

DISASTER RECOVERY FAQs

These Disaster Recovery (DR) FAQs apply to the following NYSE platforms: the NYSE markets (NYSE, NYSE American Equities, NYSE Arca Equities, NYSE Chicago, NYSE National, NYSE American Options, NYSE Arca Options, and NYSE Bonds), as well as Global OTC and the FINRA/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 connections on the refreshed platform in the Mahwah Data Center can be used to connect to the Cermak Data center. LCN connections that have not yet moved to the refreshed platform cannot be used to connect to Cermak.
- LLN connections in Mahwah Data Center cannot be used to connect to NYSE platforms in the Cermak Data Center
- 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 primary 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 may be different for Cermak DR. For all Pillar Native Gateway, UGW FIX & Binary the port number is the same as your current port in production. For NYSE CCG 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

Application	Type	API	IP Range	Port Range
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
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.176.0/23 162.68.180.0/23	40000-49999

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
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.138.0/23 162.68.142.0/23	40000- 49999

NYSE Chicago

Application	Type	API	IP Range	Port Range
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.90.0/23 162.68.94.0/23	40000- 49999

NYSE National

Application	Type	API	IP Range	Port Range
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.75.0/23 162.68.78.0/23	40000- 49999

NYSE American Options

Application	Type	API	IP Range	Port Range
UGW	Order Entry	Binary	162.68.200.15-19	52201
Legacy FIX	Order Entry	FIX	162.68.200.8 162.68.200.34	51000- 52999
TNT	Floor Order Cross	FIX	162.68.200.11	51000- 52999
Legacy Drop Copy	Drop Copy	FIX	162.68.200.178	51000- 52999
Market Maker Direct	MM Quoting	Binary	162.68.200.190 - 162.68.200.192	47900

NYSE Arca Options - Pillar

Application	Type	API	IP Range	Port Range
Pillar Native Gateway	Order Entry/ Drop Copy	FIX & Binary	162.68.107.0/23 162.68.111.0/23	40000- 49999

NYSE Bonds

Application	Type	API	IP Range	Port Range
Legacy FIX	Order Entry	FIX	162.68.233.25 162.68.233.139	51000- 52999

Global OTC

Application	Type	API	IP Range	Port Range
UGW	Order Entry	FIX	162.68.198.136- 162.68.198.137	52209
Legacy Drop Copy	Drop Copy	FIX	162.68.198.135	51000 - 52999

FINRA/NYSE TRF

Application	Type	API	IP Range	Port Range
TRF FIX	Trade Reporting	FIX	162.68.194.4 162.68.194.5	51000- 52999
TRF Drop Copy	Drop Copy	FIX	192.68.194.8	51000- 52999

PROPRIETARY MARKET DATA

10. Question: For Proprietary 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 Integrated Feed

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

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 or individual session DR IPs for Pillar Publisher platforms.

Example: Legacy XDP

NYSE ArcaBook

Feed Type	Production (Mahwah)	DR (Cermak)
Request Primary	162.69.186.7:1069	162.68.186.7:1069
Request Backup	162.69.186.8:1069	162.68.186.8:1069

Example: Pillar Publisher

NYSE Equities

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.179.250-251 162.68.183.250-251	35000-39999

NYSE Arca Equities

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.139.250-251 162.68.143.250-251	35000-39999

NYSE American Equities

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.155.250-251 162.68.159.250-251	35000-39999

NYSE Chicago

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.91.250-251 162.68.95.250-251	35000-39999

NYSE National

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.75.250-251 162.68.79.250-251	35000-39999

NYSE Arca Options

Application	Type	API	IP Range	Port Range
Pillar Request Server	Proprietary Market Data	Binary	162.68.107.250-251 162.68.111.250-251	35000-39999

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 https://www.nyse.com/publicdocs/nyse/data/IP_Addresses.xlsx

NETWORK CONNECTIVITY (IGN)

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

Answer: Yes. Please verify with IGN (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 IGN HA IP service to connect to the DR site?

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

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

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

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

Answer:

- Refreshed LCN connections in Mahwah can be used to connect to Cermak
- Legacy LCN and LLN connection in Mahwah cannot be used to co connect to Cermak

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 IGN to verify.

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

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

Sales

Tel: US 770 661 0010, Option 3 / EU +44 207 429 4610

Email: iceglobalnetwork-info@theice.com

Customer Engineering - (Provisioning Group)

Tel: US 212.894.5488 / EU +44 (0)207.429.4530

Email: clientprovisioning@theice.com

Network Operations 24x7 - (Production Issues)

US 770 661 0010 opt 1 / EU +44 203 808 6638 opt 1 / APAC +61 3 8593 5999 opt 1

Email: clientnetworks@theice.com