



DISASTER RECOVERY FAQs

These Disaster Recovery (DR) FAQs apply to all the NYSE platforms: the NYSE markets (NYSE Equities, NYSE Arca Equities, NYSE American Equities, NYSE Arca Options, NYSE American Options, and NYSE Bonds), as well as Global OTC and the NYSE TRF.

QUICK REFERENCE

- Customers should use the same IDs for connecting to DR environments as are used in Production
- Customers must change their systems to connect to DR IP Addresses. This includes all order entry, reporting, and quoting sessions, as well as any other systems connected to NYSE Production Environments
 - LCN/LLN connections in Mahwah cannot be used to connect to Cermak DR
- Customers must accept multicast Market Data flow from the NYSE platforms' DR source networks

FREQUENTLY ASKED QUESTIONS

GENERAL QUESTIONS

1. **Question:** Do the NYSE platforms perform DR testing in which customers can perform connection, order entry, drop copy, trade reporting, etc.?

Answer: Yes. The NYSE platforms perform multiple weekend tests each year during which customers can utilize their DR sessions to test the NYSE platforms' DR environments.

2. **Question:** Do the NYSE platforms perform or allow DR testing during the week?

Answer: No. While Production site systems are up, connections to the DR site systems are blocked.

3. **Question:** If I want to test with the NYSE platforms' DR on a particular weekend, and there is no test scheduled, can arrangements be made for me to test my connections?

Answer: The NYSE platforms host several customer DR tests each year and participate in the RegSCI/SIFMA industry-coordinated tests. To receive notifications regarding upcoming DR test opportunities for the NYSE platforms, please subscribe to NYSE Trader Updates at

www.nyse.com/subscriptions. Individual DR testing requests may be requested through the NYSE Relationship Management team. Requests will be accommodated based on availability.

4. **Question:** Where is the DR site for the NYSE platforms?

Answer: The DR site for the NYSE platforms is located in the Cermak Data Center in Chicago, IL.

ORDER ENTRY / DROP COPY / TRF / GLOBAL OTC / QUOTING

5. **Question:** If I currently connect to sessions in Mahwah, will those same sessions be available in Cermak?

Answer: Yes. The session information, including the LoginID, SenderCompID and TargetCompID, and configuration of features like max order size, self-trade prevention, cancel on disconnect, etc. will be identical to each Customers' current Production sessions. However, targeted DR IP Addresses and ports will be different for Cermak DR. For all Pillar Native Gateway, UGW FIX & Binary, and NYSE Binary CCG sessions, the port number is the same as your current port in Production. For NYSE CCG FIX, NYSE Arca Options FIX, and NYSE American Options FIX, the port number may be different from Production and DR.

6. **Question:** Who can I contact to obtain the DR information for my sessions?

Answer: The Connectivity team is available by phone or email:
Tel: (212) 896-2830 Option 2, 1
E-Mail: connectivity@nyse.com

7. **Question:** If I target my Mahwah Production IP and the relevant NYSE platform is running out of Cermak DR, will my connections be redirected from the Production IPs to the DR site?

Answer: No. Connections to Production IPs will not be redirected to DR. Customers must target the DR IP and Port for the session(s) at the DR site.

8. **Question:** Can I connect to both the Production and the DR site at the same time?

Answer: No, only one site is available at a time. When the Primary site is up, the DR site is down; and when the DR site is activated, the Primary site is down.

9. **Question:** What are the addresses that I would need to permission order flow to when one or more of the NYSE platforms are operating in DR?

Answer: It depends on the gateway. Below are the networks for each order entry and quote API type, by platform:

NYSE Equities

Application	Type	API	IP Range	Port Range
BCCG / UTP Direct	Order Entry	Binary	162.68.193.42-51	54207
CCG	Order Entry	FIX	162.68.193.13-37	10000-13000
Drop Copy	Drop Copy	FIX	162.68.193.40-41 162.68.193.52-53	23000-23999

NYSE American Equities

Application	Type	API	IP Range	Port Range
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.154.0/23 162.68.158.0/23	40000-49999

NYSE Arca Equities

Application	Type	API	IP Range	Port Range
UGW	Order Entry	Binary	162.68.233.11-20	52201
UGW	Order Entry	FIX	162.68.200.163-166	52209
Legacy	Drop Copy/ Echo	FIX	162.68.200.151-160	51000-52999
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.138.0/23 162.68.142.0/23	40000-49999

NYSE Bonds

Application	Type	API	IP Range	Port Range
Legacy FIX	Order Entry	FIX	162.68.233.25	51000-52999
Legacy Drop Copy	Drop Copy	FIX	162.68.200.151 - 162.68.200.155	51000-52999

NYSE American Options

Application	Type	API	IP Range	Port Range
UGW	Order Entry	Binary	162.68.233.5-10	52201
Legacy FIX	Order Entry	FIX	162.68.233.23-24	51000-52999
TNT	Floor Order Cross	FIX	162.68.233.32	51000-52999
Legacy Drop Copy	Drop Copy	FIX	162.68.200.161	51000-52999
Market Maker Direct	MM Quoting	Binary	162.68.233.129 - 162.68.233.131	47900

NYSE Arca Options

Application	Type	API	IP Range	Port Range
UGW	Order Entry	Binary	162.68.233.1-4 162.68.233.8	52201
Legacy FIX	Order Entry	FIX	162.68.233.21-22	51000-52999
TNT	Floor Order Cross	FIX	162.68.233.33	51000-52999
Legacy Drop Copy	Drop Copy	FIX	162.68.200.162	51000-52999
Market Maker Direct	MM Quoting	Binary	162.68.233.132-134	47900

Global OTC

Application	Type	API	IP Range	Port Range
UGW	Order Entry	FIX	162.68.200.167	52209
Legacy Drop Copy	Drop Copy	FIX	162.68.200.151 - 162.68.200.155	51000 - 52999

NYSE TRF

Before January 8, 2018

Application	Type	API	IP Range	Port Range
TRF FIX	Trade Reporting	FIX	162.68.233.50	51000-52999

After January 8, 2018

Application	Type	API	IP Range	Port Range
TRF FIX	Trade Reporting	FIX	162.68.200.173	51000-52999

MARKET DATA

10. Question: For Market Data from DR, do I need to join new channels to receive data?

Answer: No. Customers will join the same channels as for Production. However, the multicast data customers receive will be from DR source network instead of Production.

Example: NYSE Arca IBF XDP 2.1

Feed Type	Production (Mahwah)	DR (Cermak)
Multicast A	162.69.132.0/24	162.68.132.0/24
Multicast B	162.69.134.0/24	162.68.134.0/24
Multicast A - Ret/Ref	162.69.133.0/24	162.68.133.0/24
Multicast B - Ret/Ref	162.69.135.0/24	162.68.135.0/24

11. Question: Can we make TCP retransmission requests to the Production IPs/Ports?

Answer: No. TCP retransmission requests should be made to the **DR** retransmission server.

Example: NYSE Arca IBF XDP 2.1

Feed Type	Production (Mahwah)	DR (Cermak)
Request Primary	162.69.131.2:1067	162.68.31.1:1067
Request Backup	162.69.131.3:1067	162.68.31.2:1067

12. Question: Will our current retransmission IDs work in DR?

Answer: Yes. Retransmission IDs are synced between Production and DR.

13. Question: Is there a spreadsheet with all the Market Data Production and DR IP/Port/RP information?

Answer: Access the updated spreadsheet here:

www.nyse.com/publicdocs/nyse/data/IP_Addresses.xls

NETWORK CONNECTIVITY (SFTI)

14. Question: Does SFTI have a presence at Cermak?

Answer: Yes. Please verify with SFTI (or your firm's network provider) to ensure your service is provisioned to reach the relevant NYSE platform's DR site.

15. Question: Can I use my SFTI IP service to connect to the DR site?

Answer: Yes. Customers should contact the SFTI Sales Engineering team to review their existing connectivity setup. The SFTI team can recommend any updates or changes that may be required to allow access the relevant NYSE platform's DR destination via the SFTI IP service.

16. Question: Can I use my Mahwah SFTI IP to connect to the DR site?

Answer: No. A DR event affecting the NYSE platform(s) may also affect the Mahwah SFTI access center. For that reason, customers are advised to also connect to a SFTI location outside of Mahwah for resiliency.

17. Question: Can I use my Mahwah SFTI LCN and LLN connections to connect to the DR site?

Answer: No. SFTI LCN and LLN cannot be used to connect to the NYSE platforms' DR services

18. Question: Does my Rendezvous Point (RP) need to change to connect to Cermak?

Answer: This depends on the service used to access the NYSE platforms' systems. Please contact SFTI to verify.

19. Question: How do I contact the SFTI Sales Engineering and Network operations groups?

Answer: Please contact the SFTI Sales Engineering and Network operations groups using the information below:

For sales, provisioning and general enquiries
SFTI Sales Engineering
Tel: (212)-896-2830, Option 3 / +44 (0)2074294530
E-Mail: SFTI-SalesEngineering@theice.com

For support and troubleshooting
SFTI Network Operations
Tel: (770) 661-0010, Option 1
E-Mail: clientnetworks@theice.com