INTEGRATED TRADING AND CLEARING (ITaC) GUIDANCE NOTE ON END-TO-END (ETE) TESTING ENVIRONMENT

JULY 2018

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1. REVISION HISTORY

Version	Description	Date
1.0	Initial release	24/07/2018
1.1	Updated to include reference to detailed schedule for trading and RTC and corrected port number for the RTC service	24/07/2018
1.2	Updated to include ETE Cycle 3 updates	27/07/2018

2. INTRODUCTION

The main objective of this document is to provide a summarized view of End-To-End (ETE) testing environment and the procedures to be followed for participating in End-To-End (ETE) testing.
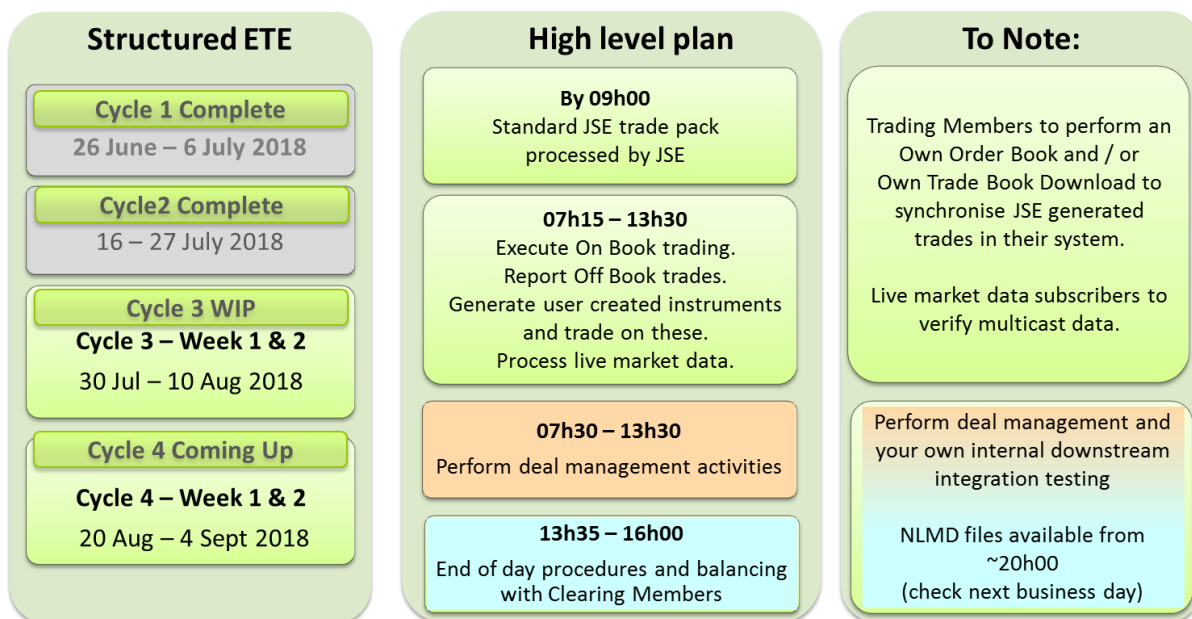
3. PURPOSE OF END-TO-END (ETE) TESTING ENVIRONMENT

The purpose of End-to-End (ETE) testing environment is to provide clients with a *"PRODUCTION LIKE"* environment to test in, readily accessible other than on the dress rehearsal weekends. Clients are urged to test their internal day to day business processes in this environment so as to ensure that the majority of business processes are tested thoroughly prior to go-live.

4. HIGH-LEVEL TEST PLAN AND APPROACH

Two phases of End-to-End (ETE) testing are envisaged:
1. Structured ETE testing - test specific identified scenarios and events on specific days
2. Scripted ETE testing – ring fenced with specific data and functionality on specific days with specific expected outcomes.

Structured ETE

Cycle 1 Complete
26 June – 6 July 2018

Cycle2 Complete
16 – 27 July 2018

Cycle 3 WIP
Cycle 3 – Week 1 & 2
30 Jul – 10 Aug 2018

Cycle 4 Coming Up
Cycle 4 – Week 1 & 2
20 Aug – 4 Sept 2018

High level plan

By 09h00
Standard JSE trade pack
processed by JSE

07h15 – 13h30
Execute On Book trading.
Report Off Book trades.
Generate user created instruments
and trade on these.
Process live market data.

07h30 – 13h30
Perform deal management activities

13h35 – 16h00
End of day procedures and balancing
with Clearing Members

To Note:

Trading Members to perform an
Own Order Book and / or
Own Trade Book Download to
synchronise JSE generated
trades in their system.

Live market data subscribers to
verify multicast data.

Perform deal management and
your own internal downstream
integration testing

NLMD files available from
~20h00
(check next business day)

Links to the test plans for each phase –

The proposed baseline scope and run plan for End-To-End Testing Cycle 3 can be access at the following link:
[E2E Cycle 3 Runplan Scenarios](#)
> Tab "Clearing Member Scope - Cycle 3" contains all scenarios to be executed by Clearing Member.
> Tab "Trading Member Scope - Cycle 3" contains all scenarios to be executed by Trading Members.
> Tab "Info Sub Scope - Cycle 3" contains all scenarios to be executed by Information Subscribers.

The proposed scope and run plan for End-To-End Testing Cycle 3 – Non-Live Market Data can be accessed at the following link:
[ITaC Non-Live Information Subscriber End to End Test Plan](#)

In addition, we have published a document with all scenarios to be tested by Trading Members wishing to test the decommissioning of the Nutron services during Cycle 3 i.e. for all derivatives markets that remain on Nutron
[Nutron Decommissioning Cycle 3 RunPlan](#)

5. TYPES OF PARTICIPANTS

Function	Full Direct participation	Partial Direct participation	Indirect participation
TRADING	*Trading Members:* Connect and execute *Clearing Members:* Connect and execute OBOs	Trade packs submitted by JSE	Trade packs submitted by JSE
DEAL MANAGEMENT	*Trading Members:* Connect and execute *Clearing Members:* Connect and execute and perform OBOs	*Trading Members:* Connect and execute *Clearing Members:* Connect and execute and perform OBOs	*Clearing Members:* Connect and execute and perform OBOs
CLEARING	*Trading Members:* Verify EOD reports *Clearing Members:* Connect and execute Clearing functions	*Trading Members:* Verify EOD reports *Clearing Members:* Connect and execute Clearing functions	*Trading Members:* Verify EOD reports *Clearing Members:* Connect and execute Clearing functions
MARKET DATA	Information Subscribers: Verify live market data Verify NLMD files	N/A	Information Subscribers: Verify NLMD files

6. SUPPORT AND COMMUNICATION

- All documentation required for ETE testing will be available on the JSE website under the section "End-To-End Testing"
  https://www.jse.co.za/services/itac#EndToEndTestingDocumentation

- o Communication on ETE testing status and progress will only be provided via the ITaC communication webpage on the below link:
  https://www.jse.co.za/services/itac-communications-page

- Please contact the Client Service Centre (CSC) for all support required on +27 11 520 777 or send an email to CustomerSupport@jse.co.za. When logging queries via e-mail please include your firm name and prefix the subject with the word "ETE" E.g. ETE–ABC SECURITIES.

- **Please Note!** Daily Client CSV Reference data files for ETE testing must be downloaded from the IDP folder
  - o \Derivatives Market **ETE**

7. ENABLEMENT PROCEDURE

Trading Members, Live Market Data subscribers and Real-Time Clearing Members need to provide the following information to the Client Service Centre by sending an e-mail to CustomerSupport@jse.co.za :

- Provide the Member and related COMPID details for Trading and RTC that you will use for this testing
- Request the new target IP address details for the Native Trading, Post Trade and Drop Copy Gateway and ensure that these are configured in your environment
- Production enablements as used during dress rehearsals have been copied to ETE - no new enablements will be created and JSE will update existing enablements to include the IP addresses that you will connect from
- CSC will arrange for NW enablement of the nominated Comp-ID's
- Participants can only join ETE testing at the start of a week and/or cycle and the cut off is 12h00 on the Wednesday (Thursday/Friday for enablement and LCON)
- Test connectivity (LCON) to the ETE environment prior to the start of a week and/or cycle
- Template of information required:

Software Provider Name					
Firm Name	Native Trading CompID	Post-trade CompID	Drop Copy CompID	RTC CompID	Market Data CompID

Non-Live Information Subscribers need to adhere to the following in order to be enabled:

- In order to be enabled for the ETE environment a request must be sent to mdprojects@jse.co.za
- The ETE exercise will, as much as possible, simulate a traditional business day so the data files will be made as close as possible to the planned production delivery times
- The ETE environment will make use of the production IDP server to facilitate the use of existing IDP access credentials. New IDP users will be provided with new access credentials
- A distinct different ETE test folder structure will be used so as not to interfere or cause confusion with the previous UAT exercise as well as the production folders
- The data records will, in the theme of a near-production experience, be provided via Information Subscriber specific data files
- There are 36 data records in scope, spread across the two markets (EDM and FXM), with 12 different types of data files
- The data subscriber specific data files per data subscriber will differ based on the data record subscription
- Non-Live Information Subscribers must firm up their data record subscriptions as the ETE subscription definitions will be used to configure the production subscriptions
- The JSE will not dictate to data subscribers as to when to test each data record during the ETE period i.e. No scripted testing will take place
- The source of the data for the data records is the same test environment (Test bed 75) as that being used for all other testing.

8. IP ADDRESS INFORMATION

- Real-Time Clearing (RTC) – 196.216.152.79, port 6981
- Trading & Live Market Data – provided on request via email to CustomerSupport@jse.co.za
- Non-Live Market Data – Please refer to the below link – (Same folder structure used as per NLMD UAT phase) IDP Connectivity Document for ITaC NLMD UAT.pdf
- Reference data files for ETE testing will be available in the IDP folder
    - \Derivatives Market ETE

9. AVAILABILITY OF ENVIRONMENT

Please refer to the detailed End-To-End (ETE) environment schedule at the following link.
JSE ETE Trading and RTC Schedule

10. AVAILABILITY OF NON-LIVE MARKET DATA FILES

Currency Derivative (FXM) Data Records

FXM data records comprise of 17 data records in total across 6 different data files.
All times are stipulated in South African Standard Time (SAST – GMT+2)

Data Record Name	Dissemination Frequency	Dissemination Time	Data Record Identifier	Data File Name
Daily Traded Statistics	Daily	20:00	DCD – Subtype 1	CD.ZIP
Daily Full Market Type Statistics	Daily	20:00	SCD – Subtype 2	CD.ZIP
Daily Full Market Overall Totals	Daily	20:00	OCD – Subtype 2	CD.ZIP
Early MTM	Daily	16:00	MCD – Subtype 3	CD15.ZIP
Market Statistics (Daily)	Daily	20:00	MCD – Subtype 2	CD.ZIP
Mark to Market All	Daily	20:00	MCD – Subtype 1	CD.ZIP
Market Statistics (Weekly)	Weekly	20:00	MCD – Subtype 4	CD.ZIP
Market Statistics (Monthly)	Monthly	20:00	MCD – Subtype 5	CD.ZIP
South African Rates	Daily	10:10	RCD – Subtype 1	CD10.ZIP
South African Rates	Daily	11:15	RCD – Subtype 2	CD11.ZIP
South African Rates	Daily	20:00	RCD – Subtype 3	CD.ZIP
Risk Parameters	Daily	20:00	ACD – Subtype 1	CD.ZIP
Close Out Prices	Quarterly	17:25	CCD – Subtype 1	CD17.ZIP
Rand Spot	Daily	11:10	CCD – Subtype 2	CD11.ZIP
Rand Spot	Daily	16:10	CCD – Subtype 3	CD17.ZIP
Margin Requirements	Fortnightly	20:00	ICD – Subtype 1	CD.ZIP
Detailed Instruments	Daily	20:00	XCD – Subtype 1	CD.ZIP

Equity Derivative (EDM) Data Records

EDM data records comprise of 19 data records in total across 6 different data files.
All times are stipulated in South African Standard Time (SAST – GMT+2)

Data Record Name	Dissemination Frequency	Dissemination Time	Data Record Identifier	Data File Name
Daily Traded Statistics	Daily	20:00	DED – Subtype 1	ED.ZIP
Market Statistics (Daily)	Daily	20:00	DED – Subtype 2	ED.ZIP
Market Statistics (Weekly)	Weekly	20:00	DED – Subtype 3	ED.ZIP
Market Statistics (Monthly)	Monthly	20:00	DED – Subtype 4	ED.ZIP
Daily Full Market Type Totals	Daily	20:00	SED – Subtype 2	ED.ZIP
Daily Full Market Overall Totals	Daily	20:00	OED – Subtype 2	ED.ZIP
Early Mark to Market	Daily	16:00	MED – Subtype 1	ED15.ZIP
Mark to Market All	Daily	20:00	MED – Subtype 2	ED.ZIP
South African Rates	Daily	10:15	RED – Subtype 1	ED10.ZIP
South African Rates	Daily	11:15	RED – Subtype 2	ED11.ZIP
South African Rates	Daily	20:00	RED – Subtype 3	ED.ZIP
Close Out Prices	Quarterly	12:45	CED – Subtype 1	ED12.ZIP
Margin Requirements	Fortnightly	20:00	IED – Subtype 1	ED.ZIP

Options Daily Traded Report	Daily	20:00	PED – Subtype 1	ED.ZIP
Dividends	Daily	20:00	IED – Subtype 2	ED.ZIP
Volatility Surface	Daily	17:15	LED – Subtype 1	ED17.ZIP
All Contract Details	Daily	20:00	AED – Subtype 1	ED.ZIP
Risk Parameters	Daily	20:00	ADD – Subtype 1	ED.ZIP
Detailed Instruments	Daily	20:00	XED – Subtype 1	ED.ZIP

11. DIFFERENCE BETWEEN CUSTOMER TEST SERVICE (CTS) AND END-TO-END (ETE) ENVIRONMENTS

- In CTS we do not publish open interest
- User created instruments do not feed from the Trading System through to the Real-Time Clearing (RTC) as the JSE Master Data System (MDS – the reference data system) is not in the CTS environment. Therefore, any trades executed on user created instruments do not feed through to the Real-Time Clearing (RTC) system and therefore clients cannot perform deal management activities on these trades
- There are no intra-day reference data files in CTS

![JSE logo]

For additional information please contact our Client Service Centre (CSC) team on:
011 520 7777
Customersupport@jse.co.za

www.jse.co.za