Johannesburg Stock Exchange

JSE Release 7.7 | MIT Upgrade 2024

Overview

This document serves to provide an overview of the enhancements and changes that will be included in Release 7.7, "The Upgrade 2024", of the Trading and Information System for the Equity Market (EQM), Equity Derivative Market (EDM) and the Currency Derivative Market (FXM). The code will first become available on the CTS Release environment for all clients to test the changes. Further dates will be provided in a service hotline related to these changes with a planned go-live date most likely in the latter half of H2 2024.

This release will require mandatory conformance testing for those clients who wish to introduce the Option Self-Match Prevention functionality. Due to the extensive nature of the changes to the system as well as to provide an opportunity for all software developers to align on updated JSE Conformance criteria, Clients are strongly advised to test the functionality in the CTS Release environment before the go-live date and complete conformance tests as good-practice for a major release.

All changes to the system are documented at a high-level below and should provide enough detail for users to perform an adequate impact assessment. Changes to specifications and updated documents will follow in due course and will be announced via service hotlines.

CHANGES OR ENHANCEMENTS:

Documentation Updates

- **Native Gateway documentation split** – Existing Volume 01 – Native Trading Gateway will be split into: (1) an Equity Market and (2) a Derivative Market-relevant specification by simplifying each into:

    - Volume 01E – Basic Native Trading Gateway; for Equity Market participants

    - Volume 01D – Enhanced Native Trading Gateway; for Derivative Market participants

    This is to ensure that specifications are more streamlined and relevant, due to the nature of different messages structures across these markets.

NEWS Gateway Enhancements

- **Correction of the News source mapping**

    o On the News Gateway multicast feed, the *News* message field *NewsSource (*6940) will be corrected to display the issuer name for all instruments. This will specifically enhance the user experience for structured products and Exchange Traded Products (ETPs) as it is not currently populated correctly. There is no impact to general shares where the issuer and instrument name of the company are the same.

    o The JSE will be providing a fix to populate this field with the primary issuer (company) long name as held in the JSE Reference data.

    o No API changes or conformance testing will be required.

- **Tradable Instrument Display Mnemonics (TIDM) and ISIN population Fix**

    o The Tradable Instrument Display Mnemonic (TIDM) is allocated by the Exchange and used to identify a tradable instrument for the JSE and NSX Equity markets. This field is not maintained for interest rate instruments e.g. ZAG.

    o Currently for ZAG instruments, In the *News* message the *SecurityID (48)* (ISIN) is populated in the message body and not in the dedicated field for *SecurityID (48)* (ISIN). The JSE will fix the functionality to populate the *SecurityID (48)* (ISIN) field.

    o No API changes but conformance testing is recommended.

General Enhancements

- During certain ad-hoc events a trade on the derivative markets has a discrepancy to what is received on the derivative clearing system causing misalignment in trade values. This will be addressed in this release to ensure alignment between traded values and values that appear in the clearing systems.

- o   No API changes or conformance testing required.

- The Closing Price methodology 2 for segment ZA04 will be amended to remove the last step in the process which sets the closing price of zero, if there is no mid-point, last trade nor bid/offer. This will be replaced with the previous closing price of the instrument.

- Alignment to specifications – Currently the *Account* field is not present in Trade Capture Report (TCR) Ack message on the Post Trade Gateway when the counterparty sends a TCR to accept an on-book cancellation. This will be added for completeness.

  - o   No API change, however, conformance testing is recommended.

- In certain instances, the *Notional Delta* and *Notional Delta Exposure* fields on the MITCH *Extended Statistics* message are exceeding the field parameters so that a NULL value is being displayed. This will be address by amending the field type to a Price+ field (similar to that used for the *Turnover* field) where the fields will have an eight-byte integer field with four-implied decimal places changed from eight-implied decimal places.

  - o   API field type change with conformance testing being recommended.

  - o   Volume 05 – Market Data Gateway (MITCH -UDP)

- In certain instances where the *Cancel on Disconnect/Logout* functionality is defined in milliseconds the cancellation took effect on a less granular level. This has been enhancement to cater for millisecond validation in 200 millisecond intervals. The majority of user settings are on an instantaneous level i.e. set to 0 and are unaffected by this change. Likewise, users that are set at a second-parameter level are not impacted by the enhancement.

  - o   No API change or conformance testing required.

Enhancements for Noting

The below enhancements are provided for noting and have no impacts on API specification or conformance testing requirements, however, as part of good practice, conformance is recommended.

- Trade cancellation after Market Close have been disabled. This has no impact to the normal trade cancellation process via JSE Market Regulation.

- The MITCH *Symbol Directory* message will be enhanced to publish updated previous close values to the market in real-time if any changes are made by JSE operations.

- The Order Mass Cancellation process is enhanced to work more efficiently in an atomic-event manner, there is no change to the functionality and system experience.

- Trade cancellations initiated by both traders and JSE had the *OrigClOrdID* stamped in *Execution Reports*. This field will not be stamped for trade cancellations initiated by JSE Market Regulation anymore.

- The process of managing market data requests for segments that have no instruments attached to them is enhanced to service the request and ignore the empty segments. This is a rare event

on the derivative markets only as all equity market segments will have instrument attached to them.

OPTIONAL ENHANCEMENTS

Self-Match Prevention

In the context of stock trading, self-match prevention is a crucial functionality designed to ensure fair and efficient markets. This mechanism acts as a safeguard against unintended conflicts of interest that may arise when a trader inadvertently matches their own buy and sell orders. By implementing self-match prevention, the trading system automatically detects and prevents such occurrences, thereby maintaining market integrity and preventing potential manipulation. This not only promotes a level playing field for all market participants, but also enhances overall market transparency and trust, fostering a secure trading environment for investors and traders alike.

The JSE will achieve this via the introduction of the *Self Trade Prevention Key* field to Basic Native Trading Gateway for the Equity Market (EQM). The *NoTrdKey* (Tag = 7714) field is already in the existing message structure for the FIX Trading Gateway protocol. The *Self Trade Prevention Key* will be added to the Basic Native protocol via the introduction of a new message versions. Therefore, a new protocol version (v3) will be introduced to the Basic Native Trading Gateway, with the default version remaining as (v2). **This ensures that users that do not immediately require the functionality are not affected by this change.**

This field will be added to the *New Order* and *Execution Report* messages on the Basic Native Trading Gateway.

The *NoTradeKey* field will be removed from the Order Cancel/Replace Request message on the FIX Trading Gateway, as the facility to amend the unique key via an order amendment will be restricted.

There's no impact on the Drop Copy Gateway, the existing *NoTradeKey* functionality will remain unchanged and the field will be published if filled with a value.

The Self-Match Prevention mechanism applies to the normal order book and the closing price cross (CPX) session and is not enforced in any other trading sessions. The functionality will also not be applicable to any JSE Pegged Hidden Orders.

- API changes as per below and conformance will be required.

Updates to documentation:

> Volume 01E – Basic Native Trading Gateway
>
> Volume 02 – FIX Trading Gateway
>
> Volume 03 – Drop Copy Gateway
>
> Volume 201 – Guide to JSE Trading and Information Conformance
>
> Volume 202 – Conformance Test Report