REG SCI PLAYBOOK

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Overview

- Regulation SCI requires that each SCI entity designate members/participants (participating members) to take part in the annually scheduled Business Continuity and Disaster Recovery Plan test.

- SCI entities have established criteria for the designation of applicable members that are required to participate in the annual Business Continuity and Disaster Recovery Plan test.

- The objective of the 2021 test is that SCI entities conduct a functional and performance testing of ' business continuity and disaster recovery (BC/DR) plans with participating members to exercise and verify the ability to operate through a business continuity and/or disaster recovery event using backup sites, recovery facilities and backup communication capabilities.

2021 Test - Guiding Principles

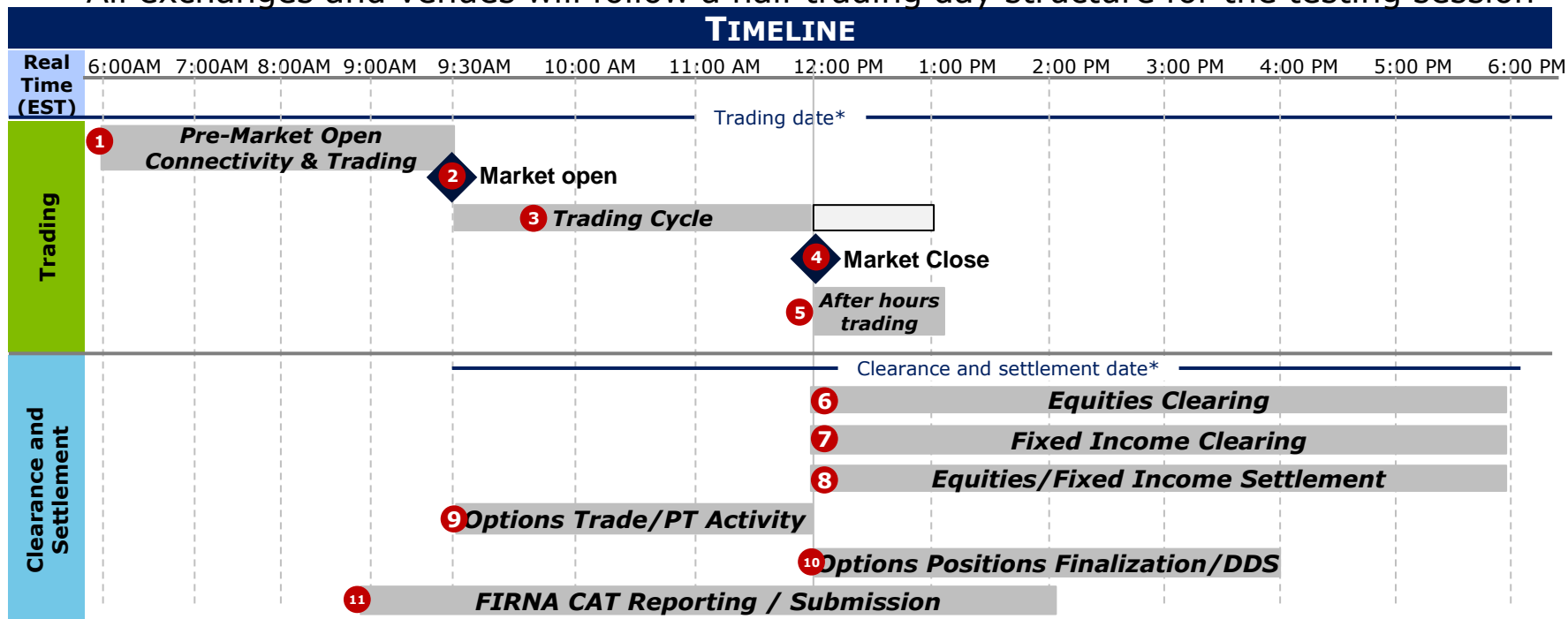| Topic		Approach
2021 test date		• The test will occur on Saturday **October 23rd 2021.** The test date aligns with SIFMA Classic, and FIA and IROC
Environments connectivity		• Participating members should be able to operate from their **production or DR environments** • Participating members who elect to operate from their production environments are **strongly encouraged** to conduct a separate connectivity test from their DR environment(s)
Designated Reg SCI contacts		• Reg SCI Entities notification to designated Reg SCI firms will be included in the 2021 Reg SCI Playbook • Participating members to develop & communicate Reg SCI distribution emails to all SCI Entities by SIFMA
Test scripts communication and distribution		• Reg SCI Entities are responsible for communicating test scripts and other test requirements to their respective participating members • Those Reg SCI Entities with public test scripts will provide participating members with the address of a dedicated location on their website which houses all REG SCI communications, including test scripts
Connectivity testing		• Connectivity testing is highly recommended to limit issues observed during prior years • Reg SCI Entities are responsible for providing connectivity testing prior to the 2021 Reg SCI BC/DR test; Connectivity test dates will be established and circulated to participating members • Entities will work directly with participating members to provide network connectivity information • Connectivity configuration used for pre-test must remain unchanged for 2021 Reg SCI BC/DR test date
Text Execution		• The 2021 annual Regulation SCI BC/DR test should not require manual intervention by participating member systems to execute the test (manual intervention refers to limited system or configuration changes)
Text Scope		• The 2021 test is designed to verify that Reg SCI entities are able to demonstrate that they can support the maintenance of fair & orderly markets in the event the Reg SCI entities' BC/DR plans are activated • The 2021 test is an industry coordinated test (as required by Reg SCI), but it is not an end-to-end industry integrated test; it is a test for each individual SCI Entity to test its own BC/DR environment(s) • The test is not systems capacity test; however the test should generate enough message traffic to support trading and dissemination of market data through the SIPs • The test is not a pass/fail exercise for the participating members. Some SCI members, based on their rulebook, will publish results[1]. Others will provide members with a scorecard outlining capabilities and issues • In the event of an unsuccessful test further analysis will be required to understand the root cause (i.e. is the issue on the participating member side, SCI entity, etc.)
Classic SIFMA Test		• The 2021 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test

[1] OCC will publish results if asked by regulators

Test-Day - Timeline and Break Points

- Test Timeline and Breakpoints to follow the same test outline are prior years
- All exchanges and venues will follow a half trading day structure for the testing session

TIMELINE

Real Time (EST): 6:00AM 7:00AM 8:00AM 9:00AM 9:30AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM

Trading date*

Trading
- (1) Pre-Market Open Connectivity & Trading
- (2) Market open
- (3) Trading Cycle
- (4) Market Close
- (5) After hours trading

Clearance and settlement date*

Clearance and Settlement
- (6) Equities Clearing
- (7) Fixed Income Clearing
- (8) Equities/Fixed Income Settlement
- (9) Options Trade/PT Activity
- (10) Options Positions Finalization/DDS
- (11) FIRNA CAT Reporting / Submission

(1) Exchanges to open their systems any time prior to market open

(2) Coordinated Market Open across SCI entities - 9:30 AM ET

(3) Short trading day cycle - 9:30 AM – 12:00 PM ET
[For OCC Exchange Mock Trading Cycle and Encore Daily Activity 9:30 AM-12:00 PM]

(4) Coordinated Market Close (Equities and Options) – 12:00 PM ET

(5) After hours trading - 12:00 PM – 1:00 PM ET

(6) Equities Clearing – 12:00 PM – 6:00 PM
- Accept trades from the Exchanges – trades will reject with invalid trade Date

(7) Fixed Income Clearing 12:00 PM – 6:00 PM
- Trades submitted and matched, settlement totals calculated

(8) Equities/Fixed Income Settlement 12:00 PM – 6:00 PM
- Deliver Orders and Payment Orders submitted and settled
- CNS transactions and settlement totals processed
- Fixed income settlement totals processed
- ITP Matching: CTM Block and Tradesuite Confirm trades accepted and processed

(9) Options Trade / Post Trade Activity – 9:30 AM – 12:00 PM ET

(10) Options Positions Finalization / End of Day – 12:00 PM – 4:00 PM ET

(11) FIRNA CAT Reporting/Submission – 9:00 PA – 2:00 PM ET

- Exchanges may test additional functionality including IPO's limit up/limit down and trading halts
- DTCC will be able to accept transactions during the Clearance and Settlement window beginning at noon
- DTCC anticipates all 4 entities (ITP (Omgeo), FICC, NSCC, DTC) will be simultaneously during the clearing and settlement window

***Trade and Clearance and settlement dates**
- Trade date for Exchange Systems will be 10/22/2021 (Friday)
- Trade Date for the OCC Encore System will be 10/21/2021 (OCC to change date of 10/23/2021 to 10/21/2021)
- OCC's Business/Trade/Clearance date will be 10/21/2021
- OCC's settlement date will be 10/25/2021
- Input transaction settlement date for DTCC entities will very by test

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Test Scope Outline - Participating Members

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Participating Members Test Summary

- Conduct the test from their production or DR environments

- Submit a representative sample of daily trade transactions to exchanges

- Work with Reg SCI entities to determine communication protocols

- Cover all in-scope product types

- Clean all test data from systems prior to Monday market open

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Test Scope Outline - Exchanges

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Exchanges Test Summary

- Conduct trade matching

- Transmit matched trades to clearing agencies to demonstrate connectivity to the clearing agency (NSCC will reject the trades at the CDTS gateway and a reject message will be transmitted back to the exchange over FIX connections)

- Receive and verify messages (pended/rejected trades and execution) if applicable

- Clean all test data from systems prior to Monday market open

Note: Exchanges to communicate additional functionality including IPO's limit up/limit down and trading halts

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Test Scope Outline - Clearing Agencies

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Clearing Agencies Test Summary

NSCC

- NSCC simulate trade executions on behalf of the exchanges
- Participating members access NSCC to inquire on trade data submissions that NSCC would simulate on behalf of the exchanges via web screens or automated output; to validate data & receive output from DTCC

OCC

- Exchanges will:
  - Transmit matched trades to OCC for processing throughout the mock trading cycle to OCC in real time
  - Submit balance sets and balance trades with OCC at close of Mock Trading Lifecycle
  - Receive and verify outbound DDS through connections to OCC's DR environment
  - Purge all test data from systems prior to market open for Monday
- Firms will:
  - Submit post trade transactions to OCC utilizing the communication protocols normally used in production (External Encore, Real-time MQ, Batch SFTP or Batch NDM)
  - Receive and verify outbound DDS through connections to OCC's DR environments
  - Access on-demand and core reports through External Encore
  - Purge all test data from systems prior to market open for Monday

Fixed Income Clearing (FICC)

  - Trades submitted and matched, settlement totals calculated

ITP (Omgeo)

  - Trades submitted

DTC settlement test:

- Deliver Order and Payment Order submitted; Processed; and submitted for settlement

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Test Scope Outline - SIPs

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

<u>Test Summary</u>

SIP - NASDAQ
- The NASDAQ SIP (UTP) will be available from both Carteret and Cermak
- The system of record is the binary version of the SIP feed which will be available during the Reg SCI and Industry BCP/DR test

SIP -SIAC
- The OPRA SIP and CTS/CQS SIP will be available in Cermak
- Firms can contact connectivity@nyse.com for any questions on connecting to DR in Cermak
- General questions on SIP support can be addressed to (cqs-cts-opra@siac.com)
- SIAC will be running out of the DR site

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Test Scope Outline - FINRA

The objective of the test scope outline is to provide consistent detail for the execution of the test as well as consistent set of requirements

Test Summary

FINRA will create test scripts for each facility and send them to the firms who have been identified to test. Testing will include the following FINRA facilities:

- **TRACE** (Fixed Income – Corporate & Agency Debt, Securitized Products and treasuries)

- **ORF** (Over the Counter Equities)

- **NY and Nasdaq TRF** (for firms who report NMS trades to the TRFs)

Note: Test scripts were distributed to each designated firm for their respective facilities

Equities and Options Symbols and CUSIPs

- Production or Test Symbols will be used for trading
- Test Symbols will be used for clearing (minimum of one test symbol)
- Testing using production symbols is encourage using the below symbols to support triggering market infrastructures/SIPs. <u>It is noted that testing is not limited to the production symbols below</u>
- Production data will be used by FINRA for OTC equities testing (FINRA will accept any valid production symbol)

Production Symbols*

#	Symbol
1	CSCO
2	F
3	MSFT
4	GE
5	BAC
6	SPX (CBOE proprietary product)
7	SPXW (CBOE proprietary product)
8	VIX (CBOE proprietary product)

* Not Comprehensive - SCI entities may require specific Options to support their testing

Test Symbols

#	Exchange	Symbol
1	Cboe Exchanges (Options & Equites)	* See Below
2	NASDAQ	ZVZZT
3	NASDAQ	ZJZZT
4	NASDAQ	ZWZZT
5	NASDAQ	ZXZZT
6	NYSE Listed	NTEST
7	NYSE American Listed	ATEST
8	NYSE Arca Listed	PTEST
9	IEX	ZIEXT
10	IEX	ZEXIT
11	IEX	ZXIET
12	Global OTC test symbols	TESTF TESTJ TESTX
13	DealerWeb	See Appendix

Cboe Exchanges Options – Symbols: BTEST,CBO,CBX,IBO,IGZ,ZBZX,ZTEST,ZTST,ZVV,ZVZZT,ZWZZT,ZXZZT; Strike Prices: 10.000,15.000,20.000,25.000,5.000; Expiration Date: 2099-01-01
Cboe Exchanges Equities - ATEST,CBO,CBX,CTEST,IBO,IGZ,MTEST,NTEST,PTEST,ZAZZT,ZBZX,ZBZZT,ZCZZT,ZEXIT, ZIEXT,ZTEST, ZTST, ZVV,ZVZZT,ZWZZT,ZXIET,ZXYZ,ZXZZT

- OCC will be using production symbols for testing
- OCC will not be supporting Cboe test symbols

Equities Symbols and CUSIPs - FINRA Securities List

#	FINRA Reporting Facility	CUSIP	Symbol
1	ORF		SWRAY
2			RHHBY
3			POAHY
4			DASTY
5			MIELY
6			DANOY
7	TRACE: TS	9127964V8	TSRYS5053887
8		9128284L1	TSRYS4622555
9		912803EQ2	TSRYS4493785
10		9128284H0	TSRYS4620372
11			
12			
13	TRACE: CA	88167AAE1	TEVA4384553
14		31359MGK3	FNMA.RY
15		36256M528	GS4775292
16		439419BJ0	CHRC3995690
17	TRACE: SP	00432CBQ3	AGIK3279059
18		01449TAA1	ALEZ23279744
19		12543PAB9	BAC3314428
20		3140QCTB2	FNMA4932907
21		21H030682	GNMB3525437
22			
23			

#	FINRA Reporting Facility	Symbol	CUSIP
24	FINRA/NYSE TRF; FINRA/Nasdaq TRF-Carteret; FINRA/Nasdaq TRF-Chicago	ALLY	02005N100
25		CAT	149123101
26		NKE	654106103
27		AAPL	037833100
28		EBAY	278642103
29		NFLX	64110L106

FINRA scripts have been updated to reflect current prices, and will be distributed on Oct. 19. No other changes have been made to the scripts.

FINRA will accept active Symbols and CUSIPs for OTC Equities testing, as well as for TRACE testing

Updated as of October 19 2021

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SCI entities test scripts

BOX
- BOX communicate the test scope and framework to designated participants on August 24th

Cboe Exchanges (Cboe Options, BYX, BZX, EDGA, EDGX and C2)
- Link to Cboe Notification
- Link to Cboe test plan

CME/Btec
- Test scripts distributed to designated participating members on September 23rd

DEALERWEB
- Test scripts were distributed to designated participating member

DTCC
- DTCC test scripts are available via online portal to those clients who have completed their test registration survey.

FINRA
- FINRA's test scripts are confidential and were only be shared with FINRA's designated participants
- Test scripts were distributed to designated participating members for their respective facilities (June 4th), and were updated and distributed on October 19.

FINRA CAT
- Test scripts were distributed to designated participating members for their respective facilities
- FINRA CAT will also host two bridge lines open for all CAT Reporters:
  - *Industry Members (Firms):* https://finra.zoom.us/j/96525904284?pwd=a1FqbGUzcE5CNHhvOXorTVRHVnA1UT09
  - *Plan Participants (Exchanges):* https://finra.zoom.us/j/97953323563?pwd=Sko1TnhiZWNrdU1ZVjZrMmxiZ0Frdz09

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SCI entities test scripts

IEX
- IEX distributed a <u>Trader Alert Notification </u>related to the 2021 Regulation SCI BCP/DR Testing
- The Trader Alert Notification include the <u>formal test script</u> for the 2021 Regulation SCI BCP/DR Test.

LTSE
- Test Scripts have been distributed to designated participating members

MEMX
- Link to <u>MEMX test scripts</u>

MIAX Exchanges
- Link to <u>MIAX test scripts</u>

MSRB
- *Not applicable*

NASDAQ Exchanges
- Test notification information (Nasdaq equities and options questionnaire) has been distributed.
- The notification include a check list of different items that they must complete as appropriate
    - For Equities: https://www.nasdaqtrader.com/Trader.aspx?id=Support_FactSheets
    - For Options: https://www.nasdaq.com/solutions/options-specifications-and-resources-hub

SCI entities test scripts

NYSE Group/ ICE
- Link to NYSE Group test script
- NYSE will provide participating members with a Checklist in advance of the test
- Checklist must be returned to regscitesting@nyse.com following test conclusion
- Upon Checklist receipt, NYSE will provide firms with "a confirmation of test completion" email

OCC
- Individualized test strategies are developed for each registered participant and tailored to individual business models.
- OCC Testing requirements are posted on Infomemo #48425 published on March 11

OTC Link
- OTC Markets' test scripts shared with designated participants

SIFMA Classic Test
- SIFMA Classic Test scripts vary depending on the scope of testing offered by each test entity, an overview of test scope is available in the Summary of Components spreadsheet on the SIFMA test site

UBS ATS
- UBS ATS test scripts was shared with designated participants in early September

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Other Considerations (contd')

Orders

- Average number of shares is used with a minimum of 2 orders (no max)

Registration

- The 2021 Regulation SCI BC/DR test is distinct from the classic SIFMA BC/DR test

- Registration to the 2021 Regulation SCI BC/DR test is done by notification from the SCI entities – see Appendix for 2021 notification process

Success Criteria

- *DTCC* has outlined the capabilities, designee activity and evidence for inbound and outbound activity with FICC, NSCC, DTC and ITP (Omgeo) which will be used to determine whether testing has been successful (see chart in Appendix)

- *OCC* has documented Success Criteria in Infomemo #48425 and it will be documented in each participants confirmed test strategy.

- *NASDAQ* notification includes a check list of different items that they must complete as appropriate

- *NYSE* provides participating members with a Checklist in advance of the test which should be returned following test conclusion. Upon Checklist receipt, NYSE will provide firms with "a confirmation of test completion" email

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Pre-Test and Post Test Requirements and Guidelines

	BOX ✓	Cboe ✓ Exchanges	CME/ Brokertec	DealerWeb ✓	DTCC ✓	FINRA* ✓	FINRA CAT ✓
Availability for Pre Testing	Yes	Yes	No	Yes	Yes	Yes	Yes
Availability for Post Testing	No	No	No	Will accommodate upon request	N/A		Upon request
Pre- Testing Required	Yes	Strongly Recommended	No	No	Strongly Recommended	Strongly Recommended	Strongly Recommended
Post - Testing Required	No	No	No	No	N/A		No
Connectivity Testing Required	Yes	Strongly Recommended	No	No	Strongly Recommended	Yes	Strongly Recommended
Test Contact Information	**BOX Maret Operations Center** 866-768-8845 boxmoc@boxoptions.com	**Cboe Trade Desk** 913-815-7001 tradedesk@cboe.com **Cboe NOC** 913.815.7005 noc@cboe.com	**Market Support/GCC** 212-521-4700 **ms@btec.com**	Market Support/Control - 201.536.5781 support@dealerweb.com William Vogt william.vogt@dealerweb.com Caroline Schultz caroline.schultz@dealerweb.com	**Kevin Hanley,** 212-855-8092 **khanley@dtcc.com** **Evanthia Richey** erichey@dtcc.com	**Tamara Scrivens** tamara.scrivens@finra.org (240) 386-6132 **FINRA Product Management-Backup:** finraproductmanagement@finra.org	FINRA CAT Helpdesk Help@finracat.com 1-888-696 3348
Reg SCI Pre Testing Dates	• **9/25/2021** • 10/2/2021	• **9/25/2021** • 10/2/2021 • Any time	• **N/A**	Will work with Participants	• **10/2/2021**	• **10/2/2021**	• **9/25/2021**
Comments on Reg SCI Pre Testing	N/A	Voluntary connectivity pre-testing can occur any time. Cboe NOC & Trade Desk support available to address connectivity issues.	BrokerTec does not participate in the pre-testing.		Pretest is highly recommended for designees		Ping test capability for DR up by 9/1. Request selected CAT reporters to complete connectivity testing by 9/25. Will host two checkpoint calls (9/20 and 10/19 to answer any questions
Post Reg SCI Test Confirmation	Not required	Not required	Send a follow up to each client by the following Monday	Please communicate with Market Support Group on test day when complete	Confirmation of success is provided during the test window via email and/or online portal confirmation	Not required	Not required
Reg SCI Post Testing Dates	N/A	No	N/A	N/A	N/A		N/A
Comments							

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* Applies to all FINRA facilities and products including Fixed Income and TRACE for Treasuries

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Pre-Test and Post Test Requirements and Guidelines

	IEX ✓	LTSE ✓	MEMX ✓	MIAX Exchanges ✓	MSRB	NASDAQ Exchanges ✓	NYSE Group ✓
Availability for Pre Testing	Yes	Yes	Yes	Yes		Yes	Yes
Availability for Post Testing	Yes – connectivity testing only	Upon Request	Upon Request	No		Will be made available upon request	No
Pre- Testing Required	Strongly Recommended	Strongly Recommended	Strongly Recommended	Strongly Recommended		Yes	Strongly Recommended
Post - Testing Required	No	No	No	No		No	No
Connectivity Testing Required	Strongly Recommended	Strongly Recommended	Strongly Recommended	Strongly Recommended		Yes	Strongly Recommended
Test Contact Information	**Market Operations** marketops@iextrading.com; 646-343-2310 **Tech. Ops** sre@iextrading.com; 646-343-2200	marketops@longtermstockexchange.com ; 813-575-2602 ; techops@longtermstockexchange.com	mops@memx.com	**Trading Operations** TradingOperations@MIAXOptions.com (609) 897-7302		**Trading Services** tradingservices@nasdaq.com **Options Market Operations** optionshelpdesk@nasdaq.com	**API Technical Support** 212.896.2830, Option #2 #1 connectivity@nyse.com **Chris Loonam** 770-857-2718 chris.loonam@theice.com
Reg SCI Pre Testing Dates	• **9/25/2021** • 10/2/2021	• **9/25/2021** • 10/2/2021	• **9/25/2021** • 10/2/2021	• **9/25/2021** • 10/2/2021		• **9/25/2021** • 10/2/2021	• **9/25/2021** • 10/2/2021
Comments on Reg SCI Pre Testing	N/A		For any questions about mandatory testing or the script (prior to test day), membership@memx.com.	Connectivity testing will also be available Monday, October 18, 2021 through Friday, October 22, 2021, between 8:00AM - 5:30PM EST			
Post Reg SCI Test Confirmation	Not required	Post Reg SCI Test Confirmation: contact marketops@longtermstockexchange.com when complete	contact mops@memx.com when complete	Contact trading Operations when complete		Participants to fill out the checklist on the alert return via email to options helpdesk @nasdaq.com by following Monday	Completed Checklist by Email required per Test Script
Reg SCI Post Testing Dates	On request	On request	N/A			made available upon request	
Comments							

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Pre-Test and Post Test Requirements and Guidelines

	OCC ✓	OTC Link ✓	SIAC ✓	UBS-ATS ✓
Availability for Pre Testing	Yes	Yes*	Yes	Yes
Availability for Post Testing	Yes – validation of prod to prod connectivity once testing is complete and OCC production environment is back up	No	No	No
Pre- Testing Required	Yes	Yes*	Strongly recommended	Strongly recommended
Post - Testing Required	No (Optional)	No	No	No
Connectivity Testing Required	Yes	No	Strongly recommended	Strongly recommended
Test Contact Information	**OCC Help Desk:** 800-544-6091 or 800-621-6072 occDRtest@theocc.com	**Bart Krezalek** bart@otcmarkets.com 212-896-4475 **Vlad Brodsky** vlad@otcmarkets.com	**SIAC PPM:** CTA-OPRA-Support@siac.com **212-656-8177** **SIAC Operations:** operations@siac.com 212-896-2818	**Charles Seremetis** Charles.seremetis@ubs.com 212-713-2080
Reg SCI Pre Testing Dates	• 07/24/2021 • **10/2/2021**	Will work directly with participants	• **9/25/2021** • 10/2/2021	• **9/25/2021**
Comments on Reg SCI Pre Testing	Mandatory Pre-Testing for all OCC participants and will consist of validating connectivity			Offering connectivity testing to DR at any time (coordinate with charles.seremetis@ubs.com)
Post Reg SCI Test Confirmation	Email indicating completion of input & output & test success	Contact trading Operations when Complete	N/A	
Reg SCI Post Testing Dates	N/A			
Comments		* pre-testing requirement focuses only on connectivity		

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Appendix

RegSCI DR Test – DTCC Client Success Criteria

Entity	Input Capabilities	Designee Activity	Input Evidence	Output Capabilities	Designee Activity	Output Evidence	Criteria
FICC	FICC will enable the following capabilities for data submission: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Designees to submit trade input using one of the following interfaces: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Designee will submit evidence of the trade input status	FICC will enable the following capabilities for data inquiry: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee can confirm their capability in one of 2 ways: • Receipt of automated machine readable output from FICC, or; • Verification of FICC data processing through the FICC Web Interface, File Interface, or MQ interface.	Each designee will need to submit evidence for at least one of the following: • Screen shot of the receipt date/time of the message or file sent by FICC to the designee; or; • Screen shot of result of data processing via Web Interface.	Firms can submit evidence for successful receipt of 1 input and 1 output transaction
NSCC	NSCC will enable data submission through FIX	NSCC to send inputs using FIX interface simulation Exchanges to send inputs using FIX interface	Each Exchange will need to submit evidence (screenshots) of trade rejections	NSCC will enable the following capabilities for data inquiry: • Web Interface (Settlement) • File Interface (FTP/NDM) • MQ Interface • FIX	Each designee can confirm their capability in one of 2 ways: • Receipt of automated machine readable output from NSCC, or; • Verification of NSCC data processing through Web Interface, File Interface, FIX or MQ interface.	Each designee will need to submit evidence for at least one of the following: • Screen shot of the receipt date/time of the message or file sent by NSCC to the designee; or; • Screen shot of pre- and post-data processing for the test transaction via Web Interface	Firms can submit evidence for successful receipt of 1 output transaction
DTC	DTC will enable the following capabilities for data submission: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Designees to send inputs using one of the following interfaces: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee will need to submit evidence for inputs being sent to DTC	DTC will enable the following capabilities for data inquiry: • Web Interface • File Interface (FTP/NDM) • MQ Interface	Each designee can confirm their capability by validating trade processing through: Web Interface, File Interface, or MQ interface.	Each designee will need to submit evidence for at least one of the following: • Screen shot of the receipt date/time of the message or file sent by DTC to the designee; or; • Screen shot of pre- and post-data processing for the test transaction	Firms can submit evidence for successful receipt of 1 input and 1 output transaction
ITP	ITP will enable the following capabilities for data submission: • Web Interface • File Interface (CCF/MTI) • MQ Interface • FIX	Designees to send inputs using one of the following interfaces: • Web Interface • File Interface (CCF/MTI) • MQ Interface • FIX	Each designee will need to submit evidence for inputs being sent to ITP	ITP will enable the following capabilities for data inquiry: • Web Interface • File Interface (CCF, MTI) • MQ Interface • FIX	Each designee can confirm their capability in one of 2 ways: • Receive automated machine readable output from ITP, or; • Validate the trade processing through: Web Interface, File Interface, or MQ interface	Each designee will need to submit evidence for at least one of the following: • Screen shot of the receipt date/time of the message or file sent by ITP to the designee; or; • Screen shot of pre- and post-data processing for the test transaction via Web Interface	Firms can submit evidence for successful receipt of 1 input and 1 output transaction

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Additional Symbols / Cusips Information

Dealerweb

• Dealerweb will be using the following test symbols during the test:

Description	Cusip	Unique Instrument ID
Test E-Mini S&P 500 Dec21 / SPY	FUTRESZ1-TESTETFSPY	FUTRESZ21-TESTETFSPY_NYSE
Test AXRZ1 Dec21 / SPY	FUTRAXRZ1-TESTETFSPY	FUTRAXRZ21-TESTETFSPY_AXR
TESTQQQ	TESTQQQ	TESTQQQ_NAVX
TESTSPY	TESTSPY	TESTSPY_NAVX

DTCC (NSCC)

• DTCC (NSCC) will be using the following CUSIPS during the test:

459200101
191216100
594918104
17275R102
345370860
369604 301

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Includsion of 3rd parties/service bureaus in the Reg SCI Test

- Confirmed list of 3rd parties/service bureaus to be included in the Reg SCI test

- Defined the role each 3rd parties/service bureau in supporting the Reg SCI testing (connectivity, market data, quote/order entry, opening/closing processes, trade matching, clearing & settlement, etc.)

- Engaged with identified 3rd parties and service bureaus

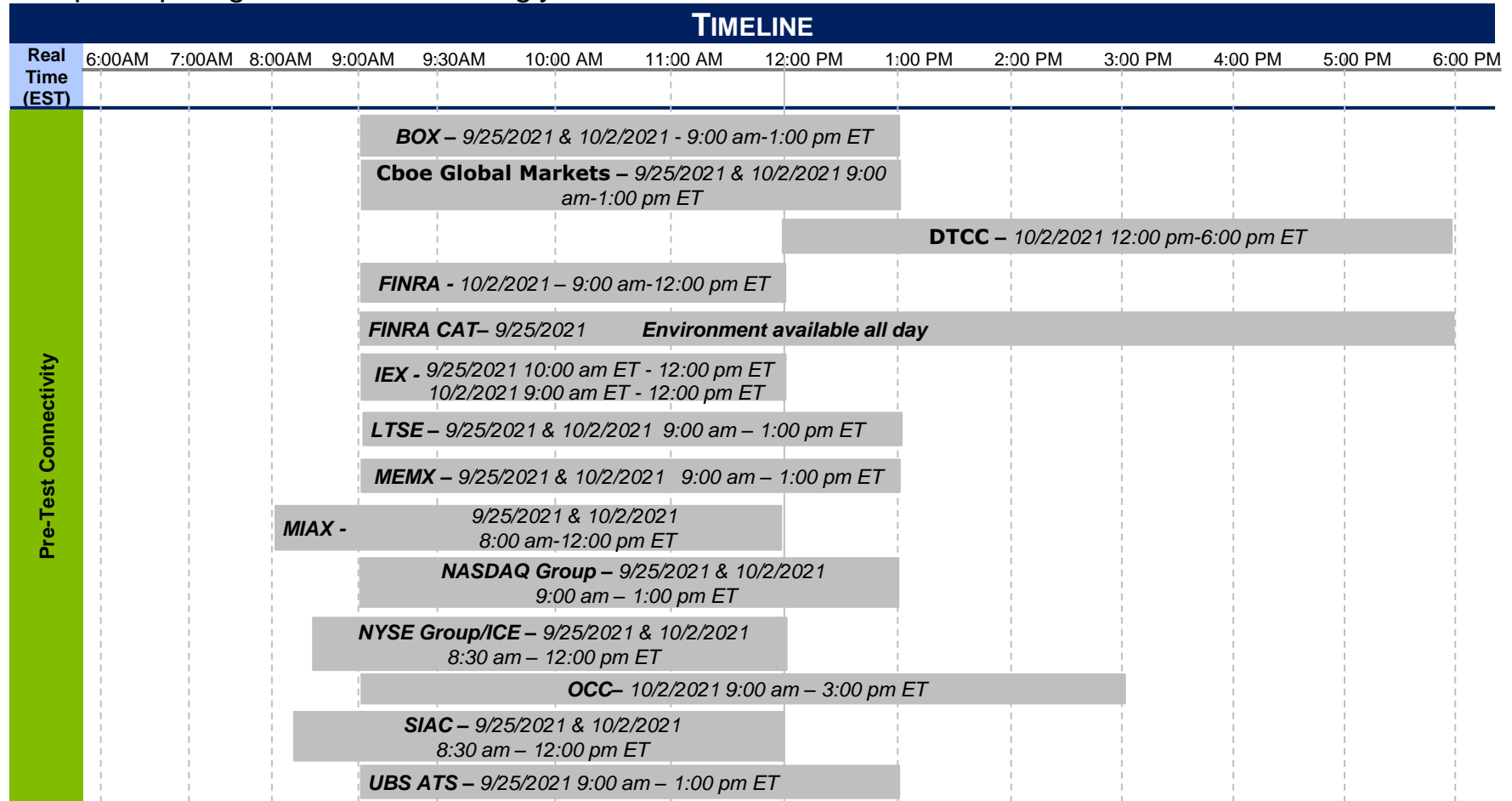| 3rd Party Name	Mentioned by		Participation status	Role Played in Reg SCI Test	Pretesting participation	Comments
	Reg SCI Entity	Member				
Broadridge	✓	✓	Confirmed participation	DTTC Connectivity		DTTC Connectivity for clearing and settlement test
Refinitiv BETA	✓	✓	Participating	DTTC Connectivity		DTTC Connectivity for clearing and settlement test
BlackRock	✓		Confirmed participation	DTTC Connectivity		DTTC Connectivity for clearing and settlement test
Shadow Financial	✓		Confirmed participation	DTTC Connectivity		DTTC Connectivity for clearing and settlement test
FIS	✓	✓	Confirmed participation	Service bureau	Yes	Service Bureau
ION	✓	✓	Not in scope	Service bureau	Yes	Service Bureau
Bloomberg		✓	Not in scope	Connectivity/ Service bureau	Yes	Connectivity as a Service Bureau
Dash	—	✓	Not in scope	Connectivity/ Service bureau		
Fidessa	✓		Not in scope	Connectivity/ Service bureau	Yes	Connectivity as a Service Bureau

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2021 Proposed Coordinated Voluntary Pre-Test Dates

- The proposed coordinated voluntary pre-Reg SCI BD/DR test dates are **9/25/2021 (Primary) and 10/2/2021 (Secondary);** Reg SCI Test Date is 10/23/2021.

SCI Entity	Pre-Testing Required	4-Sept[1]	11-Sep	18-Sep	Primary 25-Sep	Secondary 2-Oct	9-Oct[2]	16-Oct	Comments
BOX	Yes				✓	✓			
Cboe Global Markets**	Strongly Recommended				✓	✓			offer connectivity testing to DR sessions at any time
CME/Btec	No				–	–			
Dealerweb-Tradeweb Mkts	No				–	–			
DTCC	Strongly Recommended					✓			
FINRA*	Strongly Recommended					✓			
FINRA CAT	Strongly Recommended				✓				Pretest will open from 9/1/2021 and 9/25/21 will be a "complete by" date
IEX	Strongly Recommended				✓	✓			
LTSE	No				✓	✓			
MEMX	No				✓	✓			
MIAX Exchanges	Strongly Recommended				✓	✓			Connectivity testing will also be available Monday, October 18, 2021 through Friday, October 22, 2021, between 8:00AM - 5:30PM EST
MSRB	--				–	–			N/A
NASDAQ Exchanges	Yes				✓	✓			
NYSE Group***	Strongly Recommended				✓	✓			
OCC	Mandatory					✓			• 7/24/1 – Optional Connectivity Member participants Pre-Test Date • All participants who are supporting more than just UI related testing will need to complete pre-testing on either 7/24 or 10/2.
OTC Link	No				–	–			
SIAC	Strongly Recommended				✓	✓			
UBS	Strongly Recommended				✓				

1. Labor Day Weekend
2. Columbus Day Weekend

* Applies to all FINRA facilities and products including Fixed Income and TRACE for Treasuries
** BYX/BZX/EDGA/ EDGX/C2/Cboe Options
*** NYSE Chicago – maintains two hot-hot sites and is open to testing at any time during the week

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Pre-Test Day - Outline Timeline

- The coordinated voluntary pre-Reg SCI BD/DR test dates are **9/25/2021 (Primary)** and **10/02/2021 (Secondary)**
- Pre-Test will focus on connectivity testing
- SCI entities will open their systems per the below schedule
- SCI entities who are interested in extending the test further than connectivity testing will notify their participating members accordingly

TIMELINE

Real Time (EST)	6:00AM	7:00AM	8:00AM	9:00AM	9:30AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM

Pre-Test Connectivity

- **BOX –** 9/25/2021 & 10/2/2021 - 9:00 am-1:00 pm ET
- **Cboe Global Markets –** 9/25/2021 & 10/2/2021 9:00 am-1:00 pm ET
- **DTCC –** 10/2/2021 12:00 pm-6:00 pm ET
- **FINRA -** 10/2/2021 – 9:00 am-12:00 pm ET
- **FINRA CAT–** 9/25/2021 **Environment available all day**
- **IEX -** 9/25/2021 10:00 am ET - 12:00 pm ET 10/2/2021 9:00 am ET - 12:00 pm ET
- **LTSE –** 9/25/2021 & 10/2/2021 9:00 am – 1:00 pm ET
- **MEMX –** 9/25/2021 & 10/2/2021 9:00 am – 1:00 pm ET
- **MIAX -** 9/25/2021 & 10/2/2021 8:00 am-12:00 pm ET
- **NASDAQ Group –** 9/25/2021 & 10/2/2021 9:00 am – 1:00 pm ET
- **NYSE Group/ICE –** 9/25/2021 & 10/2/2021 8:30 am – 12:00 pm ET
- **OCC–** 10/2/2021 9:00 am – 3:00 pm ET
- **SIAC –** 9/25/2021 & 10/2/2021 8:30 am – 12:00 pm ET
- **UBS ATS –** 9/25/2021 9:00 am – 1:00 pm ET

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Standard SRO Test Script Template

Review proposed approach to organize the test scripts with the goal of driving greater Reg SCI test standardization

- **Basic** - Reg SCI entities leverage their own test script outline but include standard tagging of key elements within their scripts to standard templates. Participating members to individually extract information for their own work

- **Intermediate** – Reg SCI entities leverage the Standard SRO Test Script Template in a consistent word document format

- **Advanced** – Standardized test scripts across Reg SCI entities aligned with the standard SRO test script

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Regulation SCI Rule requirements

- An SCI entity's BC/DR plan, including its backup systems, each SCI entity shall: (a) establish standards for the designation of those members or participants that the SCI entity reasonably determines are, taken as a whole, the minimum necessary for the maintenance of fair and orderly markets in the event of the activation of such plans; (b) **designate members or participants** pursuant to the standards established and **require participation** by such designated members or participants in **scheduled functional and performance testing** of the operation of such plans, in the **manner and frequency specified by the SCI entity**, provided that such frequency shall not be less than once every 12 months; and (c) **coordinate** the **testing** of such plans **on an industry- or sector-wide basis** with **other SCI entities** [Regulation SCI Rule 1004 and FAQs]

- Conduct the **initial functional** and **performance testing** of **BC/DR plans** with designated members or participants no later than November 2, 2016 [Regulation SCI FAQs]

- SCI entities are **not required to conduct all functional** and **performance testing** at once and in coordination with other SCI entities all at the same time…. if, to meet the requirements of the rule, a single annual test cannot be properly conducted, **SCI entities have flexibility to design their testing to include**, for example, **weekend testing** and **testing** in **segments** over the course of a year [SCI Adopting Release and FAQ's]

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End of PlayBook