Industry Test Release 1.2 Overview

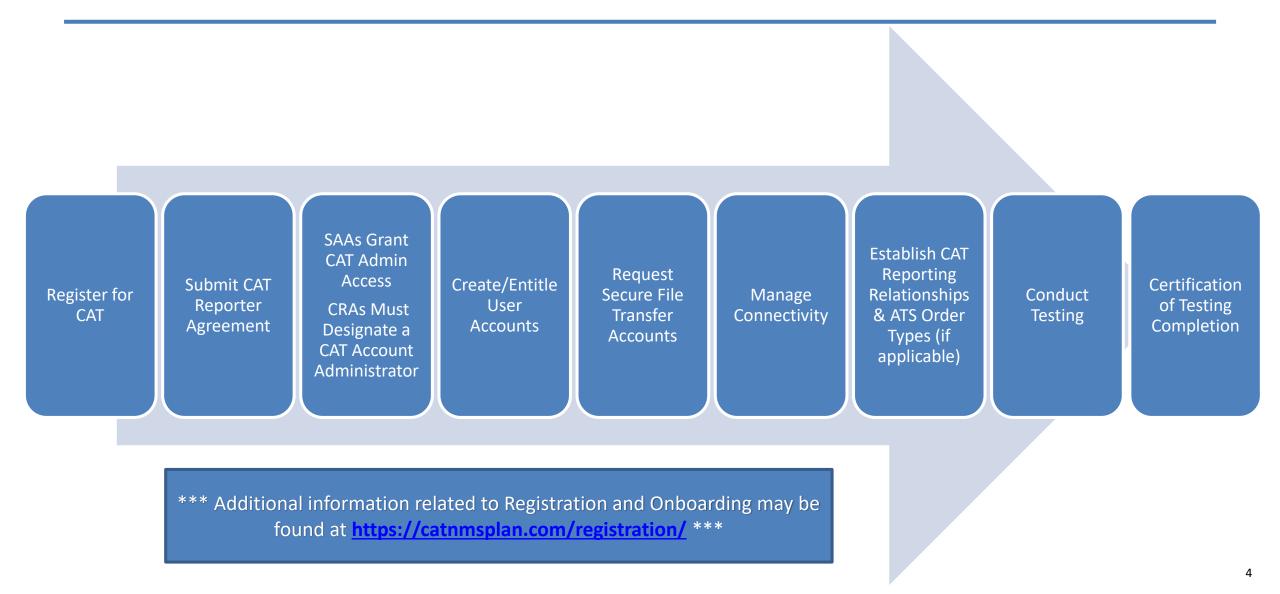
December 9, 2019

Agenda

- Important Reminders
 - Onboarding
 - Connectivity
 - Multi-Factor Authentication
- Industry Test Release Overview
 - Roadmap
 - Release Reminders
- Demo
- Upcoming Key Dates
- Q&A

Onboarding, Connectivity & Multi-Factor Authentication

Onboarding Steps



Connectivity Reminders

Industry Members and CAT Reporting Agents may connect to CAT via:

- Private Line (CenturyLink or BT Radianz)
- > AWS PrivateLink
- CAT Secure Reporting Gateway

Important Reminder

Private line connectivity to CAT needs to be established and a connectivity ping test completed as soon as possible. Firms and reporting agents should note that the ping test <u>may be completed prior</u> to signing the CAT Reporter Agreement and obtaining CAT Reporter Portal entitlements.

Accessing CAT

CAT Reporter Portal

Method	Production URL	Industry Test URL
CAT Secure Reporting Gateway	https://srg.catnms.com	https://srg.ct.catnms.com
Private Line	https://reporterportal.catnms.com	https://reporterportal.ct.catnms.com
AWS PrivateLink	https://reporterportal-pl.catnms.com	https://reporterportal-pl.ct.catnms.com

Machine-to-Machine

Method	Production URL	Industry Test URL
Private Line	sftp.catnms.com	sftp.ct.catnms.com
AWS PrivateLink	sftp-pl.catnms.com	sftp-pl.ct.catnms.com

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.

Industry Test Release Overview & Roadmap

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

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Live in maustry rest				
11/18/2019 Industry Test Release 1.1	12/16/2019 Industry Test Release 1.2	2/24/2020 Industry Test Release 1.3	03/23/2020 Industry Test Release 1.4	4/20/2020 – 2a Go-Live 5/18/2020 – 2b Go-Live
 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 	 Industry Test Open for Machine-to-Machine File & Data Integrity Validations & Feedback CAT Reporter Portal: Basic File Statistics CAT Reporter Portal: Manual File Upload 	 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 	 Announcements System Status 	 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 1.2 (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 to 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 available for download via the Reporter Portal

Industry Test Release -Release Notes & Reminders

- Industry Test Release 1.2 (Machine-to-Machine and CAT Reporter Portal functionality) will available on December 16 at 8:00 a.m.
- If private line connectivity is NOT yet established, Industry Members may still begin testing using the CAT Reporter Portal via the Manual File Upload. Requirements for CAT Reporter Portal:
 - ✓ Industry Members must have a signed CAT Reporter Agreement
 - ✓ A CAT Reporter Portal CAT Admin or User account must be established
 - ✓ 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 (HTML5 Compatible browsers including: Chrome, Firefox and Safari)

Industry Test Release – Release Notes & Reminders

- Industry Members must certify with a day of Production data by April 6, 2020 for 2(a) and May 4, 2020 for (2b).
- Any CAT Reporting Relationship or ATS Order Types entered into Industry Test by April 6, 2020 will automatically be migrated to Production. Any relationship or order type entered after April 6, 2020 will also need to be entered into Production.
- > During the Industry Test period, FINRA CAT will be closely monitoring:
 - Network and Connectivity Performance
 - Rejections and Errors

Demo & Walkthrough

Demo & Walkthrough

- Demo of Industry Test Release 1.2 (December 16)
 - File Submission
 - CAT Reporter Portal

Reporter Portal – Basic Statistics Screen

CAT F	onortor Portal	10/00/0040	INT ENVIRONMENT ed for production use)	Perspective Reporte	r 🗸	TEST2 (151234) Portal Testing (portaltest151234)
Home	CAT Summary					
Report to CAT	Processing Date 12/6/20	019	IMID ALL	•		🛓 Export
Reporting Relationships	Rejection Error Rate	80.0000%				
ATS Order Types	File Submissions	Received Data Files	Accepted Data Files	Rejected Data Files	Received Metadata Files	Rejected Metadata Files _
	Event Submissions	Processed Events	Accepted Events	Rejected Events 8		

File Upload - File Naming Convention Requirements

CAT F	Reporter Portal	1:33 PM EST 12/08/2019	THIS IS A QAINT ENVIRONMENT (not intended for production use)	Perspective Reporter TEST2 (151234) Portal Testing (portaltest151234) S
Ame Home	Report to CAT			
Report to CAT	File Upload	Download Feedbac	k	
Reporting Relationships		🔂 Drag and c	lrop files here or browse	File Requirements File Naming Convention Metadata File Name : <cat id="" submitter="">_<cat imid="" reporter="">_<file date="" generation="">_[<group>_]<file kind=""><file number="">.meta[.File Instruction].<format extension=""></format></file></file></group></file></cat></cat>
ATS Order Types	Total (1) Invalid name for	91129_WEBIncFileName_OE_00 rmat for the file 20191129_WEBIncFileNam	0.00 MB of 5.00 GB limit	 Data File Name : <cat id="" submitter="">_<cat imid="" reporter="">_<file date="" generation="">_[<group>_]<file kind="">_<file number="">.<format extension="">.</format></file></file></group></file></cat></cat> Data files must be submitted prior to or at the same time as the Metadata file submission If reporting on behalf of another firm, the CAT Reporting Agent must be authorized to submit data on behalf of the CAT Reporter IMID via a reporting relationship in the CAT Reporter Portal Format All files for submission must be in json or csv format Data files must be individually compressed to bz2 format before submission Metadata files must be submitted uncompressed Size Individual files are limited to maximum uncompressed size of 1GB with a record limit of 100,000 records per file Maximum of 10 files per submission with a total size of 5GB

Download Feedback

CAT R	anortor Portal	2/00/2010	TENVIRONMENT	Perspective	Reporter	-	TEST2 (151234) Portal Testing (portaltest151234)	Θ
Home	Report to CAT							
Ē	File Upload	Download Feedback						
Report to CAT	Feedback Time	File N	lame					
Reporting Relationships	Dec 08, 2019 13:19:01	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000008.ingestio	n.error.csv.bz2		
	Dec 08, 2019 13:19:00	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000008.ingestio	n.csv		
ATS Order Types	Dec 08, 2019 13:18:35	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000008.integrity	CSV		
	Dec 08, 2019 12:20:34	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000009.ingestio	n.error.csv.bz2		
	Dec 08, 2019 12:20:34	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000009.ingestio	n.csv		
	Dec 08, 2019 12:20:09	1512	34_TEST1_20191129_WEBIn	gestionErr_OrderEve	nts_000009.integrity	CSV		

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Upcoming Key Dates

Upcoming Key Dates for Release 2a/2b

Торіс	Event	Date
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 16, 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 17, 2019
Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls - Every Tuesday at 4:15 pm (ET)	December 30, 2019 - March 20, 2020
Connectivity	Connectivity Supplement updated to include AWS PrivateLink information	January 3, 2020
Connectivity	AWS PrivateLink available for 2a/2b machine-to-machine file submission and CAT Reporter Portal	January 27, 2020
Plan Participant UAT	Plan Participant UAT begins for February Industry Test Release	February 3, 2020
User Guide Publication	CAT Reporter Portal User Guide Published for February Release	February 10, 2020
Industry Webinar and Demo	CAT Reporter Portal Industry Webinar and Demo of Industry Test Release 1.3 functionality	February 14, 2020
Industry Test Release 1.3	Industry Test Release of: - CAT Reporter Portal Error Correction and Feedback	February 24, 2020

The timeline of Phase 2a/2b Release 1 (File Validation & Data Integrity) can be found at https://catnmsplan.com/timelines/phase-2a-2b-release.html

Upcoming Key Dates for Release 2a/2b

Торіс	Event	Date
Industry Webinar and Demo	Industry Test Release 1.3 Go-Live Checkpoint and CAT Reporter Portal Demo of: - Submission, Error Correction & Feedback	February 25, 2020
Industry Test Release 1.4	Industry Test Release of: – CAT Reporter Portal Announcements & System Status	March 23, 2020
Industry Call: Industry Testing Checkpoint	Daily Industry Testing Checkpoint Calls at 4:15 pm (ET)	March 23, 2020 - April 3, 2020
Industry Test Certification	Industry Members and CAT Reporting Agents must complete production readiness testing for 2a reporting	April 6, 2020
Industry Call: Industry Testing Checkpoint	Weekly Industry Testing Checkpoint Calls – Every Tuesday at 4:15 pm (ET)	April 6, 2020 - May 1, 2020
Production Go–Live	Production Go-Live for Equities 2a file submission and data integrity validations	April 20, 2020
Industry Call: Production Release Checkpoint	Industry Call – Status of 2a Go-Live	April 21, 2020
Industry Test Certification	Industry Members and CAT Reporting Agents must complete production readiness testing for 2b reporting	May 4, 2020
Industry Call: Industry Testing Checkpoint	Daily Industry Testing Checkpoint Calls at 4:15 pm (ET)	May 4, 2020 - May 15, 2020
Production Go–Live	Production Go-Live for Options 2b file submission and data integrity validations	May 18, 2020
Industry Call: Production Release Checkpoint	Industry Call – Status of 2b Go-Live	May 19, 2020
Industry Webinar and Demo	Industry Webinar and Demo of Compliance Report Card	June 2, 2020
Production Go–Live	Release of Industry Member Compliance Report Card for Equities ONLY	June 19, 2020
Production Go–Live	Release of Industry Member Compliance Report Card including Equities and Options	July 20, 2020

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

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