OPRA Dynamic Symbol Rebalancing

Frequently Asked Questions

Options Price Reporting Authority (OPRA) | Securities Industry Automation Corporation (SIAC)

Version: 1.0 | Last Updated: August 25th, 2026

SECTION 1: OVERVIEW

Q1. What is OPRA Dynamic Symbol Rebalancing, and what is changing?

OPRA is replacing its current quarterly, alpha-range-based traffic distribution methodology with a daily rebalancing approach. Under the existing model, options series are mapped to fixed output multicast lines based on the alphabetical range of the underlying symbol, combined with odd/even expiration date and Put/Call splits.

With Dynamic Symbol Rebalancing, each underlying symbol is mapped nightly to between 1 and 16 (non-consecutive) output multicast lines based on historical burst rates, sustained throughput, and volume patterns. Assignment can change daily; and Puts/Calls as well as odd/even expiry dates for the same symbol can be distributed over the same line.

Two new mechanisms communicate the mapping to subscribers for each session:

- Series Mapping File — a nightly CSV file available on FTP before the session begins.
- Series Mapping Message (Category R Type A) — a real-time message published at Start of Day over each series' assigned line and simultaneously over a new dedicated line 220.

Q2. Why is OPRA making this change?

The current quarterly distribution was designed for a smaller, less volatile options universe. As the number of active series and daily message rates have grown significantly, the current mapping creates uneven line loads. Daily rebalancing allows OPRA to distribute traffic more evenly based on actual observed patterns, improving overall throughput efficiency and capacity headroom.

Q3. When does Dynamic Symbol Rebalancing go live in production?

The activation date is Monday, November 23, 2026.

Q4. Does this change affect the OPRA Global Trading Hours (GTH) session?

No. Dynamic Symbol Rebalancing applies only to the OPRA Regular Trading Hours (RTH) session. GTH will continue to use the current distribution over lines 201–204.

Q5. Will the total number of output multicast lines change?

Trade and quote data will continue to flow over lines 1–96 (96 lines). A new dedicated line 220 is being added to carry Series Mapping Messages for all series. This line carries only Series Mapping Messages (Category R Type A) and no trade or quote traffic. For multicast addresses for line 220, refer to the Common IP Multicast Distribution Network Specification (see Q28 for full reference list).

SECTION 2: SERIES DISTRIBUTION RULES

Q6. How many lines can a single underlying symbol be assigned to?

A symbol can be mapped to a minimum of 1 and a maximum of 16 output lines. The assigned lines need not be consecutive. Under the current quarterly distribution model, a single symbol is spread across at least 2 and at most 8 lines (due to the odd/even and Put/Call split). Daily rebalancing eliminates those structural constraints.

Q7. Can Puts and Calls, or odd and even expiry dates, for the same symbol be on the same line?

Yes. Under daily rebalancing, there is no restriction that separates Puts from Calls or odd-expiry from even-expiry series of the same symbol. All series for a given underlying can be assigned to the same set of lines, and those series will be intermixed on those lines.

Q8. How are root symbols with different names for the same underlying handled (e.g., SQQQ, SQQQ1, SQQQ2)?

Load balancing is performed at the underlying symbol level. Series with different root symbols that belong to the same underlying (for example, following a corporate action) will be mapped to the same set of output lines.

Q9. What happens to Flex options series?

Messages for Flex series — any options series whose symbol begins with a numeric character will continue to be routed over line 4, same as today. The Series Mapping File and Series Mapping Messages do not include Flex series. Flex trades are reported as free-form Administrative (Category C) messages on line 4.

Q10. How are Administrative, Underlying Value, and Control messages routed?

- **Administrative (Category C) messages** — routed only over line 4, same as today.
- **Underlying Value / Index (Category Y) messages** — routed only over line 4, different from today where under the current quarterly distribution they are routed over the first even day line for calls.
- **Control messages** (SOD, EOD, Start/End of Summary, Start/End of Open Interest, DR Activation, Line Integrity, Reset Block Sequence Number) — can be published over all 96 lines, same as today.

Q11. Once a series is assigned a line for the day, can it move intraday?

No. Once an options series is assigned to an output line, all messages for that series remain on that line for the entire session. There is no intraday remapping of existing series. Future Day 2 design may consider rebalancing intraday to handle latency degradation on skewed lines, but this is not in scope for the initial release.

SECTION 3: SERIES MAPPING FILE

Q12. What is the Series Mapping File, and where is it available?

The Series Mapping File is a nightly comma-delimited (CSV) file that maps every option series to the output line it will be assigned for the next OPRA session. It is generated based on the options series information received in the Open Interest files from OCC at the end of each day and is available at ftp.nyse.com/opra_symbol_files. The file schema is defined in Appendix E of the OPRA Pillar Output Specification (see Q28 for full reference list).

Q13. How many Series Mapping Files are published each night, and when?

Two files are published each trading day under normal conditions:

- **Initial File (~7:00 PM ET)** — Full rebalance of all non-expired series carried forward from the prior session (OCC Open Interest file typically not yet received). This is the only time a full rebalance is run.
- **Second File (~11:30 PM ET)** — Incorporates new series from the OCC Open Interest file (if received). Existing mappings from the initial file are preserved unchanged; only new series/symbols receive line assignments. This file supersedes the initial file.

The second file is always generated and uploaded at ~11:30 PM regardless of whether there is a delta — this ensures a predictable "latest file" for subscribers to retrieve.

Files are named OPRASymbolMapping_YYYYMMDD_HHMMSS.csv. If generated past midnight, the filename carries the next business day's date. Subscribers should always consume the file with the most recent timestamp.

Files from the prior session are cleared from the FTP directory at the end of each session at approximately 6:05 PM ET.

Q14. What happens if the OCC Open Interest file is delayed past 11:30 PM cutoff?

If the OCC file has not arrived by 11:30 PM, the second file is generated and uploaded on schedule without the new series. When OCC processing subsequently completes — whether before or after the next session's Start of Day — a new Series Mapping File is generated and uploaded containing the original series plus the delta. Mappings that have already been established are not changed. If the session has already started, Series Mapping Messages are immediately published for the newly added series/symbols.

Q15. Can there be more than two files in the FTP directory?

Yes. If a file must be regenerated for any operational reason, additional files beyond the two scheduled ones may appear. In all cases, subscribers should process the file with the most recent timestamp.

Q16. Are all option series included in the Series Mapping File?

Not all series are included. The following are excluded:

- **Expired series** — only non-expired series (carried forward from the prior session, plus new series from the OCC OI file) appear in the file.
- **Flex series** — series whose root symbol starts with a numeric character are excluded.
- **Intraday added series** — series that did not exist at file-generation time (i.e., not present in the OCC Open Interest file processed for that session) are not included. Real-time Series Mapping Messages are the authoritative source for these series (see Section 5)

SECTION 4: SERIES MAPPING MESSAGE (CATEGORY R TYPE A)

Q17. What is the Series Mapping Message, and when is it published?

The Series Mapping Message (Category R, Type A, Participant ID = O) is a real-time message that communicates the output line assignment for each options series. It is published in two scenarios:

- **At Start of Day (~1:30 AM ET)** — for every series loaded for that day, over its assigned output line and simultaneously over the dedicated line 220.
- **Intraday** — whenever a new series is added intraday (i.e., not present at the start of the session and as such not present in the Series Mapping File), a Series Mapping Message is immediately published over the assigned line and over line 220 before any other message for that series is disseminated.

The message contains the series identifier (Security Symbol, Expiration Block, Strike Price Denominator Code, Strike Price) and the Multicast Line Number to which it is assigned.

Q18. What is line 220, and what traffic does it carry?

Line 220 is a new dedicated output line introduced with Dynamic Symbol Rebalancing. It carries Series Mapping Messages for all series (except Flex), republished simultaneously as they are sent to each series' assigned line. This provides a single subscription point for subscribers that wish to receive all series mapping information without subscribing to all 96 lines.

Line 220 does not carry trade or quote data for any options series. However, Control messages (e.g., Line Integrity) can be published over line 220 like any other OPRA output line.

Q19. Are Series Mapping Messages published only once, or refreshed periodically? What if I miss them?

Series Mapping Messages are published once at Start of Day for all series — there is no periodic refresh during the session. The only additional publications are:

- **Intraday series creation** — a Series Mapping Message is immediately published for any series created during the session (see Section 5).
- **Failure recovery** — messages are republished following a DR failover or cold restart, so that reconnecting subscribers can recover the current mapping state.

Subscribers that miss the SOD publication can request retransmission through the standard OPRA retransmission facility. Because line 220 carries all series mapping messages in one stream, retransmission requests can be directed to line 220 rather than to each individual assigned line (see Q28 for the Retransmission User Guide reference).

SECTION 5: INTRADAY SERIES CREATION

Q20. What happens when a new series or underlying symbol is added intraday?

If an input message is received for an options series that does not yet exist in the OPRA session, series is added in OPRA in real time:

- The series is assigned to one of the output lines already mapped to its underlying symbol. If the underlying symbol itself is new, OPRA assigns one or more output lines to it at that point.
- A Series Mapping Message is immediately published over the assigned line and over line 220.
- The input message that triggered the creation is then published over the assigned line.
- All subsequent messages for that series are distributed over that same line for the remainder of the session.

The Series Mapping File is not updated for intraday creations; the real-time Series Mapping Message is the authoritative source for intraday series. Total number of lines assigned to any underlying symbol will not exceed 16.

SECTION 6: SUBSCRIBER IMPLEMENTATION GUIDANCE

Q21. How should subscribers determine which line carries a given series, and which sources should they use?

Three complementary sources are available — the most robust implementation uses all of them:

- **Series Mapping File** — download the file with the most recent timestamp from ftp.nyse.com/opra_symbol_files before the session starts. Useful for pre-session setup and batch processing; covers all known series before the session begins.
- **Series Mapping Messages at SOD (line 220)** — process these real-time messages to confirm or update mappings. Subscribing to line 220 provides all series mappings in a single stream without subscribing to all 96 lines.
- **Real-time intraday Series Mapping Messages** — essential for any series or symbol added after file-generation time. A Series Mapping Message is always published before any other message for a newly added series.

Note: there is no symbol-level routing message summarizing which lines carry a given root symbol. Subscribers must process individual Series Mapping Messages per series to build a complete series-to-line mapping.

Q22. Do subscribers need to subscribe to all 96 lines to receive all trade and quote data?

Yes, if a subscriber wants complete trade and quote coverage. A given symbol can be distributed across up to 16 non-consecutive lines whose assignment changes nightly, so the subscriber's data infrastructure must be capable of receiving all 96 lines. The Series Mapping File and Series Mapping Messages indicate which specific lines to watch for a given series, but do not reduce the subscription requirement.

Q23. How does this change affect retransmission requests for trade and quote data?

Since a series' assigned line can change nightly, subscribers must use the current session's Series Mapping File or SOD messages to determine the correct line before making retransmission requests. Retransmissions of trade and quote data are sent over the dedicated retransmission multicast streams, not over the primary output lines. See Q28 for the Retransmission User Guide reference.

Q24. How does failover or DR activation affect series-to-line mappings?

Each series retains its output line assignment after failover or cold restart. The mapping is persisted in the OPRA database, including for any series added intraday, and is also preserved in the event of a release rollback.

SECTION 7: INDUSTRY TESTING

Q25. What is the industry test schedule?

Date	Test Type
Monday, August 24, 2026	CERT System functional testing begins
Saturday, August 29, 2026	Industry Test #1 — Functional testing
Saturday, October 3, 2026	Industry Test #2 — Functional, Failure/Recovery, and Capacity testing
Saturday, October 17, 2026	Industry Test #3 — Intraday fallback to November 20 symbol routing
Saturday, October 31, 2026	Industry Test #4 — Final Functional testing
Saturday, November 21, 2026	Industry Test #5 — Confidence Test (pre-go-live)
Monday, November 23, 2026	**Production Go-Live**

For the detailed test script including step-by-step timing, refer to the Industry Test Notice published at opraplan.com.

Q26. Will Series Mapping Files be available during Testing?

Yes. A full production-size sample file is available at ftp.nyse.com/opra_symbol_files. Subscribers can use this file to size their ingestion, parsing, and storage systems against a realistic file containing millions of series. Additionally, a dedicated file will be made available for each industry test date.

SECTION 8: SPECIFICATIONS AND FURTHER INFORMATION

Q27. Where can I find the complete technical specifications for Dynamic Symbol Rebalancing?

All publications below are available at opraplan.com:

Publication	Relevant Sections / Contents
OPRA Pillar Output Specification	Section 6.07 — Series Mapping Message format and fields Appendix B §4 — Updated traffic distribution rules Appendix E — Series Mapping File schema
Common IP Multicast Distribution Network Specification	Multicast group addresses for all output lines, including line 220
Automated Retransmissions User Guide	Retransmission request procedures for all OPRA output lines

Q28. How will subscribers be notified of updates, test schedules, and specification revisions?

All notices, test schedules, and specification updates related to Dynamic Symbol Rebalancing will be published at opraplan.com. Technical inquiries can be directed at:

- **Email:** CTA-OPRA-Support@siac.com
- **Phone:** 212-656-8177, Option 2
- **Support Hours:** 8:00 AM – 5:00 PM ET, Monday–Friday