November 28, 2023

To: OPRA Multicast Subscribers

Subject: Expansion of OPRA Data Dissemination from a 48-Line to a 96-Line Multicast Network: Industry Test #8 with Revised Symbol Distribution - Saturday, December 9, 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.

Go-Live Date:
The Go-Live date of data dissemination on the 96-line multicast data distribution network will take place at start of day, Monday, February 5, 2024.

Revised 96-Line Symbol Distribution:
The final symbol routing distribution has been revised based upon recent traffic patterns, and are available as CSV and Excel files.

Test Schedule:

- Saturday, December 9, 2023
  - Capacity test only with revised symbol distribution schema
  - Time: 9:25 AM to 11:35 AM, ET

Additional Industry Tests (with the revised symbol distribution schema):

- Saturday, January 20, 2024 - Functional and Capacity Tests

The Confidence Test will take place on Saturday, February 3, 2024.

For detailed schedule information including additional tests, please consult the OPRA 96-Line Migration FAQ’s, here.

Other Testing Opportunities:

- Cert System Functional Testing: New symbol routing test schema
  - Began: Monday, April 3, 2023
  - Ends: Friday, February 2, 2024

- Test replay dissemination with the revised 96-line distribution schema will be available every weeknight over Playback Test IP’s (not Production IP’s) between 8:00pm and 9:00pm ET (15-minute period; variable time dependent on completion of afterhours), began October 23, 2023.

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 tests should register at CTA-OPRA-Support@siac.com.

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

<table>
<thead>
<tr>
<th>#</th>
<th>Time</th>
<th>Test Category</th>
<th>Action By</th>
<th>Test Description</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9:25:00 AM</td>
<td>SOD</td>
<td>OPRA</td>
<td>OPRA on the New Output Multicast addresses for Realtime and Retransmission lines on the new 96-line Traffic Distribution</td>
<td>OPRA to trigger Start-of-Day message on the new Output Multicast lines</td>
</tr>
<tr>
<td>2</td>
<td>9:30:00 - 10:30:00 AM</td>
<td>Capacity Test</td>
<td>OPRA</td>
<td>OPRA to simulate data for Capacity Test</td>
<td>- Initial Rate = 1M msg/100ms. Rate will be maintained for 4 minutes</td>
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<td></td>
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<td>- Rate will increase by 1M msg/100ms every 4 minutes, with highest rate</td>
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<td>at 15M msg/100ms</td>
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<td>- Total duration = ~ 60 Minutes</td>
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Test Date & Time: Dec 9, 2023, 9:25 AM to 11:35 AM ET (Approximate)

Hourly Test Script

1 9:25:00 AM SOD OPRA Capacity Test for the 96-Line Traffic Distribution

2 9:30:00 - 10:30:00 AM Capacity Test OPRA OPRA to simulate data for Capacity Test

3 10:35:00 AM - 11:35:00 AM Capacity Test OPRA OPRA to simulate data for Capacity Test

4 11:35:00 AM End of Test