

April 2025

DTCC Data Center Rotation: Test Plan

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1. INTRODUCTION

DTCC's Resiliency Strategy focuses on dual and equally important objectives of both strengthening our current resiliency capabilities while in parallel building towards a modern resilient architecture. DTCC has two data centers that currently operate as primary and backup. The primary data center is located in Brooklyn, NY and the backup data center is located in Dallas, Texas.

In 2025, DTCC is evolving its disaster recovery capabilities and enabling the ability for all production processing to operate live out of the Dallas data center through periodic rotation between the data centers. To date, validation of the ability for Dallas to operate production processing is through simulations of planned and unplanned events (see list of current simulations and exercises below). To demonstrate repeatable and sustainable resiliency, a full swing of the data centers will be executed periodically beginning in January 2026 with the initial swing from Brooklyn to Dallas and the return to Brooklyn in March 2026.

In preparation for this, DTCC will be establishing multiple tests in Q3 and Q4 2025 to exercise this capability and to provide clients with the option to connect to DTCC to validate functionality. Based on client feedback, this will be supplemental to the scope of the annual Reg SCI Industry Test with added functionality for client testing, including business processes supporting Equities Clearance & Settlement, Fixed Income Clearing, Institutional Trade Processing, Asset Services and Wealth Management Services.

This document aims to provide an overview of our test approach and test plans for internal and external testing. While DTCC is not mandating client testing, we encourage participation to ensure success. Not all clients need to test; a sample group can validate for the broader population.

2. BACKGROUND

DTCC undertakes various tests and exercises to ensure its capability to operate the production environment from the Dallas data center for an extended period of time. These include:

- Client Network Rotation Every three months, client networks are switched between the Brooklyn and Dallas data centers. This process routes client input and outputs to our Dallas center, without impacting clients.
- Annual Reg SCI test DTC, NSCC, FICC and ITP Matching designate clients to test with these
 entities in the annual Reg SCI Industry Test. Clients have the option to connect from the primary
 or alternate site to DTCC's Dallas data center.
- Client Connectivity Testing Clients that do not participate in the Annual Reg SCI Industry Test are required to schedule a backup test annually to validate connectivity from the client backup site to Dallas data center.

The planned Data Center Rotation will comprehensively demonstrate the organization's ability to manage all production processes from the Dallas data center and to seamlessly transition operations between the two data centers.

DTCC will ensure thorough testing to validate all steps and processes involved in the execution of the Data Center Rotation and to mitigate any unintended impacts.

3. TEST FRAMEWORK

Internal and external testing will be expanded to further confirm the readiness for Data Center Rotation. This section outlines DTCC's testing approach and plans, including the testing schedules and guidelines for clients involved in the testing process.

Overarching Test Approach

DTCC's test scope will validate the necessary capabilities for Data Center Rotation. Additionally, the DTCC test scope will verify that the functionality of on-premises systems, interactions with off-premises systems and connectivity with external stakeholders remain unaffected by the Data Center Rotation.

This testing is conducted as part of our Disaster Recovery ("DR") tests, particularly the Loss of NY Region DR tests, that are executed on the Dallas Production environment. These tests are executed on a test copy of storage to preserve the data integrity of both the Brooklyn and Dallas production environments.

DTCC is mindful of client resources required for testing and intends to employ external test scenarios supplemental to existing Reg SCI scope.

Internal Test Plan

Internal testing has been augmented to include additional end-to-end processing validation such as:

- Enhanced test scripts including the generation of client outputs and execution of full job schedules
- External connectivity between clients and third-parties
- Connectivity and end-to-end testing with Public Cloud applications and services
- User Interfaces
- Performance verification
- Recovery and Resumption of Tiers 4 and 5 services

External Test Plan

Based on comprehensive review of internal test plans and capabilities, it was determined that external tests should focus on verifying the successful transmission of inputs and outputs from the Dallas data center across various connectivity channels and protocols. As mentioned earlier in this document, DTCC does periodically switch the client networks between the Brooklyn and Dallas centers to continuously exercise the ability for the external networks to operate from either data center.

The definition of external test scope involved:

- Reviewing each service and component supported by on-premises applications.
- Evaluating the connectivity channels and communication protocols used by the services, to ensure requisite coverage in tests performed.
- Incorporating internal test plans for each service to derive external / client testing requirements.

Further refinement included:

- Identifying services using the same infrastructure, channels, and protocols where a single test scenario can validate for multiple transaction types.
- Included within the scope of Reg SCI testing, to avoid duplicate effort.

External test scenarios derived from these steps are in Section 4. Detailed test scripts will be provided in June.

External Test Schedule

To provide clients with flexibility, external testing of the Data Center Rotation scenarios will be available on **Saturday, August 23, 2025**, and **Saturday, October 4, 2025**, which is also the Reg SCI pre-test date. Additionally, Reg SCI participants can also test concurrently with Reg SCI testing on **Saturday, October 25, 2025**; this option is not available to non-Reg SCI designated participants.

Clients must confirm their participation and preferred test date by April 30th using the DTCC-provided survey.

Testing on all dates will be from 12 PM EST to 6 PM EST. Start times will be staggered by legal entity and communicated in advance.

External Test Environment – Connection and Access

As for Reg SCI, the Dallas data center will be utilized for the Data Center Rotation external test. Access to the Dallas data center will be restricted to clients and vendors participating in the testing. Upon completion of testing, production processing will resume at the Brooklyn data center. None of the test data from Dallas will be transferred to the Brooklyn data center or used for production processing.

DTCC will assist clients with connectivity to the Dallas data center. Clients will collaborate with DTCC to collect and validate the accuracy of the information for their network connections. Ensuring correct information is essential to allow access through DTCC's firewall for conducting tests.

Connectivity testing is scheduled for June 7, 2025 and July 26, 2025, to verify client connections to the Dallas data center prior to the August and October testing dates. Clients who confirm that they will be participating in the August and/or October test dates are required to participate in the connectivity test.

Client Test Guidelines

This section provides guidelines for clients involved in the testing process.

- Following information will be required from clients:
 - Confirm participation, services to be tested and preferred test date by April 30th via the <u>DTCC-provided survey</u>.
 - Submit network details by May 15th via DTCC test portal. The portal link will be provided by April end (see Section 5 for information on the portal)
- As for the Reg SCI, clients will have the option to test from their production or disaster recovery systems.
- Clients are responsible for expunging any transactions within their own systems that are submitted or received from ANY DTCC system during the test period if those transactions will pose a risk to normal production processes.
- Testing may alter the clients MQ sequence numbers dependent upon what environment the client is transmitting data from. As a result, clients must be able to support re-alignment of MQ sequence numbers, if applicable with DTCC on the following day of the test.
- If a service provider is required for your testing, please ensure the following:
 - Engage contact(s) to confirm participation in support of testing with immediacy and inform DTCC of your intent to use (via testing portal).
 - Firms are responsible for ensuring their service providers are engaged, and support test planning and execution.
- Clients should review personnel requirements for testing:
 - Test Coordinator A single point of contract to facilitate information flow during test planning and to act as test day point of contact in coordinating activities.
 - Firewall / Network Specialist To ensure high level of precision and fidelity of information surrounding network connection for successful testing.
 - Business Operations To effect trade entry required for testing, Business Ops staff is typically leveraged and a key component of both planning and execution phases.

4. TEST SCENARIOS

This section outlines the test scenarios by legal entity, designed to validate data transmission across various connectivity channels and protocols. The scope considers validations obtained from Reg SCI external test to avoid duplicated effort.

Data Center Rotation testing is optional; clients can select scenarios based on their specific requirements. Detailed test scripts will be published in June.

Entity	Service	Scenario	Input Interface(s)	Output Interfaces(s)
Asset	Claims	Client to submit and affirm/match	Portal	Portal
Services	Processing	a claim.		
	Cash and Stock	DTC can receive BMA file from	File	N/A
	Distributions	agent.		
	(BMA FILE)			
	Cash and Stock Distributions	DTC can receive MBS file.	File	N/A
	(Fed File)			
	Cash and Stock Distributions	DTC can receive DCN file from agent.	File	N/A
	(DCN FILE)			
	Maturity Presentments for MMI Issues	IPA to input event details through PAMM.	Web	N/A
	Maturity Presentments for MMI Issues	IPA to submit Full Call through Settlement Web.	Web	N/A
	Pre-Refundings (Full or Partial)	DTC can receive refunding file.	File	N/A
	Redemption Announcements	DTC can receive REDCAL file from agent.	File	N/A
	(REDCAL File)			
	Automated Subscription Offer Program (ASOP)	 Client to receive instruction files and approve Letter of Agreements. Client to instruct through Voluntary Reorg Instructions. 	PBS, API, MQ	File
	DTC TaxRelief	Client to access CA web and submit elections for DTC TaxRelief.	Web, MQ	Web, MQ
	U.S. Tax Withholding Service	Client to submit elections for US tax.	Web, File	Web
	Legal Notices	Client to submit notice through Issuer Agent Portal (Web).	Web	N/A
	Proxy Record Date Notices (CCF	Client receives CCF Proxy via Security Position Reports.	N/A	File
	Specifically)			
	Tabulation Agent Services	Tabulation Agent receives data file.	N/A	File

Entity	Service	Scenario	Input Interface(s)	Output Interfaces(s)
	DWAC Centralized Billing Service	Transfer Agent creates a new fee for product of choice.	Portal	Portal
	Electronic Safekeeping	Agent will access Securities Processing Application to sign off on FAST balances.	Portal	Portal
	Custody Reorganization Service	Client will route corporate action event from its current inventory prep box to the custody reorg prep box.	File, MQ, PBS	File, MQ, PBS
	New York Window Service	 Client to submit a Withdrawal. Client to submit a Receive. Client to submit an Envelope Settlement Service transaction. 	File, MQ, PBS	File, MQ, PBS
	Non-Cede Custody Service	 Client to submit a Withdrawal. Client to submit transfer instruction. 	File, MQ, PBS	File, MQ, PBS
	Branch Deposit Service (BDS)	• Client to submit a deposit and review image.	File, MQ, PBS	File, MQ, PBS
	Deposit Automation Management (DAM)	Client to submit DAM deposit.	File, PBS	File, PBS
	Deposit/Withdraw al at Custodian (DWAC)	Client to submit DWAC withdrawal or deposit.	File, MQ, API Portal	File, MQ, API
	Reorganization Deposits Service	Client to submit a reorg deposit.	File, PBS	File
	Restricted Deposit Service (RDS)	Client to submit an RDS deposit or withdrawal	File, MQ, PBS	File, MQ, PBS
	Withdrawal by Transfer (WT) - Physical	Client to submit a WT request.	File, PBS	File
	New Issue Eligibility	Client to submit an eligibility request and validate a successful response message was received from DTC.	FTP, MQ	FTP, MQ
Equities Clearing	Automated Customer Account Transfer	Client to submit a transfer initiation.	API, MQ, File, Web	MQ, File, Web
	Buy-Ins Processing	Client to submit a Buy-in.	Web, MQ	N/A
	Delivery Priority	Client to confirm access to CNS web application.	Web	N/A
	Short Position Exemptions	Client to submit exemption instructions.	Datatrak	N/A
	Voluntary Corporate Actions Processing	Client to confirm access to CNS Voluntary Corporate Actions system.	Web	N/A
	CMU Trade Comparison	Client to submit trades to CMU and confirm receipt of output.	Web, MQ	MQ, MRO

Entity	Service	Scenario	Input Interface(s)	Output Interfaces(s)
	MSRB Trade Reporting	Client to submit messages and confirm receipt of output.	MQ	MQ
	Cost Basis Reporting Service (CBRS)	Client to submit asset and tax lot records.	Web, File	Web, File
	ETF Create/Redeem (Trade Capture/Reportin g)	Client to submit ETF Create and Redeem input files and confirm receipt of output files.	Datatrak, MRO	Datatrak, MRO
	ETF Portfolio Composition Files (PCF)	Client to submit Portfolio Composition files and confirm receipt of output files.	Datatrak, MRO	MRO
	OW Comparison	 Client to submit transaction information Contraparty to receive comparison advisory. Both parties to respond to the advisory. 	Web, MQ	MRO
FICC	Auction Takedown Service	Client to submit auction file.	Batch via SFTP	N/A
	DVP Trade Comparison	Client to connect to API.	API	N/A
	GCF Repo Index	Receive transmission of GCF Index information.	N/A	SFTP
	GCF Repo Netting and Settlement Service	Client to confirm receipt of Settlement file.	N/A	File
	Sponsored GC Service	Client to submit Sponsored GC file.	File	N/A
	EPN Messaging	Client to submit EPN messages for allocation after trade submission.	API	API
ITP	ALERT - Core Services	 Client to submit a request for alerts and confirm response message received. Client to submit a GetAccounts request and confirm response message received. 	Broker Direct – API, GC Direct - MQ	Broker Direct – API, GC Direct - MQ
	CTM Core Service	Client to submit block and allocation messages.	FIX APPIA (F5 VPN), MoveIT CMI SFTP, CMI Web HTPPS, CSSS	FIX APPIA (F5 VPN), MoveIT CMI SFTP, CMI Web HTPPS, CSSS
	TradeSuite ID Core Service	 Client to submit confirm. Client to receive confirm and send affirmation. Client to confirm receipt of output in a SWIFT format. 	CCF, TradeHub	CCF, TradeHub, SWIFT
RDS	A modified approac	ch to test scenarios for Repository ar	d Derivatives Serv	rices is pending.

Entity	Service	Scenario	Input	Output
Settlement	End of Day Money Settlement	Client to confirm receipt of file.	Interface(s) Web	Interfaces(s) MRO
	Memo Segregation	Client to submit file with DO, PO, Collateral Loan transactions.	File	File
Wealth Management – AIP & Insurance	Core AIP Transaction Processing	 Client to submit inbound file with data to reject, and receive confirm back. Client to receive autoroute file. Client to create a Security General Profile record. 	File, UI	File, UI
	Paperless Replacements Processing (RPL)	Client to send and receive messages.	API	API
	Attachments (ATT)	Client to send and receive messages.	Web Service	Web Service
	Financial Activity Reporting (FAR)	Client to send and receive files.	File	File
	Fee and Expense Transmission (FET)	Client to upload FET file.	UI	UI
Wealth Management	Fund/SERV	Client to submit order and respond back with confirm.	Batch, MQ, Web, UTF	Batch, MQ
– Mutual Funds	MF Info Xchange	 Client to submit and confirm receipt of a Large Trade Notification. Client to submit a Div Schedule Client to submit and confirm receipt of a fund event. 	API, Web	API, Web
	Daily Price and Rate File	Client to submit and confirm receipt of prices.	Batch, MQ	Batch, MQ
	Profile II Distribution Database	 Client to submit and confirm receipt of file. Client to enter distribution information. 	Batch	Batch
	Security Issue Database	 Client to send and receive files. Client to submit change request. Client to access Profile Security UI. 	Batch	Batch
	Networking B50/B52	Client to submit and confirm receipt of file.	Batch, Web	Batch
	Networking Dividend File	Client to submit and confirm receipt of file.	Batch	Batch

5. TEST SUPPORT

Test Portal

An integrated portal has been set up for client testing, offering a centralized location for test information. It will collect business and connectivity details and proof of successful testing from clients. Test support information including test schedules, test scripts and guides will be published to clients via this portal.

DTCC will provide the link to all participating firms by April 30th.

Next Steps

- Clients must confirm their participation, services to be tested and preferred test date by April 30th using the <u>DTCC-provided survey</u>.
- Submit network details by May 15th via DTCC test portal. The portal link will be provided by April end (see Section 5 for information on the portal).

Client Inquiries

For inquiries or further details regarding the Data Center Rotation, kindly contact your Relationship Manager or reach out to us at DTCCEnterpriseResiliencyOffice@dtcc.com.

REVISION HISTORY

DTCC Data Center Rotation: Test Plan

Version	Date
Version 1	March 2025
Version 2	April 2025

Change Log:

Туре	Description	Page No.
Text	Edits to scenarios for Repository & Derivatives Services	8

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