



Integrated Trading and Clearing (ITaC)

Project Forum

25 July 2018

Agenda

- ITaC Key Dates
- ITaC Planned Functional Changes
- ITaC End-To-End (ETE) Testing update
 - ETE Documentation
 - ETE Cycle 2 – status update
 - ETE Cycle 3 – scope, approach and participation requirements
- ITaC Dress Rehearsal 14 July 2018 results feedback
- ITaC User Readiness reports
- ITaC Guidance Notes
- Questions?

ITaC Key Dates



Date	Milestone
11 Jun – 22 Jun 2018	Clearing Member & Software Provider Testing in ETE environment
26 Jun 2018	Start of End-to-End Testing in ETE environment
26 Jun – 5 Jul 2018	ETE Testing – Cycle 1 Structured
9 Jul – 13 Jul 2018	Prep for MMDR; data clean up and full position take on
14 Jul 2018	Mandatory Market Dress Rehearsal (MMDR)
16 Jul – 26 Jul 2018	ETE Testing – Cycle 2 Structured
30 Jul – 10 Aug 2018	ETE Testing – Cycle 3 Scripted
13 Aug – 17 Aug 2018	Prep for Dress Rehearsal; data clean up and full position take on
18 Aug 2018	ETE Dress Rehearsal – mandatory for all clients
20 Aug – 4 Sep 2018	ETE Testing – Cycle 4 Scripted
8 Sep 2018 (TBC)	JSE deploys RTC/VIS/CIS into production
15 Sep 2018	Go-Live Ready Dress Rehearsal – mandatory for all clients
8 Oct 2018	Targeted Go-Live Date
12 Nov 2018	Contingency Go-Live Date

PLEASE NOTE:
Mandatory for CMs and
those TMS Client Function
We are here
passed two dress rehearsals

PLEASE NOTE:
Mandatory for all clients

PLEASE NOTE:
Mandatory for all clients

DATE
RATE

ITaC Agreements – cutoff dates



- **JSE Services Agreement (JSA)**
 - Signed JSA is required to access ***all production and test services*** including the End-To-End environment
 - **JSA must be signed by Friday, 27 July 2018** which is prior to the start of Scripted End-To-End testing on Monday, 30 July 2018 whether participating in ETE or not
- **JSE Data Agreement (JDA)**
 - Signed JDA is required to access all market data (live, intra day or EOD)
 - **JDA must be signed by Friday, 27 July 2018 for clients wishing to participate in Scripted End-To-End** testing which starts on Monday, 30 July 2018
 - JDA must be signed by 31 August 2018 for all other clients not participating in ETE testing

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ITaC Proposed Functional Changes

(being discussed at Market Steering Committee on 26 July)



- **Instruments created intra day**
 - Live information subscribers and SW providers experiencing difficulties processing transactions on these instruments prior to receiving reference data files on IDP. Even though this change affects all market participants, it has been requested by the market to solve intra day instrument creation issues. The JSE expects to deploy this change for clients to test prior to the 18 Aug dress rehearsal and will also be tested in the dress rehearsal. Software providers engaged to date have indicated they will accommodate this change without impacting the targeted go-live. **Deployment date is scheduled for 6 Aug 2018 into CTS and ETE.**
- **Trader name on Trading Members' Trader ID file**
 - The JSE provides a Trader ID file to all trading members but the file does not contain the name field. Software providers have requested the field to be added to assist in managing trader permissions. **Deployment date is scheduled for 30 July 2018.**
- **Change month end interest calculation in RTC**
 - ETE month end testing highlighted that the RTC system calculates month end interest differently than the current market convention where the start of the next calendar month is on a weekend. **This change will be deployed in ETE for the August month-end (Cycle 4) as this is not applicable for the July month end.**

ITaC Proposed Functional Changes

(being discussed at Market Steering Committee on 26 Jul)



- **Change JSE billing calculations to cater for changed month end interest calculations**
 - ETE month end testing highlighted that the RTC system calculates month end interest differently than the current market convention and a change to RTC requires a change to JSE billing system. **This change will be deployed in ETE for the August month-end (Cycle 4) as this is not applicable for the July month end.**
- **Capture commissions on behalf of branches**
 - Software provider requested to be able to capture commissions on behalf of branches. If a member has many branches then the current solution is very cumbersome and requires a separate log in for each branch. **Deployed into CTS and ETE on 24 July 2018.**
- **Default exercise style of options created by Trading Members**
 - When creating an option instrument intra day, the requirement is to default the exercise style for options according to the Market i.e. American for EDM and European for FXM to assist in more efficient processes. **Deployment date in CTS and ETE is scheduled for 10 Aug 2018.**
- **RTC correct the remaining quantity field on the trade sub-message in specific scenarios**
 - Correct the way in which the remainingQuantity field (13) of the Trade sub message (10015) of the Account Position Event message (10032) and Account Trade Event (10141) is updated in specific scenarios, namely when an assign or tripartite allocation is accepted by the counterparty. After the patch, the remaining quantity of the trade being given up will no longer be updated. **Deployment date in CTS and ETE is proposed for evening of 26 July 2018.**

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End-To-End (ETE) Documentation



- **ETE testing documentation**

- All documentation required for ETE testing is available on the JSE website under the section “**End-To-End Testing**”
- <https://www.jse.co.za/services/itac#EndToEndTestingDocumentation>
- [ITaC End-To-End Testing Overview](#)
- [E2E Cycle 2 Runplan Scenarios](#)
- [ITaC Non-Live Information Subscriber End-To-End Test Plan](#)
- [ITaC Guidance Note on ETE testing](#) *New
- [JSE ETE Trading and RTC Schedule](#) *New
- [IDP Connectivity Document for ITaC NLMD ETE](#)



Weekly testing feedback is required from all participants – please flag relevant scenarios in the [E2E Cycle 2 Run Plan Scenarios](#) with related test results and feedback and send this through to your JSE buddy at the end of each week of ETE testing

Status Update – ETE Testing Cycle 2: Week 1



- **Overall:**
 - Trading members still have low participation
 - Some new defects have been raised against software provider and JSE systems which proves that ETE testing is important
- **Statistics**
 - Orders: 3314 orders submitted by 21 members
 - Trades: 2418 trades submitted by 27 members
 - Subscription Services: 238 Files produced
- **There was no testing on 18 July 2018**
 - There was no End-To-End testing for trading members or information subscribers for 18 July 2018. Testing resumed on 19 July 2018.
 - The JSE encountered issues with balancing to clearing members on 17 July 2018 which was caused by some unrealistic volumes and prices in the JSE trades that were played on 17 July 2018.

Status Update – ETE Testing Cycle 2: Week 2



- **Information Subscribers**
 - Live Market Data
 - 3 clients enabled for live market data access
 - Access to ETE environment via International Access Point enabled
 - Non-Live Market Data
 - NLMD Data files are made available each day
 - Enabling of new testing participants is still continuing
 - Data Subscribers that have not yet firmed up data record subscriptions should make use of the ETE testing phase to make final decisions
 - Clients have raised a few defects which the JSE is addressing

Status Update – ETE Testing Cycle 2: Week 2



- **Clearing Members**
 - **Clearing Member Reports (Internal and external)**
 - Clearing Members should be issuing daily reports to their clients – please notify your JSE buddy if you are not receiving these
 - Clients should also log any problems with their reports directly with their Clearing Members
 - A formal status reporting mechanism of report testing by clearing members has been implemented
 - The reporting structure will track readiness of all reports that are part of the agreed scope on a weekly basis to ensure quality and readiness on an ongoing basis
 - **Clearing Member balancing**
 - Two issues have delayed progress on daily balancing in the end to end environment requiring a reference and transactional data refresh for Clearing Members
 - In the weeks prior to the above issues consistent daily balancing between JSE and Clearing Members was achieved
 - **Specific Events**
 - Successful processing of an Equity Derivatives closeout and a currency expiry
 - Successful processing of a special dividend corporate action
 - Successful processing of intraday created option instruments in respect of the currency expiry

End-To-End (ETE) Testing – High Level Plan



- **Structured ETE testing** - test specific identified scenarios and events on specific days
 - Any additional scenarios or trades that are required to be included in Cycle 3 should be submitted by no later than 12h00 Wed, 25 July 2018

Structured ETE

Cycle 1 Complete

26 June – 6 July 2018

Week 1 Complete

Cycle 2 – Week 1

16 – 20 July 2018

Week 2 WIP

Cycle 2 – Week 2

23 – 26 July 2018

Week 3 Coming Up

Cycle 3

30 Jul – 10 Aug 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)

End-To-End (ETE) Testing - Cycle 3



Start Date: 30 July 2018
End Date: 10 August 2018

Basic Events Scope	Specific Events Scope
Order Management	EDM Multiple FCOs – Dates TBC
Trade Execution - On Book & Off Book	FXM Multiple Expiries – Dates TBC
Options Exercised & Abandoned	Month End – 31 July 2018
Deal Management	Public Holiday – 9 August 2018
	Corporate Actions - Basic - Complex
	FXM market making obligations
	Market Operations (week 2): - Market Halt & Reopening - Market Pause - Market Announcement
	Decommissioning impact on remaining markets
	Member and client transfers
	Intraday margin call

End-To-End (ETE) Testing – Cycle 3

- **Cycle 3 Scripted ETE testing** – ring fenced with specific data and functionality on specific days with specific expected outcomes as well as other testing along side

Trading Members who do not have physical environments to participate and signoff reports



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

End-To-End (ETE) Testing – Cycle 3



- **JSE Run Plan will be issued Friday, 27 July 2018**
 - Please note all the specific event dates and monitor communication page
- **Trading Members**
 - Mandatory Indirect Participation required for Cycle 3 & 4
 - JSE Trade pack will cover a few trades for each trading member
 - Please ensure you get your reports from your clearing members on a daily basis and verify accuracy and completeness and notify your JSE buddy if you are not receiving these
 - Log any problems with your reports directly with you Clearing Member
 - Attend conceptual training
 - Engage your software provider on any issues logged and ensure issues are closed out to your satisfaction
- **Information Subscribers**
 - Receive files on a daily basis and verify accuracy and completeness and notify MDSupport@jse.co.za if you have any issues or defects to raise

End-To-End (ETE) Testing



- **ETE Communication**
 - Monitor ETE testing status and progress via the ITaC communication webpage here:
 - <https://www.jse.co.za/services/itac-communications-page>
- **Helpline for support of all enablement or issues experienced during ETE testing?**
 - Contact Client Service Centre (CSC) on CustomerSupport@jse.co.za
or +27 11 520 7777



**Submit your feedback to the JSE
at the end of each week!**

End-To-End (ETE) Testing - Cycle 4



Start Date: 20 August 2018
End Date: 4 September 2018

Basic Events Scope	Specific Events Scope
Order Management	Users to create intra day instruments
Trade Execution - On Book & Off Book	Month End – 31 August 2018
Options Exercised & Abandoned	EDM Multiple FCOs – Dates TBC
Deal Management	FXM Multiple Expiries – Dates TBC
	Corporate Actions - Basic - Complex
	FXM market making obligations
	Decommissioning impact on remaining markets
	Member and client transfers
	Intraday margin call

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Dress Rehearsal Observations / Issues



Trading

- Off Book Trade Reporting
 - Submission, accept, reject, withdrawal and cancellation
- Anyday contract creation
- Segregation of permissions on front ends
- Multiple expiry dates for same CFD

Post-trade

- Client maintenance and specifically adding a new local /foreign client
- Commissions – two software providers solution not working effectively
- Bulk Upload
- AccountPosition Event - add market identifier

Live Market Data

- Excessive re-requests issued and account's locked out
- Multicast data flow and configuration
- On replay/recovery technical timeouts/disconnects experienced
- Instrument reference data recovery – having to recover post a system failure

Overall Dress Rehearsal Results



12 May 2018

ORDER MANAGEMENT															
Submit New Order - TIF								Submit New Order - Type					Order Amend	Order Cancel	OOBD
OPG	DAY	FOK	GFA	GTC	GTD	GTT	IOC	MARKET	MIT	MTL	STOP	STOP LIMIT	Amended	Cancelled	Recovery
	71%							56%					61%	63%	70%

26 May 2018 Average (not weighted) Trading Member results across both EDM and FXM – mandatory participant only

Submit New Order - TIF								Submit New Order - Type					Order Amend	Order Cancel	OOBD
OPG	DAY	FOK	GFA	GTC	GTD	GTT	IOC	MARKET	MIT	MTL	STOP	STOP LIMIT	Amended	Cancelled	Recovery
	71%							64%					60%	62%	92%

14 July 2018 Average (not weighted) Trading Member results across both EDM and FXM

Submit New Order - TIF								Submit New Order - Type					Order Amend	Order Cancel	OOBD
OPG	DAY	FOK	GFA	GTC	GTD	GTT	IOC	MARKET	MIT	MTL	STOP	STOP LIMIT	Amended	Cancelled	Recovery
	83%							67%					67%	70%	86%

- Average (not weighted) Trading Member results across both EDM and FXM – both technical and functional results
- OWN ORDER BOOK DOWNLOAD (OOBD) is mandatory in order to recover and/or sync your order book in the event of a system failure – **from 92% to 86%**
- Day orders - **improved from 71% to 83%**
- Order maintenance - **improved from 60% and 62% to 67% and 70%**

Overall Dress Rehearsal Results



12 May 2018

TRADE MANAGEMENT																	
On Book Trades		Off Book Trades - Dual-Sided					Off Book Trades - Single-Sided					OBO	Cancellation		Strategy Trade		OTBD
UT	AT	CD	NT	PA	RT	SR	CD	NT	PA	RT	SR	NT	On Book	Off Book	ICS	Delta Option	Recovery
	69%		47%					53%					35%	28%			59%

26 May 2018 Average (not weighted) Trading Member results across both EDM and FXM – mandatory participant only

On Book Trades		Off Book Trades - Dual-Sided					Off Book Trades - Single-Sided					OBO	Cancellation		Strategy Trade		OTBD
UT	AT	CD	NT	PA	RT	SR	CD	NT	PA	RT	SR	NT	On Book	Off Book	ICS	Delta Option	Recovery
	67%		59%					48%					33%	47%			91%

14 July 2018 Average (not weighted) Trading Member results across both EDM and FXM

On Book Trades		Off Book Trades - Dual-Sided					Off Book Trades - Single-Sided					OBO	Cancellation		Strategy Trade		OTBD
UT	AT	CD	NT	PA	RT	SR	CD	NT	PA	RT	SR	NT	On Book	Off Book	ICS	Delta Option	Recovery
	83%		71%					40%*					35%	50%			86%

- Average (not weighted) Trading Member results across both EDM and FXM – both technical and functional results (* excl for FXM)
- OWN TRADE BOOK DOWNLOAD (OTBD) (aka TRADE CAPTURE REQUEST) is mandatory in order to recover and/or sync your trades view to the JSE in the event of a system failure - **from 91% to 86%**
- On Book trades **improved from 67% to 83%** (i.e. on screen trades)

Overall Dress Rehearsal Results



12 May 2018

INSTRUMENT MANAGEMENT					
Permissions		Sessions/Status		Instrument Creation	
Correct Market	Correct Instrument Type	Suspend/Halt	No trading session	Future	Option
Functional	Functional	Functional	Functional	Functional	Functional
94%	100%	96%	95%	4%	5%

26 May 2018

Permissions		Sessions/Status		Instrument Creation	
Correct Market	Correct Instrument Type	Suspend/Halt	No trading session	Future	Option
96%	100%	97%	96%	3%	5%

14 July 2018

Permissions		Sessions/Status		Instrument Creation	
Correct Market	Correct Instrument Type	Suspend/Halt	No trading session	Future	Option
99%	99%	99%	94%	8%	9%

- Average (not weighted) Trading Member results across both EDM and FXM – both technical and functional results
- Reference Data downloads and reference data management – **consistent across the dress rehearsals**
- User created instruments – slight improvement - clients are still familiarising themselves with this process – **more testing is required and this will be one of the key objectives for end to end testing**

Trading Member Results



No. of Trading Members who were mandated to test on 14 July	No. of Trading Members who passed 14 July	No. of Trading Members who did not pass 14 July
52 (EDM)	42	10
44 (FXM)	27	17

No. of Trading Members have passed 2 dress rehearsals	No. of Trading Members that have passed 1 dress rehearsal	No. of Trading Members who have not passed a dress rehearsal
53 (EDM)	11	4
30 (FXM)	15	9

Key areas of concern:

- Trade Cancellations
- Commissions
 - Some software providers had issues on the day which impacted overall commissions functionality
 - Population of reference fields is much better, some issues still to be ironed out
- Understanding of AM (At Market) order type

Post-trade MDR Results Summary



- Average Post-trade (deal management) results for Trading Members only
- % Met is derived on this **minimum set of criteria** relevant to the business of the firm

Category	Function	12-May	26-May	14-Jul
Trade Feed into RTC	Receive Trades in RTC	100%	100%	100%
Deal Management	Accumulate	79%	73%	92%
	Allocate	66%	63%	70%
	Allocate Correction	37%	33%	37%
	Assign	67%	60%	75%
	Tripartite Allocation	22%	6%	28%
	Principal Correction	24%	31%	43%
	Trade Sub Account Mod	51%	50%	66%
Position Management	Position Sub Account Mod	24%	31%	38%
	Option Exercise	37%	46%	46%
	Position Abandon	33%	38%	38%
Commissions	New Commission	67%	60%	59%
	Cancel Commission	38%	33%	25%
	Reject Commission	28%	17%	54%

- Stats above are simply number of members that successfully performed a function as a percentage of total number of members and do not consider whether the function is applicable or not to the members' business
- Commissions stats above do not factor whether commission reference fields were correctly populated
- Includes all trading members even if not active or deal management outsourced to clearing member

Post-trade Dress Rehearsal Results



No. of Trading Members who were mandated to test on 14 July	No. of Trading Members who passed 14 July	No. of Trading Members who did not pass 14 July
62	30	32

No. of Trading Members have passed 2 dress rehearsals	No. of Trading Members that have passed 1 dress rehearsal	No. of Trading Members who have not passed a dress rehearsal *
22	29	19

Key areas of concern:

- Commissions - some software providers had issues on the day which impacted overall commissions functionality
- Population of reference fields is much better, some issues still to be ironed out
- Deal management scenarios involving branches

* includes those where the clearing member does the On-Behalf-Ofs

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User Readiness Reports



- Of the 70 trading member clients we are tracking, 41 clients returned Certain User readiness reports as at 13 July 2018
- Remaining 28 trading member clients are reflected as “Ready for Go-Live” as they did not submit their reports – JSE will engage these clients
- Of the 41 clients the following areas need attention:
 - JSE Remote Disaster recover connectivity testing
 - Trader ID and ComplD set up and permissions for clearing members
 - IDP credentials verification
 - Client technical changes i.e. downstream to members
 - Client education by members on ITaC changes
 - Operational readiness by members
 - 76% will be ready by go-live – JSE will engage clients to address remaining clients

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ITaC Guidance Notes



The following NEW guidance notes will soon be available to assist clients:

- Principal Trading
- Trading with Tripartite Clients
- Production Client Files (Reference Data CSVs)
- Corporate Actions
- Branches
- User Created Instruments
- Password Management

Other Guidance Notes available

- ITaC Guidance Note on ETE testing
- ITaC Instrument Reference Data Quick Reference Guide
- ITaC JSE Booking Fee Replication for the Derivatives Market
- ITaC Positions Take on Project 1b and 1c Guidance Note
- Guidance Note on how to create user created instruments on Index
- Volume A JSE Market Data Statistics
- Volume B Trading and Information Network Configuration Guide
- Volume E Derivatives Markets Trade Reporting Guidance Note

Questions?



Please refer all queries to the
JSE Client Service Centre (CSC)



CustomerSupport@jse.co.za



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