Integrated Trading & Clearing (ITaC)

Dress Rehearsal Feedback

23 November 2017

Agenda

- High Level Timelines and Key Dates
- Mandatory Market Dress Rehearsals
  - Feedback from the first dress rehearsal – 11 November 2017
  - Second Mandatory Market Dress Rehearsal – 25 November 2017
- Post-trade Clearing - take note

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A note of thanks…

- Thank you to all those that provided feedback, if you have not submitted your feedback yet, please do so – your feedback is important to us!

- We look forward to your feedback after this coming weekends dress rehearsal too

ITaC INTEGRATE ACCELERATE GROW

ITaC Project Timeline and Key Dates

Leanne Parsons

ITaC INTEGRATE ACCELERATE GROW

Project ITaC Count Down

As at 23 November 2017

1 business day

to 25 Nov 2017

2nd market facing

dress rehearsal

58 business days

to Targeted Go Live

19 Feb 2018

Just over 15 weeks!

JSE

ITaC Timeline & Key Dates

- Milestones completed successfully

Date	Milestone
22 Sept 2017	Conformance cut-off date

First Software Provider /Own solution developer Dress Rehearsal	
21 Sept 2017	Enablement requests for 7 Oct dress rehearsal
28 Sept 2017	Live Connectivity (LCON) tests to be completed
7 Oct 2017	First Software Provider/Own Solution developer dress rehearsal

Second Software Provider /Own solution developer Dress Rehearsal	
12 Oct 2017	Enablement requests for 21 Oct dress rehearsal
19 Oct 2017	Live Connectivity (LCON) tests to be completed
21 Oct 2017	Second Software Provider/Own Solution developer dress rehearsal

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ITaC Timeline & Key Dates

Date	Milestone
Voluntary Clearing Member Testing (VCMT)	
3 Nov 2017	As requested by clients - extended time to 3 Nov 2017
Mandatory Clearing Member Testing (MCMT)	
13 Nov – 15 Dec 2017	MCMT Phase 1 – start date of formal scripted testing to be agreed with Clearing Members post 25 Nov test
8 Jan – 9 Feb 2018	MCMT Phase 2 – dates to be agreed with Clearing Members post 25 Nov test
Collateral Management testing by CSDPs to be facilitated	Timelines to be agreed with CSDP forum and clearing member forum (as agreed with clearing members **Collateral Management will not be enabled from day 1 of go-live** but will be phased in after a suitable post go-live bedding down period

ITaC Timeline & Key Dates

- Upcoming Milestones 2017

Date	Milestone	Status
26 Oct 2017	Enablement cut-off date for all clients	All enablements received have been processed (bear in mind standard SLA is 7 days)
2 Nov 2017	Complete all Live Connectivity (LCON) tests (technical)	Tests to prove technical handshake between application adaptors and the JSE Gateways - Complete
11 Nov 2017	**Mandatory** Market Facing Dress Rehearsal 1 for all members and live information subscribers	Simulate a production business day - Complete
25 Nov 2017	**Mandatory** Market Facing Dress Rehearsal 2 for all members and live information subscribers	Simulate a production business day - In progress

- Clients are encouraged to make use of the Customer Test Service (CTS) environment for testing post the dress rehearsal as this can be used for training and testing.

ITaC Timeline & Key Dates

- Upcoming Milestones 2018

Date	Milestone	Status
1 Feb 2018	Final enablement amendments - cut-off date	Final enablement amendment request submissions (bear in mind standard SLA is 7 days) - dates dependent on successful MCMT
8 Feb 2018	Final Live Connectivity (LCON) tests	Last date to prove any enablement amendments ahead of go live - dates dependent on successful MCMT
17 Feb 2018 (Contingency 24 Mar 2018)	**Mandatory** Market Facing Dress Rehearsal 3 for all members and live information subscribers	Execute final deployment and implementation activities Simulate a production business day - dates dependent on successful MCMT
19 Feb 2018 Contingency 26 Mar 2018	**ITaC Go live** for all members and live information subscribers - dates dependent on successful MCMT	Equity Derivatives and Currency Derivatives start trading and clearing through the new ITaC solutions with Real-time data published via JSE London PoP Decommissioning of Equity Derivatives and Currency Derivatives trading and clearing on Nutron/Nuclears solution Change to DITCH market data feed to JSE London PoP to exclude Equity Derivatives Market

Market Facing Dress Rehearsals for November 2017

Leanne Parsons

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Dress Rehearsal Feedback

Objective	Outcome	Met?	Reason
Participation			
All EDM and FX Trading Members (clients enabled for both markets = 2x Setup)		94%	124 of 132 clients enabled 8 Clients (6 unique) not ready
All EDM and FX Clearing Members		100%	All 8 Clearing Members were enabled
All real-time Live Information Subscribers		100%	All enabled

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Dress Rehearsal Feedback

Objective	Outcome	Met?	Reason
Practice JSE cut-over activities required for Go Live		Fully tested	JSE tested all it's end-to-end cut-over activities Minor issues were experienced in preparing the client csv files which resulted in the files being delivered on Thurs morning iso Wed evening
Practice SW Provider/SIP and Client cut-over activities required for Go Live		Partially	Certain Clients & SIPs/SW Providers only tested trading and clearing cut-over activities Clients did not test all cut-over activities for downstream systems and other system dependencies e.g. market maker applications, DMA applications
Prove technical enablements and front-end connectivity – ensure permissions and authentication is correct		Not Met	Numerous connectivity issues experienced during the test - Some issues on the JSE side - Some issues on the client, SIP, SW Provider side - At the end of the day all clients successfully logged into the JSE Gateways **EXCEPT 2** JSE created: 676 Trading CompIDs 156 Market Data CompIDs 153 Real-time Clearing CompIDs 2040 Trader IDs

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Dress Rehearsal Feedback

Objective	Outcome	Met?	Reason
Practice trading day activities			
Conduct functional testing of trading and post-trade systems that you wish to implement - Test all functionality that your business is dependent on and that you do on a daily basis - Capture a controlled set of orders and trades, perform deal management activities and verify the outcome of the results on all screens, reports, downloads etc. - Verify integrity and accuracy of transactions generated - Make use of the JSE high level functional checklist to guide functional testing - Test any downstream integration systems that are dependent on the ITaC API adapters to ensure end to end functionality prior to go live		Not Met	Trading Members did not test all trading and deal management functionality - Clients experienced issues with front-end software and trader permissions - Connectivity delays Some clients could not process public market data correctly Live market data feeds to JSE London PoP not throttled Clearing members tested limited system functionality and some were not able to test functionality at all Only some clients prepared detailed checklists of the scenarios they would test Some clients did not test downstream applications an integration

Dress Rehearsal Feedback

Objective	Outcome	Met?	Reason
Practice trading day activities			
Familiarise yourself with the new systems and your new front-ends		Not Met	Very few clients attended/viewed JSE conceptual training - Trader and clearing operations staff knowledge of new market models and processes lacking especially Trade Reporting Watch JSE conceptual training videos on JSE YouTube channel (search Johannesburg Stock Exchange) Not all clients received user guides/training on their new SW prior to the dress rehearsal. Clients are responsible to ensure all traders and clearing staff receive the necessary training prior to go live Not all traders participated in dress rehearsal Clients must test their solutions against their business requirements and functional criteria

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Dress Rehearsal Feedback

Objective	Outcome	Met?	Reason
Gauge the overall level of readiness across the market: - Trading Members - Clearing Members - Information Subscribers		Not Met	Test assisted in identifying areas requiring attention by clients! Very few clients had a clean test even though JSE extended test period on the dress rehearsal Many clients have requested additional time to test and additional dress rehearsals Clients must make better use of the Customer Test Service (CTS) to conduct functional testing
Build internal and external confidence for go live		Not Met	Clients understand the new solution better and the importance and relevance of tests Key focus areas requiring work identified
Minimise the risk of identifying issues on go live		Partially	Test assisted to identify issues to address prior to go live As not all functionality was tested – more testing is required

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Client Feedback – Key Themes

- Was useful to better understand the more complex ITaC environment and identify where their shortcomings are
- Some Trading Members are behind schedule due to not finalising Software Provider choices and not being able to test prior to Dress Rehearsals
- Clearing members are behind schedule due to late delivery of fully functional clearing system
- Password reset challenges
- Not able to test full functionality
- Integration in client environments not working properly
- Traders and Trader Groups on front ends not configured correctly
- Trade Reporting functionality not working on front ends and lack of understanding on new processes
- Asked for more testing time and additional dress rehearsals
- Market maker software not tested
- Some clients indicated Client Support was not responsive enough
- Insufficient volume in Currency Derivatives Market

Room for Improvement - JSE

- Implement pass/fail criteria per member firm for future Mandatory Dress Rehearsals and Mandatory Clearing Member Testing
  - JSE will provide observations to members for 25 November Dress Rehearsal
- Migrate additional client accounts for tests
- Market readiness is being tracked on an individual basis and more regular checkpoints with Trading Members
- Additional SME support for clients in CSC (previous dress rehearsals saw CSC overwhelmed with connectivity issues from clients and therefore could not address other issues satisfactorily)
- JSE to request formal list of known issues and action plans from all software providers/shared infrastructure providers
- Full audits conducted with software providers and host-to-host clients on technical enablements and Firm/TraderIDs to ensure connectivity issues are not experienced
- JSE to confirm with clients API/DMA Trader IDs to be migrated to new systems
- Enforce use of checklists for functionality readiness and sign off
- Enforce receipt of dress rehearsal feedback

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Room for Improvement - Clients

- ***Be prepared*** – have a checklist of all the functionality you need to test. Use the dress rehearsal checklists to define this – **ONLY YOU know how your business operates**
  - Mandatory Market Facing Dress Rehearsal Checklist (Trading) v1.0.pdf
  - Mandatory Market Facing Dress Rehearsal Checklist (Post Trade) v1.0.pdf

- Read the following business functional documents and get a better understanding of the new systems:
  - Volume 00D - Trading and Information Overview for Derivative Markets v1.01.pdf
  - Volume E Derivatives Markets Trade Reporting Guidance Note v1.00.pdf
  - Volume PT00 - Post-trade Services Overview v1.02.pdf

- Take ownership of your requirements to ensure that software providers/shared infrastructure providers deliver accordingly including disaster recovery capabilities
- Clients have not necessary completed a full impact analysis and dependency analysis – URGENT to complete asap
- Indicate any additional practical support mechanisms required from the JSE for ITaC readiness
- Clients to verify trader configuration and set up with software providers/shared infrastructure providers
- Ensure you teams know what the issue logging procedures is – log software issues with your software provider and other general issues with the JSE Client Service Centre (CSC). Use your buddy for escalation, if required
- Keep track of all actions in the event of a problem to assist with troubleshooting and to recreate the issue
- Focus on accuracy and integrity not volume – we will allow a volume test period
- **Continue the open and honest feedback – its helps us to improve**

Room for Improvement - Clients

Remember:

- Allow Traders to trade on the markets they are authorised for
- Derivatives Traders who are part of the same legal entity as the Equity Member firm will be enabled to use the same Trader ID as used in the Equity Market. i.e. one Trader ID across EQM and Derivatives Markets, if not the same legal entity then 2 Trader IDs will be assign i.e. 1 for EQM and 1 for all Derivatives markets
- To ensure that Off Book Trade Reporting is done across members firms and across different software providers and ensure that the traders have the necessary Firm IDs and the Public Trader Group IDs for counterparties
- Only the following **Off Book Trade Sub Types** are valid:
  - CD – CFD Reported Trade
  - NT – Negotiated Trade
  - EP – Exchange for Physical
  - RT – Roll Trade
  - SR – Strategy Trade
  - PA – Price Adjust (can only be done on On Book Trades)
- Trade cancellations work differently
- Derivatives Markets trade in **Rands NOT Cents** (Equity Market trades in Cents)
- You are not supposed to trade on the House Suspense Account (40006) – you can use House Account instead

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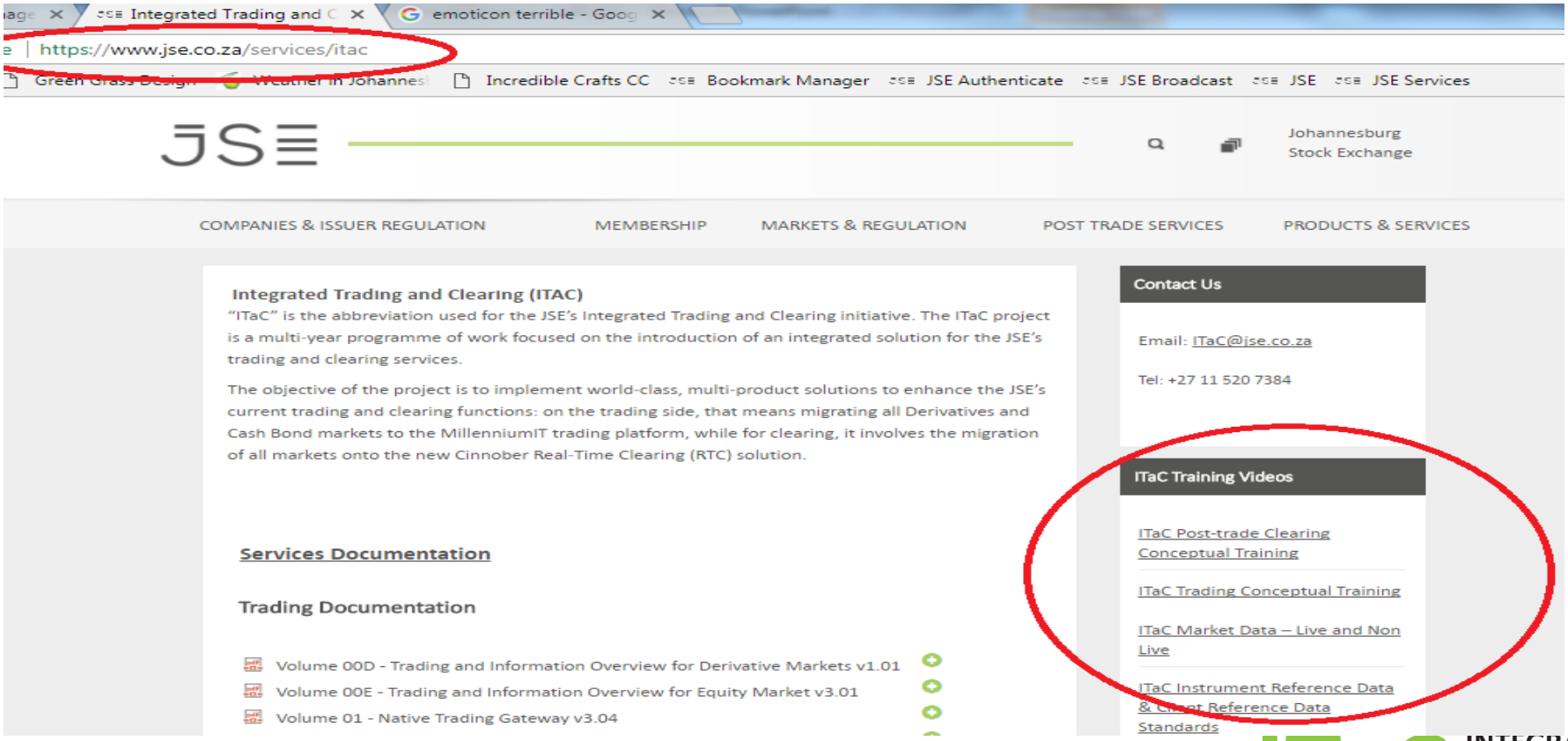
Conceptual Training Videos now available

- Visit the JSE YouTube channel to view the conceptual training videos for both Trading and Post-trade Clearing
  - Logon to YouTube and search "Johannesburg Stock Exchange"
  - Alternatively, visit the ITaC webpage and click links on the top right hand corner of the page



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Participation in Dress Rehearsals – 25 Nov 2017

- This dress rehearsal is **mandatory** for:
  - All JSE Trading and Clearing Members that participate in the Equity Derivatives and Currency Derivatives markets regardless of how they access JSE trading and post trade services; and
  - All Real-time Information subscribers that connect directly to the JSE
  - *All applications that connect directly* to the JSE ITaC Equity Derivatives and Currency Derivatives production Gateways (i.e. API adapter) - software that is not tested during these Dress Rehearsals will not be able to be deployed for go live
  - All CompIDs required for go live
  - 25 Nov 2017 – whilst we originally said clients **may only test** with the **software they intend to go live** with – due to issues experienced, clients can again test with multiple software providers

- Not mandatory for every trader to participate, however every Trader ID should be tested to prove correct authorisation in JSE systems and Software Front Ends
- Non Live Market Data subscribers do not need to participate in the November dress rehearsals
- Ensure you have the support helpdesk contact details of your software provider for support during the dress rehearsals

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Dress Rehearsal – 25 Nov 2017

- Test runs between 6h30 – 12h30 - technical teams be on site 6:30 – 7am. Business users on site from 8am for start of trade reporting
- Monitor dress rehearsal status via SMS or this link:

  https://www.jse.co.za/services/technologies/market-communications
- Define roles and responsibilities for your team members and what each if accountable for
- Test all functionality that your business is dependent on and that you do on a daily basis
- Remember! Compliance Officers, ITaC responsible officers and ITaC primary officers have been given a full list of all Trader Ids – please pass on to your software providers to configure and check this
- Traders: If you are not currently enabled to access a specific market YOU WILL NOT be able to access it during dress rehearsals. E.g. if you are not currently an FX dealer you cannot trade currencies
- Clearing back office staff will have a TraderID for every trading member that they clear for
- **Familiarise yourself** with the new systems and your new front-ends – test, test and test some more
- No enablement or TraderID/TraderGroup changes allowed with immediate effect
- Be aware of the JSE published known issue list as well as that of your software provider

  ITaC Mandatory Market Dress Rehearsal Known Issues.pdf
- **NB:** Only member clients that have been **active over the past 2 years** will be migrated to RTC for the dress rehearsal

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25 Nov 2017 – Dress Rehearsal Key Dates

Date	Milestone	Status
22 Nov 2017	Trading reference data client CSV files published	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download files and process data
23 Nov 2017	Post-trade reference data can be downloaded via the RTC API (EMAPI)	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download and process data
24 Nov 2017	**Updated** Trading reference data client CSV files published	Software Providers, Shared Infrastructure Providers (SIPS), own solution developers and Host-to-Host clients to download files and process data

- **NOTE: Issue reported for underlying BSK028** in Wednesday csv files
  - A couple of futures, Options and Inverse Calendar Spreads on the underlying BSK028 have an incorrect Instrument subcategory and Contract code
  - As a result, JSE has terminated these instruments tonight and these instruments will not be included in the csv files on Friday night

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Dress Rehearsal Tracking

- Each JSE client will be assigned a JSE user readiness contact (“buddy”)
- The JSE appointed representative will contact the nominated ITaC person within the firm to exchange contact details (by Thurs 23 Nov)
  - this person will be your escalation contact (if required) during the dress rehearsals
  - If a more senior escalation contact is required, please contact Leanne Parsons who is the JSE senior executive contact for ITaC and can be contacted via LeanneP@jse.co.za or via Client Service Centre (CSC) +27 11 520 7777

- Monitor status updates via SMS or JSE webpage – for SMS updates:
  - Send email to ITaC@jse.co.za with:
    - Firm Name
    - Name & Surname
    - Cell phone Number
    - Email Address

- **JSE will require sign-off** from the ITaC Responsible Officer per client to confirm their success/results in the dress rehearsal via the feedback form
  - Technical capability successful
  - Tested minimum functionality and was successful
  - Enablements successful
  - Reference Data processing
  - Trader Groups and Trader IDs correct

Post-trade Clearing

Take note!!

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Commissions

Overview

- Trading members to capture commissions for transactions concluded in an agency capacity
- Primary role of JSE Clear will be to act as a payment clearinghouse to ensure settlement of net commission amounts across Clearing Members on T+1
  - Commissions will be rolled up to the Clearing Member level at EOD and **net** amounts per Clearing Member will be settled on T+1
- Commissions data entered into the Clearing system will be provided back to Trading and Clearing Members to support
  - Cash collections and payments from/to trading member and clients
  - Reporting, reconciliations and VAT invoicing

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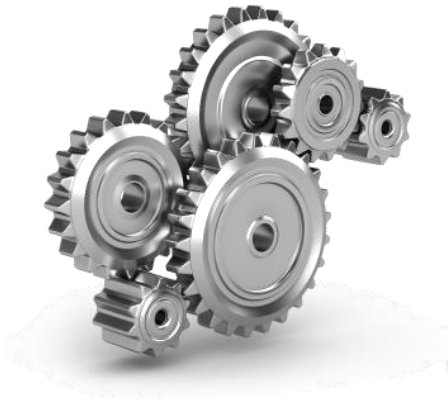
Commissions

Activities and functions

General mechanics of the JSE commission solution:



Commission Management Functions

Functions for capturing and managing daily commission entries (Capture, Cancel, Reject)

Commission Downloads

Downloading of commissions data for reconciliation, invoicing and collection processes

EOD Balancing & Settlement

Daily balancing and settlement of commissions at end of day

Commission Reporting & Invoicing

Reporting and invoicing of commissions between trading members and clients

Commissions

Key actions performed by market participants

Capture New Commission

Performed by

Initiating Trading Member

Description

Capture new commission entries against recipient trading members or clients (direct or tripartite clients)

EXAMPLE: NEW COMMISSION ENTRY
Market (mandatory)
<Relevant Derivatives Market>
Commission Amount (mandatory)
+ZAR10
Recipient Trading Member (mandatory)
Trading Member 2
Client Ref (optional)
ClientXYZ
Commission Ref (optional)
TM3212345

Commission Management Functions

Cancel Commission

Performed by

Initiating Trading Member

Description

Cancel incorrectly captured commission entries

Reject Commission

Performed by

Recipient Trading Member

Description

Reject incorrect or unknown commission entries that have been captured against them

Market Dress Rehearsal Outcomes

#	Test Category	Test Activity	Outcome (Success / Fail)
1	**Connectivity testing**	Successful connection and login (by at least 1 interface user ID) to the RTC gateway, IDP (for reference date files) and the Post-Trade gateway (for on-behalf of reported trades)	
2	**Enablement testing**	Verify that all clearing member users were correctly set up and correctly enabled	
3	**Real Time Clearing (RTC) start-up**	Reference data subscriptions – were you able to verify that all required members / branches / clients / accounts were visible	
4	**Trading, Deal Management and Clearing period**	Receive off Book trade reports via RTC	
		Receive On Book trades via RTC	
		Receive any trade cancelations from trading engine (via RTC)	
		Receive position and risk event updates resulting from trading engine activities	
		Receive user created instruments and trades there-on	
		Perform reported trades (on behalf of trading members) via the trading system post-trade gateway	
		Perform deal management activities (on behalf of trading members) and receive resultant deal, position and risk event updates	
		Perform commissions management on behalf of trading members and receive commissions updates resulting from commissions management activity from your trading members	
		Perform member client maintenance	
		Perform position management	
		Receive all price events and resultant intraday risk event updates	

Market Dress Rehearsal Outcomes

#	Test Category	Test Activity	Outcome (Success / Fail)
5	**EOD Deal & Position Management period**	Complete deal, commissions and position management activities	
6	**CM Balancing 1**	Receive margin, dividend and CFD funding results from JSE	
		Receive initial daily account summary report from JSE	
		Calculate and verify margin, dividend and CFD funding calculations	
		Submit auto-balance to JSE (confirming recon Y/N)	
7	**CM Balancing 2**	Receive fees and commissions calculations from JSE	
		Receive final daily account summary report from JSE	
		Calculate and verify fees and commissions calculations	
		Submit auto-balance to JSE (confirming recon Y/N)	

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Questions?

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

CustomerSupport@jse.co.za

+27 11 520 7777

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Trading and Information Dress Rehearsal Schedule

Dress Rehearsal Times		
Start	End	Functional Testing to commence
04:15	14:00	Trading and Market Data systems start/end - heart beats start flowing
06:30	07:00	Start of day reference data published
		Off Book Trade Reporting period start – All Markets
08:00	12:00	- *Cash Bonds*
08:00	12:00	- *Commodity Derivatives (CDM)*
08:00	12:00	- *Interest Rate Derivatives*
08:00	12:00	- Equity Market (EQM)
08:00	12:00	- **Currency Derivatives (FXD)**
08:00	12:00	- **Equity Derivatives (EDM)**
08:20	08:30	**EDM - Open Auction**
08:30	12:00	*Continuous Trading: Cash Bonds & IR Derivatives (IRD)*
08:30	08:40	*Commodity Derivatives: Pre-open*
08:30	08:40	EQM for JSE & NSX : Open Auction (All segments)
08:40	11:40	EQM for JSE & NSX : Continuous trading
08:30	12:00	**EDM - Continuous trading**
08:30	12:00	**FXD: Continuous trading**
08:40	12:00	*Commodity Derivatives: Continuous Trading*
11:40	11:45	EQM - Closing Auction
11:45	12:00	EQM – CPP → CPX → EOD Volume Auction (5min each)
12:00	14:00	**Admin Period for All Markets**

- A detailed checklist is available on the ITaC webpage under the other documentation section
- A volume test period will be allocated during the continuous trading periods

ITaC INTEGRATE ACCELERATE GROW

Post-trade Dress Rehearsal Schedule

Dress Rehearsal Times		
Start	End	Functional Testing to commence
05:30	14:00	Post-trade Real Time Clearing (RTC) system start - Open state: Reference data subscriptions, position management, member client maintenance
08:00	12:00	Equity Derivatives (EDM) and Currency Derivatives (FXD) Markets - **Off Book Trade Reports start feeding into RTC for all ITaC markets**
08:30	12:00	EDM – **On Book Trades feed through to RTC** (starting after auction period), deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	FXD – **On Book Trades feed through to RTC**, deal management, commissions, intraday price updates and risk monitoring
08:30	12:00	*CDM, Cash Bonds & IRD – Deal & Position Management*
12:00	12:15	**EDM – EOD Deal & Position Management period**
12:00	12:15	**FXD – EOD Deal & Position Management period**
12:00	12:15	*CDM, Cash Bonds & IRD – EOD Deal & Position Management period*
12:15	14:00	**EDM & FXD - JSE End of Day batch processing commences**
12:15	14:00	*CDM, Cash Bonds & IRD - Clearing EOD process* *(net payments from legacy systems will be fed into new ITaC systems)*

- A detailed post-trade checklist is available on the ITaC webpage under the other documentation section
- A volume test period will be allocated during the continuous trading period which will also feed trades into the Clearing Solution

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