CAT Reporter Portal - Industry Webinar

October 28, 2019

Agenda

- Connectivity & Multi-Factor Authentication
- Onboarding & Entitlement
- CAT Reporter Portal Roadmap
- Demo
- Key Dates & Next Steps
- Q&A

Connectivity & Multi-Factor Authentication

General Connectivity Overview

- The CAT Reporter Portal is a web interface utilizing secure encryption protocols (HTTPS/TLS) and multi-factor authentication (MFA) for submissions (by either direct entry or manually uploaded file), rejections, corrections, and compliance reports.
- The Reporter Portal may be accessed via:
 - Private Line
 - AWS PrivateLink
 - CAT Secure Reporting Gateway
- Reporter Portal requirements include:
 - TLS 1.2 requiring at a minimum NIST compliant 128 bit ciphers
 - HTML5 Compatible browsers, including: Chrome, Firefox, and Safari
 - Multi-factor authentication setup (more details on the Multi-factor authentication setup and required software will be published in a future version of the FINRA CAT Industry Member Onboarding Guide)

CAT Secure Reporting Gateway

- Industry Members and CAT Reporting Agents may also access the CAT Reporter Portal by establishing an authenticated, encrypted connection (SSL VPN) through the CAT Secure Reporting Gateway (SRG).
- The SRG requires multi-factor authentication (MFA) to establish a secure, encrypted session before accessing the CAT Reporter Portal.
- No limit in choice of Internet Service Providers and no specialized client software is required to be installed other than a modern web browser (e.g. Chrome, Safari, Firefox).

Multi-Factor Authentication

- FINRA CAT systems utilize multi-factor authentication, or MFA, for human user accounts, to provide an additional layer of security beyond the User ID and password required for login.
- Second-level authentication is provided by Duo, and CAT Reporter users must enroll a smart phone or tablet in the Duo service to initiate the authentication process and to use this service going forward.
- The Duo second-level authentication is not applicable to machine-to-machine accounts.

MFA Requirements:

- Each user must have a smart phone or tablet, and must enroll that device in the Duo MFA service.
- The device must have a screen lock enabled.
- The device must be on an operating system that is not identified as "end-of-life".
- End-of-life operating systems are supported for a short grace period after their end-of-life date. If a user attempts to use a device with an end-of-life operating system, during that time, they will be able to authenticate, but will be notified that they need to update their operating system. After the grace period, they will no longer be able to access CAT systems without updating their operating system.

*** Additional information related to MFA will be available in the Onboarding Guide on November 4 located at https://catnmsplan.com/registration/ ***

Onboarding & Entitlement

Onboarding Steps

SAAs Grant Establish CAT CAT Admin Reporting Request Access **Submit CAT** Create/Entitle Certification Register for Secure File Relationships Manage Conduct Reporter User of Testing **CRAs Must** Transfer Connectivity CAT & ATS Order **Testing** Completion Agreement Accounts Designate a Types (if Accounts **CAT Account** applicable) Administrator

*** Additional information related to Registration and Onboarding may be found at https://catnmsplan.com/registration/ ***

Onboarding – Account Administration Reminders

- Each Industry Member has ONE designated Super Account Administrator (SAA) who will be granted CAT account administration once firm registers and submits Agreement. SAAs do not need to request CAT access.
- In addition to Registration and Agreement, CAT Reporting Agents must designate at least one CAT Account Administrator (AA) by submitting, via DocuSign, a CAT Account Administrator Entitlement Form, available at https://catnmsplan.com/registration
- Roles serve as the main points of contact for the FINRA Entitlement Team
- Ability to create, delete and maintain user accounts
- SAAs may create CAT Account Administrators who manage CAT entitlement for other users within the organization
- Responsible for verifying all user accounts for their organization and must comply with the FINRA Entitlement User Account Certification Process

User Roles

 User roles for the Industry Member Reporter Portal include CAT Account Administrator, CAT User, and CAT Read-Only

Task	CAT Account	CAT	CAT
	Admin	User	Read-Only
Create/Manage CAT Users	V		
(via the FINRA Entitlement system)	X		
View/Export Feedback	V	V	V
(including announcements, reporting summaries, and error records)	X	X	X
View Reporting Relationships and ATS Order Types	X	X	X
Create/Edit Reporting Relationships	X	X	
Create/Edit ATS Order Types	X	X	
Create/Transmit data	Χ	X	
Repair CAT Errors	V	V	
(including bulk repairs)	X	X	
Create/Edit User Preferences	X	Χ	
Upload Data File	V	V	
(via Portal)	X	X	
View Monthly Report Card	Χ	Χ	X

CAT Reporter Portal Roadmap

Industry Member 2a/2b - Release 1 (File & Data Integrity) Release Rollout

11/18/2019

Industry Test Release 1.1

- CAT Reporter Portal: ATS Order Types
- CAT Reporter Portal: CAT Reporting Relationships
- Multi-Factor
 Authentication Enabled
- Publication of IMID & Conflict List to catnmsplan.com
- Publication of Issue/Option Symbol Reference Lists to catnmsplan.com

12/16/2019

Industry Test Release 1.2

- Industry Test Open for Machine-to-Machine File
 Data Integrity
 Validations & Feedback
- CAT Reporter Portal: Basic File Statistics
- CAT Reporter Portal: Manual File Upload

2/24/2020

Industry Test Release 1.3

- CAT Reporter Portal: File Submission feedback
- CAT Reporter Portal: Reporting Statistics (i.e. number of records received, accepted, rejected and feedback summaries)
- CAT Reporter Portal: Error Rates
- CAT Reporter Portal: Direct data entry & corrections
- CAT Reporter Portal: Bulk Repair of applicable Syntax/Semantic Errors

03/23/2020

Industry Test Release 1.4

- Announcements
- System Status

4/20/2020 – 2a Go-Live 5/18/2020 – 2b Go-Live

- 2a Go-Live Industry Member 2a Reporting Required on April 20
- 2b Go-Live Industry Member 2b Reporting Required on May 18

Industry Test Release 1.1 (November 18, 2019)

- CAT Reporter Portal:
 - Entry and Management of CAT Reporting Relationships
 - Entry and Management of ATS Order Types (ATS IMs Only)
- Multi-Factor Authentication Enabled
- Publication of IMID & Conflict List to cathmsplan.com
- Publication of Issue/Option Symbol Reference Lists to cathmsplan.com

*** CAT Reporter Portal User Guide will be published on November 4, 2019 ***

Industry Test Release 1.2 (December 16, 2019)

- Industry Test Opens for Machine-to-Machine testing of File & Data Integrity
- ▶ CAT Reporter Portal Release of:
 - Basic File Reporting Statistics
 - Manual File Upload
 - User Role of CAT Administrator or CAT User is required
 - Files MUST meet the Technical Specification requirements (naming, syntax, compression requirements, etc.)
 - Files must be <=1GB in size AND total record count may not exceed 100,000
 - Meta and Data files are BOTH required Data files must be submitted prior or at the same time as Meta Files
 - No limit to the number of files submitted using File Upload; however a limit of 10 files for a single submit, with max limit of 5GB
 - File and Data Integrity Feedback files submitted using Manual File Upload will also be available

Industry Test Release 1.3 (February 24, 2020)

CAT Reporter Portal:

- File Submission feedback
- Reporting Statistics (i.e. number of records received, accepted, rejected and feedback summaries)
- Error Rates
- Direct data entry
- Syntax/Semantic Error Corrections
- Bulk Repair of applicable Syntax/Semantic Errors

Industry Test Release 1.4 (March 23, 2020)

- CAT Reporter Portal:
 - System Status
 - Announcements including status, notifications, maintenance and system outages

Demo & Walkthrough

Demo & Walkthrough

- Walkthrough of Multi-Factor Authentication Enrollment
- ▶ Demo of User Log-in and Release 1.1 (November 18)
- Walkthrough of screens related to Release 1.2 (December 16)
- Walkthrough of a subset of screens related to Release 1.3 (February 24)
 - Note, some of the screens include linkage feedback examples which are not in scope for Release
 1.



Logon for CAT Secu	r Ire Reporting Gateway
Username	
tportaluser1	
Password	



What is this? ☐ Need help?

Protect Your FINRA CAT - TESTING Account

Two-factor authentication enhances the security of your account by using a secondary device to verify your identity. This prevents anyone but you from accessing your account, even if they know your password.

This process will help you set up your account with this added layer of security.

Start setup



What is this? ☐ Need help?

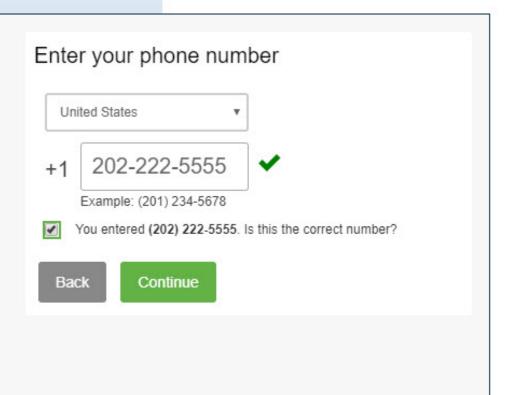
What type of device are you adding?

- Mobile phone RECOMMENDED
- Tablet (iPad, Nexus 7, etc.)

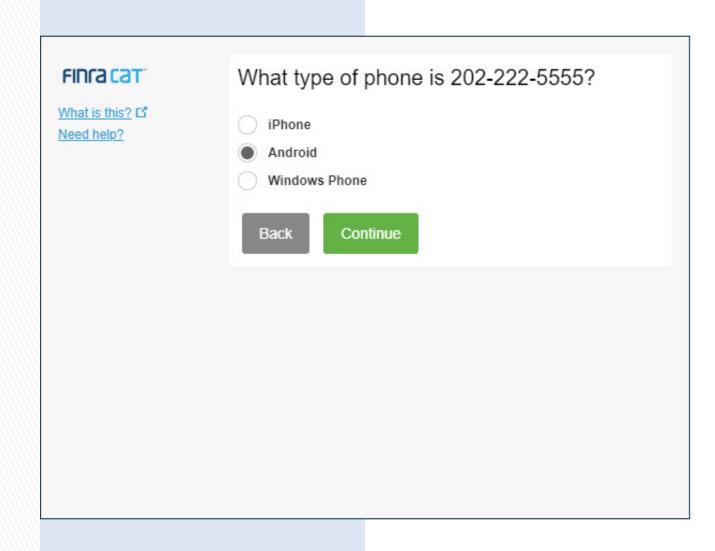
Continue



What is this? If Need help?









What is this? If Need help?

Install Duo Mobile for Android



- Launch the Google Play Store app and search for "Duo Mobile".
- 2. Tap "Install" to install the app.

Back

I have Duo Mobile installed



What is this? If Need help?

Activate Duo Mobile for Android



- 1. Open Duo Mobile.
- 2. Tap the "+" button.
- 3. Scan this barcode.

Email me an activation link instead.

Back

Continue



What is this? If Need help?

Activate Duo Mobile for Android



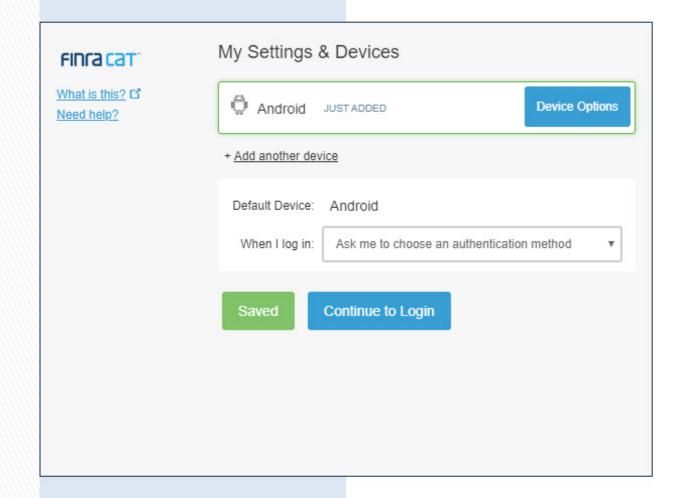
- 1. Open Duo Mobile.
- 2. Tap the "+" button.
- 3. Scan this barcode.

Email me an activation link instead.

Back

Continue







What is this? If
Add a new device
My Settings & Devices
Need help?

Choose an authentication method

Duo Push RECOMMENDED

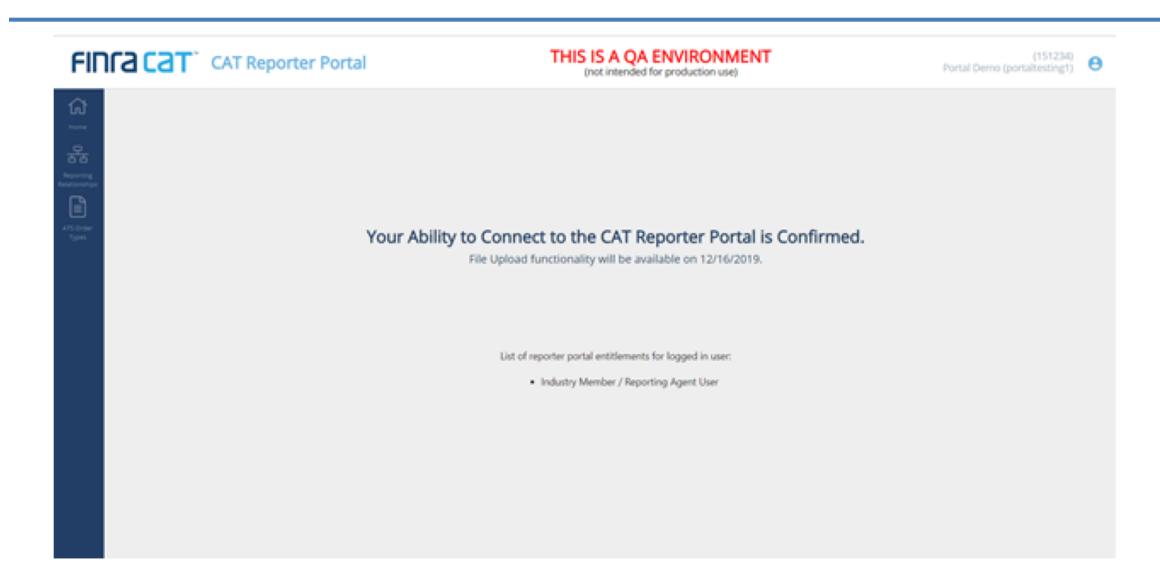
Send Me a Push

Passcode

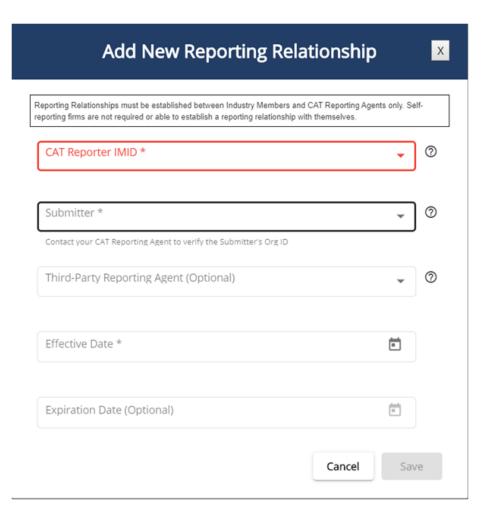
Enter a Passcode

Enrollment successful! This is the Duo login prompt that you'll normally see when logging in.

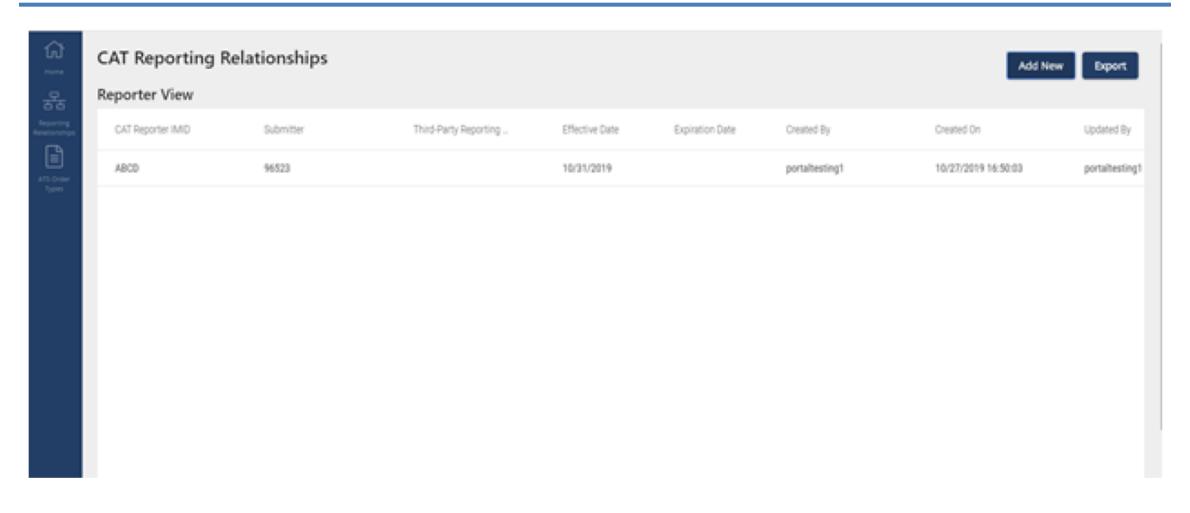
Live Demo Portion-Landing Page on 12/16/19



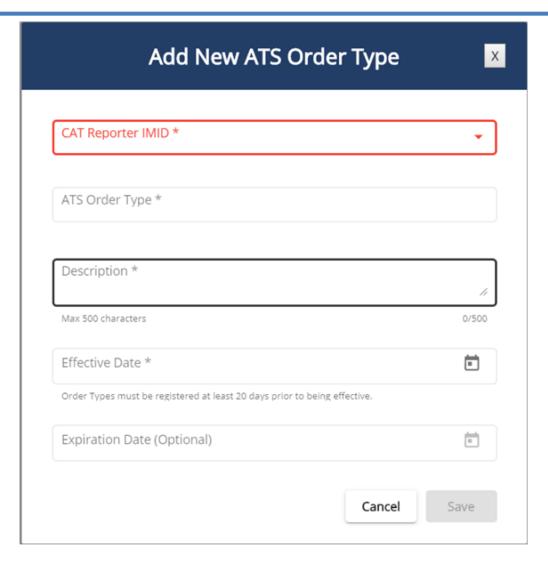
Live Demo Portion- Add Reporting Relationship



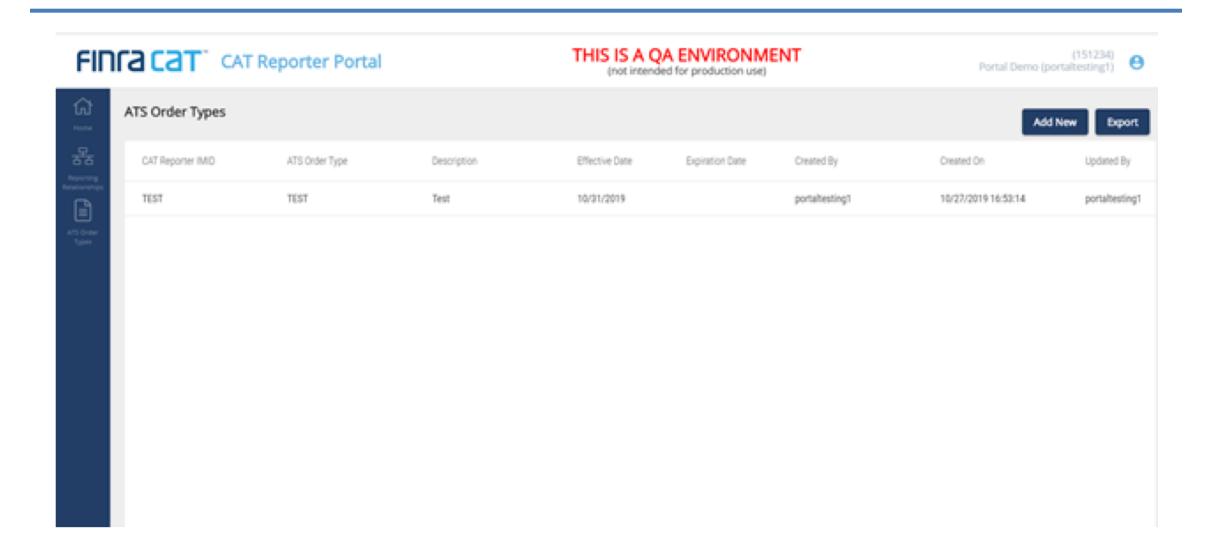
Live Demo Portion- View Reporting Relationships



Live Demo Portion - Add ATS Orders



Live Demo Portion - View ATS Orders









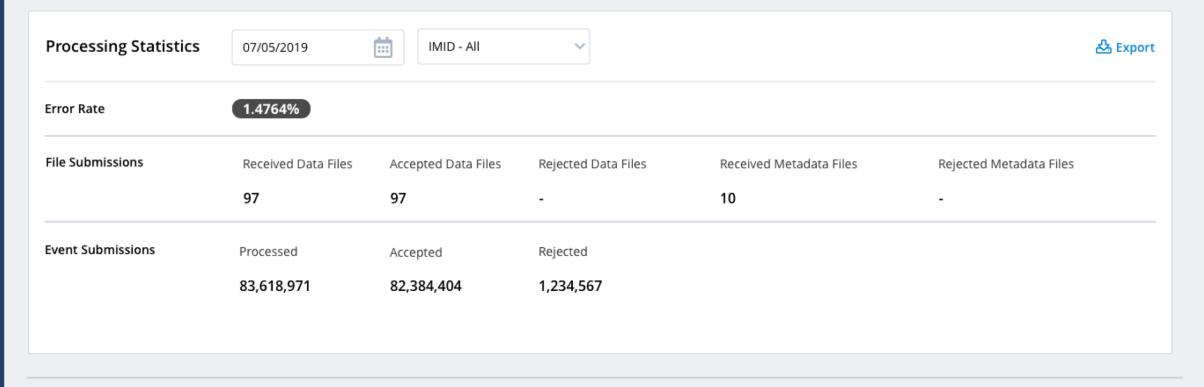








CAT Summary





catnmsplan.com







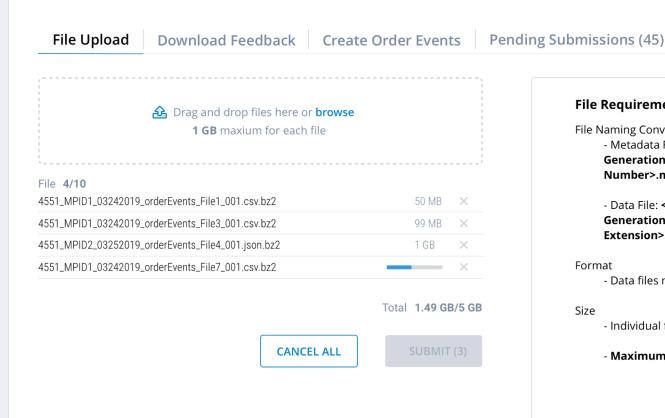








Report to CAT



File Requirements

File Naming Convention

- Metadata File: <CAT Submitter ID>_<CAT Reporter IMID>_<File Generation Date>_[<Group>_]<File Kind>_<File Number>.meta.<Format Extension>
- Data File: <CAT Submitter ID>_<CAT Reporter IMID>_<File Generation Date>_[<Group>_]<File Kind>_<File Number>.<Format Extension>.<Compression Extension>

Format

- Data files must be individually compressed using **BZip2**

Size

- Individual files are Limited to maximum uncompressed size of 1GB
- Maximum of 10 files per submission with a total size of 5GB









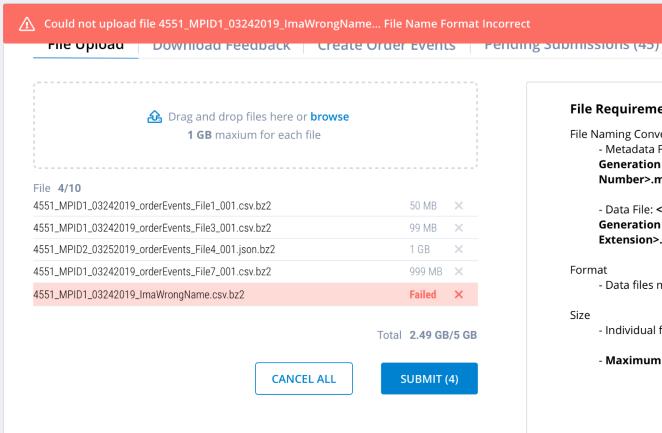








Report to CAT



File Requirements

File Naming Convention

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- Data File: <CAT Submitter ID>_<CAT Reporter IMID>_<File Generation Date>_[<Group>_]<File Kind>_<File Number>.<Format Extension>.<Compression Extension>

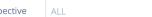
Format

- Data files must be individually compressed using **BZip2**

Size

- Individual files are Limited to maximum uncompressed size of 1GB
- Maximum of 10 files per submission with a total size of 5GB











Report to CAT



File Upload Dow	nload Feedback Create Order Events Pending Submissions (45)	
iles (3,564)		
Feedback Time ↓	File Name	Download
Sep 19, 2019 23:59:59	SUBID_MYID_20170307_OrderEvents_000123.meta.ack.json	🚣 Feedback
Sep 19, 2019 12:44:12	SUBID_MYID_20170307_OrderEvents_000123.ack.json	🚣 Feedback
Sep 19, 2019 23:11:45	SUBID_MYID_20170307_OrderEvents_000123.integrity.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.ack.error	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.meta.ack.error	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.meta.acSUBID_MYID_20170307_OrderEvents_000123MAX.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.ack.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.integrity.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.ack.error	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.meta.ack.error	८ Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.meta.ack.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.ack.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_20170307_OrderEvents_000123.integrity.json	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.ack.error	🚣 Feedback
Sep 19, 2019 09:35:37	SUBID_MYID_201703.meta.ack.error	🕹 Feedback















Report to CAT

File Upload	Download	Feedback	Create Order Eve	nts Pending Submissions (45)		
Files (3,564)						
Feedback Time ↓		File Name ▽			Download	
Sep 19, 2019 23:59:59	9	Search by File	Name Q	:a.ack.json	& Feedback	
Sep 19, 2019 12:44:12	2	✓ All		.json	🚣 Feedback	
Sep 19, 2019 23:11:45	5		× Clear Filter	grity.json	各 Feedback	
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703			& Feedback	
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703.meta.ack.error				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.meta.acSUBID_MYID_20170307_OrderEvents_000123MAX.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.ack.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.integrity.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703.ack.error				
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703.meta.ack.error				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.meta.ack.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.ack.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_20170307_OrderEvents_000123.integrity.json				
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703.ack.error				
Sep 19, 2019 09:35:37	7	SUBID_MYID_201703	3.meta.ack.error		♣ Feedback	









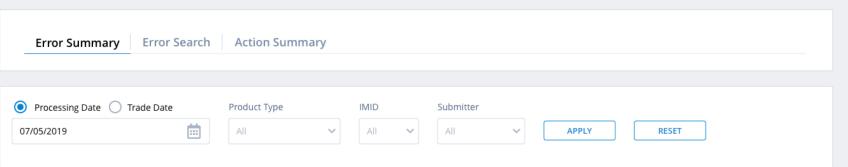








Error Corrections



Error Sun	nmary (10)									🕰 Expo
Date 🔽	Reporter IMID 🔽	Submitter ID 🔽	Error Type ▽	Repaired V Status	Error Code 🔽	Error Reason ▽	Group Repair ▽ Eligible	Error Value ▽	Error Count 🔽	Download ▽
07/05/2019	ABCD	123	Rejection	U	2015	Missing or invalid capacity	Y		2,987	<u>&</u>
07/05/2019	ABCD	123	Rejection	R	2015	Missing or invalid capacity	Υ	W	20	<u>&</u>
07/05/2019	ABCD	123	Rejection	U	2015	Missing or invalid capacity	N	W	3	<u>&</u>
07/05/2019	ABCD	123	Rejection	U	2020	Missing or invalid deptType	Y	deptABC	854	<u>&</u>
07/05/2019	ABCD	456	Rejection	U	2054	Missing or invalid tapeTradeID	N		8,621	<u>&</u>
07/05/2019	ABCD	456	Linkage	U	8009	Symbol did not match	Y	ABCD	1	<u>&</u>
07/05/2019	ABCD	456	Linkage	U	8007	Destination did not match	Y	вох	421	<u>&</u>
07/05/2019	ABCD	789	008	U	<u>3601</u>	Out of Sequence Event	N		25	<u>&</u>
07/05/2019	ABCD	399	Warning	U	399	Full Duplicate	N		25,000	<u>&</u>
07/05/2019	ABCD	399	Warning	U	399	Full Duplicate	N		3,434	<u>&</u>





ALL











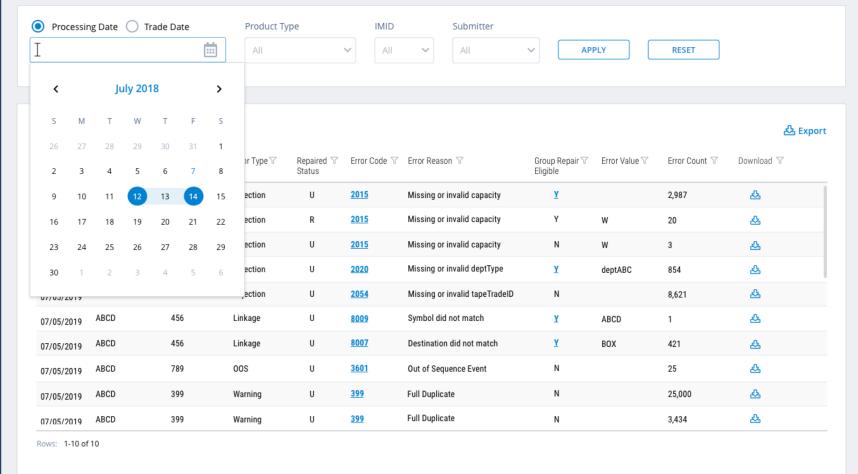






Error Corrections

Error Summary Error Search Action Summary













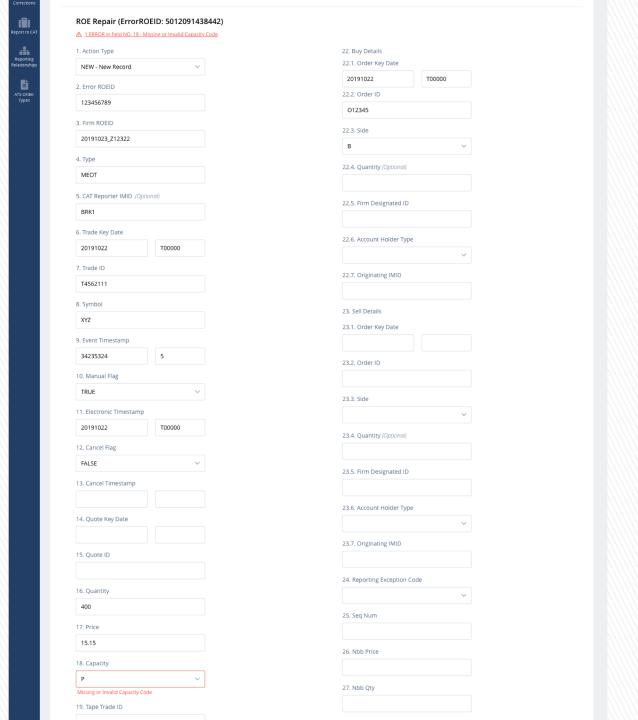






Error Corrections

Processing Dat	e Trade Date	Product Type							
07/12/2019 - 07/14	**	ALL APPLY RESET							
otal Errors (45									& Expor
ErrorROEID▽	Error Reason 🗑	Error Code 😙	Repair Status 🍸	Error Type 😙	Error Value 😙	FirmR0EID 😙	CAT Reporter IMID 😙	Event Type 😙	Symbol/ Option II
5012091438442	Missing or invalid	2xxx	U	Rejection	W	А	FRMA	MENO	XYZ
5012091387112	Originating Order not found	3xxx	U	Linkage		В	FRMA	MEOJ	XYZ
5012091438443	Missing or invalid	2xxx	U	Rejection	W	С	FRMA	MEOT	RAX
5012091438444	Missing or invalid	2xxx	U	Rejection	W	D	FRMA	MENO	EDC
	Named - Matching ROID not found	i 8xxx	U	Linkage		ROE1			
5012091438446	Missing or invalid	2xxx	U	Rejection	W	F	FRMA	MENOS	XYZ
5012091438447	Out of Sequence	Зххх	U	008		G	FRMA	MEOR	RAX
5012091438401	Missing or invalid	2xxx	U	Rejection	W	Н	FRMA	МЕСОМ	FDS
5012091438448	Originating Order not found	Зххх	U	Linkage		I	FRMA	MENOS	POJ
5012091438449	Matching ROID not found	8xxx	U	Linkage		J	FRMA	MEOR	POJ
	Named - Matching ROID not found	i 8xxx	U	Linkage		ROE2			
5012091443212	Originating Order not found	Зххх	U	Linkage		L	FRMA	MEOC	XFT
	Named - Matching ROID not found	l 8xxx	U	Linkage		ROE3			
5012111443577	Referenced Order not found	3xxx	U	Linkage		N	FRMA	MEOT	XFT



















Error Corrections

< Go Back to Error	Search						2/10	Previous Gro	oup Next Group
Group Repair									
		18. Capacity *							
Error Missing o	or invalid capacity (20)	W				CANCEL	REPAIR (20)		
		Please correct capacity							
Errors (20)									& Export
ErrorROEID▽	Error Reason 🗑	Error Code 🖓	Repair Status 😙	Error Type 😙	Error Value 😙	FirmR0EID 😙	CAT Reporter IMID 😙	Event Type 🔻	Symbol/ Option II
5012091438442	Missing or invalid	2xxx	U	Rejection	W	Α	FRMA	MENO	
5012091387112	Missing or invalid	2xxx	U	Rejection	w	В	FRMA	MEOJ	XYZ
5012091438443	Missing or invalid	2xxx	U	Rejection	w	С	FRMA	MEOT	
5012091438444	Missing or invalid	2xxx	U	Rejection	w	D	FRMA	MENO	EDC
5012091438444	Missing or invalid	2xxx	U	Rejection	w	ROE1			
5012091438446	Missing or invalid	2xxx	U	Rejection	W	F	FRMA	MENOS	XYZ
5012091438447	Missing or invalid	2xxx	U	Rejection	W	G	FRMA	MEOR	

Rejection

Rejection

W

W

FRMA

FRMA

MECOM

MENOS



5012091438401

5012091438448

Missing or invalid...

Missing or invalid...

2xxx

2xxx

U

U

FDS

Upcoming Key Dates & Next Steps

Upcoming Key Dates

Date	Topic	Event
November 1, 2019	Onboarding	Onboarding Guide Update to include Multi-Factor Authentication
November 4, 2019	Connectivity	CAT Secure Reporting Gateway available for network testing
November 4, 2019	User Guide Publication	CAT Reporter Portal User Guide Published for Industry Test Release 1.1 (November 18 functionality)
November 18, 2019	Industry Test Release 1.1	Industry Test Release of: - CAT Reporter Portal: * CAT Reporting Relationships * ATS Order Type Registration (ATS Only) - Reference Data: * Publication of Daily Issue Symbol Reference List * Publication of Daily IMID and Conflicts List
November 18, 2019	Industry Webinar and Demo	CAT Reporter Portal Industry Webinar and Demo - Multi-Factor Authentication - Industry Test Release 1.1 Functionality
December 2, 2019	User Guide Publication	CAT Reporter Portal User Guide Published for Industry Test Release 1.2 (December 16 functionality)
December 9, 2019	Industry Webinar and Demo	CAT Reporter Portal Industry Webinar and Demo of: - Industry Test Release 1.2 functionality - Basic Reporting Statistics and Manual File Upload - Industry Test Release 1.3 functionality - Submission, Error Correction & Feedback
December 16, 2019	Industry Test Release 1.2	Industry Test Release of: - Machine-to-Machine File and Data Integrity Validations & Feedback - CAT Reporter Portal Basic Reporting Statistics and Manual File Upload
December 17, 2019	Industry Webinar and Demo: Industry Testing Checkpoint & CAT Reporter Portal Demo	Industry Test Release 1.2 Go-Live Checkpoint and CAT Reporter Portal Demo of: - CAT Reporter Portal Basic Reporting Statistics - Manual File Upload
December 23, 2019 - March 20, 2020	Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls
February 10, 2020	User Guide Publication	CAT Reporter Portal User Guide Published for February Release
February 14, 2020	Industry Webinar and Demo	CAT Reporter Portal Industry Webinar and Demo of Industry Test Release 1.3 functionality: - Submission, Error Correction & Feedback
February 24, 2020	Industry Test Release 1.3	Industry Test Release of: - CAT Reporter Portal Error Correction and Feedback
February 25, 2020	Industry Webinar and Demo	Industry Test Release 1.3 Go-Live Checkpoint and CAT Reporter Portal Demo of: - Submission, Error Correction & Feedback
March 23, 2020	Industry Test Release 1.4	Industry Test Release of: - CAT Reporter Portal Announcements & System Status
April 20, 2020	Production Go-Live	Production Go-Live for Equities 2a file submission and data integrity validations
May 18, 2020	Production Go-Live	Production Go-Live for Options 2b file submission and data integrity validations

Next Steps – Industry Engagement

- CAT Reporter Portal will have additional enhancements and functionality for subsequent Error Correction and Linker Releases
- On-Going Feedback will be solicited through:
 - Small User Groups
 - One-on-one interviews
 - Industry Webinars
- Additional information will be provided in subsequent CAT Reporter Portal Industry Webinars

How to Ask a Question during Today's Call

For participants using computer audio:

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

For participants using phone audio:

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

FINRA CAT Helpdesk

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