

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-94697; File No. SR-EMERALD-2022-12)

April 12, 2022

Self-Regulatory Organizations; MIAX Emerald, LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Amend the MIAX Emerald Fee Schedule to Adopt Fees for the High Precision Network Time Signal Service

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”),<sup>1</sup> and Rule 19b-4 thereunder,<sup>2</sup> notice is hereby given that on March 30, 2022, MIAX Emerald, LLC (“MIAX Emerald” or “Exchange”) filed with the Securities and Exchange Commission (“Commission”) a proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization’s Statement of the Terms of Substance of the Proposed Rule Change

The Exchange is filing a proposal to amend the MIAX Emerald Fee Schedule (the “Fee Schedule”) to adopt fees for a new service known as the “High Precision Network Time Signal Service.”<sup>3</sup>

The text of the proposed rule change is available on the Exchange’s website at <http://www.miaxoptions.com/rule-filings/emerald>, at MIAX’s principal office, and at the Commission’s Public Reference Room.

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<sup>1</sup> 15 U.S.C. 78s(b)(1).

<sup>2</sup> 17 CFR 240.19b-4.

<sup>3</sup> See, generally, Exchange Rule 531(d).

II. Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange recently established a new service known as the “High Precision Network Time Signal Service” (“HPNTSS” or the “Service”),<sup>4</sup> which will be available for purchase by subscribers on a voluntary basis. The Exchange now proposes to adopt fees for the Service, which is described under Exchange Rule 531(d).<sup>5</sup> The Service is an optional product available to any firm that chooses to subscribe.

The Exchange proposes to assess a monthly fee of \$3,600 for subscribing to the Service. As such, the Exchange proposes to amend the Fee Schedule to adopt new Section 8), Services, to provide that subscribers may purchase the Service for a monthly fee of \$3,600. Subscribers may cancel their subscription at any time. The Exchange proposes to specify that for mid-month subscriptions to the Service, new subscribers will be charged for the full calendar month for

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<sup>4</sup> See Securities Exchange Act Release No. 94335 (March 1, 2022), 87 FR 12756 (March 7, 2022) (SR-EMERALD-2021-38) (Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of a Proposed Rule Change, as Modified by Amendment No. 1, To Amend Exchange Rule 531 To Provide for a New Service Called the High Precision Network Time Signal Service).

<sup>5</sup> See Exchange Rule 531(d).

which they subscribe. A second time signal is available with each subscription to the Service for redundancy and disaster recovery purposes.

In sum, the Service enables subscribers to synchronize their own primary clock devices to the Exchange's primary clock device, by receiving time signals from the Exchange via a 1 gigabit ("Gb") connection that is currently offered by the Exchange and utilized by market participants to connect to the Exchange's System.<sup>6</sup> The Service simply provides subscribers with the Exchange's time signal at a sub-nanosecond level and nothing else. The sub-nanosecond time signal would tell the subscriber the Exchange's time at a sub-nanosecond level at a particular point in time. The subscriber may then use that time signal to synchronize their own primary clock to the Exchange's primary clock at the more acute sub-nanosecond level.<sup>7</sup> Subscribers would utilize their own Enhanced PTP device<sup>8</sup> to synchronize the clocks within the subscriber's computer and network infrastructure, as appropriate, at a sub-nanosecond level. This would enable the subscriber to record certain times an order or message traveled through and leaves the subscriber's system at a sub-nanosecond level.

The Service is not a connectivity product and subscribers are able to utilize an existing connectivity method offered by the Exchange to utilize the Service. The Service simply provides

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<sup>6</sup> The Exchange did not provide a new connectivity option to receive time signals via the Service. The Service is not a connectivity product and subscribers would only need to utilize an existing connectivity method offered by the Exchange to utilize the Service. See Fee Schedule, Section 5, System Connectivity Fees, for information regarding 1 Gb connectivity.

<sup>7</sup> See supra note 4 for a detailed description of the Service. See also MIAX Emerald Options - Update: The Introduction of the High Precision Network Time Signal (Enhanced PTP/White Rabbit) Beginning April 1, 2022 (March 3, 2022), available at <https://www.miaxoptions.com/alerts/2022/03/03/miax-emerald-options-update-introduction-high-precision-network-time-signal>.

<sup>8</sup> An Enhanced PTP clock synchronization device captures time and coordinates time synchronization within a network at a sub-nanosecond level.

enhanced time synchronization that may be utilized by a subscriber to adjust their own systems. The Service is not a market data product or access/connectivity service. Subscribers may continue to use their existing methods to connect to and send orders to the Exchange. The Service will not include any trading data regarding the subscriber's activity on the Exchange or include any data from other trading activity on the Exchange.

The Exchange established the Service in response to demand for tighter and more accurate clock synchronization options with the Exchange's network. The Service is offered to subscribers on a completely voluntary basis in that the Exchange is not required by any rule or regulation to make the Service available and potential subscribers may subscribe to the Service only if they voluntarily choose to do so. It is a business decision of each subscriber whether to subscribe to the Service or not.

The Exchange intends to begin to offer the Service and charge the proposed fees on April 1, 2022.

## 2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,<sup>9</sup> in general, and furthers the objectives of Section 6(b)(5) of the Act,<sup>10</sup> in particular, in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and to protect investors and the public interest, and that it is not designed to permit unfair discrimination among customers, brokers, or dealers. The Exchange also believes that its proposal to adopt fees for the Service is consistent with Section

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<sup>9</sup> 15 U.S.C. 78f(b).

<sup>10</sup> 15 U.S.C. 78f(b)(5).

6(b) of the Act<sup>11</sup> in general, and furthers the objectives of Section 6(b)(4) of the Act<sup>12</sup> in particular, in that it is an equitable allocation of dues, fees and other charges among market participants.

The Exchange operates in a highly competitive environment in which 16 U.S. registered equity options exchanges compete for market share. Based on publicly available information, no single options exchange has more than 13-14% of the equity options market share and currently the Exchange represents only approximately 3.57% of the market share.<sup>13</sup> The Commission has repeatedly expressed its preference for competition over regulatory intervention in determining prices, products, and services in the securities markets. Particularly, in Regulation NMS, the Commission highlighted the importance of market forces in determining prices and SRO revenues and recognized that current regulation of the market system “has been remarkably successful in promoting market competition in its broader forms that are most important to investors and listed companies.”<sup>14</sup> Making products, like the Service, available to market participants fosters competition in the marketplace, and constrains the ability of exchanges to charge supra-competitive fees. In the event that a market participant views one exchange’s product offering as more attractive than the competition that market participant can, and often does, switch between similar products. The proposed fees are a result of the competitive environment of the U.S. options industry as the Exchange seeks to adopt fees to attract purchasers of the recently introduced Service.

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<sup>11</sup> 15 U.S.C. 78f(b).

<sup>12</sup> 15 U.S.C. 78f(b)(4).

<sup>13</sup> See “The Market at a Glance,” (last visited March 15, 2022), [available at https://www.miaxoptions.com/](https://www.miaxoptions.com/).

<sup>14</sup> See Securities Exchange Act Release No. 51808 (June 9, 2005), 70 FR 37496, 37499 (June 29, 2005) (“Regulation NMS Adopting Release”).

If the Exchange proposed fees that market participants viewed as excessively high, then the proposed fees would simply serve to reduce demand for the Exchange's Service, which as noted, is entirely optional. Other options exchanges are also free to introduce their own comparable products with lower prices to better compete with the Exchange's offering. As such, the Exchange believes that the proposed fees are reasonable and set at a level to compete with other options exchanges that may choose to offer similar services. Moreover, if a market participant views another exchange's potential service as more attractive, then such market participant can merely choose not to subscribe to the Exchange's Service and instead subscribe to another exchange's similar product, which may offer similar data points, albeit based on that other market's trading systems.

The Exchange also believes the proposed fees are reasonable as they would support the introduction of a new product to subscribers. The Exchange believes the proposed fees are reasonable in order to support the introduction of the new Service, which may be used for numerous optional purposes. For example, the Service would allow subscribers to more precisely measure latency between their network and that of the Exchange at a sub-nanosecond level, allowing subscribers to better understand the times at which their order or message reached certain points when traveling from their network to the Exchange. The Service would also allow subscribers to analyze the efficiency of their network and connections when not only routing orders to the Exchange, but also when receiving messages back from the Exchange (including communications regarding whether their order was accepted, rejected, or executed). Subscribers utilizing the Service may also measure message traversal times by comparing their messages' (e.g. order, quote, cancellation) timestamps to the Exchange's matching engine timestamps from the Exchange-generated acknowledgement messages (e.g. order acknowledgment, quote

acknowledgment, cancellation acknowledgment).<sup>15</sup> Subscribers would then be able to enhance their own systems to ensure that they are receiving such communications in a timelier manner and to verify that their systems are working as intended.

In addition, subscribers may utilize these enhanced latency measurements to better analyze latencies within their own systems and use this analysis to optimize their network, models and trading patterns to potentially improve their interactions with the Exchange. In particular, subscribers may use these metrics to better assess the health of their network and that their systems are working as intended. For example, a subscriber may use this information when analyzing the efficacy of their various connections and whether a connection is performing as expected or experiencing a delay. A subscriber may then decide to rebalance the amount of orders and/or messages over its various connections to ensure each connection is operating with maximum efficiency. Subscribers may also use the Service for other purposes, such as determining compliance with certain regulatory requirements<sup>16</sup> and trade surveillance. Subscribers may also utilize time synchronization to assist them in evaluating compliance with certain clock synchronization requirements. The Exchange therefore believes the proposed fees are reasonable because of the numerous benefits provided to subscribers that subscribe to the Service. Selling different products and services, such as HPNTSS, is also a means by which exchanges compete to attract business. To the extent that the Exchange is successful in attracting subscribers for the Service, it may earn trading revenues and further enhance market participants'

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<sup>15</sup> The Exchange sends subscribers an acknowledgement message that their order or message was received by the Exchange. This acknowledgement includes the time of receipt at a nanosecond level.

<sup>16</sup> See, e.g., Chapter III of the Exchange's Rules, which incorporates by reference Rule 301, Interpretation and Policy .02 (Just and Equitable Principles of Trade), of the Exchange's affiliate, Miami International Securities Exchange, LLC ("MIAX"); and Financial Industry Regulatory Authority, Inc. ("FINRA") Rule 5320.

interactions on the Exchange, which would increase value of its products and services. If the market deems the proposed fees to be unfair or inequitable, firms can diminish or discontinue their use of the Service. The Exchange therefore believes that the proposed fees for the Service reflect the competitive environment of U.S. exchanges and would be properly assessed to market participants that subscribe to the Service. The Exchange also believes the proposed fees are equitable and not unfairly discriminatory as the fees would apply equally to all users who choose to subscribe to the Service. It is a business decision of each market participant that chooses to subscribe to the Service. The Exchange's proposed fees would not differentiate between subscribers that purchase the Service and are set at a modest level that would allow any interested market participant to purchase the Service based on their business needs.

The Exchange reiterates that the decision as to whether or not to purchase the Service is entirely optional for all potential subscribers. Indeed, no market participant is required to purchase the Service and the Exchange is not required to make the Service available to all investors. It is entirely a business decision of each market participant to subscribe to the Service. The Exchange offers the Service as a convenience to market participants to provide them with the ability to synchronize their own primary clock devices to the Exchange's primary clock device at a sub-nanosecond level. A market participant that chooses to subscribe to the Service may discontinue the use of the Service at any time if that market participant determines that the synchronization of its primary clock devices to the Exchange's primary clock device is no longer useful.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The

Exchange made the Service available in order to keep pace with changes in the industry and evolving customer needs and demands, and believes the product will contribute to robust competition among national securities exchanges. As a result, the Exchange believes this proposed rule change permits fair competition among national securities exchanges.

The Exchange believes the proposed fees would not cause any unnecessary or inappropriate burden on intermarket competition as other exchanges are free to introduce their own comparable product with lower prices to better compete with the Exchange's offering. The Exchange operates in a highly competitive environment, and its ability to price the Service is constrained by competition among exchanges who choose to adopt a similar product. The Exchange must consider this in its pricing discipline in order to compete for market share. For example, proposing fees that are excessively higher than fees for potentially similar products would simply serve to reduce demand for the Exchange's product, which as discussed, market participants are under no obligation to utilize. In this competitive environment, potential purchasers are free to choose which, if any, similar product to purchase to satisfy their need for market information. As a result, the Exchange believes this proposed rule change permits fair competition among national securities exchanges.

The Exchange also believes that the proposed fees do not cause any unnecessary or inappropriate burden on intermarket competition because the synchronization of subscribers' primary clock devices with that of the Exchange would enhance competition between exchanges. Subscribers that subscribe to the Service could use the Service to adjust their own systems and recalibrate their models and trading strategies to improve their overall trading experience on the Exchange. This may improve the Exchange's overall trading environment resulting in increased liquidity and order flow on the Exchange. In response, other exchanges may similarly seek ways

to provide synchronized clock timestamps in an effort to improve their own market quality.

The Exchange does not believe the proposed rule change would cause any unnecessary or inappropriate burden on intramarket competition. Particularly, the proposed product and fees apply uniformly to any purchaser in that the Exchange does not differentiate between subscribers that purchase the Service. The proposed fees are set at a modest level that would allow any interested market participant to purchase the Service based on their business needs.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,<sup>17</sup> and Rule 19b-4(f)(2)<sup>18</sup> thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

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<sup>17</sup> 15 U.S.C. 78s(b)(3)(A)(ii).

<sup>18</sup> 17 CFR 240.19b-4(f)(2).

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an e-mail to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-EMERALD-2022-12 on the subject line.

Paper comments:

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-EMERALD-2022-12. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet website (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to

make available publicly. All submissions should refer to File Number SR-EMERALD-2022-12 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.<sup>19</sup>

J. Matthew DeLesDernier  
Assistant Secretary

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<sup>19</sup> 17 CFR 200.30-3(a)(12).