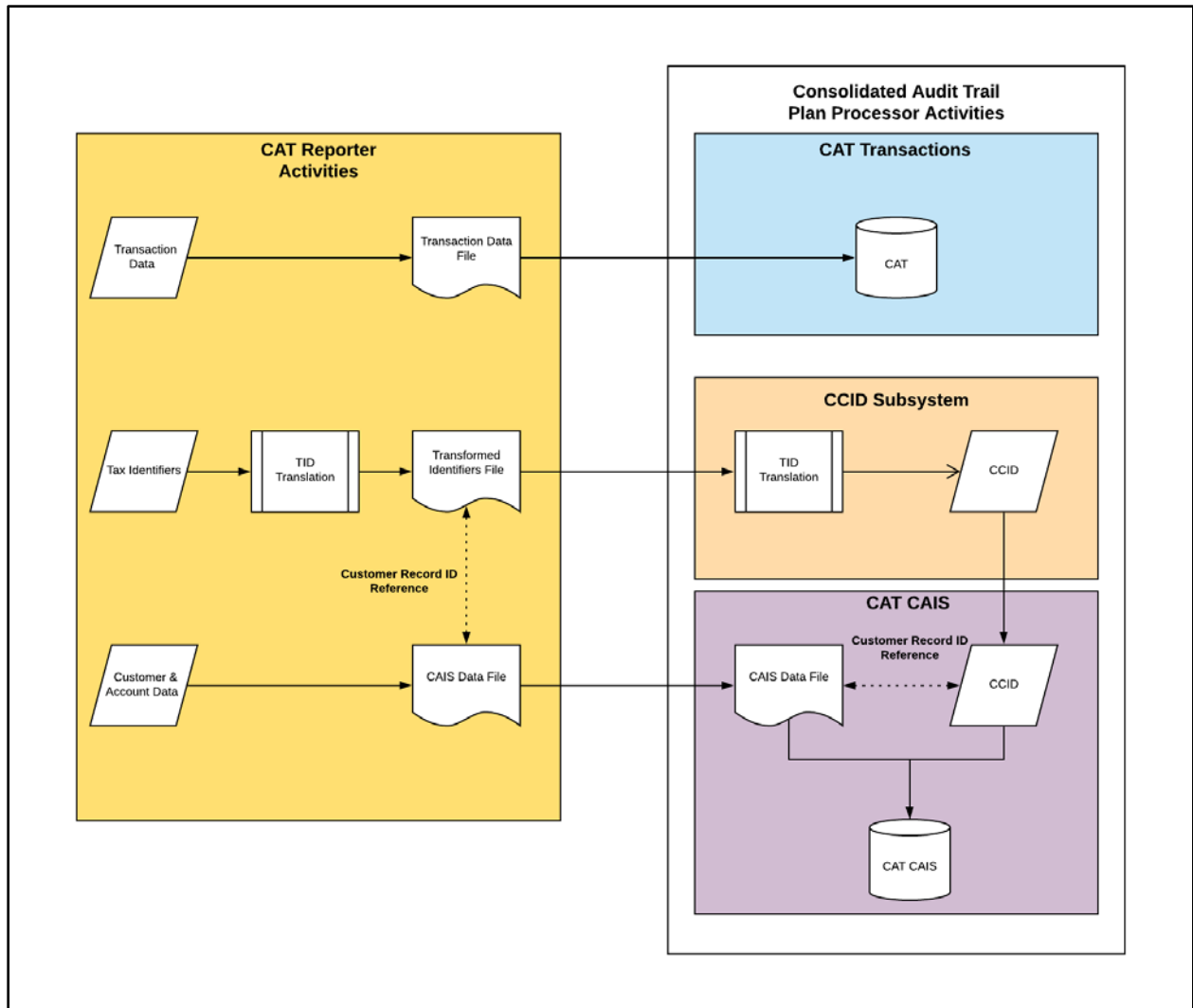
The CCID value is never provided to CAT Reporters or Submitters and is only used within CAT to uniquely reference a single Customer.

2.2.8. CCID Subsystem

The CCID Subsystem is an isolated subsystem of CAT CAIS that exists solely to translate input TID values into CCID values. The Transformed Identifiers file, sent only to the CCID Subsystem and containing the combination of the Customer Record ID pointer and TID, translates the TID to CCID, and passes the combination of Customer Record ID and CCID to CAT CAIS where the Customer Record ID is used to associate the assigned CCID with the corresponding customer record.

The following diagram provides an overview of the flow of translating Tax Identifiers to TID values by the reporting firm, the separation of the TID data from the customer and account reference data, and the translation of TID values to CCID values in the isolated CCID Subsystem so that TID is never known to the CAT CAIS datastore.

Figure 1: CAT Reporting Activities



2.2.9. Reportable Identifier

A Reportable Identifier is a generic term used to reference any customer identifiers that are to be included in plain text form in submissions to CAT in the CAIS Data file. It is both possible and acceptable for a Tax Identifier to also be a Reportable Identifier. The list of Reportable Identifiers includes:

- Employer Identification Number (EIN)
- Legal Entity Identifier (LEI)

- Large Trader ID (LTID)/Unidentified Large Trader ID (ULTID)

2.2.10. Data Inconsistency

In accordance with the CAT NMS Plan Appendix D, Section 9.4, the CAT system must implement procedures and mechanisms to handle both minor and material inconsistencies in Customer information submitted to CAT.

Material Inconsistencies require correction with the established Deadline of Repair for Errors Identified by CAIS described in the Deadline of Repair for Errors Identified by CAT CAIS section of this document.

Minor Inconsistencies are provided to the CAT Reporter Firms for informational purposes only, and do not require correction.

There are three areas in which Inconsistencies can occur:

- Within a single submission file of a CAT Reporter Firm
- Across multiple submission files of a single CAT Reporter Firm – either through updates to key characteristics of a single Customer record, or consistent key characteristics data across multiple Customer records
- Across multiple submission files of multiple CAT Reporter Firms – either through inconsistent data for key characteristics of a single Customer record, or consistent key characteristics data across multiple Customer records

2.2.11. Material Inconsistencies Procedure

The process by which Material Inconsistencies are identified and reported back to CAT Reporter Firms is known as the Material Inconsistencies Procedure. Notification of Material Inconsistencies, as well as the window for Material Inconsistencies repair, will occur in two phases, as follows:

- The Reporter whose submission data is Materially Inconsistent when compared to the data currently stored within CAIS - whether the currently stored data was entered by that same Reporter or another Reporter - is referred to as the “Triggering Firm”. Information regarding the identified Material Inconsistency will be included in the Feedback file for the firm’s submission and the timeframe for repair will start as of the CAT Trading Day of the firm’s submission to CAIS. This Triggering Firm must now either Attest to the accuracy of the data they have submitted to CAIS, determine the Customer record was an erroneous submission and end the Customer record in a subsequent submission, or submit an update to the Customer record in a subsequent submission.
- The Reporter whose data was previously stored within CAIS, whose data is now determined to be Inconsistent as a result of the submission of the same Customer by another CAT Reporter firm is known as the “Impacted Firm”. The Impacted Firm’s notification and subsequent correction

window will not start until the Triggering Firm first resolves for the Inconsistency. If the Triggering Firm Attests to the validity of the data that triggered an inconsistency, the Impacted Firm will then be notified of the Inconsistency via the 'Inconsistency Feedback' file, at which time their repair window will start. If the Triggering Firm corrects their submission data, either by ending the Customer record or by submitting an update to the Customer record resulting in their data being consistent with the existing record in CAIS, the Impacted Firm will not be notified of the temporary Inconsistency for the Customer, and would not need to take any action.

2.2.12. Proactive Confirmation of Customer Record Updates

In the event that a CAT Reporter Firm is submitting an update to key identifying attributes for their previously submitted Customer Record which would result in the identification of a Material Inconsistency, the CAT Reporter may include confirmation of the intent to update these attributes within their submission file. When the CAT Reporter includes this proactive confirmation, CAIS will not generate a Material Inconsistency notification for the reported Customer regarding the confirmed attributes. Instead, CAIS will include an Update Confirmation notification in the feedback file for the CAT Reporter Firm, confirming the update to a key identifying attribute was accepted by CAIS.

2.2.13. Attestation of Customer Data

In the event that a CAT Reporter Firm has been notified that the Customer data they submitted to CAT has resulted in a Material Inconsistency – either due to an update to key identifying attributes not paired with an update confirmation, or the firm is the Impacted Firm from submissions of another CAT Reporter Firm – and the CAT Reporter Firm determines the data they provided to CAT is valid for their customer as reported to CAT, the CAT Reporter Firm may then provide an attestation of the validity of the Customer data they reported to CAT in a subsequent submission file. Provision of the attestation does not require resubmission of the Customer record data, and will result in closure of the Material Inconsistency of the CAT Reporter.

The following table details the categorization and outcomes of data submission and inconsistency identification for a single Customer record as reconciled to a single TID/CCID.

Table 3: Data Submission Outcomes

Inconsistency Categorization	Within a Single Submission File	Inconsistency Across Multiple Submissions of a Single CAT Reporter Firm	Inconsistency Across Multiple CAT Reporter Firms
Material Inconsistency	Record rejected; resubmission required	Records accepted; Submitter must attest to or update the record	Records accepted; Material Inconsistency Procedure enacted
Minor	Record rejected;	Records accepted, submitter	Records accepted, submitter alerted;

Inconsistency Categorization	Within a Single Submission File	Inconsistency Across Multiple Submissions of a Single CAT Reporter Firm	Inconsistency Across Multiple CAT Reporter Firms
Inconsistency	resubmission required	alerted; no further action required	no further action required

The following table details the attribute set for Customer record data submissions and what level of Inconsistency checking is applied against the attribute, as well as whether or not it is possible to provide an Update Confirmation of the attribute and what standardization will be applied to the attribute in an effort to reduce the appearance of inconsistencies resulting from insignificant differences in reported data.

Table 4: Customer Data Inconsistencies

Attribute	Customer Record Type	Material/Minor Inconsistency Validation	Update Confirmation Possible	Standardizations
Customer Start Date	Both	Material	Yes	None
First Name	Natural Person	Material	Yes	Punctuation, White Space Trimming
Middle Name	Natural Person	Minor	No	Punctuation, White Space Trimming
Last Name	Natural Person	Material	Yes	Punctuation, White Space Trimming
Name Suffix	Natural Person	Material	Yes	None
Year of Birth	Natural Person	Material	Yes	None
Legal Name	Legal Entity	Material	Yes	Punctuation, White Space Trimming, Incorporation Types (Limited:LTD, Corporation:CORP, etc.)
Address Line 1	Both	Minor	No	Punctuation, White Space Trimming, Directionality, and Street Standardization
Address Line 2	Both	Minor	No	Punctuation, White Space Trimming, Directionality, and Street Standardization
Address Line 3	Both	N/A	No	Punctuation, White Space Trimming, Directionality, and Street Standardization
Address Line 4	Both	N/A	No	Punctuation, White Space Trimming, Directionality, and Street Standardization
City	Both	Material	Yes	Punctuation, White Space Trimming
Region Code	Both	Material	Yes	Punctuation, White Space Trimming
Country Code	Both	Material	Yes	None
Postal Code	Both	Material	Yes	None
EIN	Legal Entity	Material	No	None
LEI	Legal Entity	Material	Yes	None
LTID	Natural Person	Material	Yes	None
LTID	Legal Entity	Minor	Yes	None

2.3. Data Types

CAT customer and account data must be reported using JSON text files. Data types used throughout this document are described below. Data types used for CAT customer and account reporting are a subset of the data types used for CAT transaction reporting, with the following differences:

- Text – comma (ASCII decimal 44, hex 2c) and the ‘at’ or @ symbol (ASCII decimal 64, hex 40) are acceptable characters to include in customer and account reporting
- Timestamp – only STRING versions of timestamp are supported in customer and account reporting

To support JSON submissions, the Industry Member Customer & Account Schema (JSON) file is available on the CAT public website that describes each data type with required representation formats.

2.3.1. Data Validation Based on Data Types

All customer and account data submitted to CAT will be validated based on the defined data type of each item, including proper formatting and range checking. Examples of accepted values are detailed in the table below. Valid values for Choice fields are defined in the Data Dictionary for each data element. Valid data values, ranges, and formats will be specified in the record schema files, which will be used to validate submitted data element values. Records and values that fail validation will be rejected and will be reported as feedback to the Reporter and Data Submitter as detailed in Section 6.

Table 5: Data Types

Data Type	JSON Type	Description
Unsigned	NUMBER	An unsigned value, greater than or equal to zero, with no decimal fraction component, in the inclusive range from 0 to 18,446,744,073,709,551,615 (the same range as a 64-bit unsigned integer).
Boolean	BOOLEAN	A value with two choices: true or false. In JSON representation, if the field is not present, the value is considered false.
Alphanumeric	STRING	A string, composed only of letters and digits [a-zA-Z0-9]. When an Alphanumeric type is described, it will include a number, indicating the maximum length of the field. For example, Alphanumeric (7) means that the field can contain up to 7 characters. Alphanumeric values are case sensitive.
Text	STRING	A string, composed of any printable ASCII character between 32 and 126. The string may not include the following characters which serve as delimiters: <ul style="list-style-type: none"> • pipe (ASCII decimal 124, hex 7C) and • double quote (ASCII decimal 34, hex 22). When a Text data type is described, it will include a number, indicating the maximum length of the field. For example, Text (7) means that the field can contain up to 7 characters. Text values are case sensitive.

Data Type	JSON Type	Description
Date	NUMBER	An 8-digit integer representing the date in YYYYMMDD.
Year	NUMBER	A 4-digit integer representing the year in YYYY.
Timestamp	STRING	<p>A timestamp represents a moment in time. All timestamps must be in Eastern Time (ET).</p> <p>Timestamps formatted as a STRING have a maximum length of 25 and are formatted as 'YYYYMMDD HHMMSS.CCCNNNNNN' with the Date and Time portions, separated by a space (ASCII decimal 32, hex 20) or the letter T (ASCII decimal 84, hex 54).</p> <ul style="list-style-type: none"> The Date portion must include four-digit year, two-digit month, and two-digit day. Valid values: YYYY = 0000 - 9999, MM = 01 - 12, DD = 01 - 31. The Time portion must include a two-digit hour, two-digit minute, and two-digit seconds. Valid values: HH = 00 - 23, MM = 01 - 59, SS = 01 - 59, CCC = 000 - 999, NNNNNN = 000000 - 999999. <p>Examples which comply with Timestamp in STRING format:</p> <ul style="list-style-type: none"> 20190617T000120.000000000 20190617T000120 20190617T000120.000 20170107T213000.123456789 20170107 213000.123456789 20190617 000120.123000000 <p>Examples which do not comply with Timestamp in STRING format:</p> <ul style="list-style-type: none"> 20190617T0120 20190617T000120.
Name/Value Pairs	OBJECT	<p>An object composed of a list of zero or more attributes where each attribute is either a name with no value, or a name with an accompanying value. Multiple attributes are separated by a delimiter.</p> <p>When represented in JSON, the following rules apply:</p> <ul style="list-style-type: none"> The OBJECT is contained within curly brackets { } Name/Value Pairs are comma separated A value accompanied by a name must be formatted as per the data type syntax required in JSON
Array	ARRAY	<p>A list of 0, 1 or more values of the same data type.</p> <p>When represented in JSON, the following rules apply:</p> <ul style="list-style-type: none"> ARRAY is within a set of brackets [] Elements within the array are comma separated.
Choice	STRING	A Text field with an explicit list of acceptable values. The Data Dictionary section of this document lists the acceptable values for each Choice field.
Multi-Dimensional Array	Multi-Dimensional ARRAY	A compound object that consists of an array of objects. The JSON syntax for this data type is consistent with other Multi-Dimensional Array JSON Types. Multi-Dimensional Array is specified as the data type within the

Data Type	JSON Type	Description
		<p>Submissions file as well as the Feedback response file.</p> <p>When represented in JSON, the following rules apply:</p> <ul style="list-style-type: none"> • ARRAY is within a set of brackets [] • Each OBJECT contained in the ARRAY is within curly brackets { } • Elements within each object are comma separated • Conditional elements that do not have a value are not required to be included.
Hexadecimal	String	A string, composed only of valid hexadecimal characters [a-fA-F0-9]. When a Hexadecimal type is described, it will include a number, indicating the maximum length of the field. For example, Hexadecimal (7) means that the field can contain up to 7 characters. Hexadecimal values are case insensitive.

2.3.2. Required, Conditional, and Optional Fields

Throughout this document, record attribute fields will be defined. Each field will be notated with the abbreviation R, C, or O to represent whether it is required, conditional, or optional. This codification will appear within each row of a table describing a field.

Table 6: Include Key

Value	Abbreviation	Description
Required	R	Required for the given record. This field must always be included.
Conditional	C	Conditionally required for the submission, depending upon other values submitted on the account record.
Optional	O	Optional for the given record. May be included at the discretion of the reporter/submitter.

3. Special Reporting Requirements

3.1. Replacement of FDIDs

The current functionality provided to CAT Reporters enables the replacement of a single FDID record at a time using the replacedByFDID attribute. If a CAT Reporter desires to replace one or more of their FDID records for any reason, they are able to do so by submitting each individual FDID to be replaced and the replacedByFDID attribute indicating which FDID has taken its place. There is no limit on how many FDID records can be replaced within a submission file, other than the standing record limits for file transmission.

3.2. Mass Transfer of FDIDs across CAT Reporter Firms

This section intentionally left blank.

3.3. Translation of Tax Identifiers to TID Values

For each Tax Identifier that is to be used to uniquely identify a single Customer, the identifier must be input in the exact valid format – that is, 999-99-9999 for SSN or ITIN, and 99-9999999 for EIN – to a SHA-256 hashing algorithm. The 32 bytes output from the SHA-256 hashing algorithm must be then represented as a 64 byte hexadecimal value. This resulting output is the TID value that must be reported to CAT CAIS and will be treated as case-insensitive. It is the responsibility of the CAT Reporter to translate the Tax Identifier to a TID. The Plan Processor will conduct validations against the submitted TIDs to ensure the Tax Identifier used to generate the TID was in the appropriate format and is from a valid range for the identifier type, as follows:

1. For SSN
 - a. No values having an Area Number (first three digits) of 000 nor 666.
 - b. No values having a Group Number (middle two digits) of 00.
 - c. No values having a Serial Number (last four digits) of 0000.
 - d. No values of 111-11-1111, 333-33-3333, 666-66-6666, nor 123-45-6789.
2. For EIN
 - a. Must have a valid prefix (first two digits), as noted by the Internal Revenue Service.

3.4. Translation of TID to CCID Values

Each valid and unique input TID will result in the generation of a cryptographically randomized CCID generated by the Plan Processor. This resulting CCID will be unique for the specific input TID, and will be the resulting CCID each time the same TID is input for translation. The resulting CCID will not be returned

to the CAT Reporter, will not be able to be reversed to the input TID, and is only used within the CAT to uniquely identify a single Customer without storage of Tax Identifiers.

3.5. Transition from LTID to Full Customer Reporting

This section intentionally left blank.

3.6. Periodic Full Data Refresh

This section intentionally left blank.

4. CAIS Reporting

This section describes the attributes for inclusion within the CAIS submission file. The following table lists each record attribute in JSON naming convention, as well as corresponding Data Types, Include Key, acceptable Occurrences, Description, and Format or Accepted Values for a Choice-type attribute. A single submission to CAIS will require a paired set of a CAIS Data File and a Transformed Identifiers file, as defined in [5.1 - File Submissions and Data Formats](#)

4.1. CAIS Data File

The CAIS Data File contains the list of FDID records and associated data, the core Customer data attributes excluding TID, and the relationships between the two. For security considerations, CAIS Data File must not contain the TID data; this is to be provided in the Transformed Identifiers File. A single CAIS Data File is to be submitted in a pairing with a single Transformed Identifiers File if the CAIS Data File contains one or more customer records.

Table 7: CAIS Data File

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
version	Text (10)	Main	R	Exactly One per submission file	The version of the CAIS Schema under which the data is reported. The version utilized for full Customer reporting will be 2.0.0.	2.0.0
catReporterCRD	Unsigned	Main	R	Exactly One per submission file	The CRD number assigned to the firm to which the data within the file belongs.	
catSubmitterID	Unsigned	Main	R	Exactly One per submission file	The ID of the CAT Reporting Agent that submitted the file to CAT. In the case the CAT Reporter is submitting data for themselves, they must still populate the CAT Submitter ID field.	
fdidRecordCount	Unsigned	Main	R	Exactly One per submission file	The count of firmDesignatedID attribute occurrences within the file. Used to validate the count of FDID records	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					intended to be submitted within the file matches the count of records present in the file.	
naturalPersonCustomerRecordCount	Unsigned	Main	R	Exactly One per submission file	The count of customerRecordID attribute occurrences within the file for Natural Person type Customers. Used to validate the count of Natural Person Customer records intended to be submitted within the file matches the count of records present in the file.	
legalEntityCustomerRecordCount	Unsigned	Main	R	Exactly One per submission file	The count of customerRecordID attribute occurrences within the file for Legal Entity type Customers. Used to validate the count of Legal Entity Customer records intended to be submitted within the file matches the count of records present in the file.	
fdidRecordList	Multi-Dimensional Array	Main	C	Zero or One per submission file	Structure for the array of FDID Records that are included in the file. Required if the submission file contains one or more FDID records; not required if no FDID records are included in the file.	
fdidRecordID	Unsigned	FDID Record	R	Exactly One per FDID Record	A unique reference to a single FDID for a single submission file.	
firmDesignatedID	Alphanumeric (40)	FDID Record	R	Exactly One per FDID Record	The Firm Designated ID of the Account or Relationship being reported by the CAT Reporting firm.	
fdidType	Choice	FDID Record	R	Exactly One per FDID	Representation of the type of record of	"ACCOUNT" "RELATIONSHIP"

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
				Record	the reported FDID. Values: ACCOUNT – Account type record RELATIONSHIP – Relationship type record ENTITYID – Entity Identifier type record	“ENTITYID”
accountType	Choice	FDID Record	C	Zero or One per FDID Record	Representation of the type of Account the FDID represents. Must be provided if fdidType is ACCOUNT. Must not be provided if fdidType is any value other than ACCOUNT. Values: CASH – Cash account DVP/RVP – Delivery versus Payment account/Receipt versus Payment account MARGIN – Margin account OTHER – Other undefined account	“CASH” “DVP/RVP” “MARGIN” “OTHER”
accountTypeNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any accountType currently stored in CAT CAIS should be cleared. Must not be provided as true if accountType is populated. Must not be populated as true if fdidType is ACCOUNT.	true false
fdidName	Alphanumeric (40)	FDID Record	R	Exactly One per FDID Record	The name applied to the FDID at the CAT Reporter Firm.	
isRetirement	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates if the FDID is established for retirement purposes. Required if fdidType is ACCOUNT. Must not be provided if isRetirementNULL is populated as true. Values: true – account established for	true false

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					retirement savings false – account not established for retirement savings	
isRetirementNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any isRetirement currently stored in CAT CAIS should be cleared. Must be provided if accountTypeNULL is populated as true. Must not be provided as true if isRetirement is populated. Must not be populated as true if fdidType is ACCOUNT.	true false
isOptionsEligible	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates if the FDID is eligible to trade options. Required if fdidType is ACCOUNT. Must not be populated if isOptionsEligibleNULL is provided as true. Values: true – eligible to trade options false – not eligible to trade options	true false
isOptionsEligibleNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any optionsEligible currently stored in CAT CAIS should be cleared. Must be provided if as true accountTypeNULL is populated as true. Must not be provided if as true isoptionsEligible is populated. Must not be populated as true if fdidType is ACCOUNT.	true false
isInstitutional	Boolean	FDID Record	R	Exactly One per FDID Record	Indicates if the FDID meets the institutional account definitions as defined in FINRA Rule 4512(c). Values: true – meets definition of institutional account	true false

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					as defined in FINRA Rule 4512(c) false – does not meet definition of institutional account as defined in FINRA Rule 4512(c)	
isManagedAccount	Boolean	FDID Record	R	Zero or One per FDID Record	Indicates if the FDID is managed by an investment advisor. Values: true – is managed by an investment advisor false – is not managed by an investment advisor	true false
primeBrokerID	Alphanumeric (4)	FDID Record	C	Zero or One per FDID Record	Clearing number of the account's prime broker. Must be provided if the custodian of the account is a broker/dealer.	
primeBrokerIDNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any primeBrokerID currently stored in CAT CAIS should be cleared.	true false
bankDepositoryID	Alphanumeric (5)	FDID Record	C	Zero or One per FDID Record	The identifying number of the depository institution for the FDID. Must be populated if the custodian of the account is not a broker/dealer.	
bankDepositoryIDNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any bankDepositoryID currently stored in CAT CAIS should be cleared.	true false
clearingBrokerID	Alphanumeric (4)	FDID Record	C	Zero or One per FDID Record	The NSCC Clearing ID of the firm that clears the accounts. Must be populated if the fdidType is ACCOUNT.	
clearingBrokerIDNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any clearingBrokerID currently stored in CAT CAIS should be cleared.	true false
branchOfficeCRD	Unsigned	FDID Record	R	Exactly One per FDID	The Central Registration Depository system	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
				Record	generated CRD Branch Number assigned when the CAT Reporter Firm filed Form BR.	
registeredRepCRD	Unsigned	FDID Record	C	Zero or One per FDID Record	The Central Registration Depository ID assigned to the Registered Representative of the FDID. Must be provided if known to the CAT Reporter firm.	
customerType	Choice	FDID Record	R	Exactly One per FDID Record	Placeholder – to be defined Values: TBD	
fdidDate	Date (Number) (8)	FDID Record	R	Exactly One per FDID Record	Date on which the FDID account opened, as defined in Section 2.2.3 of this specification, in YYYYMMDD format.	YYYYMMDD
fdidEndDate	Date (Number) (8)	FDID Record	C	Zero or One per FDID Record	Date on which the Account was closed or the Relationship was ended, in YYYYMMDD format. Must be provided if the fdidEndReason field is populated. Must not be provided if fdidEndDateNULL is populated as true.	YYYYMMDD
fdidEndDateNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any fdidEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if fdidEndReasonNULL is populated as true. Must not be provided as true if fdidEndDate is populated.	true false
fdidEndReason	Choice	FDID Record	C	Zero or One per FDID Record	Reason why the Account was closed or the Relationship was ended. Must be provided if the fdidEndDate field is populated. Must not be provided if fdidEndReasonNULL	“CORRECTION” “ENDED” “REPLACED” “OTHER”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					L is populated as true. Values: CORRECTION – FDID was erroneously reported ENDED – FDID was ended REPLACED – FDID replaced by another FDID within the CAT Reporter Firm. OTHER – Other unlisted reason for ending the FDID	
fdidEndReasonNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any fdidEndReason currently stored in CAT CAIS should be cleared. Must be provided as true if fdidEndDateNULL is populated as true. Must not be provided as true if fdidEndReason is populated.	true
fdidEndedBy	Choice	FDID Record	C	Zero or One per FDID Record	Indication of which party initiated the closure of the Account or termination of the Relationship. Must be provided if the fdidEndDate field is populated. Must not be provided if fdidEndedByNULL is populated. Values: FIRM – The CAT Reporter firm initiated ending of the FDID CUSTOMER – The customer of the FDID initiated ending of the FDID UNKNOWN – Unknown which party initiated the ending of the FDID	“FIRM” “CUSTOMER” “UNKNOWN”
fdidEndedByNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any fdidEndedBy currently stored in CAT CAIS should be cleared. Must not be	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					provided if fdidEndedBy is populated. Must be provided if fdidEndDate is populated.	
replacedByFDID	Alphanumeric (40)	FDID Record	C	Zero or One per FDID Record	The new FDID replacing the currently reported FDID, used to provide historical linkage across replaced records over time. Must be provided if the fdidEndReason is REPLACED. Must not be provided if the fdidEndReason is any value other than REPLACED. Must not be provided if replacedByFDIDNULL is populated as true.	
replacedByFDIDNULL	Boolean	FDID Record	C	Zero or One per FDID Record	Indicates any replacedByFDID currently stored in CAT CAIS should be cleared. Must not be provided as true if replacedByFDID is populated.	true false
fdidCustomerList	Multi-Dimensional Array	FDID Record	R	Exactly One per FDID Record	Structure for the array of Customer records that are associated to the FDID record within the file.	
customerRecordID	Unsigned	FDID Customer Record	R	Exactly One per FDID Customer Record	A unique reference to a single Customer in reference to a single FDID for a single submission file.	
role	Choice	FDID Customer Record	R	Exactly One per Customer Record	Representation of the type of role the Customer has on the FDID. Values: HOLDER – Holder of the FDID AUTHTRADER – Authorized Trader on the FDID	“HOLDER” “AUTHTRADER”
subRole	Choice	FDID	R	Exactly One	Provides additional	“DISCRETION”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
		Customer Record		per FDID Customer Record	granularity as to the role the Customer has for the FDID. Values: DISCRETION – Discretion to trade on behalf of holder(s) of the FDID JOINT – Joint holder of the FDID PRIMARY – Single primary holder of the FDID PWRATTNY – Power of Attorney over the holder of the FDID TRUSTEE – Trustee of the holder(s) of the FDID OTHER – Any other unknown role	“JOINT” “PWRATTNY” “PRIMARY” “TRUSTEE” “OTHER”
roleStartDate	Date (Number) (8)	FDID Customer Record	R	Exactly One per FDID Customer Record	Date on which the Customer entered into the specified role on the account, in YYYYMMDD format.	
roleEndDate	Date (Number) (8)	FDID Customer Record	C	Zero or One per FDID Customer Record	Date on which the customer ceased having the specified role on the FDID, in YYYYMMDD format. Must be provided if the roleEndReason field is populated. Must not be provided if roleEndDateNULL is populated.	
roleEndDateNULL	Boolean	FDID Customer Record	C	Zero or One per FDID Customer Record	Indicates any roleEndDate currently stored in CAT CAIS should be cleared. Must be provided if roleEndReasonNULL is populated. Must not be provided if roleEndDate is populated.	
roleEndReason	Choice	FDID Customer Record	C	Zero or One per FDID Customer Record	Reason why the customer ceased having the specified role on the FDID. Must be provided if	“CORRECTION” “ENDED” “REPLACED” “OTHER”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					<p>the roleEndDate field is populated. Must not be provided if roleEndReasonNULL is populated.</p> <p>Values: CORRECTION – Customer role on FDID was erroneously reported or FDID was erroneously reported ENDED – Customer role on FDID was ended or FDID was ended REPLACED – Customer role on FDID was ended because the FDID was replaced with another FDID, or because the Customer Tax Identifier was replaced with another Tax Identifier OTHER – Other unlisted reason for ending the customer role on FDID</p>	
roleEndReasonNULL	Boolean	FDID Customer Record	C	Zero or One per FDID Customer Record	Indicates any roleEndReason currently stored in CAT CAIS should be cleared. Must be provided if roleEndDateNULL is populated. Must not be provided if roleEndReason is populated.	
naturalPersonCustomerList	Multi-Dimensional Array	Main	C	Zero or One per submission file	Structure for the array of Natural Person type Customer records that are included in the file. Required if the submission file contains one or more Natural Person customer records; not required if no Natural Person customer records are included in the file.	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
customerRecordID	Unsigned	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	A unique reference to a single Customer for a single submission file.	
firstName	Alphanumeric (40)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	The First Name known for the Customer.	
middleName	Alphanumeric (20)	Natural Person Customer Record	O	Zero or One per Natural Person Customer Record	The Middle Name known for the Customer.	
lastName	Alphanumeric (40)	Natural Person Customer Record	R	Zero or One per Natural Person Customer Record	The Last Name known for the Customer.	
nameSuffix	Choice	Natural Person Customer Record	O	Zero or One per Natural Person Customer Record	The Name Suffix known for the Customer. Values: FIFTH FOURTH JUNIOR SENIOR THIRD	"FIFTH" "FOURTH" "JUNIOR" "SENIOR" "THIRD"
yearOfBirth	Year (Number) (4)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	The Year of Birth known for the Customer in YYYY format.	YYYY
customerStartDate	Date (Number) (8)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	The date on which the customer first became a customer of the CAT Reporter firm, in YYYYMMDD format.	YYYYMMDD
customerEndDate	Date (Number) (8)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	The date on which the customer ceased to be a customer of the CAT Reporter firm, in YYYYMMDD format.	YYYYMMDD
customerEndDateNULL	Boolean	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Indicates any customerEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if customerEndReasonNULL is populated as true. Must not be	true false

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					provided as true if customerEndDate is populated.	
customerEndReason	Date (Number) (8)	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	The reason why the customer ceased to be a customer of the CAT Reporter firm. Values: CORRECTION – Customer was erroneously reported DECEASED – Customer is deceased ENDED – Customer ended their relationship with the firm REPLACED – Tax Identifier of the Customer was updated and a new Customer was reported in place of this customer OTHER – Other unlisted reason for ending the Customer relationship	“CORRECTION” “DECEASED” “ENDED” “REPLACED” “OTHER”
customerEndReason NULL	Boolean	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Indicates any customerEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if customerEndDateNULL is populated as true. Must not be provided as true if customerEndReason is populated.	true
addrLine1	Alphanumeric (40)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	The first Address Line for the address of the customer	
addrLine2	Alphanumeric (40)	Natural Person Customer Record	O	Zero or One per Natural Person Customer Record	Additional space for Address Line.	
addrLine3	Alphanumeric (40)	Natural Person Customer Record	O	Zero or One per Natural Person Customer Record	Additional space for Address Line. Must not be provided if addrLine2 is not provided.	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
addrLine4	Alphanumeric (40)	Natural Person Customer Record	O	Zero or One per Natural Person Customer Record	Additional space for Address Line. Must not be provided if addrLine2 and addrLine3 are not provided.	
city	Alphanumeric (100)	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	City of the Address of the Customer.	
regionCode	Text(40)	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Code of the local region of the Customer Address, in ISO 3166-2 format without the two character Country Code. See published reference data list for acceptable values. Must be provided if a region list is available for the Country of the Customer Address. Optional to provide if no region list is available for the Country of the Customer Address.	AA-XX
countryCode	Choice	Natural Person Customer Record	R	Exactly One per Natural Person Customer Record	Code of the Country of the Customer Address, in ISO 3166-1 alpha-2 format. See published reference data list for acceptable values.	AA
postalCode	Alphanumeric (15)	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Postal Code of the Customer Address. Must be provided if Postal Codes exist for the Country of the Customer.	
updateConfirmationList	Multi-Dimensional Array	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Structure for the array of Update Confirmation indications that are included in the file for the Natural Person Record. Not required if no updates are included in the file for the specific Natural Person Customer. Must not be included if the specific Customer has not	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					previously been accepted into CAIS for the CAT Reporter firm.	
updateConfirmationRecordID	Unsigned	Update Confirmation Record	R	Exactly One per Update Confirmation Record	A unique reference to a single Update Confirmation for a single Customer.	
updateConfirmationAttribute	Choice	Update Confirmation Record	R	Exactly One per Update Confirmation Record	The changing attribute for the Natural Person Customer Record that is being Update Confirmed as a valid and intentional change. Each value for the field is a reference to the particular attribute of the Natural Person Customer Record that is being changed. Values: CITY COUNTRYCODE CUSTOMERSTARTDATE FIRSTNAME LASTNAME LTID NAMESUFFIX POSTALCODE REGIONCODE YEAROFBIRTH	“CITY” “COUNTRYCODE” “CUSTOMERSTARTDATE” “FIRSTNAME” “LASTNAME” “LTID” “NAMESUFFIX” “POSTALCODE” “REGIONCODE” “YEAROFBIRTH”
largeTraderList	Multi-Dimensional Array	Natural Person Customer Record	C	Zero or One per Natural Person Customer Record	Structure for the array of LTID and ULTID records that are associated to the Natural Person Customer record within the file. Required if the submission file contains one or more LTID/ULTID records associated to the customer record; not required if no LTID/ULTID records are included in the file in association to the reported customer.	
largeTraderRecordID	Unsigned	Large Trader	R	Exactly One per Large	A unique reference to a single LTID or	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
		Record		Trader Record	ULTID in reference to a single FDID for a single submission file.	
largeTraderID	Text (13)	Large Trader Record	R	Exactly One per Large Trader Record	The LTID or ULTID associated to the FDID in the CAT Reporter's system.	For LTID – 99999999-9999 For ULTID – ULT99999-9999
ltidEffectiveDate	Date (Number) (8)	Large Trader Record	R	Exactly One per Large Trader Record	Date on which the LTID or ULTID became associated to the FDID within the CAT Reporter's system, in YYYYMMDD format.	YYYYMMDD
ltidEndDate	Date (Number) (8)	Large Trader Record	C	Zero or One per Large Trader Record	Date on which the LTID or ULTID was no longer associated to the FDID within the CAT Reporter's system, in YYYYMMDD format. Must be provided if the ltidEndDate field is populated. Must not be provided if ltidEndDateNULL is populated as true.	YYYYMMDD
ltidEndDateNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndDateReasonNULL is populated as true. Must not be provided as true if ltidEndDate is populated.	true false
ltidEndReason	Choice	Large Trader Record	C	Zero or One per Large Trader Record	Reason why the LTID or ULTID was no longer associated to the Customer. Must be populated in order to end date an LTID-to-FDID association in the system. Must be provided if the ltidEndDate field is populated. Must not be provided if ltidEndReasonNULL is populated as true. Values:	“CORRECTION” “DECEASED” “ENDED” “REPLACED” “OTHER”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					<p>CORRECTION – LTID was erroneously reported</p> <p>DECEASED – Customer is deceased</p> <p>ENDED – LTID-to-Customer association was ended</p> <p>REPLACED – LTID was replaced by a different LTID or the Customer TID was replaced by a different TID</p> <p>OTHER – Other unlisted reason for ending the LTID-to-Customer association</p>	
ltidEndReasonNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndReason currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndDateNULL is populated as true. Must not be provided as true if ltidEndReason is populated.	true false
legalEntityCustomerList	Multi-Dimensional Array	Main	C	Zero or One per submission file	Structure for the array of Legal Entity type Customer records that are included in the file. Required if the submission file contains one or more Legal Entity customer records; not required if no Legal Entity Customer records are included in the file.	
customerRecordID	Unsigned	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	A unique reference to a single Customer for a single submission file.	
legalName	Alphanumeric (100)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	The Legal Name known for the Customer entity.	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
customerStartDate	Date (Number) (8)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	The date on which the customer first became a customer of the CAT Reporter firm, in YYYYMMDD format.	YYYYMMDD
customerEndDate	Date (Number) (8)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	The date on which the customer ceased to be a customer of the CAT Reporter firm, in YYYYMMDD format.	YYYYMMDD
customerEndDateNULL	Boolean	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	Indicates any customerEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if customerEndReasonNULL is populated as true. Must not be provided as true if customerEndDate is populated.	true false
customerEndReason	Date (Number) (8)	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	The reason why the customer ceased to be a customer of the CAT Reporter firm. Values: CORRECTION – Customer was erroneously reported ENDED – Customer ended their relationship with the firm REPLACED – Tax Identifier of the Customer was updated and a new Customer was reported in place of this customer OTHER – Other unlisted reason for ending the Customer relationship	“CORRECTION” “ENDED” “REPLACED” “OTHER”
customerEndReasonNULL	Boolean	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	Indicates any customerEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if customerEndReasonNULL is populated as true. Must not be provided as true if customerEndReason	true

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					n is populated.	
addrLine1	Alphanumeric (40)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	The first Address Line for the address of the customer	
addrLine2	Alphanumeric (40)	Legal Entity Customer Record	O	Zero or One per Legal Entity Customer Record	Additional space for Address Line.	
addrLine3	Alphanumeric (40)	Legal Entity Customer Record	O	Zero or One per Legal Entity Customer Record	Additional space for Address Line. Must not be provided if addrLine2 is not provided.	
addrLine4	Alphanumeric (40)	Legal Entity Customer Record	O	Zero or One per Legal Entity Customer Record	Additional space for Address Line. Must not be provided if addrLine2 and addrLine3 are not provided.	
city	Alphanumeric (100)	Legal Entity Customer Record	R	Exactly One per Natural Person Customer Record	City of the Address of the Customer.	
regionCode	Text (40)	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	Code of the local region of the Customer Address, in ISO 3166-2 format without the two character Country Code. See published reference data list for acceptable values. Must be provided if a region list is available for the Country of the Customer Address. Optional to provide if no region list is available for the Country of the Customer Address.	AA-XX
countryCode	Choice (2)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	Code of the Country of the Customer Address, in ISO 3166-1 alpha-2 format. See published reference data list for acceptable values.	AA
postalCode	Alphanumeric (15)	Legal Entity Customer	C	Zero or One per Legal Entity	Postal Code of the Customer Address. Must be provided if	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
		er Record		Customer Record	known.	
ein	Text (10)	Legal Entity Customer Record	R	Exactly One per Legal Entity Customer Record	The Employer Identification Number (EIN) of the customer, in 99-9999999 format.	99-9999999
lei	Alphanumeric (20)	Legal Entity Customer Record	O	Zero or One per Legal Entity Customer Record	The Legal Entity Identifier (LEI) of the customer. Must be provided if known to the firm.	
updateConfirmationList	Multi-Dimensional Array	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	Structure for the array of Update Confirmation indications that are included in the file for the Natural Person Record. Not required if no Update Confirmations are included in the file for the specific Natural Person Customer.	
updateConfirmationRecordID	Unsigned	Update Confirmation Record	R	Exactly One per Update Confirmation Record	A unique reference to a single Update Confirmation for a single Customer.	
updateConfirmationAttribute	Choice	Update Confirmation Record	R	Exactly One per Update Confirmation Record	The changing attribute for the Legal Entity Customer Record that is being Update Confirmed as a valid and intentional change. Each value for the field is a reference to the particular attribute of the Legal Entity Customer Record that is being changed. Values: CITY COUNTRYCODE CUSTOMERSTARTDATE LEGALNAME LEI LTID POSTALCODE REGIONCODE	“CITY” “COUNTRYCODE” “CUSTOMERSTARTDATE” “LEGALNAME” “LEI” “LTID” “POSTALCODE” “REGIONCODE”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
largeTraderList	Multi-Dimensional Array	Legal Entity Customer Record	C	Zero or One per Legal Entity Customer Record	Structure for the array of LTID and ULTID records that are associated to the Legal Entity Customer record within the file. Required if the submission file contains one or more LTID/ULTID records associated to the customer record; not required if no LTID/ULTID records are included in the file in association to the reported customer.	
largeTraderRecordID	Unsigned	Large Trader Record	R	Exactly One per Large Trader Record	A unique reference to a single LTID or ULTID in reference to a single FDID for a single submission file.	
largeTraderID	Text (13)	Large Trader Record	R	Exactly One per Large Trader Record	The LTID or ULTID associated to the FDID in the CAT Reporter's system.	For LTID – 99999999-9999 For ULTID – ULT99999-9999
ltidEffectiveDate	Date (Number) (8)	Large Trader Record	R	Exactly One per Large Trader Record	Date on which the LTID or ULTID became associated to the FDID within the CAT Reporter's system, in YYYYMMDD format.	YYYYMMDD
ltidEndDate	Date (Number) (8)	Large Trader Record	C	Zero or One per Large Trader Record	Date on which the LTID or ULTID was no longer associated to the FDID within the CAT Reporter's system, in YYYYMMDD format. Must be provided if the ltidEndReason field is populated. Must not be provided if ltidEndDateNULL is populated as true.	YYYYMMDD
ltidEndDateNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndReasonNULL	true false

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					is populated as true. Must not be provided as true if ltidEndDate is populated.	
ltidEndReason	Choice	Large Trader Record	C	Zero or One per Large Trader Record	Reason why the LTID or ULTID was no longer associated to the Customer. Must be populated in order to end date an LTID-to-FDID association in the system. Must be provided if the ltidEndDate field is populated. Must not be provided if ltidEndReasonNULL is populated as true. Values: CORRECTION – LTID was erroneously reported ENDED – LTID-to-Customer association was ended REPLACED – LTID was replaced by a different LTID or the Customer TID was replaced by a different TID. OTHER – Other unlisted reason for ending the LTID-to-Customer association	“CORRECTION” “ENDED” “REPLACED” “OTHER”
ltidEndReasonNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndReason currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndDateNULL is populated as true. Must not be provided as true if ltidEndReason is populated.	true false
correctionList	Multi-Dimensional Array	Main	C	Exactly One per Submission File	Structure for the array of Correction records within the file. Required if the submission file contains one or more Correction records. Must only	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					be used for correcting rejections caused by malformed firmDesignatedID or largeTraderID values.	
rejectionID	Unsigned	Correction Record	R	Exactly One per Correction Record	The rejectionID from a prior submission that was created for the particular Data Ingestion error being corrected.	
correctionAction	Choice	Correction Record	R	Exactly One per Correction Record	The particular action that is being taken to correct for the prior rejection. Values: CORRECTION – A new entry is included in the submission file to correct for the prior rejected record using a new firmDesignatedID or new largeTraderID. DELETE – The prior rejection needs to be cleared without a new record being submitted.	“CORRECTION” “DELETE”
correctingFirmDesignatedID	Alphanumeric (40)	Correction Record	C	Zero or One per Correction Record	The firmDesignatedID that is correcting for the prior rejected FDID. The correctingFirmDesignatedID must be present in the submission file, or have been accepted in a prior CAT CAIS submission. Required if the correctionAction is CORRECTION.	
correctingCustomerRecordID	Unsigned	Correction Record	C	Zero or One per Correction Record	The correctingCustomerRecordID that is correcting for the prior rejected customerRecordID record. The correctingCustomerRecordID must be present in the submission file. Required if the	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					correctionAction is CORRECTION and the prior error being corrected was against a Customer. Must be populated if the correctingLargeTradeID is populated.	
correctingLargeTradeID	Text (13)	Correction Record	C	Zero or More per Correction Record	The LTID or ULTID that is correcting for the prior rejected LTID/ULTID record. The correctingLargeTradeID must be present in the submission file for the corresponding Customer. Required if the correctionAction is CORRECTION and the prior error being corrected was against an LTID for the Customer.	For LTID – 99999999-9999 For ULTID – ULT99999-9999
attestationList	Multi-Dimensional Array	Main	C	Zero or One per Submission File	Structure for the array of Customer Attestation records within the file. Required if the submission file contains one or more Customer Attestation records. Must only be used for attesting to customer data that has one or more outstanding Inconsistencies open against it.	
inconsistencyEventID	Unsigned	Attestation Record	R	Exactly One per Attestation Record	The Inconsistency Event ID reported by CAIS to the CAT Reporter that is being attested to as current and accurate data.	
customerRecordID	Unsigned	Attestation Record	R	Exactly One per Attestation Record	The Customer Record ID pointer to the entry in the Identifiers file for the TID whose data is being attested to as current and accurate.	

4.2. Transformed Identifiers File

The Transformed Identifiers File contains the list of TID values and the pointer to the tidRecordID from the CAIS Data File. A single Transformed Identifiers File is to be submitted in a pairing with a single CAIS Data File containing one or more customer records.

Table 8: Transformed Identifiers File

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
version	Text (10)	Main	R	Exactly One per submission file	The version of the Transformed Identifiers Schema under which the data is reported. Initial version utilized will be 2.0.0	2.0.0
tidRecordCount	Unsigned	Main	R	Exactly One per submission file	The count of TID attribute occurrences within the file. Used to validate the count of TID records intended to be submitted within the file matches the count of records present in the file.	
tidRecordList	Multi-Dimensional Array	Main	C	Zero or One per submission file	Structure for the array of TID Records that are included in the file. Required if the submission file contains one or more TID records; not required if no TID records are included in the file.	
customerRecordID	Unsigned	TID Record	R	Exactly One per TID Record	A unique reference to a single Customer record in the CAIS data file.	
tidType	Choice	TID Record	R	Exactly One per TID record	The specific type of Tax Identifier used to generate the TID value. Values: SSN/ITIN – Indicates the TID was generated using a Social Security Number (SSN) or Individual Taxpayer	“SSN/ITIN” “EIN”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					Identification Number (ITIN) EIN – Indicates the TID was generated using an Employer Identification Number (EIN).	
tidValue	Hexadecimal (64)	TID Record	R	Exactly One per TID Record	The obfuscated TID value created in place of the SSN, ITIN, or EIN of the Customer Record whose data is being reported.	
replacedByTIDType	Choice	TID Record	C	Zero or One per TID Record	The obfuscated TID value created in place of the SSN, ITIN, or EIN of the Customer Record that has taken the place of the reported Customer Record. Must be provided if the customerEndReason in the CAIS Data file for the Customer is REPLACED. Must not be provided if the customerEndReason is not set or is set as any value other than REPLACED.	“SSN/ITIN” “EIN”
replacedByTID	Hexadecimal (64)	TID Record	C	Zero or One per TID Record	The obfuscated TID value created in place of the SSN, ITIN, or EIN of the Customer Record that has taken the place of the reported Customer Record. Must be provided if the customerEndReason in the CAIS Data file for the Customer is REPLACED. Must not be provided if the customerEndReason is not set or is set as any value other than REPLACED.	

5. Submission Process

This section contains information pertaining to CAT CAIS account data and file formats, CAT CAIS submissions (including a general data flow overview), network and transport options, CAT CAIS access, and reporting hours.

5.1. File Submissions and Data Formats

CAT CAIS customer and account reference data submissions must include a data file with populated header record information, including Version, CAT Reporter ID, CAT Submitter ID, FDID Record Count, and Customer Record Count. It is valid and acceptable for a firm to submit a file with only this header information and record counts of zero, indicating an intentional submission of no account record data. A single submission to CAT CAIS must be comprised of a paired data file and identifiers file, even if record counts are zero for both files. The base file names for the data file and identifiers file must use identical name values, comprised of the CAT Submitter ID, CAT Reporter CRD, File Generation Date, optional Group, and File Number, to be identified as a paired data file. Data files have a prescribed naming convention and are supported in JSON format.

Transformed Identifiers data submissions must include a data file with populated header information, including Version and TID Record Count. It is valid and acceptable for a firm to submit a file with only this header information and record counts of zero, indicating an intentional submission of no TID data.

5.1.1. File Submission Names

1. Reference Data files must be named using the following format:

```
<CAT Submitter ID>_<CAT Reporter CRD>_<File Generation  
Date>_<Group>_<File Kind>_<File Number>.<Format  
Extension>.<Compression Extension>
```

For example: 123_999_20200101_CAIS_000123.json.bz2

2. Identifier files must be named using the following format:

```
<CAT Submitter ID>_<CAT Reporter CRD>_<File Generation  
Date>_<Group>_<File Kind>_<File Number>.<Format  
Extension>.<Compression Extension>
```

For example: 123_999_20200101_TIDS_000123.json.bz2

3. The values assigned within the format of a file name include:

Table 9: Elements of a File Submission Name

Field Name	Data Type	Description	Include Key
CAT Submitter ID	Unsigned	CAT Reporting Agent that submitted the file to CAT.	R
CAT Reporter CRD	Unsigned	The CRD assigned identifier of the firm to which the data within the file belongs.	R
File Generation Date	Date	The date the file was generated or reported. Used to guarantee uniqueness of a file across dates. Date must be less than or equal to System Date. Future dates are not acceptable.	R
Group	Alphanumeric (20)	Reporter defined string to guarantee uniqueness of a file across dates. Filenames associated with web submission directly entered into the CAIS Reporter Portal will be assigned the value of 'caisweb'. We recommend not using the Group value of 'caisweb' for submissions uploaded via the CAIS Reporter Portal or submitted via SFTP.	O
File Kind	Alphanumeric (20)	Set to 'CAIS' for Reference Data files. Set to 'TIDS' for Identifiers files.	R
File Number	Unsigned	Sequence number of the file, 6-digits long, left-padded with zeros.	R
Format Extension	Alphanumeric (4)	Represents the format of the data submission. JSON formatted submissions must be 'json'.	R
Compression Extension	Alphanumeric (3)	Applicable to Data Files. Set to 'bz2'	R

- File names should be globally unique among all other files using the base name (the portion of the file name without the format and compression extensions) of the file.
- A single CAT CAIS submission must consist of a paired Data file and Identifiers file, noted by the same file name for the Data file and Identifiers file for the combination of CAT Submitter ID, CAT Reporter CRD, File Generation Date, optional Group (if present on either), and File Number attributes.

5.1.2. Submission Formats

CAT CAIS supports the submission of data in JSON format only, due to the relational nature of the account and customer data.

5.1.3. Reference Data File Submission

Note – the data submission rules are works in progress while the schema is being finalized.

The following rules apply to Reference Data Files:

1. The CAT CAIS Processor will support standard JSON syntax for each record or as specified in this document.
2. Data files serve as top-level containers for each object.
3. All data files sent from the CAT Reporter (or the third-party CAT Reporting Agent for the CAT Reporter) must be compressed using BZip2. The associated compression extension is "bz2".
4. Data files must be individually compressed and submitted. Compressed files may not be bundled into a single container file.
5. The data contained within the data file must represent data for the CAT Reporter CRD number identified within the file name.
6. A Data file without an associated Identifiers file posted within 30 minutes of the data file submission will result in an error.
7. An Identifiers file without an associated Data file posted within 60 minutes of the Identifiers file submission will be deleted, and no notification will be provided to the firm of this action.
8. The CAT Submitter ID, CAT Reporter CRD, and File Generation Date must be the same for the Reference Data file and paired Identifiers file.
9. The Reference Data File submission must be the same schema version as the Identifiers file.
10. Files submitted through SFTP are limited to a maximum uncompressed size of 100GB.
11. Files sizes <= 1GB are recommended as feedback will be returned faster.
12. Data files submitted through the CAT Reporter Portal – CAIS are limited to a maximum uncompressed size of 1GB, with a record limit of 100,000 FDID records per file and 100,000 Customer records. Files with more than 100,000 FDID records and/or more than 100,000 Customer records will be rejected.
13. Schema files will be maintained by the Plan Processor and will be versioned as the Technical Specifications change.
14. Data files submitted to CAT CAIS will be treated as Delta files, and updates or changes will only be enacted on records as contained within the submission file; records previously received and not included in a later submission file, or optional or conditional attributes previously received for an FDID or Customer and not included in a later submission file, will not be changed in CAT CAIS until included in a subsequent submission file.
15. Data files may contain original submissions, updates to records contained in prior submissions, firm-initiated corrections of records contained in prior submissions, and record error corrections.
16. Conditional and optional fields without a value must be omitted from the submission.

5.1.3.1. Reference Data File Submission – FDID

The following rules apply to FDID records present within Reference Data Files:

1. An FDID being submitted to CAIS for the first time must have at least one associated Customer within the submission file.
2. If all Customers associated to an FDID within a submission file are rejected due to data validation errors:
 - a. If the FDID is being submitted to CAIS for the first time, it will be rejected for a data validation error for having no associated Customer
 - b. If the FDID has previously been accepted by CAIS, the FDID data will be accepted by CAIS and any updates will be applied to the FDID record in CAIS
3. In the scenario a Firm needs to clear a previously submitted conditional or optional field value, they must include the corresponding nullifying attribute field with a value of true, indicating the intent to clear the prior value. For example:
 - a. If a Firm previously ended an FDID record for a reason other than REPLACED, and the Firm wants to resume submission of the FDID record, they would need to send a true value for the *fdidEndDateNULL* and *fdidEndReasonNULL* fields.
 - b. If the Firm intends to resume submission of an FDID record ended for a reason of REPLACED, the Firm would need to send a true value for the *fdidEndDateNULL*, *fdidEndReasonNULL*, and *replacedByFDIDNULL* fields.
4. Clearing previously set *fdidEndDate* and *fdidEndReason* attributes through use of the corresponding nullifying fields will not result in reactivation of any Customer associations of the FDID.
5. Each FDID included in a submission file must contain all required attributes, however optional and conditional attributes are not required to be included unless the Firm intends to modify said attribute.
6. The *replacedByFDID* value included in a submission file must reference an FDID that is either included in the current submission file or was accepted by CAT CAIS in a prior submission file.
7. If the *replacedByFDID* record in a submission file was not accepted by CAT CAIS in a prior submission file and is not included in the current submission file, or is included in the current submission file but the replacing FDID record does not pass data validation checks, the submission record referencing the replacing FDID will fail data validation and not be accepted by CAT CAIS.
8. The *correctingFirmDesignatedID* value included in a submission file must reference a corresponding FDID that is either included in the current submission file or was accepted by CAT CAIS in a prior submission file.
9. If the FDID listed in the *correctingFirmDesignatedID* value in a submission file was not accepted by CAT CAIS in a prior submission file and is not included in the current submission file, or is included in the current submission file but the FDID record does not pass data validation checks, the correction submission record referencing the FDID record will fail data validation and not be accepted by CAT CAIS.

10. Once a Customer-to-FDID association has passed data validation checks and been accepted by CAT CAIS, the Firm is not required to include the Customer-to-FDID association in subsequent submission files unless the Firm intends to end or modify said Customer-to-FDID association.
11. If a Customer is associated to multiple FDID records within a single CAT Reporter Firm, the Customer-to-FDID association must be submitted for each FDID. The associations may be submitted within a single submission file or across multiple submission files as associations are established.
12. If a Customer becomes associated to an FDID that was previously submitted and accepted by CAT CAIS, the Firm must establish the Customer-to-FDID association by including the FDID in a submission file with all required attributes, and including the Customer role within the *fdidCustomerList* array of the FDID record.
13. In the scenario a Firm ends an FDID record, by including a populated *fdidEndDate* and *fdidEndReason* attribute, any remaining active Customer associations to the ended FDID will be ended on behalf of the Firm. The *fdidEndDate* and *fdidEndReason* will be cascaded as the *roleEndDate* and *roleEndReason*, respectively.
14. In the scenario a Firm is ending an FDID record that has currently active Customer associations to the ending FDID, and they do not want the date and reasons cascaded, they must explicitly end the Customer-to-FDID association by including the association in the submission file with populated *roleEndDate* and *roleEndReason* attributes.
15. In the scenario a Firm is ending an FDID record that has one or more Customer-to-FDID associations where the *roleEndDate* is set to a date later than the *fdidEndDate*, the *roleEndDate* values stored in CAIS will be updated to the earlier *fdidEndDate* value. The *roleEndReason* currently set on the association will not be updated if it differs from the submitted *fdidEndReason* value.

5.1.3.2. Reference Data File Submission – Customer

The following rules apply to Customer records present within Reference Data Files:

1. Each Customer record present in the Reference Data file must have a corresponding entry in the Identifiers file. If a corresponding Identifiers file entry is not present, the Customer Record will be rejected.
2. A Customer being submitted to CAIS for the first time by a CAT Reporter must have at least one associated FDID within the submission file.
3. In the scenario a Firm ends a Customer record, by including a populated *customerEndDate* and *customerEndReason* attribute, any remaining active LTIDs associated to the ended Customer will be ended on behalf of the Firm. The *customerEndDate* and *customerEndReason* will be cascaded as the *ltidEndDate* and *ltidEndReason*, respectively.
4. In the scenario a Firm is ending a Customer record that has currently active LTIDs associated to the ending Customer, and they do not want the date and reasons cascaded, they must explicitly end the

LTID-to-Customer association by including the association in the submission file with populated *ltidEndDate* and *ltidEndReason* attributes.

5. In the scenario a Firm is ending a Customer record that has one or more LTID-to-Customer associations where the *ltidEndDate* is set to a date later than the *customerEndDate*, the *ltidEndDate* values stored in CAIS will be updated to the earlier *customerEndDate* value. The *ltidEndReason* currently set on the association will not be updated if it differs from the submitted *customerEndReason* value.
6. If all FDIDs associated to a Customer within a submission file are rejected due to data validation errors:
 - a. If the Customer is being submitted to CAIS for the first time, it will be rejected for a data validation error for having no associated FDID
 - b. If the Customer has previously been accepted by CAIS, the Customer will be accepted by CAIS and any updates will be applied to the Customer record in CAIS
7. In the scenario a Firm needs to clear a previously submitted conditional or optional field value, they must include the corresponding nullifying attribute field with a value of true, indicating the intent to clear the prior value. For example:
 - a. If a Firm previously ended a Customer record for a reason other than REPLACED, and the Firm wants to resume submission of the FDID record, they would need to send a true value for the *customerEndDateNULL* and *customerEndReasonNULL* fields.
 - b. If the Firm intends to resume submission of a Customer record ended for a reason of REPLACED, the Firm would need to send a true value for the *customerEndDateNULL*, and *customerEndReasonNULL* fields. The Firm would also need to send a true value for the *replacedByTIDNULL* field within the Transformed Identifiers file.
 - c. If a Firm previously ended an LTID-to-Customer association, but did not end the Customer, and the Firm wants to resume submission of the LTID record, they would need to send a true value for the *ltidEndDateNULL* and *ltidEndReasonNULL* fields.
8. Each Customer record included in a submission file must contain all required attributes, however optional and conditional attributes are not required to be included unless the Firm intends to modify said attribute.
9. Clearing previously set *customerEndDate* and *customerEndReason* attributes through use of the corresponding nullifying fields will not result in reactivation of LTID associations of the Customer, nor the reactivation of any FDID associations of the Customer.
10. Once an LTID-to-Customer association has passed data validation checks and been accepted by CAT CAIS, the Firm is not required to include the LTID-to- Customer association in subsequent submission files unless the Firm intends to end or modify said LTID-to-Customer association.

11. If an LTID is associated to multiple Customer records within a single CAT Reporter Firm, the LTID-to-Customer association must be submitted for each FDID. The associations may be submitted within a single submission file or across multiple submission files as associations are established.
12. If an LTID becomes associated to a Customer that was previously submitted and accepted by CAT CAIS, the Firm must establish the LTID-to-Customer association by including the Customer in a submission file with all required attributes, and including the LTID within the *largeTraderList* array of the Customer record.
13. If the Customer or Customer and LTID listed in the *correctingCustomerRecordID* or *correctingLargeTraderID* is not included in the current submission file, or is included in the current submission file but the Customer record does not pass data validation checks, the correction submission record referencing the Customer record will fail data validation and not be accepted by CAT CAIS.
14. If a Customer becomes associated to an FDID that was previously submitted and accepted by CAT CAIS, the Firm must establish the Customer-to-FDID association by including the FDID in a submission file with all required attributes, and including the Customer role within the *fdidCustomerList* array of the FDID record.
15. In the scenario a Firm ends a Customer record, by including a populated *customerEndDate* and *customerEndReason* attribute, any remaining active FDID associations to the ended Customer will be ended on behalf of the Firm. The *customerEndDate* and *customerEndReason* will be cascaded as the *roleEndDate* and *roleEndReason*, respectively.
16. In the scenario a Firm is ending a Customer record that has currently active FDID associations to the ending Customer, and they do not want the date and reasons cascaded, they must explicitly end the Customer-to-FDID association by including the association in the submission file with populated *roleEndDate* and *roleEndReason* attributes.
17. In the scenario a Firm is ending a Customer record that has one or more Customer-to-FDID associations where the *roleEndDate* is set to a date later than the *customerEndDate*, the *roleEndDate* values stored in CAIS will be updated to the earlier *customerEndDate* value. The *roleEndReason* currently set on the association will not be updated if it differs from the submitted *customerEndReason* value.
18. In the scenario a Firm is ending the last Customer that has currently active FDID associations, and the Firm does not also end the FDID or FDIDs associated to the Customer, CAIS will reject the Customer submission, as it is not permissible to have an active FDID without any active Customer associations.

5.1.3.3. Reference Data File Submission – Attestations

The following rules apply to Attestation records present within Reference Data Files:

1. A single *inconsistencyEventID* must be present within the data file only once.

2. A single Customer Record ID must be present within the Attestation list only once per file.
3. The Customer Record ID present within the Attestation list must have a corresponding TID entry within the paired Transformed Identifiers file.
4. The *inconsistencyEventID* must be paired with the appropriate TID for the Customer against whom the inconsistency was identified or the attestation will not be accepted.
5. The Customer Record ID is not required to be present within the *naturalPersonCustomerList* nor the *legalEntityCustomerList* of the data file, as the customer record has already previously been accepted into CAIS.

5.1.4. Identifiers Data File Submission

The following rules apply the Identifier Files and the records present within the file:

1. Schema files will be maintained by the Plan Processor and will be versioned as the Technical Specifications change.
2. A single TID record must be present within the Transformed Identifiers file only once.
3. Each TID record present in the Identifiers file must reference a record present in the Data file. If a corresponding record is not present in the Data file – either in the *naturalPersonCustomerList*, the *legalEntityCustomerList*, or the *attestationList*, the individual TID entry in the Identifiers file will be rejected and not processed for additional validations.
4. A TID record must be created from an appropriately formatted Tax Identifier – that is, SSN/ITIN values formatted as '999-99-9999' or EIN values formatted as '99-9999999'.
5. A TID record must be created from a valid Tax Identifier, as noted
 - a. For SSN
 - i. No values having an Area Number (first three digits) of 000 nor 666.
 - ii. No values having a Group Number (middle two digits) of 00.
 - iii. No values having a Serial Number (last four digits) of 0000.
 - iv. No values of 111-11-1111, 333-33-3333, 666-66-6666, nor 123-45-6789.
 - b. For EIN
 - i. Must have a valid prefix (first two digits), as noted by the Internal Revenue Service.
6. A TID generated from an invalid Tax Identifier, or submitting with an incorrect *TIDType* value, will cause the Customer record to be rejected.
7. Reporting the same TID with multiple *customerRecordID* values in a single Identifiers file submission will cause all Customer submission records in the file for the TID to be rejected.

5.1.4.1. Data File JSON Example

The following JSON example demonstrates how a Firm would structure a reference data file submission.


```

{
  "version": "2.0.0",
  "catReporterCRD": 123,
  "catSubmitterID": 999,
  "fdidRecordCount": 3,
  "naturalPersonRecordCount": 3,
  "legalEntityRecordCount": 1,
  "fdidRecordList": [
    {
      "fdidRecordID": 1,
      "firmDesignatedID": "EZAccount123",
      "fdidType": "ACCOUNT",
      "accountType": "MARGIN",
      "isRetirement": false,
      "isOptionsEligible": true,
      "primeBrokerID": "BRK1",
      "clearingBrokerID": "A349",
      "branchOfficeCRD": 13245,
      "registeredRepCRD": 1222,
      "fdidDate": 20190101,
      "fdidCustomerList": [
        {
          "customerRecordID": 1,
          "role": "HOLDER",
          "subRole": "PRIMARY",
          "roleStartDate": "20190101",
          "roleEndDate": "20200401",
          "roleEndReason": "ENDED"
        },
        {
          "customerRecordID": 1,
          "role": "HOLDER",
          "subRole": "JOINT",
          "roleStartDate": "20200401"
        },
        {
          "customerRecordID": 4,
          "role": "HOLDER",
          "subRole": "JOINT",
          "roleStartDate": "20200401"
        },
        {
          "customerRecordID": 15,
          "role": "AUTHTRADER",
          "subRole": "DISCRETION",
          "roleStartDate": "20200401"
        }
      ]
    },
    {
      "fdidRecordID": 2,
      "firmDesignatedID": "MyTestEntity",
      "fdidType": "ENTITYID",
      "fdidDate": 20170308,
      "fdidEndDate": 20191201,
      "fdidEndReason": "ENDED",
    }
  ]
}

```

```

    "fdidEndedBy": "FIRM"
  },
  {
    "fdidRecordID": 3,
    "firmDesignatedID": "InternalRel",
    "fdidType": "RELATIONSHIP",
    "isRetirement": false,
    "isOptionsEligible": true,
    "bankDepositoryID": "DEP11",
    "clearingBrokerID": "A349",
    "branchOfficeCRD": 13245,
    "registeredRepCRD": 1222,
    "fdidDate": 20150121,
    "fdidEndDateNULL": true,
    "fdidEndReasonNULL": true,
    "replacedByFDIDNULL": true,
    "fdidCustomerList": [
      {
        "customerRecordID": 2,
        "role": "HOLDER",
        "subRole": "PRIMARY",
        "roleStartDate": "20190101"
      },
      {
        "customerRecordID": 15,
        "role": "AUTHTRADER",
        "subRole": "DISCRETION",
        "roleStartDate": "20200401"
      }
    ]
  }
],
"naturalPersonCustomerList": [
  {
    "customerRecordID": 1,
    "firstName": "JOHN",
    "lastName": "DOE",
    "nameSuffix": "SENIOR",
    "yearOfBirth": "1980",
    "customerStartDate": "20160501",
    "addrLine1": "123 MAIN ST",
    "city": "NEW YORK",
    "regionCode": "US-NY",
    "countryCode": "US",
    "postalCode": "10011",
    "largeTraderList": [
      {
        "largeTraderRecordID": 1,
        "largeTraderID": "12345678-0001",
        "ltidEffectiveDate": 20190501
      }
    ]
  }
],
  {
    "customerRecordID": 4,
    "firstName": "JANE",

```

```

"lastName": "DOE",
"yearOfBirth": "1982",
"customerStartDate": "20200301",
"addrLine1": "123 MAIN ST",
"city": "NEW YORK",
"regionCode": "US-NY",
"countryCode": "US",
"postalCode": "10011",
"updateConfirmationList": [
  {
    "updateConfirmationRecordID": 1,
    "updateConfirmationAttribute": "LASTNAME"
  },
  {
    "updateConfirmationRecordID": 2,
    "updateConfirmationAttribute": "CITY"
  },
  {
    "updateConfirmationRecordID": 3,
    "updateConfirmationAttribute": "REGIONCODE"
  },
  {
    "updateConfirmationRecordID": 4,
    "updateConfirmationAttribute": "POSTALCODE"
  }
]
},
{
  "customerRecordID": 15,
  "firstName": "ALEXANDER",
  "middleName": "W",
  "lastName": "SMYTHE",
  "yearOfBirth": "1975",
  "customerStartDate": "20080915",
  "addrLine1": "PRINCIPAL STREET ADDR",
  "city": "NEW YORK",
  "regionCode": "US-NY",
  "countryCode": "US",
  "postalCode": "10005",
  "largeTraderList": [
    {
      "largeTraderRecordID": 1,
      "largeTraderID": "98765432-1234",
      "ltidEffectiveDate": 20180501
    }
  ]
}
],
"legalEntityCustomerList": [
  {
    "customerRecordID": 2,
    "legalName": "PRIMARY TRADING",
    "customerStartData": "20100101",
    "addrLine1": "1 WATERS ST",
    "addrLine2": "TRADING DESK 15",
    "city": "JERSEY CITY",

```

```

    "regionCode": "US-NJ",
    "countryCode": "US",
    "postalCode": "07097",
    "largeTraderList": [
      {
        "largeTraderRecordID": 1,
        "largeTraderID": "11223344-0001",
        "ltidEffectiveDate": 20180901
      },
      {
        "largeTraderRecordID": 2,
        "largeTraderID": "99887766-6543",
        "ltidEffectiveDate": 20200105
      }
    ]
  },
  "correctionList": [
    {
      "rejectionID": 1127,
      "correctionAction": "CORRECTION",
      "correctingFirmDesignatedID": "EZAccount123",
      "correctingLargeTraderID": "12345678-0001"
    },
    {
      "rejectionID": 821,
      "correctionAction": "DELETE"
    }
  ]
  "attestationList": [
    {
      "inconsistencyEventID": 1001,
      "customerRecordID": 15
    }
  ]
}

```

The following JSON example demonstrates how a Firm would structure the companion identifier file submission.

```

{
  "version": "2.0.0",
  "tidRecordCount": 4,
  "tidRecordList": [
    {
      "customerRecordID": 1,
      "tidType": "SSN/ITIN",
      "tidValue":
"01a54629efb952287e554eb23ef69c52097a75aecc0e3a93ca0855ab6d7a31a0"
    },
    {
      "customerRecordID": 2,
      "tidType": "EIN",

```

```

      "tidValue":
"3b2a38ab53618a0dc1114a4a77dd0bd2d6a83d5fe62598735cd2677a8f4aab65"
    },
    {
      "customerRecordID": 4,
      "tidType": "SSN/ITIN",
      "tidValue":
"4628ea314743d5ac373997763be3d39b86fc40c5d2015d2db345b0231e215b6c"
    },
    {
      "customerRecordID": 15,
      "tidType": "SSN/ITIN",
      "tidValue":
"ac7dd472ecaede73cb8dce1d9a68b7e2e33f87d9baee6ac6157bb8044365129e"
    }
  ]
}

```

5.1.5. Schema

An Industry Member Schema file that details the structure and expected contents of every CAIS file submission is available on the CAT public website. The schema file will be maintained by the Plan Processor and will be versioned as the account and customer file formats change. The CAT CAIS schema file will use the json schema format as defined at <https://json-schema.org/>.

5.1.5.1. Schema Version

Schema changes will be updated when changes to the CAT Reporting Technical Specifications for Industry Members occur that impact the schema. The following rules apply:

1. The Schema Version is formatted as <Major>.<Minor>.<Patch>. All digits must be represented.
 - o **Major** – updated when a change occurs that impacts all or a significant portion of Industry Member CAT Reporters. In such cases, the schema is not backward compatible and will be specified accordingly.
 - o **Minor** – updated when a change occurs that does not require coding changes for all Industry Member CAT Reporters. In such cases, the schema is backward compatible with support for previous version(s) as specified.
 - o **Patch** – updated when a change occurs that does not require coding changes for any Industry Member CAT Reporters.
2. Records contained in a Data File must be formatted as per the Schema Version noted in the submission file.
3. Feedback provided by CAT CAIS will set the *feedbackVersion* equal to the applicable Schema Version for the submission file.

5.1.5.2. Schema Definition

The schema file is a JSON format file that represents the following:

1. **Data Types** – CAT defined data types containing the following elements:
 - **dataType**: Data Type (E.g. Text) as defined in [Table 5: Data Types](#)
 - **JSONDataType**: JSON standard data type to be used to submit data of this type.
 - **maxLength**: Maximum length of the string submission. Applicable to text and alphanumeric types only.
2. **Choices** – For choice data types, the list of possible values.
3. **Name/Value Pairs** – Field specifications for Name/Value Pair fields.
 - **name**: Field Name.
 - **dataType**: Data Type or an array of Data Types.
 - **JSONDataType**: The JSON standard data type or an array of JSON standard data types.
 - **required**: Indicates whether the field is "Required," "Conditional," or "Optional."

5.2. Connectivity

Connectivity to CAT will be through at least one of the following methods:

- Private Line provided by a Managed Network Service Provider (MNSP)
- AWS PrivateLink⁴
- CAT Secure Reporting Gateway (SRG) Reporter Portal

Both the Private Line and AWS PrivateLink connectivity methods will support the CAT File Transfer service, which provides access for automated, machine-to-machine file submissions, acknowledgements, rejections, and corrections using the Secure File Transfer Protocol (SFTP) service as well as to the CAT Reporter Portal for interactive reporting through web-based forms or manual file uploads.

The CAT Secure Reporting Gateway (SRG) connectivity method will only support the CAT Report Portal. The SRG requires multi-factor authentication (MFA) to establish a secure, encrypted session before accessing the CAT Reporter Portal. The SRG requires the use of modern browsers supporting HTML5 and TLS (Transport Layer Security). No client software installation is required.

The combinations of Connectivity and Interface Methods are summarized below.

⁴ Industry Members and CAT Reporting Agents interested in AWS PrivateLink should contact the FINRA Help Desk at 888-696-3348 or at help@finracat.com.

Table 10: Connectivity Methods and Supported CAT Interfaces Methods

Connectivity Methods	Interface Methods	
	CAT File Transfer	CAT Reporter Portal - CAIS
Private Line provided by MNSP	Y	Y
AWS PrivateLink	Y	Y
CAT Secure Reporting Gateway (SRG)	N	Y

For a detailed description of the CAT Connectivity Methods, including instructions for establishing access and connectivity to the CAT system, refer to the [FINRA CAT Connectivity Supplement for Industry Members](#).

5.3. CAT Interface Methods

The interface methods available to Industry Members and CAT Reporting Agents to submit data and retrieve reporting feedback include CAT File Transfer and the CAT Reporter Portal. For a detailed description of the CAT Interface Methods, including instructions for establishing access and connectivity to the CAT system, refer to the [FINRA CAT Connectivity Supplement for Industry Members](#).

The following identifies the types of CAT information with the respective interface methods available for each:

Table 11: CAT Data and Feedback Interface Methods

CAT Data Submission and Feedback	Category	CAIS SFTP	CAT Reporter Portal – CAIS	CAT Reporter Portal
Submission of CAT CAIS files	Submission	✓	✓	
Resubmission of Rejected Files/Records, Corrections and Attestations	Submission	✓	✓	
Interactive CAT Reportable Account Entry	Submission		✓	
Interactive CAT Reportable Customer Entry	Submission		✓	
File Status Retrieval	Feedback	✓	✓	
Reporting Statistics	Feedback		✓	
Error Feedback	Feedback	✓	✓	
Data Inconsistencies Feedback	Feedback	✓	✓	
CAIS System Status and Announcements	Feedback		✓	
FDID Reconciliation Report	Feedback		✓	
Account Maintenance	Administration			✓

CAT Data Submission and Feedback	Category	CAIS SFTP	CAT Reporter Portal – CAIS	CAT Reporter Portal
Establishment of Reporting Relationships	Administration			✓

5.3.1. CAT File Transfer

The CAT File Transfer method is an automated, machine-to-machine interface utilizing the Secure File Transfer Protocol (“SFTP”) for file submissions, acknowledgements, rejections and corrections. SFTP enables Industry Members and CAT Reporting Agents to create machine-to-machine connections to securely transmit data and retrieve data from FINRA CAT. In order to ensure customer and account reference data is never commingled with the TID value, the two file types must be posted to separate SFTP sites.

There are two separate host sites that are utilized for CAIS data reporting to ensure the separation of the customer and account data submissions from the identifiers file. This additional physical separation for file posting further increases the security of the data within the identifiers file, and the separate directory structure reduces risks of files being cross-posted to the incorrect directory.

The following is the SFTP directory structure that will be made available in the submitter’s home directory for posting customer and account reference data, and received feedback and inconsistencies files. Files associated with reference data submissions, associated feedback, and identified data inconsistencies will be uploaded in SFTP directories as per the following table.

Table 12: SFTP Directories – CAIS Data, Feedback, and Inconsistencies

Reference Data SFTP Directory	Usage
/submitterID/cat/cais/upload	SFTP submissions uploaded by Submitters including Reference Data files. CAT will move files from this directory for further processing.
/submitterID/cat/cais/feedback	Feedback files associated with data submission file processing.
/submitterID/cat/cais/inconsistencies	Feedback files containing inconsistencies identified during daily CAT CAIS data scanning.

The following is the SFTP directory structure that will be made available on the separate host site for posting the Transformed Identifiers file, and received feedback files.

Table 13: SFTP Directory – Transformed Identifiers file

Identifiers Data SFTP Directory	Usage
/submitterID/cat/tid/upload	SFTP submissions uploaded by Submitters including Identifiers files. CAT will move files from this directory for further processing.
/submitterID/cat/tid/feedback	Feedback files associated with identifier submission file processing.

The following rules apply:

1. Processing is initiated when a file appears in the /submitterID/cat/cais/upload directory paired with a corresponding file in the /submitterID/cat/tid/upload directory only.
2. Files posted to /submitterID/cat/cais/upload without a corresponding file submission posted to /submitterID/cat/tid/upload will be rejected one hour after posting.
3. Files posted to /submitterID/cat/tid/upload without a corresponding file submission posted to /submitterID/cat/cais/upload will be rejected one hour after posting.
4. CAT will remove files from the upload directory as soon as each file upload is complete.
5. The Submitter must not delete files from the /submitterID/cat/cais/upload directory.
6. Due to the PII considerations of the account and customer data, a copy of uploaded files will not be made available to the Reporter or Submitter after submission.
7. Firms using SFTP will be able to obtain Feedback Files for files submitted through the SFTP, as well as any files submitted through the CAT Reporter Portal - CAIS through either file upload or manual submission.

5.3.2. CAT Reporter Portal - CAIS

The CAT Reporter Portal – CAIS is a web interface utilizing secure encryption protocols (HTTPS/TLS) and multifactor authentication (MFA). The CAT Reporter Portal - CAIS will facilitate data submissions using the following methods:

- Manual data file uploads for files up to 1GB in size and limited to 100,000 FDID and 100,000 Customer records meeting all requirements of data files as specified in 5.1.3.
- Data entry for original submissions, repairs for CAT identified errors, and firm initiated corrections and deletion instructions. These entries will be converted to submission files generated by the portal. Because these files will contain PII data, they will not be available to download after submission.
- The CAT Reporter Portal - CAIS will include a summary view screen for records created through manual submission that contains the record data which will be submitted, allowing users to confirm, and capture for their records, the details of their submission.
- Firms using the CAT Reporter Portal - CAIS will not be able to view the full details of the originally submitted record for correction of CAT identified errors for data security. The CAT Reporter Portal - CAIS will only display the following attributes regarding the error record, and will require entry of all other data attributes to be included in the submission:
 - ◆ catReporterCRD
 - ◆ catSubmitterID

- ◆ firmDesignatedID
- ◆ fdidRecordID
- ◆ customerRecordID (if error is against a Customer record or an FDID-to-Customer association)
- ◆ largeTraderRecordID (if error is against a Large Trader record)
- ◆ rejectionID
- ◆ errorCodeID
- Firms using the CAT Reporter Portal - CAIS will only be able to view Feedback Files for files submitted through the CAT Reporter Portal - CAIS. They will not be able to view Feedback Files for files posted via SFTP.

5.4. CAT CAIS Reporting Hours

5.4.1. Submission of CAT Account and Customer Data

The CAT NMS Plan requires Industry Members to report Received Industry Member Data, which includes customer and account data, by 8:00 a.m. Eastern Time on the CAT Trading Day following the day the Industry Member receives such Received Industry Member Data. Customer and Account data may be bulk uploaded at the end of the CAT Trading Day, or may be submitted in batches with associated uploads throughout the day. All creation of, or modifications to, CAT reportable accounts are required to be submitted to CAT CAIS by 8:00 a.m. Eastern Time on the CAT Trading Day following the day such information was received by the Industry Member.

Weekends or any day that all equities or options national securities exchanges are closed are not considered a CAT Trading Day.

5.4.2. Deadline of Repair for Errors Identified by CAT CAIS

For data submitted by 8:00 a.m. ET, errors will be identified by CAT CAIS and provided to Industry Members by no later than 5:00 p.m. ET on the CAT Trading Day such information was submitted to CAT. Once available, repairs can be made immediately. All repairs must be submitted by 5:00 p.m. Eastern Time on the third Trading Day after the account information became available to the Industry Member. Repairs received after the repair deadline will be accepted but considered late.

CAT specifications allow for Industry Members to correct account submissions that did not produce an error during processing at any time after original submission. Firm-initiated corrections will be handled in the same method as any other update to the existing account record.

5.4.3. Deadline of Repair of Data Inconsistencies or Attestation of Data Accuracy Identified by CAT CAIS

For data submitted by 8:00 a.m. ET, data inconsistencies present within the submission file will be identified by CAT CAIS and provided to Industry Members by no later than 5:00 p.m. ET on the CAT Trading Day such information was submitted to CAT. Once available, data repairs or attestations can be made immediately. All repairs or attestations must be submitted by 5:00 p.m. Eastern Time on the third CAT Trading Day after the account information became available to the Industry Member. Repairs or attestations received after the repair deadline will be accepted but considered late.

CAT CAIS will also conduct cross CAT Reporter inconsistency scanning across all records previously submitted by the firms on a daily basis. Data inconsistencies identified against prior submissions will be identified by CAT CAIS and provided first to the Industry Member whose data submission caused the inconsistency. All repairs or attestations must be submitted by 5:00 p.m. Eastern Time on the third CAT Trading Day after the inconsistency was identified. If the Industry Member attests their current data submission is correct, or submits an update to their data that leaves data inconsistent for the Customer record, all other CAT Reporter Firms who have an active version of the same Customer record with the inconsistency will then be notified of the Material Inconsistency. All repairs or attestations must be submitted by 5:00 p.m. Eastern Time on the third CAT Trading Day after the inconsistency was reported to the Industry Member.

5.5. Security

5.5.1. Encryption (In-transit)

TLS-based encryption, version 1.2 minimum, is required for connection to the Reporter Portal (whether accessed via private line or the SRG) and to the Security Reporter Gateway itself.

For SFTP, in addition to the fact that the SFTP service is only accessible via private line, traffic will be encrypted by virtue of the intrinsic encryption capabilities of SFTP. AES256 will be supported for SFTP; support for other encryption protocols is under evaluation.

5.5.2. Encryption (At-rest)

The CAT CAIS system will use native AWS encryption features to encrypt data upon receipt. No action is required by the Industry Member.

5.5.3. Authentication

Two-factor authentication will be required for access to the CAIS Reporter Portal. The first factor will be username and password which will require periodic rotation.

The second factor will be via push notification to an off-the-shelf application installed on a mobile device provided by the user. The user will be required to install the application to their mobile device through their mobile operating system's application store and then complete a registration process on the Reporter Portal or SRG. There is no cost to the Reporter or the user for this mobile application.

The SFTP service similarly requires that two conditions be met to access the interface. The first factor is authentication via username and password. The second is the use of a defined IP source address that is established during initial onboarding. The SFTP system implements an IP whitelist that prevents access from any system not on the whitelist.

More detailed information related to Security is described in the [FINRA CAT Connectivity Supplement for Industry Members](https://www.catnmsplan.com/registration/) available at <https://www.catnmsplan.com/registration/>.

6. Feedback and Corrections

CAT provides feedback associated with CAT CAIS submissions for CAT Reporters and Submitters as follows:

- **File Status:** available via SFTP and the CAT Reporter Portal - CAIS, indicates the acceptance or associated errors with a submission file.
- **Reporting Statistics:** available via the CAT Reporter Portal - CAIS, daily summary statistics representing reporting activity and errors for prior submissions. Error Rate is also included.
- **Error Feedback:** available via SFTP and the CAT Reporter Portal - CAIS, errors found during processing will be made available, including error code, affected FDID, and associated record ID(s) from the submission file.
- **Corrections Feedback:** available via the CAT Reporter Portal - CAIS, information is provided for the repair status of all corrections. When an error has been corrected, the updated status will be reflected.
- **Inconsistency Feedback - Submissions:** available via SFTP and the CAT Reporter Portal - CAIS, inconsistencies found during processing will be made available, including inconsistency code, affected record, and associated record ID(s) from the submission file.
- **Inconsistency Feedback – Scans:** available via SFTP and the CAT Reporter Portal - CAIS, inconsistencies found in comparing accepted versions of the same Customer from multiple Reporters will be made available, including inconsistency code, details about the submission file that last contained the Customer record, and associated record ID(s) from the submission file.
- **System Status and Announcements:** available via the CAT Reporter Portal - CAIS, the status of CAT processing will be made available with a distinction for instances when a processing delay or issue is occurring. Additionally, announcements related to system maintenance and upcoming changes will be presented.

This section describes the procedures for obtaining feedback and making corrections/deletions associated with feedback of errors. Additionally this section describes the requirement for making correction/deletions for accepted data for which there was no feedback.

6.1. File and Error Feedback

A feedback file will be made available for each submission file that is acknowledged as uploaded. This file will contain information about current status, as well as previously completed steps in the ingestion process. Feedback related to the following processing steps is expected to be made available within the following timelines:

Table 14: Feedback and Error Correction Availability

Seq	Processing Stage	Feedback	Anticipated Delivery	Delivery No Later Than
1	File Acknowledgement	File Acknowledgement Status	Within 10 minutes of File Submission	1 hour of File Submission
2	File Integrity	File Integrity Error Status or File Integrity Passed Status	Within 30 minutes of File Submission	2 hours of File Submission
3	Data Validation	Data Errors including syntax and semantic errors	Within 1 hour of File Integrity Feedback	4 hours of File Integrity Feedback
4	Inconsistencies – Submission	Customer Data Inconsistencies	Within 1 hour of Data Validation	6 hours of File Integrity Feedback
5	Inconsistencies – Scan Results	Inconsistency Scan Results	Nightly	Nightly

6.1.1. Feedback Generation

Feedback associated with all processing stages will be made available via SFTP and/or the CAT Reporter Portal - CAIS as described in Table 11: CAT Data and Feedback Interface Methods. A single feedback file will be generated for each file submission, and will be updated with status information as the file completes each stage of processing.

For Feedback files made available via SFTP, the following rules apply:

1. The format of feedback files will be JSON.
2. Feedback files for data submissions will be accessible under the `cat/cais/feedback` directory in the Submitter's home directory on the Feedback SFTP server.
3. Feedback files for identifier submissions will be accessible under the `cat/tid/feedback` directory in the Submitter's home directory on the Feedback SFTP server.
4. Feedback for data submitted by a CAT Submitter on behalf of a CAT Reporter will be accessible under the CAT Reporter's home directory on the Feedback SFTP server if the CAT Reporter has an SFTP account.
5. If a file is rejected for a file integrity error, it will not proceed to the next processing stage.
6. The minimum retention time for feedback files on the SFTP server is 10 calendar days. After that time, they may be removed from the server. Feedback will be available via the CAT Reporter Portal - CAIS for at least 90 days.

6.1.2. Feedback File Names and Format

1. Feedback Files created by CAT CAIS will be named using the following format:

<original File Base Name>.<version>.feedback.<Format Extension>.<Compression type>

Example: SUBID_MYID_20200101_CAIS_000123.v1.feedback.json.bz2

Example: SUBID_MYID_20200101_TID_000123.v1.feedback.json.bz2

Example: SUBID_MYID_20200101_INCONSISTENCIES_000123.v1.feedback.json.bz2

2. The version will be applied as part of the file generation process to accommodate situations where a single Firm submits multiple files having the same original File Base Name, so that the feedback file for each version submitted can be retained.
3. Separate feedback files will be provided for the data and identifiers files, as well as for inconsistencies resulting from data within the submission.

Table 15: Elements of a Data Feedback file

Field Name	Data Type	JSON Object	Include Key	Description
version	Text(10)	Main	R	The schema version of the feedback file used for providing the response.
submissionID	Unsigned	Main	R	The unique Submission ID assigned to the paired data and identifier submission files by the CAT CAIS system. Used to identify the single submission activity. If the same file name is submitted across multiple submissions, each submission instance will have a separate and unique Submission ID value.
catSubmitterID	Unsigned	Main	R	The unique identifier assigned to the Submitter firm by CAT.
catReporterCRD	Unsigned	Main	R	The unique CRD identifier assigned to the CAT Reporter to whom the data belongs.
submissionStatus	Choice	Main	R	The current status of the submission file in the processing flow. VALUES: <ul style="list-style-type: none"> • FILE_ACKNOWLEDGED – indicates the file was acknowledged as having been submitted, and has picked up for file integrity checks. • FILE_INTEGRITY_PASSED – indicates the file passed file integrity checks, and will now be processed through record data validations. • RECORD_SCAN_COMPLETED – indicates the file has completed record validations. If one or more records passed record validation, they will now be loaded to CAIS. Details about any rejected records are now available within

Field Name	Data Type	JSON Object	Include Key	Description
				<p>the feedback file in the RejectionItems section.</p> <ul style="list-style-type: none"> • COMPLETED_WITHOUT_REJECTIONS – indicates the file has completed loading into the CAIS, and no data validation errors were encountered. No further updates will be made to the feedback file. • COMPLETED_WITH_REJECTIONS – indicates the file has completed loading into the CAIS, and one or more data validation errors were encountered. No further updates will be made to the feedback file. • COMPLETED_INTEGRITY_ERROR – indicates the file failed file integrity checks and can not be processed. No further updates will be made to the feedback file upon reaching this status.
integrityErrorCode	Choice	Main	C	Only populated if the submissionStatus is COMPLETED_INTEGRITY_ERROR . integrityErrorCode will be populated with the error code from Appendix B that caused the error.
receiptTimestamp	Timestamp (String)	Main	R	The time at which the file was acknowledged to have been submitted for processing.
completedTimestamp	Timestamp (String)	Main	C	The time at which the file completed processing, reaching a completed status. Only populated after the file has reached a final status.
receivedFDIDRecordCount	Unsigned	Main	C	Total count of FDID Records present within the file. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
successfulFDIDRecordCount	Unsigned	Main	C	Total count of FDID Records processed without record validation errors. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
receivedNaturalRecordCount	Unsigned	Main	C	Total count of Natural Person Customer Records present within the file. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
successfulNaturalRecordCount	Unsigned	Main	C	Total count of Natural Person Customer Records processed without record validation errors. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .

Field Name	Data Type	JSON Object	Include Key	Description
receivedLegalEntityRecordCount	Unsigned	Main	C	Total count of Legal Entity Customer Records present within the file. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
successfulLegalEntityRecordCount	Unsigned	Main	C	Total count of Legal Entity Customer Records processed without record validation errors. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
receivedCorrectionActionCount	Unsigned	Main	C	Total count of Correction Action records present within the file. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
successfulCorrectionActionCount	Unsigned	Main	C	Total count of Correction Action records processed without record validation warnings. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
receivedAttestationCount	Unsigned	Main	C	Total count of Attestation records present within the file. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
successfulAttestationCount	Unsigned	Main	C	Total count of Attestation records processed without record validation warnings. Only populated when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
statusHistory	Name/Value Pair	Main	R	Includes the list of events and corresponding timestamps from file processing. Includes the following Name attributes: <ul style="list-style-type: none"> • FILE_ACKNOWLEDGED • FILE_INTEGRITY_PASSED • RECORD_SCAN_COMPLETED • COMPLETED
rejectionItems	Multi-Dimensional Array	Main	C	Includes the list of records having data validation errors. Only present if at least one record had a data validation error, and only when the file has reached the interim status of RECORD_SCAN_COMPLETED or the final status of COMPLETED_WITH_REJECTIONS .

Field Name	Data Type	JSON Object	Include Key	Description
rejectionID	Unsigned	Rejection Record	R	The unique ID reference for the particular record rejection reported on the FDID within the Submission File.
firmDesignatedID	Alphanumeric(40)	Rejection Record	C	The FDID of the record having the data validation error.
fdidRecordID	Unsigned	Rejection Record	C	A unique numeric reference to the FDID record within the particular submission file.
customerRecordID	Unsigned	Rejection Record	C	A unique numeric reference to the Customer record within the particular submission file. Only populated on Customer rejections or on FDID rejections for an FDID-to-Customer association.
largeTraderRecordID	Unsigned	Rejection Record	C	A unique numeric reference to the Large Trader record in association to the Customer record within the particular submission file. Only populated on Large Trader rejections.
errorCode	Unsigned	Rejection Record	R	The error code of the data validation, noting which attribute caused the rejection for the FDID or Customer record.
rejectionTimestamp	Timestamp	Rejection Record	R	Indicates the time at which the validation error was identified.
failedCorrectionItems	Multi-Dimensional Array	Main	C	Includes the list of Correction Action records having data validation warnings. Only present if at least one record had a data validation warning, and only when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
rejectionID	Unsigned	Failed Correction Record	R	The unique ID reference reported in the submission file for the Correction Action that was not able to be processed.
warningCode	Unsigned	Failed Correction Record	R	The warning code of the data validation, noting which attribute caused the Correction Action to not be able to be processed.
failedAttestationItems	Multi-Dimensional Array	Main	C	Includes the list of Attestation records having data validation warnings. Only present if at least one record had an attestation warning, and only when the file has reached the interim status of RECORD_SCAN_COMPLETED or a final status of COMPLETED_WITHOUT_REJECTIONS or COMPLETED_WITH_REJECTIONS .
inconsistencyEventID	Unsigned	Failed Attestation Record	R	The unique Inconsistency Event ID reported in the submission file for the Attestation that was not able to be processed.
warningCode	Unsigned	Failed	R	The warning code of the data validation, noting

Field Name	Data Type	JSON Object	Include Key	Description
		Attestation Record		which attribute caused the Correction Action to not be able to be processed.

Table 16: Elements of an Identifiers Feedback file

Field Name	Data Type	JSON Object	Include Key	Description
version	Text(10)	Main	R	The schema version of the feedback file used for providing the response.
submissionID	Unsigned	Main	R	The unique Submission ID assigned to the paired data and identifier submission files by the CAT CAIS system. Used to identify the single submission activity. If the same file name is submitted across multiple submissions, each submission instance will have a separate and unique Submission ID value.
catSubmitterID	Unsigned	Main	R	The unique identifier assigned to the Submitter firm by CAT.
catReporterCRD	Unsigned	Main	R	The unique CRD identifier assigned to the CAT Reporter to whom the data belongs.
submissionStatus	Choice	Main	R	The current status of the submission file in the processing flow. VALUES: <ul style="list-style-type: none"> FILE_ACKNOWLEDGED – indicates the file was acknowledged as having been submitted, and has picked up for file integrity checks. FILE_INTEGRITY_PASSED – indicates the file passed file integrity checks, and will now be processed through record data validations. COMPLETED_INTEGRITY_ERROR – indicates the file failed file integrity checks and can not be processed. No further updates will be made to the feedback file upon reaching this status. COMPLETED – indicates the paired data and identifiers files have been successfully loaded into CAIS. Please refer to the data file for details regarding outcomes of record validations.
statusHistory	Name/Value Pair	Main	R	Includes the list of events and corresponding timestamps from file processing. Includes the following Name attributes: <ul style="list-style-type: none"> FILE_ACKNOWLEDGED FILE_INTEGRITY_PASSED COMPLETED_INTEGRITY_ERROR

Field Name	Data Type	JSON Object	Include Key	Description
				<ul style="list-style-type: none"> COMPLETED
errorCode	Unsigned	Main	C	The error code of the data validation, noting which attribute caused the rejection for the FDID record. Only present if the identifiers file has reached a final status of COMPLETED_INTEGRITY_ERROR .

Table 17: Elements of a Submission Inconsistencies Feedback file

Field Name	Data Type	JSON Object	Include Key	Description
version	Text(10)	Main	R	The schema version of the feedback file used for providing the response.
submissionID	Unsigned	Main	R	The unique Submission ID assigned to the paired data and identifier submission files by the CAT CAIS system. Used to identify the single submission activity. If the same file name is submitted across multiple submissions, each submission instance will have a separate and unique Submission ID value.
catSubmitterID	Unsigned	Main	R	The unique identifier assigned to the Submitter firm by CAT.
catReporterCRD	Unsigned	Main	R	The unique CRD identifier assigned to the CAT Reporter to whom the data belongs.
submissionStatus	Choice	Main	R	<p>The current status of the submission file in the processing flow.</p> <p>VALUES:</p> <ul style="list-style-type: none"> COMPLETED_INTEGRITY_ERROR – indicates data and/or identifiers file failed file integrity checks and can not be processed, and as such no inconsistency scanning occurred. No further updates will be made to the feedback file upon reaching this status. COMPLETED – indicates the paired data and identifiers files have been successfully loaded into CAIS and all identified inconsistencies have been detailed within the feedback file.
inconsistencyEventCount	Unsigned	Main	R	The count of the Inconsistency Events reported within the Inconsistency Feedback file.
inconsistencyList	Multi-Dimensional Array	Main	C	The list of Inconsistencies identified across the Active Customer records accepted into CAIS from this CAT Reporter firm.
inconsistencyEventID	Unsigned	Inconsistency Record ID	R	The unique Inconsistency Event ID assigned to the CAT Reporter Firm for the specific Customer – by TID – having one or more Inconsistencies. This ID is used because the PII – including TID – of the Customer cannot be returned to the CAT Reporter after it is submitted to CAT.

Field Name	Data Type	JSON Object	Include Key	Description
customerRecordID	Unsigned	Inconsistency Record	R	A unique numeric reference to the Customer record within the particular submission file having the inconsistency.
materialInconsistencies	Name/Value Pair	Inconsistency Record	C	Includes the list of Material Inconsistency Codes and Count of Conflicting CAT Report Firms of the identified inconsistencies for the Customer record.
minorInconsistencies	Name/Value Pair	Inconsistency Record	C	Includes the list of Minor Inconsistency Codes and Count of Conflicting CAT Report Firms of the identified inconsistencies for the Customer record. Minor Inconsistencies do not require repair or attestation.
updateConfirmations	Name/Value Pair	Inconsistency Record	C	Includes the list of Update Confirmations reported in the submission file for the Customer record that were acknowledged and bypassed a Material Inconsistency notification.

6.1.3. JSON Examples of Feedback File for file acknowledgement

Note – the JSON example of feedback has not been updated while the schema is being finalized.

The following is an example of a data feedback file after the submission has been acknowledged and accepted for file integrity checks:

Original File Submission File Name	123_456_20200204_CAIS_000123.json.bz2
Feedback File Name	123_456_20200204_CAIS_000123.v1.feedback.json.bz2
Feedback File Contents	<pre>{ "version": "2.0.0", "submissionID": 7, "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "FILE_ACKNOWLEDGED", "receiptTimestamp": "20191123T152233.000045", "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045" } }</pre>

The following is an example of an identifiers feedback file after the submission has been acknowledged and accepted for file integrity checks:

Original File Submission File Name	123_456_20200204_TID_000123.json.bz2
Feedback File Name	123_456_20200204_TID_000123.v1.feedback.json.bz2
Feedback File Contents	<pre>{ "version": "2.0.0", "submissionID": 7,</pre>

	<pre> "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "FILE_ACKNOWLEDGED", "receiptTimestamp": "20191123T152233.000045", "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045" } </pre>
--	--

6.2. File Integrity

During the File Integrity processing stage, the submission file contents are also validated to ensure they are readable and formatted as expected.

The following rules apply:

1. Data filenames which duplicate prior submissions accepted during File Integrity will reject, unless the original file had a file integrity error.
2. Data files which are not readable will reject.
3. Data files which do not have a paired Identifiers file posted within 60 minutes will reject.
4. Data files which include inaccurate counts of records will reject.
5. Identifiers files which include inaccurate counts of TIDs will reject.
6. Data files which do not have a paired Identifiers file posted within 60 minutes will reject.
7. Identifiers files which do not have a paired Data file posted within 60 minutes will reject.
8. The CAT Submitter ID of the files must be equal to the Submitter ID of the submitter that sent the files (as determined from SFTP or CAT Reporter Portal - CAIS username).
9. The CAT Reporter CRD within the filename must match the CAT Reporter CRD populated in the data file.
10. The paired Data and Identifiers files must be submitted by the same firm.
11. If the CAT Submitter is reporting on behalf of the CAT Reporter, a Reporting Relationship must be effective.

6.2.1. JSON Examples for File Integrity Feedback

File Submission Integrity Success:

Note – the JSON example of feedback has not been updated while the schema is being finalized.

Original File Submission File Name	123_456_20200204_CAIS_000123.json.bz2
Feedback File Name	123_456_20200204_CAIS_000123.v1.feedback.json.bz2
Feedback File Contents	<pre> { "version": "1.0.0", </pre>

	<pre> "submissionID": 7, "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "FILE_INTEGRITY_PASSED", "receiptTimestamp": "20191123T152233.000045", "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045", "FILE_INTEGRITY_PASSED": "20191123T152234.123245" } </pre>
--	--

File Submission Integrity Error:

Original File Submission File Name	123_456_20200204_CAIS_000123.json.bz2
Feedback File Name	123_456_20200204_CAIS_000123.v1.feedback.json.bz2
Feedback File Contents	<pre> { "version": "1.0.0", "submissionID": 7, "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "COMPLETED_INTEGRITY_ERROR", "integrityErrorCode": 21007, "receiptTimestamp": "20191123T152233.000045", "completedTimestamp": "20191123T152721.023423", "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045", "COMPLETED_INTEGRITY_ERROR": "20191123T152721.023423" } } </pre>

6.3. Data Ingestion

During Data Ingestion, records within the Data file are validated. Validations to ensure correct syntax and semantics associated with record length, field length, data type, non-null and reference data checks are performed. Validations are initiated by the record type of every record contained in the file. Ingestion feedback will be provided with reference to any and all records that have validation errors.

During the ingestion phase, each record will be checked for proper formatting (JSON field names and values) and data contents.

The following rules apply:

1. File Ingestion feedback will be generated for every submission file passing file integrity checks.
2. Any record within a Data File determined to be malformed or otherwise invalid will be individually rejected, and will not cause a rejection of the full file.
3. Any record within an Identifiers File determined to be malformed or otherwise invalid will be individually rejected, and will not cause a rejection of the full file.

4. When a record is readable and can be parsed, Ingestion validations, Database layer validations, and Inconsistency checking will occur for every field within the record.
5. One or more errors may be found within a record.
6. One or more inconsistencies may be found within a record, across multiple records within a file, or against other records accepted by CAT CAIS – including those submitted by another CAT Reporter firm.
7. Each error identified against a single FDID or Customer record will be listed separately within the feedback file.
8. Each inconsistency identified against a single Customer record will be listed in the feedback file against a single Inconsistency Event ID assigned to the Customer.
9. The original record reported to CAT CAIS will not be included in the feedback file. The feedback file will instead include the associated record IDs of the record having the error. If the error is on an FDID record, the FDID will also be included in the feedback file.
10. Records that are not rejected during Ingestion will be imported into the CAT CAIS, even if one or more Inconsistencies are identified in the accepted record.
11. If an FDID record passes validation, but contains one or more errors on associated LTIDs, the FDID record will be imported into the CAT CAIS. The associated LTID with the error will not be imported into the CAT CAIS.
12. If an FDID record passes validation, but contains one or more errors on associated Customer records, the FDID record will be imported into the CAT CAIS if at least one related Customer of the FDID passes validation.
13. If all Customer records related to a single FDID record fail validation, and the FDID record has not previously been accepted into CAT CAIS, the FDID record will not be accepted into CAT CAIS.
14. If all Customer records related to a single FDID record fail validation, and the FDID record has previously been accepted into CAT CAIS, the FDID record will be accepted into CAT CAIS and updates applied to the currently stored record.
15. If all FDID records related to a single Customer record fail validation, and the Customer record has not previously been accepted into CAT CAIS, the Customer record will not be accepted into CAT CAIS.
16. If all FDID records related to a single Customer record fail validation, and the Customer record has previously been accepted into CAT CAIS, the Customer record will be accepted into CAT CAIS and updates applied to the currently stored record.

6.3.1. JSON Examples for Data Ingestion Feedback

Data File Submission Ingestion Success:

Note – the JSON examples of feedback have not been updated while the schema is being finalized.

Original File Submission File Name	123_456_20200204_CAIS_000123.json.bz2
Meta Feedback File Name	123_456_20200204_CAIS_000123.v1.feedback.json.bz2
Feedback File Contents	<pre>{ "version": "1.0.0", "submissionID": 7, "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "COMPLETED_WITHOUT_REJECTIONS", "receiptTimestamp": "20191123T152233.000045", "completedTimestamp": "20191123T152721.023423", "receivedFDIDRecordCount": 100, "successfulFDIDRecordCount": 100, "receivedCorrectionActionCount": 0, "successfulCorrectionActionCount": 0, "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045", "FILE_INTEGRITY_PASSED": "20191123T152234.123245", "RECORD_SCAN_COMPLETED": "20191123T152255.324392", "COMPLETED_WITHOUT_REJECTIONS": "20191123T152721.023423" } }</pre>

Data File Submission Ingestion Error and Failed Correction:

Original File Submission File Name	123_456_20200204_CAIS_000123.json.bz2
Meta Feedback File Name	123_456_20200204_CAIS_000123.v1.feedback.json.bz2
Feedback File Contents	<pre>{ "version": "1.0.0", "submissionID": 7, "catSubmitterID": 123, "catReporterCRD": 456, "submissionStatus": "COMPLETED_WITH_REJECTIONS", "receiptTimestamp": "20191123T152233.000045", "completedTimestamp": "20191123T152721.023423", "receivedFDIDRecordCount": 100, "successfulFDIDRecordCount": 99, "receivedCorrectionActionCount": 1, "successfulCorrectionActionCount": 0, "statusHistory": { "FILE_ACKNOWLEDGED": "20191123T152233.000045", "FILE_INTEGRITY_PASSED": "20191123T152234.123245", "RECORD_SCAN_COMPLETED": "20191123T152255.324392", "COMPLETED_WITH_REJECTIONS": "20191123T152721.023423" }, "rejectionItems": [{ "rejectionID": 1127, "firmDesignatedID": "ABC123", "fdidRecordID": 4, "largeTraderRecordID": 2, "errorCode": 22012, "rejectionTimestamp": "20191123T152221.023423" }], "failedCorrectionItems": [</pre>

	<pre>{ "rejectionID": 5000, "warningCode": 24002 }]</pre>
--	--

6.4. Corrections

Errors found during CAT CAIS processing and found by CAT Reporters subsequent to transmission must be repaired. The reporting of Error Corrections is facilitated in CAT CAIS through submissions via SFTP and the CAT Reporter Portal - CAIS. Firm-initiated corrections of data that had been accepted in prior CAT CAIS submissions are acceptable at any time, and will be processed the same as any other update to the original record. The new data provided on the corrected record will update the currently stored record in CAT CAIS in place.

The following scenarios will be detailed below for how data can be corrected:

- Correction or Clearing of a CAT CAIS Submission File having a File Integrity Error
- Correction or Deletion of an FDID record failing FDID format validation
- Correction or Deletion of an LTID record failing LTID format validation
- Correction of an FDID record failing one or more Data Validation errors – other than FDID format validation
- Correction of an LTID record failing one or more Data Validation errors – other than LTID format validation

6.4.1. File Integrity Errors

A File Integrity Error resulting in the inability to process a particular Submission File can be corrected by submission of a new file having the same Submission File Name, with corrected data that passes File Integrity checks.

If a file is received having the same Submission File Name as a prior submission that did not have a File Integrity Error, the new submission file will be rejected as a File Integrity Warning, alerting the firm that they have reused the same Submission File Name as a file that was previously accepted by CAT CAIS. The firm does not have to take further action to correct for this submission file, however please be advised that the data included in the submission file will not be processed through Data Validation nor accepted into CAT CAIS.

6.4.2. Data Validation Errors

6.4.2.1. Missing or Invalid firmDesignatedID, largeTraderID, and TID Values

In order to support historical correction tracking and lineage of replacements, records failing Data Validation for a Missing or Invalid FDID or LTID, or a Missing or Invalid TID value, may be corrected through either of the following methods:

- Submission of a CORRECTION action within the *correctionsList* section of the Submission File, having a reference to the FDID, Customer Record ID of the TID, or Customer Record ID and LTID that corrects for the prior failed record; OR
- Submission of a DELETE action within the *correctionsList* section of the Submission File, indicating no record is required to be submitted in place of the prior record failing validation

In the CORRECTION scenario

- For an FDID - the replacing FDID record must be included within the current Submission File and pass all data validation checks, or the replacing FDID record must have been accepted by CAT CAIS in a prior submission.
- For a TID – the correcting Customer record must be included in the current Submission File, as it is not permissible to include the correcting TID reference within the data submission file.
- For an LTID - the corresponding TID and LTID having the correction must be included in the current Submission File, as it is not permissible to include the correcting TID reference within the data submission file.

If the referenced correction record fails Data Validation for the format of its FDID, LTID, or TID value, a separate rejection will be created against the replacement record, and the original rejection will remain open for correction. If the reference correction record passes Data Validation for format of the FDID, LTID, or TID, the original rejection will be closed as corrected, even if the correcting record fails a separate Data Validation; however a new rejection will be recorded and tracked against the timeline for correction of the original error.

6.4.2.2. Data Validation Errors

If a submission record fails Data Validation checks for any reasons other than the format of the FDID, TID, or LTID value, rejections can be corrected by submitting the same FDID, TID, or TID and LTID combination, with corrected data. If the new submission fails for the same data validation, the prior rejection for the record will be considered repaired, and a new rejection will be created; however the new rejection will be tracked against the timeline for correction of the original error. If the new submission fails validation against a separate attribute, the original rejection will be closed as corrected, and a new

rejection will be created for the separate attribute validation failure; however the new rejection will be tracked against the timeline for correction of the original error.

7. Nightly Data Inconsistencies Feedback

Each night the CAIS database will be scanned for data inconsistencies present on Active Customer Records within the system. Any Inconsistencies that are identified within CAIS data for Active customers triggered by another submitter now initiate a window for correction/attestation for any firm notified of the inconsistency.

The following rules apply to Data Inconsistencies Feedback Files:

1. An Inconsistencies Feedback file will be generated for each CAT Reporter Firm each night, even if they have no Inconsistencies open against their submitted Customer Record data.
2. The Inconsistencies Feedback file will be posted to the inconsistencies feedback directory of the CAT Reporter Firm whose data was evaluated for inconsistencies.
3. Material Inconsistencies will have a deadline for attestation or correction, which will be included in the feedback file.
4. If a CAT Reporter Firm attempts to attest or correct for a Material Inconsistency, but the submission record is rejected or the changes trigger a new Material Inconsistency for the same Customer record, the original inconsistency deadline will remain.
5. Minor Inconsistencies will be noted within the data inconsistencies feedback file one time, after which they will no longer be included in the feedback file until another Minor Inconsistency is identified for the customer record.
6. Minor Inconsistencies identified within the submission of a CAT Reporter Firm will be noted in the Submission Feedback file, and will also be reported one time within the data inconsistencies feedback file, after which they will no longer be included until another Minor Inconsistency is identified for the customer.
7. The CAT Reporter Firm is not required to take action on Minor Inconsistencies; they are provided for information purposes only.

7.1.1. Data Inconsistencies Feedback File Names

1. Inconsistencies files will be named using the following format:

```
<CAT Reporter CRD>_<File Generation Date>_<File Kind>.<Format  
Extension>.<Compression Extension>
```

For example: 123_20200101_INCONSISTENCIES.json.bz2

2. The values assigned within the format of a file name include:

Table 18: Elements of an Inconsistencies Feedback File Name

Field Name	Data Type	Description	Include Key
CAT Reporter CRD	Unsigned	The CRD assigned identifier of the firm within which the inconsistencies were identified.	R
File Generation Date	Date	The date the file was generated or reported. Used to guarantee uniqueness of a file across dates.	R
File Kind	Alphanumeric (20)	Set to 'INCONSISTENCIAS'.	R
Format Extension	Alphanumeric (4)	Represents the format of the data submission. JSON formatted inconsistency feedback files must be 'json'.	R
Compression Extension	Alphanumeric (3)	Applicable to Data Files. Set to 'bz2'.	R

Table 19: Elements of an Inconsistency Feedback file

Field Name	Data Type	JSON Object	Include Key	Description
version	Text(10)	Main	R	The schema version of the feedback file used for providing the response. Initial version will be 2.0.0.
fileGenerationTimestamp	Timestamp	Main	R	Time at which the Inconsistency File was generated.
reporterCRD	Unsigned	Main	R	The CRD of the CAT Reporter Firm for whom the Inconsistency Feedback file was generated.
inconsistencyEventCount	Unsigned	Main	R	The count of the Inconsistency Events reported within the Inconsistency Feedback file.
inconsistencyList	Multi-Dimensional Array	Main	C	The list of Inconsistencies identified across the Active Customer records accepted into CAIS from this CAT Reporter firm.
inconsistencyEventID	Unsigned	Inconsistency Record ID	R	The unique Inconsistency Event ID assigned to the CAT Reporter Firm for the specific Customer – by TID – having one or more Inconsistencies. This ID is used because the PII – including TID – of the Customer cannot be returned to the CAT Reporter after it is submitted to CAT.
inconsistencyDeadline	Date (8)	Inconsistency Record	C	Deadline for repair or attestation of data inconsistency event. Only provided if at least one Material Inconsistency exists for Customer.
lastSubmittedFileName	Text(100)	Inconsistency Record ID	R	Name of the file in which the Inconsistent Customer was last submitted into CAIS for the CAT Reporter to use in determining what data was included in the Customer submission.
lastSubmittedRecordID	Unsigned	Inconsistency Record	R	Customer Record ID under which the Inconsistent Customer was last submitted into CAIS for the CAT Reporter to use in determining what data was included in the Customer submission.

Field Name	Data Type	JSON Object	Include Key	Description
materialInconsistencies	Name/Value Pair	Inconsistency Record	C	Includes the list of Material Inconsistency Codes and Count of Conflicting CAT Report Firms of the identified inconsistencies for the Customer record.
minorInconsistencies	Name/Value Pair	Inconsistency Record	C	Includes the list of Minor Inconsistency Codes and Count of Conflicting CAT Report Firms of the identified inconsistencies for the Customer record. Minor Inconsistencies do not require repair or attestation.

7.1.2. JSON Examples for Data Inconsistencies Feedback

The following JSON example demonstrates the structure of a Data Inconsistencies Feedback file.

```
{
  "version": "2.0.0",
  "fileGenerationTimestamp": "20230731T223233.000045",
  "reporterCRD": 999,
  "inconsistencyEventCount": 4,
  "inconsistencyList": [
    {
      "inconsistencyEventID": 10125,
      "inconsistencyDeadline": "20230803",
      "lastSubmittedFileName": "123_999_20230724_CAIS_000123.json.bz2",
      "lastSubmittedRecordID": "15",
      "materialInconsistencies": {
        "30001": "1",
        "30005": "4"
      },
      "minorInconsistencies": {
        "31002": "3",
        "31003": "1"
      }
    },
    {
      "inconsistencyEventID": 954,
      "inconsistencyDeadline": "20230802",
      "lastSubmittedFileName": "123_999_20230601_CAIS_000003.json.bz2",
      "lastSubmittedRecordID": "999",
      "materialInconsistencies": {
        "30002": "15"
      }
    },
    {
      "inconsistencyEventID": 17,
      "lastSubmittedFileName": "123_999_20230704_CAIS_000001.json.bz2",
      "lastSubmittedRecordID": "1",
      "minorInconsistencies": {
        "31003": "1"
      }
    }
  ]
}
```

```
"inconsistencyEventID": 10297,  
"lastSubmittedFileName": "123_999_20230724_CAIS_000001.json.bz2",  
"lastSubmittedRecordID": "33",  
"materialInconsistencies": {  
  "30021": "8"  
}  
}
```


8. Testing

CAT will provide an environment for testing that mirrors the current functionality of the CAT CAIS production environment, as well as functionality for the next release version of the CAT CAIS environment when available. The CAT CAIS testing environment will automatically determine which specification version Industry Members and CAT Reporting Agents are using for submissions. If error reporting formats change, Industry Members and CAT Reporting Agents will receive feedback in the current and new specification via SFTP, as well as have access to current/new CAT Reporter Portal - CAIS URLs for specification changes that impact the CAT Reporter Portal - CAIS. Current/new connectivity changes will also be supported concurrently.

Industry Members and CAT Reporting Agents must test their submissions using the testing environment before they begin submitting to the production environment.

The test environment is available 24 hours a day, 6 days a week. Refer to the CAT website for contact information and hours of operation for support.

Industry Members and CAT Reporting Agents connect to the test environment in the same manner they would connect to the production environment. However, for the connection to the test environment, one or more alternate IP addresses or URLs may be used.

Testing does not relieve an Industry Member of its responsibilities to submit production data to the CAT System.

9. Additional Information

9.1. Public Website

The CAT public website, www.catnmsplan.com, is available via the public internet, and is hosted outside the CAT secure network. The CAT public website provides information about CAT, including links to SEC Rule 613, Participant and Industry Member Technical Specifications, FAQs, training materials, and CAT Help Desk contact information.

Web announcements will be made available on the public website (www.catnmsplan.com). You can also subscribe to receive email notifications regarding changes to the website. These announcements are used to post information related to the operation of CAT.

Contact help@finracat.com for any questions and/or feedback regarding this document.

Appendices

Appendix A: Change Release Management Process

Following publication of version 1.0, changes to this Industry Member Technical Specification will be released as follows:

- All proposed amendments to the Technical Specifications will be made in accordance with the CAT NMS Plan, including being approved or deemed approved (as applicable) by the Consolidated Audit Trail, LLC Operating Committee.
- Prior to the go-live date for any system changes set forth in the Technical Specifications:
 - ◆ A new Technical Specifications will be posted to the CAT public website, www.catnmsplan.com.
 - ◆ A notice will be posted on the CAT NMS Plan public website with a summary of changes, the go-live date for the changes and links to relevant information.
 - ◆ One or more email alerts will be sent to the email address(es) on file for the CAT Reporters with a summary of changes set forth in the revised Technical Specifications, the go-live date for the changes and links to relevant information.
 - ◆ Industry Members will be permitted to perform testing of the revised Technical Specifications in advance of the go-live date for the changes. Information on such testing will be set forth in the notices and alerts described above.
 - ◆ As the go-live date approaches, Industry Members will be able to conduct testing and will receive support from the Plan Processor to prepare for production reporting using the revised Technical Specifications format. The revised Technical Specifications will include a summary list of changes as well as a table listing the specific areas of the document where the changes have been made.

Appendix B: Error Codes

NOTE – Appendix B entries are currently in progress to be defined for the DRAFT 2.0 specification.

This section defines the error and warning codes generated by CAT CAIS. Each code is defined to include the reason for the error or warning, including the associated fields. Warnings are not subject to further processing and firms are not required to take any action on them. Codes are assigned in ranges to represent similar types of errors within the same range, related by validation type and/or by linkage type. Codes are organized by the CAT Processing stages including:

- File Integrity
- Data Ingestion
- Data Inconsistency Checking

B.1 File Integrity Errors

The table below contains error messages that are associated with file integrity. Errors are associated with files, filenames, and metadata within submission files such as record count.

Table 20: Data File Integrity Errors

Error Code	Error Code Description	Explanation	Error/Warning
21001	Duplicate File	A file with the same base name was previously accepted by CAT.	Warning
21002	Missing or Invalid CAT Submitter ID	CAT Submitter ID is missing or invalid.	Error
21003	Missing or Invalid CAT Reporter CRD	CAT Reporter CRD is missing or is not a valid Market Participant for the Generation Date.	Error
21004	Missing or Invalid File Generation Date	File Generation Date is missing or is not a valid date.	Error
21005	File exceeds the supported size limit	File size exceeds the maximum uncompressed size of 100 GB via SFTP and 1GB via the CAT Reporter Portal - CAIS.	Error
21006	Unauthorized CAT Submitter ID	CAT Submitter ID has not been authorized to submit for the CAT Reporter CRD. Verify that the CAT Submitter ID and CAT Reporter CRD in the file name have a transmitting relationship.	Error
21007	Missing or Invalid FDID record count	The FDID record count in the submission file is missing or is a negative number, does not match the count of FDID records within the file, or is a non-zero number for DEL file.	Error
21008	Missing or Invalid File Version	File Version in submission file is missing or invalid.	Error

Error Code	Error Code Description	Explanation	Error/ Warning
21009	File exceeds maximum records allowed for Web upload	A single data file uploaded via the Reporter Portal must not contain more than 100,000 FDID records.	Error
21010	Invalid CAIS File Name	CAIS submission file names must follow the defined format.	Error
21011	CAIS file not Readable	CAIS submission file format is not readable as it is not in a valid JSON format or contains an incorrect delimiter.	Error
21012	Unknown Attribute Name	The file contains a file level attribute that is not known under the reported specification version.	Error
21013	CAIS File cannot be Uncompressed	The CAIS submission file was not properly compressed and can not be processed.	Error
21014	Paired Identifiers file not received	The paired Identifiers file for the data file was not received in time.	Error

Table 21: Identifiers File Integrity Errors

Error Code	Error Code Description	Explanation	Error/ Warning
21501	Duplicate File	A file with the same base name was previously accepted by CAT.	Warning
21502	Missing or Invalid CAT Submitter ID	CAT Submitter ID is missing or invalid.	Error
21503	Missing or Invalid CAT Reporter CRD	CAT Reporter CRD is missing or is not a valid Market Participant for the Generation Date.	Error
21504	Missing or Invalid File Generation Date	File Generation Date is missing or is not a valid date.	Error
21505	File exceeds the supported size limit	File size exceeds the maximum uncompressed size of 100 GB via SFTP and 1GB via the CAT Reporter Portal - CAIS.	Error
21506	Unmatched customerRecordID reference	Identifiers file contains one or more customerRecordIDs that are not present in the paired Data file.	Error
21507	Missing or Invalid TID record count	The TID record count in the submission file is missing or is a negative number, or does not match the count of TID records within the file.	Error
21508	Missing or Invalid File Version	File Version in submission file is missing or invalid.	Error
21509	File exceeds maximum records allowed for Web upload	A single data file uploaded via the Reporter Portal must not contain more than 100,000 TID records.	Error
21510	Invalid CAIS File Name	CAIS submission file names must follow the defined format.	Error

Error Code	Error Code Description	Explanation	Error/Warning
21511	CAIS file not Readable	CAIS submission file format is not readable as it is not in a valid JSON format or contains an incorrect delimiter.	Error
21512	Unknown Attribute Name	The file contains a file level attribute that is not known under the reported specification version.	Error
21513	CAIS File cannot be Uncompressed	The CAIS submission file was not properly compressed and can not be processed.	Error

B.2 Data Validation Errors

The table below contains error messages that are associated with Data Ingestion. Error codes are associated with specific fields within a submission record.

Table 22: Data Validation Errors

Error Code	Error Code Description	Explanation	Warning/Error
22001	Missing or Invalid <i>firmDesignatedID</i>	<i>firmDesignatedID</i> must be present and populated for each account record within the file. Affected record will not be processed for further validation checks.	Error
22002	Duplicated <i>firmDesignatedID</i>	Each <i>FirmDesignatedID</i> must be present in the submission file only once. Affected records will not be processed for further validation checks.	Error
22003	Missing or Invalid <i>fdidRecordID</i>	<i>fdidRecordID</i> must be present and populated for each account record within the file. Affected record will not be processed for further validation checks.	Error
22004	Duplicated <i>fdidRecordID</i>	Each <i>fdidRecordID</i> must be present in the submission file only once. Affected records will not be processed for further validation checks.	Error
22005	Missing or Invalid <i>fdidType</i>	<i>fdidType</i> must be present and populated with one of the allowable values.	Error
22006	Reserved for future usage		
22007	Missing or Invalid format of <i>fdidDate</i>	<i>fdidDate</i> must be populated in the correct format.	Error
22008	Missing or Invalid <i>fdidEndDate</i>	When populated, <i>fdidEndDate</i> must be in the correct format. Must be populated if <i>fdidEndReason</i> is populated.	Error
22009	<i>fdidEndDate</i> set prior to <i>fdidDate</i>	When populated, <i>fdidEndDate</i> must be equal to or later than <i>fdidDate</i> .	Error
22010	Missing or Invalid <i>fdidEndReason</i>	When populated, <i>fdidEndReason</i> must use one of the allowable values. Must be populated if <i>fdidEndDate</i> is populated.	Error
22011	Missing or Invalid <i>replacedByFDID</i>	When populated, <i>replacedByFDID</i> must be in the correct format for an FDID. Must be populated if	Error

Error Code	Error Code Description	Explanation	Warning/ Error
		<i>fdidEndReason</i> is set to REPLACED.	
22012	Missing or Invalid format of <i>largeTraderID</i>	When populated, <i>largeTraderID</i> must be in the correct format for either a Large Trader ID or an Unidentified Large Trader ID. Must be populated for each Large Trader record.	Error
22013	Missing or Invalid <i>largeTraderRecordID</i>	<i>largeTraderRecordID</i> must be present and populated for each Large Trader record within the file.	Error
22014	Duplicated <i>largeTraderRecordID</i>	Each <i>largeTraderRecordID</i> reported for a single FDID record within the file must be present only once.	Error
22015	Missing or Invalid <i>ltidEffectiveDate</i>	<i>ltidEffectiveDate</i> must be populated in the correct format.	Error
22016	Missing or Invalid <i>ltidEndDate</i>	When populated, <i>ltidEndDate</i> must be in the correct format. Must be populated if <i>ltidEndReason</i> is populated.	Error
22017	Missing or Invalid <i>ltidEndReason</i>	When populated, <i>ltidEndReason</i> must use one of the allowable values. Must be populated if <i>ltidEndDate</i> is populated.	Error
22018	Unknown Attribute Name	The record contains an attribute that is not known under the reported specification version.	Error
22019	Missing or Invalid <i>fdidEndDateNULL</i>	When populated, <i>fdidEndDateNULL</i> must use one of the allowable values. Must be set to true when <i>fdidEndReasonNULL</i> is set to true. Must be set to true when <i>replacedByFDIDNull</i> is set to true.	Error
22020	Missing or Invalid <i>fdidEndReasonNULL</i>	When populated, <i>fdidEndReasonNULL</i> must use one of the allowable values. Must be set to true when <i>fdidEndDateNULL</i> is set to true. Must be set to true when <i>replacedByFDIDNull</i> is set to true.	Error
22021	Reserved for future usage		
22022	Reserved for future usage		
22023	Reserved for future usage		
22024	<i>replacedByFDID</i> must not be equal to <i>firmDesignatedID</i>	When populated, <i>replacedByFDID</i> must be a different value than the <i>firmDesignatedID</i> .	Error
22025	Reserved for future usage		
22026	Reserved for future usage		
22027	Reserved for future usage		
22028	Reserved for future usage		
22029	<i>fdidEndDate</i> and <i>fdidEndDateNULL</i> disagreement	<i>fdidEndDate</i> must not be populated when <i>fdidEndDateNULL</i> is populated.	Error
22030	<i>fdidEndReason</i> and <i>fdidEndReasonNULL</i> disagreement	<i>fdidEndReason</i> must not be populated when <i>fdidEndReasonNULL</i> is populated.	Error
22031	<i>replacedByFDID</i> and <i>replacedByFDIDNULL</i> disagreement	<i>replacedByFDID</i> must not be populated when <i>replacedByFDIDNULL</i> is populated.	Error

Error Code	Error Code Description	Explanation	Warning/Error
22032	Reserved for future usage		
22033	Reserved for future usage		
22034	Data type violation - FDID	FDID Record contains one or more attribute values that violate the data type for the attribute.	Error
22035	Missing <i>accountType</i>	<i>accountType</i> must be present and populated when <i>fdidType</i> is set to ACCOUNT.	Error
22036	Improper <i>accountType</i>	<i>accountType</i> must not be populated when <i>fdidType</i> is not set to ACCOUNT.	Error
22037	Missing <i>isRetirement</i>	<i>isRetirement</i> must be present and populated when <i>fdidType</i> is set to ACCOUNT.	Error
22038	Improper <i>isRetirement</i>	<i>isRetirement</i> must not be populated when <i>fdidType</i> is not set to ACCOUNT.	Error
22039	Missing <i>optionsEligible</i>	<i>optionsEligible</i> must be present and populated when <i>fdidType</i> is set to ACCOUNT.	Error
22040	Improper <i>optionsEligible</i>	<i>optionsEligible</i> must not be populated when <i>fdidType</i> is not set to ACCOUNT.	Error
22041	Neither <i>primeBrokerID</i> nor <i>bankDepositoryID</i> populated	One of <i>primeBrokerID</i> or <i>bankDepositoryID</i> must be populated for every FDID record within the file.	Error
22042	Missing <i>clearingBrokerID</i>	<i>clearingBrokerID</i> must be present and populated when <i>fdidType</i> is set to ACCOUNT.	Error
22043	Improper <i>clearingBrokerID</i>	<i>clearingBrokerID</i> must not be populated when <i>fdidType</i> is not set to ACCOUNT.	Error
22044	Missing <i>branchOfficeCRD</i>	<i>branchOfficeCRD</i> must be present and populated for every FDID record within the file.	Error
22045	Missing or Invalid <i>fdidEndedBy</i>	When populated, <i>fdidEndedBy</i> must be in the correct format. Must be populated if <i>fdidEndReason</i> is populated.	Error
22046	Missing or Invalid <i>customerRecordID</i> within <i>fdidCustomerList</i>	<i>customerRecordID</i> must be present and populated for each record within the <i>fdidCustomerList</i> object. Affected record will not be processed for further validation checks.	Error
22047	Duplicated <i>customerRecordID</i> within <i>fdidCustomerList</i>	Each <i>customerRecordID</i> must be present in the <i>fdidCustomerList</i> of a single FDID record only once. Affected records will not be processed for further validation checks.	Error
22048	Missing or Invalid <i>role</i>	<i>role</i> must be present and populated for each record within the <i>fdidCustomerList</i> object.	Error
22049	Missing or Invalid <i>subRole</i>	<i>subRole</i> must be present and populated for each record within the <i>fdidCustomerList</i> object.	Error
22050	Missing or Invalid <i>roleStartDate</i>	<i>roleStartDate</i> must be present and populated for each record within the <i>fdidCustomerList</i> object.	Error
22051	Missing or Invalid <i>roleEndDate</i>	When populated, <i>roleEndDate</i> must be in the correct format. Must be populated if <i>roleEndReason</i> is populated.	Error
22052	<i>roleEndDate</i> set prior to	When populated, <i>roleEndDate</i> must be equal to or	Error

Error Code	Error Code Description	Explanation	Warning/Error
	<i>roleStartDate</i>	later than <i>roleStartDate</i> .	
22053	Missing or Invalid <i>roleEndReason</i>	When populated, <i>roleEndReason</i> must use one of the allowable values. Must be populated if <i>roleEndDate</i> is populated.	Error
22501	Missing or Invalid <i>customerRecordID</i>	<i>customerRecordID</i> must be present and populated for each customer record within the file. Affected record will not be processed for further validation checks.	Error
22502	Duplicated <i>customerRecordID</i>	Each <i>customerRecordID</i> must be present in the submission file only once. Affected records will not be processed for further validation checks.	Error
22503	Missing or Invalid <i>customerRecordID</i>	<i>customerRecordID</i> must be present and populated for each Customer record within the file. Affected record will not be processed for further validation checks.	Error
22504	Duplicated <i>customerRecordID</i>	Each <i>customerRecordID</i> must be present in the submission file only once. Affected records will not be processed for further validation checks.	Error
22505	Missing <i>customerStartDate</i>	<i>customerStartDate</i> must be present and populated for each Customer record within the file.	Error
22506	Duplicated <i>largeTraderID</i>	Each <i>largeTraderID</i> must be present only once for a single Customer record.	Error
22507	Missing <i>firstName</i>	<i>firstName</i> must be present and populated for each Natural Person Customer record within the file.	Error
22508	Missing <i>lastName</i>	<i>lastName</i> must be present and populated for each Natural Person Customer record within the file.	Error
22509	Invalid <i>nameSuffix</i>	<i>nameSuffix</i> must be populated with one of the allowable values.	Error
22510	Missing or Invalid format of <i>yearOfBirth</i>	<i>yearOfBirth</i> must be populated in the correct format for each Natural Person Customer record within the file.	Error
22511	Missing or Invalid <i>customerEndDate</i>	When populated, <i>customerEndDate</i> must be in the correct format. Must be populated if <i>customerEndReason</i> is populated.	Error
22512	<i>customerEndDate</i> set prior to <i>customerStartDate</i>	When populated, <i>customerEndDate</i> must be equal to or later than <i>customerStartDate</i> .	Error
22513	Missing or Invalid <i>customerEndReason</i>	When populated, <i>customerEndReason</i> must use one of the allowable values. Must be populated if <i>customerEndDate</i> is populated.	Error
22514	Placeholder		
22515	Placeholder		
22516	Placeholder		
22517	Placeholder		
22518	Placeholder		
22519	Placeholder		
22520	Placeholder		

Error Code	Error Code Description	Explanation	Warning/Error
22521	Placeholder		
22522	Placeholder		
22523	Placeholder		
22524	Placeholder		
22525	<i>ltidEffectiveDate</i> set prior to <i>customerStartDate</i>	<i>ltidEffectiveDate</i> must not be set to a value prior to the <i>customerStartDate</i> value.	Error
22526	<i>ltidEffectiveDate</i> set later than <i>customerEndDate</i>	<i>ltidEffectiveDate</i> must not be set to a value later than <i>customerEndDate</i> .	Error
22527	<i>ltidEndDate</i> set later than <i>fdidEndDate</i>	<i>ltidEndDate</i> must not be set to a value later than <i>customerEndDate</i> .	Error
22528	<i>ltidEndDate</i> set prior to <i>ltidEffectiveDate</i>	<i>ltidEndDate</i> must not be set to a value prior to the <i>ltidEffectiveDate</i> .	Error
22529	Placeholder		
22530	Placeholder		
22531	Placeholder		
22532	<i>ltidEndDate</i> and <i>ltidEndDateNULL</i> disagreement	<i>ltidEndDate</i> must not be populated when <i>ltidEndDateNULL</i> is populated.	Error
22533	<i>ltidEndReason</i> and <i>ltidEndReasonNULL</i> disagreement	<i>ltidEndReason</i> must not be populated when <i>ltidEndReasonNULL</i> is populated.	Error
22534	Data type violation - Customer	Customer Record contains one or more attribute values that violate the data type for the attribute.	Error

B.3 Data Layer Validation Error Codes

The table below contains error messages that are associated when validating data contained in a submission record against data previously accepted into CAT CAIS for the same submission record. Error codes are associated with specific fields within a submission record.

Table 23: Data Layer Validation Errors

Error Code	Error Code Description	Explanation	Warning/Error
23001	<i>fdidDate</i> set later than stored <i>fdidEndDate</i>	The <i>fdidDate</i> included in the submission file is set to a date later than the stored <i>fdidEndDate</i> .	Error
23002	<i>fdidDate</i> set later than stored <i>ltidEffectiveDate</i>	The <i>fdidDate</i> included in the submission file is set to a date later than the <i>ltidEffectiveDate</i> of one or more stored LTID associations, and the <i>ltidEffectiveDate</i> is not set to a later date in the current submission.	Error
23003	<i>fdidEndDate</i> set prior to stored <i>ltidEffectiveDate</i>	The <i>fdidEndDate</i> included in the submission file is set prior to the <i>ltidEffectiveDate</i> of one or more stored	Error

Error Code	Error Code Description	Explanation	Warning/Error
		LTID associations, and the <i>ltidEffectiveDate</i> is not set to a later date in the current submission.	
23004	<i>replacedByFDID</i> set to an unknown value	When populated, the <i>replacedByFDID</i> must reference an FDID that is accepted without error in the current submission, or an FDID that was previously accepted by CAIS.	Error
23005	<i>fdidEndDate</i> set prior to <i>fdidDate</i> of replacing record	When <i>fdidEndReason</i> is set as REPLACED, the <i>fdidEndDate</i> must not be set prior to the <i>fdidDate</i> of the FDID set as the <i>replacedByFDID</i> .	Error
23006	<i>replacedByFDIDNULL</i> not set to true when <i>fdidEndDateNULL</i> and <i>fdidEndReasonNULL</i> set to true	When <i>fdidEndDateNULL</i> and <i>fdidEndReasonNULL</i> are present and set to true for an FDID that was previously ended for an <i>fdidEndReason</i> of REPLACED, the <i>replacedByFDIDNULL</i> must also be present and set to true.	Error
23007	<i>ltidEffectiveDate</i> set later than stored <i>ltidEndDate</i>	The <i>ltidEffectiveDate</i> in the submission file is set to a date later than the stored <i>ltidEndDate</i> , and the <i>ltidEndDate</i> is not set to a later date in the current submission.	Error

B.4 Warning Error Codes

The table below contains Warning messages that are associated with Data Ingestion and included in the Feedback file. Warning codes are associated with specific fields within a submission record. Warnings are not required to be repaired.

Table 24: CAT CAIS Validation Warnings

Error Code	Error Code Description	Explanation	Warning/Error
24001	Missing or Invalid <i>rejectionID</i>	When populated, the <i>rejectionID</i> must be a known <i>rejectionID</i> for the <i>catReporterID</i> whose data is included in the submission file.	Warning
24002	Missing or Invalid <i>correctionAction</i>	When populated, <i>correctionAction</i> must use one of the allowable values. Must be populated if <i>rejectionID</i> is populated.	Warning
24003	Missing or Invalid <i>correctingFirmDesignatedID</i>	When populated, <i>correctingFirmDesignatedID</i> must reference a <i>firmDesignatedID</i> that is included in the current submission file or was accepted by CAT CAIS in a prior submission.	Warning
24004	Missing or Invalid <i>correctingLargeTraderID</i>	When populated, <i>correctingLargeTraderID</i> must reference a <i>largeTraderID</i> that is included in the current submission file for the corresponding <i>customerRecordID</i> included in the current file.	Warning
24005	Improper correction attempt	The <i>rejectionID</i> included in the correction attempt is for an improper error code. It is only acceptable to submit a correction against rejections for error codes	Warning

Error Code	Error Code Description	Explanation	Warning/Error
		22001 and 22012.	
24006	Unknown Attribute Name	The record contains an attribute that is not known under the reported specification version.	Warning
24007	Missing or Invalid <i>correctingCustomerRecordID</i>	When populated, <i>correctingCustomerRecordID</i> must reference a <i>customerRecordID</i> that is included in the current submission file.	Warning
24008	Unchanged <i>updateConfirmationAttribute</i> reported in <i>updateConfirmationList</i>	The attribute reported in the <i>updateConfirmationAttribute</i> is equal to the value stored in CAIS for the Customer record. The Customer record submission was still accepted into CAIS.	Warning
24009	Missing or Invalid <i>inconsistencyEventID</i>	The <i>inconsistencyEventID</i> must be a known <i>inconsistencyEventID</i> for the <i>catReporterID</i> whose data is included in the submission file.	Warning
24010	Missing <i>customerRecordID</i> for an attestation	The <i>customerRecordID</i> of the attestation must reference a <i>customerRecordID</i> that is included in the current submission file.	Warning
24011	Invalid <i>inconsistencyEventID</i> and <i>customerRecordID</i> pairing	The <i>inconsistencyEventID</i> and <i>customerRecordID</i> pairing is not a valid combination for the <i>catReporterID</i> whose data is included in the submission file.	Warning

B.4 Inconsistency Codes

Table 25: CAT CAIS Inconsistency Codes

Inconsistency Code	Inconsistency Code Description	Explanation	Material/Minor
30001	<i>ein</i> present on more than one CCID	A single <i>ein</i> must only be present for a single Customer. The <i>ein</i> must be used to generate the TID for submission to CAIS and must also be provided within the CAIS data file as the <i>ein</i> of the reported Customer.	Material
31001	Inconsistent <i>middleName</i>	The <i>middleName</i> attribute for the reported customer is populated and differs from the value provided by another CAT Reporter Firm for the same Customer.	Minor

Appendix C: Glossary

Term	Definition
CAT Reporter CRD	The CAT Reporter CRD is the Central Registration Depository identifier that an Industry Member uses to report CAT account and customer data.
CAT Submitter ID	The CAT Submitter ID is the identifier of the CAT Reporting Agent, the entity authorized to submit the files to CAT on behalf of the Industry Member.
CAT Trading Day	<p>CAT Trading Day for Industry Members is defined as beginning immediately after 4:15:00PM and no fractions of a second Eastern Time on one trade date and ending at exactly 4:15:00PM and no fractions of a second Eastern Time on the next trading date.</p> <p>Weekends or any day that all equities or options national securities exchanges are closed are not considered a CAT Trading Day.</p> <p>Trading Days that close early end 15 minutes after the Market Close.</p>
FDID	<p>FDID is defined in Section 1.1 of the CAT NMS Plan as "a unique identifier for each trading account designated by Industry Members for purposes of providing data to the Central Repository."</p> <p>See CAT FAQ M2 for more information on the prohibition on use of actual account numbers. Refer to the CAT Industry Presentation on FDID for additional information.</p>
Account Opening Date	Account Opening Date is defined in the CAT NMS Plan. For account data submission, Account Opening Date is to be reported as <i>fdidDate</i> within the submission file.
Trade Date	<p>Trade Date for Industry Member is defined as beginning immediately after 23:59:59.999999 ET on Trade Date T - 1 and up to 23:59:59.999999 ET of the next Trade Date T.</p> <p>Weekends and holidays are not considered a Trade Date.</p>

Appendix D: Data Dictionary

NOTE – Appendix D entries are currently in progress to be defined for the DRAFT 2.0 specification, and will be updated as changes are made to the schemas.

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
catReporterCRD	Unsigned	Main	R	Exactly One per submission file	The CRD number assigned to the firm to which the data within the file belongs.	
catSubmitterID	Unsigned	Main	R	Exactly One per submission file	The ID of the CAT Reporting Agent that submitted the file to CAT. In the case the CAT Reporter is submitting data for themselves, they must still populate the CAT Submitter ID field.	
correctingFirmDesignatedID	Alphanumeric (40)	Correction Record	C	Zero or One per Correction Record	The firmDesignatedID within the submission file that is correcting for the prior rejected FDID. Required if the correctionAction is CORRECTION.	
correctingLargeTraderID	Text (13)	Correction Record	C	Zero or More per FDID Record	The LTID or ULTID that is correcting for the prior rejected LTID/ULTID record. The correctingLargeTraderID must be present in the submission file, or have been accepted in a prior CAT CAIS submission for the corresponding FDID. Required if the correctionAction is CORRECTION and the prior error being corrected was against an LTID for the FDID.	For LTID – 99999999-9999 For ULTID – ULT99999-9999
correctionAction	Choice	Correction Record	R	Exactly One per	The particular action that is	“CORRECTION” “DELETE”

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
				Correction Record	being taken to correct for the prior rejection. Values: CORRECTION – A new entry is included in the submission file to correct for the prior rejected record using a new firmDesignatedID or new largeTraderID. DELETE – The prior rejection needs to be cleared without a new record being submitted.	
correctionList	Multi-Dimensional Array	Main	C	Exactly One per Submission File	Structure for the array of Correction records within the file. Required if the submission file contains one or more Correction records.	
fdidDate	Date (Number) (8)	FDID Record	R	Exactly One per FDID Record	Date on which the FDID account opened, as defined in Section 2.2.3 of this specification, in YYYYMMDD format.	YYYYMMDD
fdidEndDate	Date (Number) (8)	FDID Record	C	Zero or One per FDID Record	Date on which the Account was closed or the Relationship was ended, in YYYYMMDD format. Must be provided if the fdidEndReason field is populated. Must not be provided if fdidEndDateNULL is populated as true.	YYYYMMDD
fdidEndDateNULL	Boolean	FDID Record	O	Zero or One per FDID Record	Indicates any fdidEndDate currently stored in CAT CAIS should be cleared. Must be provided as	true false

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					true if fdidEndReasonNULL is populated as true. Must not be provided as true if fdidEndDate is populated.	
fdidEndReason	Choice	FDID Record	C	Zero or One per FDID Record	Reason why the Account was closed or the Relationship was ended. Must be provided if the fdidEndDate field is populated. Must not be provided if fdidEndReasonNULL is populated as true. Values: CORRECTION – FDID was erroneously reported ENDED – FDID was ended REPLACED – FDID replaced by another FDID within the CAT Reporter Firm. OTHER – Other unlisted reason for ending the FDID	“CORRECTION” “ENDED” “REPLACED” “OTHER”
fdidEndReasonNULL	Boolean	FDID Record	O	Zero or One per FDID Record	Indicates any fdidEndReason currently stored in CAT CAIS should be cleared. Must be provided as true if fdidEndDateNULL is populated as true. Must not be provided as true if fdidEndReason is populated.	true false
fdidRecordCount	Unsigned	Main	R	Exactly One per submission file	The count of firmDesignatedID attribute occurrences within the file. Used to validate the count of FDID records intended to be submitted within the file matches the count	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					of records present in the file.	
fdidRecordID	Unsigned	FDID Record	R	Exactly One per FDID Record	A unique reference to a single FDID for a single submission file.	
fdidRecordList	Multi-Dimensional Array	Main	C	Zero or One per submission file	Structure for the array of FDID Records that are included in the file. Required if the submission file contains one or more FDID records; not required if no FDID records are included in the file.	
fdidType	Choice	FDID Record	R	Exactly One per FDID Record	Representation of the type of record of the reported FDID. Values: ACCOUNT – Account type record RELATIONSHIP – Relationship type record ENTITYID – Entity Identifier type record	“ACCOUNT” “RELATIONSHIP” “ENTITYID”
firmDesignatedID	Alphanumeric (40)	FDID Record	R	Exactly One per FDID Record	The Firm Designated ID of the Account or Relationship being reported by the CAT Reporting firm.	
largeTraderID	Text (13)	Large Trader Record	R	Exactly One per Large Trader Record	The LTID or ULTID associated to the FDID in the CAT Reporter’s system.	For LTID – 99999999-9999 For ULTID – ULT99999-9999
largeTraderList	Multi-Dimensional Array	FDID Record	C	Zero or One per FDID Record	Structure for the array of LTID or ULTID records that are associated to the FDID record within the file. Required if the submission file contains one or	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					more LTID/ULTID records associated to the FDID record; not required if no LTID/ULTID records are included in the file in association to the reported FDID.	
largeTraderRecordID	Unsigned	Large Trader Record	R	Exactly One per Large Trader Record	A unique reference to a single LTID or ULTID in reference to a single FDID for a single submission file.	
ltidEffectiveDate	Date (Number) (8)	Large Trader Record	R	Exactly One per Large Trader Record	Date on which the LTID or ULTID became associated to the FDID within the CAT Reporter's system, in YYYYMMDD format.	YYYYMMDD
ltidEndDate	Date (Number) (8)	Large Trader Record	C	Zero or One per Large Trader Record	Date on which the LTID or ULTID was no longer associated to the FDID within the CAT Reporter's system, in YYYYMMDD format. Must be provided if the ltidEndReason field is populated. Must not be provided if ltidEndDateNULL is populated as true.	YYYYMMDD
ltidEndDateNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndDate currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndReasonNULL is populated as true. Must not be provided as true if ltidEndDate is populated.	true false
ltidEndReason	Choice	Large	C	Zero or One	Reason why the	"CORRECTION"

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
		Trader Record		per Large Trader Record	<p>LTID or ULTID was no longer associated to the FDID. Must be populated in order to end date an LTID-to-FDID association in the system. Must be provided if the ltidEndDate field is populated. Must not be provided if ltidEndReasonNULL is populated as true.</p> <p>Values: CORRECTION – LTID was erroneously reported ENDED – LTID-to-FDID association was ended REPLACED – LTID was replaced by a different LTID OTHER – Other unlisted reason for ending the LTID-to-FDID association</p>	“ENDED” “REPLACED” “OTHER”
ltidEndReasonNULL	Boolean	Large Trader Record	C	Zero or One per Large Trader Record	Indicates any ltidEndReason currently stored in CAT CAIS should be cleared. Must be provided as true if ltidEndDateNULL is populated as true. Must not be provided as true if ltidEndReason is populated.	true false
rejectionID	Unsigned	Correction Record	R	Exactly One per Correction Record	The rejectionID from a prior submission that was created for the particular Data Ingestion error being corrected.	
replacedByFDID	Alphanumeric (40)	FDID Record	C	Zero or One per FDID Record	The new FDID replacing the currently reported FDID, used to provide historical	

Field Name	Data Type	JSON Object	Include Key	Occurrences	Description	Format/ Accepted Values
					linkage across replaced records over time. Must be provided if the fdidEndReason is REPLACED. Must not be provided if the fdidEndReason is any value other than REPLACED. Must not be provided if replacedByFDIDN ULL is populated as true.	
replacedByFDIDN ULL	Boolean	FDID Record	O	Zero or One per FDID Record	Indicates any replacedByFDID currently stored in CAT CAIS should be cleared. Must not be provided as true if replacedByFDID is populated.	true false
version	Text (10)	Main	R	Exactly One per submission file	The version of the CAIS Schema under which the data is reported. Initial version utilized will be 1.0.0	