



Securities Industry Automation Corporation  
11 Wall Street, New York, NY 10005

**August 17, 2023**

To: OPRA Multicast Subscribers

Subject: Expansion of OPRA Data Dissemination from a 48-Line to a 96-Line Multicast Network:  
**Industry Test #5 and Global Trading Hours (GTH) New Network Addresses  
Confidence Test - Saturday, August 26, 2023 - Reminder**

**What's New:**

[As previously announced](#), for optimal symbol balancing and line capacity utilization, OPRA will be expanding data dissemination from a 48-line to a 96-line multicast data distribution network.

**Changes Being Made:**

As part of expanding data dissemination from a 48-line to a 96-line multicast data distribution network, and to help facilitate capacity upgrades to the ICE Global Network (IGN), new subnets, rendezvous points, source addresses, and multicast addresses are being introduced (including Global Trading Hours (GTH)). Note that these changes apply to customer connections via both IGN and the NMS Network in Mahwah.

The changes are being made in two phases:

- **Phase 1:** migration of the current Regular Trading Hours (RTH) 48-line symbol distribution schema, and Global Trading Hours to new network subnets, rendezvous points, source addresses, and multicast addresses
- **Phase 2:** migration of the new symbol distribution schema over 96 lines

**When it is Changing:**

Activation of the new network subnets, rendezvous points, source addresses, and multicast addresses for RTH were completed on Monday, July 10, 2023.

**Activation of the new network subnets, rendezvous points, source addresses, and multicast addresses for GTH will be activated on Sunday, August 27, 2023.**

Activation of data dissemination on the [96-line multicast data distribution](#) network is scheduled to take place at start of day, **Monday, October 9, 2023.**

**For detailed schedule information including all industry tests, please consult the OPRA 96-Line Migration FAQ's, [here](#).**

**Testing Opportunities:**

- **Cert System Functional Testing:** New symbol routing test schema
  - Began: Monday, April 3, 2023
  - Ends: Friday, October 6, 2023

– **Confidence Test: Saturday August 26, 2023, 7:00AM-8:30AM, ET**

- **OPRA GTH**
  - a) (7:00AM-8:30AM): Primary Data Center on new network addresses preparation for go-live
- **The test plan can be located on page 3**

– **Industry Test #5: Saturday August 26, 2023, 9:00AM-3:15PM, ET**

- **OPRA**
  - a) Session 1 (9:30AM-12:00PM): OPRA Primary and Secondary Data Centers with new 96-line symbol distribution schema
  - b) OPRA Restart (12:00PM-12:45PM)
  - c) Session 2 (12:45PM-3:15PM): Capacity testing with new 96-line symbol distribution schema
- **The test plan can be located on page 4**

**OPRA subnets, rendezvous points, source addresses, and multicast addresses can be found in the appendices of the Common IP Multicast Distribution specification [here](#).**

***Data Subscribers who receive OPRA from connectivity service providers other than ICE Global Network (IGN) or the NMS Network must contact their connectivity service providers to coordinate testing.***

**Test Registration**

**Each OPRA Data Subscriber participating in the test should register at [CTA-OPRA-Support@siac.com](mailto:CTA-OPRA-Support@siac.com) .**

**Technical Inquiries**

- NMS Product Management Support Email: [CTA-OPRA-Support@siac.com](mailto:CTA-OPRA-Support@siac.com)
- NMS Production Management Support Line: 212-656-8177, Option 2 (Monday through Friday, 9:00 AM-5:00 PM ET)

## OPRA GTH Migration to new network subnets, rendezvous points, source addresses, and multicast addresses

Test Date & Time: Aug 26, 2023, 7:00 AM to 8:30 AM ET (Approximate)

### Hourly Test Script

#	Time	Test Category	Action By	Test Description	Expected Results
Both Primary Data Center and Disaster Recovery Data Center on NEW Output Multicast Network					
Friday, August 25					
1	8:30:00 PM - 9:30:00 PM	SOD	OPRA	OPRA Global Trading Hours (GTH) Production on the New Output Multicast addresses for both Realtime and Retransmission lines (Refer to Common IP Multicast Distribution Network Specification for network addresses).	
				OPRA GTH to trigger Start of Day message on the new Output Multicast lines	Start-of-Day messages published over the new Output Multicast lines followed by the multicast Line Integrity messages every 10 seconds until the participants begin to generate data
Saturday, August 26					
2	7:00:00 AM	Participant Connectivity/Input	CBOE	CBOE to establish connectivity for OPRA GTH Input lines	CBOE establish connections
				CBOE to start submitting Quote and Trade data	Quotes and trades accepted and disseminated via the new multicast output lines
3	7:30:00 - 8:30:00 AM	Data Verification	CBOE	CBOE to continue submitting Quote and Trade data	Data Subscribers to verify Data over the new Output Multicast lines
4	8:30:00 AM			End of test	

# OPRA Migration to new network subnets, rendezvous points, source addresses, and multicast addresses

Test Date & Time: Aug 26, 2023, 9:00 AM to 3:15 PM ET (Approximate)

## Hourly Test Script

#	Time	Test Category	Action By	Test Description	Expected Results
Primary Data Center on NEW Output Multicast Network with 96-Line Traffic Distribution					
1	1:30:00 AM	SOD	OPRA	OPRA Production site on the New Output Multicast addresses for Realtime and Retransmission lines, on the <b>96-line Traffic Distribution</b> . (Refer to Common IP Multicast Distribution Network Specification for network addresses) OPRA to trigger Start-of-Day message on the new Output Multicast lines	Start-of-Day messages published over the new Output Multicast lines followed by the multicast Line Integrity messages every 10 seconds until the participants begin to generate data
2	1:30:00 - 9:30:00 AM	Participant Connectivity/Input	Participants	Participants to establish connectivity for OPRA Input lines Participants to start submitting Quote and Trade data	Participants establish connections Quotes and trades accepted and disseminated across the 96-lines via the new multicast output lines
3	9:30:00 AM	Market Open	OPRA	Market Open	
4	9:30:00 - 10:30:00 AM	Data Verification	Participants	Participants to continue submitting Quote and Trade data	Data Subscribers to verify Data over the new Output Multicast addresses across the 96-lines
5	12:00:00 PM			End of Session (Note - An End-of-Day message will not be triggered by OPRA, but system will be rebooted for next test)	
SYSTEM RESTART - OPRA to run End of Day, reboot and run Start of Day to bring up system in a clean state (No Network change during this restart)					
Capacity Test for the 96-Line Traffic Distribution over the NEW Output Multicast Network					
6	12:45:00 PM	SOD	OPRA	OPRA on the New Output Multicast addresses for Realtime and Retransmission lines on the new 96-line Traffic Distribution OPRA to trigger Start-of-Day message on the new Output Multicast lines	
7	01:00:00 - 2:00:00 PM	Capacity Test	OPRA	OPRA to simulate data for Capacity Test - 20M msg/sec to 11M msg/sec, each rate maintained for 1 second (total 10 seconds) - Pattern repeated for 60 minutes	
8	02:15:00 - 3:15:00 PM	Capacity Test	OPRA	OPRA to simulate data for Capacity Test - Initial Rate = 1M msg/100ms. Rate will be maintained for 4 minutes - Rate will increase by 1M msg/100ms every 4 minutes, with highest rate at 15M msg/100ms - Total duration = ~ 60 Minutes	
9	3:15:00 PM			End of Test	