CHESS Replacement Project

Software Provider Readiness Working Group

8 December 2021

ASX

Important Information – Competition Law Policy

Working group members are reminded to have regard to their obligations under competition law. In particular, please note changes to the Competition and Consumer Act to prohibit a corporation from engaging with one or more persons in a concerted practice that has the purpose, effect or likely effect of substantially lessening competition.

Agenda

- ITE1 - Technical documentation update
- ITE1 - Open update
- ITE1 - ISO20022 update
- Technical Accreditation update
- Q&A
- Forward Schedule

ITE1 Update - Technical documentation update

Technical documentation – Industry Test Environment

https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/23233105

> Updated pages to support testing in ITE1 for software providers:

ITE1 Known Issues & Limitations — New
ITE1 Application Forms
Support for ITE
ITE1 Test Data — Update
ITE1 Test Tools

New **ITE1 Self-Service Tools**
- ITE1 Self-Service for Clearing Participants
- ITE1 Self-Service for Sponsoring Participants
- ITE1 Self-Service for Issuer (Registries)
- ITE1 Self-Service for Payment Providers
- ITE1 Self-Service for PISPs

New **ITE1 Auto-responders**
- ITE1 Bilateral Demand Transfer
- ITE1 Bilateral Demand Settlement Instruction
- ITE1 Issuer to Participant Transfer / Conversion
- ITE1 SRN / SRN Balance Enquiry
- ITE1 Collateral Creation / Removal
- ITE1 Cash Market Margin (CMM) Change Margin Settlement Amount
- ITE1 Bilateral Settlement Instruction
- ITE1 Investor Data - Bank Account Notification
- ITE1 Payment Provider Authorisation
- ITE1 Bid Election / Election Withdrawal
- ITE1 Reserve Bank Information & Transfer System (RITS)
- ITE1 mFund Application and Redemption
- ITE1 DRP/BSP Election and Election Enquiry

New **ITE1 Auto Injectors**
- ITE1 Bid Finalisation of Takeover and Buybacks
- ITE1 Code Change
- ITE1 Daily Margin Settlement Advice

New **ITE1 ASX Assisted Testing**

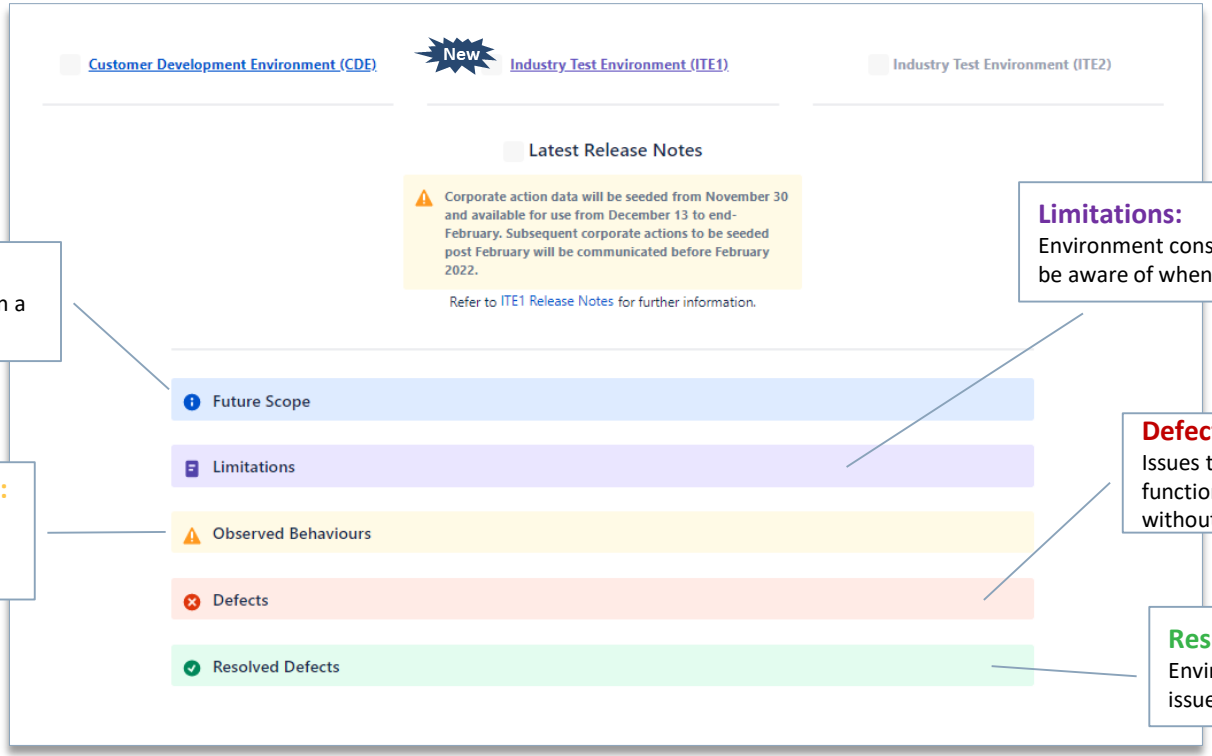
Update **Guide to Testing Services**
- Section 01 - Introduction to the Guide to Testing Services
- Section 02 - Test Environment Overview
- Section 03 - Access to Industry Test Environments (ITEs)
- Section 04 - Test Kits for ITE1
- Section 05 - Test Tooling
- Section 06 - Performance Testing
- Section 07 - Accreditation Testing for ITE1
- Section 08 - Inflight Migration Testing (for ITE-M only) — New

New **Accreditation Guide**
- Section 01 - Introduction to Accreditation Guide
- Section 02 - ASX Accreditation Process
- Section 03 - Technical Accreditation Testing
- Section 04 - Connectivity Accreditation
- Section 05 - Messaging Accreditation Testing
- Section 06 - Supplementary Information for Messaging Accreditation
  - Messaging Accreditation Scenarios
  - CHESS User by Feature, Message

New
- ITE1 release notes
- 3 Dec - What's New
- 30 Nov - What's New
- 15 Nov – What's New

Technical documentation – ITE Known Issues / Limitations

https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/1688473384



Future Scope:
Functionality available in a subsequent release.

Limitations:
Environment constraints to be aware of when testing.

Observed Behaviours:
Issues that do not prevent functional tests, generally with a workaround.

Defects:
Issues that prevent or hinder functional tests, generally without a workaround.

Resolved Defects:
Environment specific list of issues resolved.

!! TIP = Search the page for '*Identified in ITE1*' for specific items for ITE1

Industry testing supporting documentation

Significant documentation to support ITE1 already published

Documentation already published:

- Industry Test Strategy – **Jun 21**
- Connectivity Guide (ITE1) – **Jul 21**
- Messaging Accreditation (netting & settlement updates) **– Aug 21**
- Guide to Testing Services (ITE1) **– Sep 21**
- Failover & Recovery details (ITE1) **– Sep 21**
- Connectivity Guide (ITE-M) **– Sep 21**
- Connectivity Guide (ITE2) **– Sep 21**
- CHESS UI (mFunds) **– Sep 21**
- Guide to Testing Services (uplift) **– Nov 21**
- Accreditation Guide **– Nov 21**

Upcoming documentation (mid-Dec):

- Ops Readiness Scenarios

– Dec 21

- Cutover & Migration Strategy

– Dec 21

Upcoming key documentation milestones

- User Testing Guide (ITE2) **– Jan 22**
- Guide to Testing Services (ITE2) **– Jan 22**
- Industry Wide Testing HL plan **– May 22**
- Market Dress Rehearsal (MDR) details **– Jul 22**
- Industry Wide Testing details **– Sep 22**

The forward release plan will continue to be updated highlighting when key deliverables and topics will be published to the market.

Refer to Section 6 of the Industry Test Plan.

ITE1 - Open update

Industry test environment

ITE1 update – All software providers

ITE1 opened at the end of November and now available for software providers to start transitioning from CDE to ITE1

- Transition period runs from Dec'21 to the end Feb'22
- ASX is now contacting software providers to confirm; connectivity, test kit distribution and certificate distribution
- ITE1 opens with full clearing and settlement functionality (corporate action events from Jan'22)
- Guide to testing services **here**
- Software providers should note that the test kits are unique to their organisation and they will can only transact using data in that test kits, test kit overview **here**
- Self-serve test tools may have format changes from CDE – check the latest formats **here**
- NEW - Assisted testing for ASX initiated workflow – details **here**
- Request for support e-mails to contain CDE or ITE1 to assist with queries, details **here**
- Reduced non-Production support for ITE1 (and CDE) 20-31 Dec (inclusive)

Industry test environment

ITE1 update – Useful links

Ledger API

- Applications must implement new token authorisation process, details here
- Removal of package ID – improves performance of the initial connectivity to the ledger, details here
- New definition of command ID & workflow ID format, details here
- Heads up – new Ledger error codes in DAML 1.18 (released Q1'22), details here

AMQP

- Introduction of new reporting queues, details here
- Requirement to incorporate AMQP properties (BizMsgIdr & Correlation ID) details here

CHESS UI

- User guide and recommendations for setting up users in ITE1, details here
- Additional IP & Port added for authentication, details here

ITE1 – ISO 20022 update

Industry test environment

ISO 20022

Software providers must ensure their applications have the flexibility to support the _!p suffix found in the business service suffix, details here

The business service found in the BAH, as an example; **hold_201_001_01_!p**

Constructed as follows;

- **ASX Message Id** – hold_201
- **Release and Version** - 001_01
- **Suffix** (_!p)

_!p = Pilot - Should be supported in all test environments (e.g. hold_201_001_01_!p)

No suffix = Production - The lack of an environment indicator should be supported in production only (e.g. hold_201_001_01).

Application will be required to demonstrate this capability in technical accreditation

Pagination

Applicable Messages - Reporting

Software providers must ensure their applications support pagination

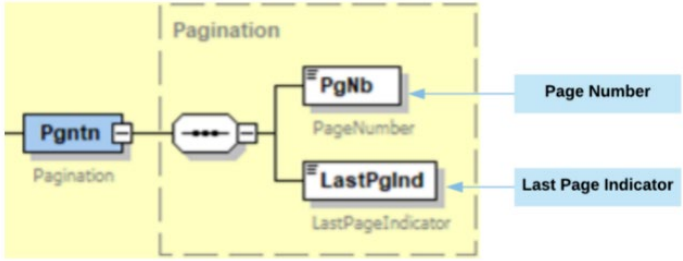
Messages will result in pagination where the maximum message size limit is exceeded.

A number of reports support pagination;

- Rptg_604 - HBAL (Holder Balance)
- Rptg_604 - HSBL (Holding Subposition Balance)
- Rptg_604 - CEBL (Cum Entitlement Balance)
- Rptg_605 - HMVT (Holding Movement)
- Rptg_605 - CEMV (Cum Entitlement Movement)
- Rptg_608 - OBLG (Obligation Status Report)
- Rptg_609 - NNDP (Netted Obligation Report)

Report size has been configured as ~32kb in ITE1and this is the proposed file size through to production.

Details of pagination can be found here



1.Page Number <PgNb>: indicates each page of the paginated message.

2.Last Page Indicator <LastPgInd>: indicates whether the page of the paginated message is the last page.

true = last message (page)
false = all other paginated messages (pages)

Accreditation Update

Technical Accreditation

Recap

What was covered in October SPR working Group?

- **Technical Accreditation**
  - Two components, Connectivity & Messaging Accreditation
  - Mandatory for all software providers
  - Test environment – ITE1
  - Scheduled end April – mid July 2022
- **Messaging Accreditation**
  - Scenario files for CHESS user type
  - Scenarios grouped by features
  - Mandatory / Optional scenarios
  - Required Fields for scenarios
- **Structure of Messaging Accreditation Scenarios**

Technical Accreditation

Agenda

Today's session

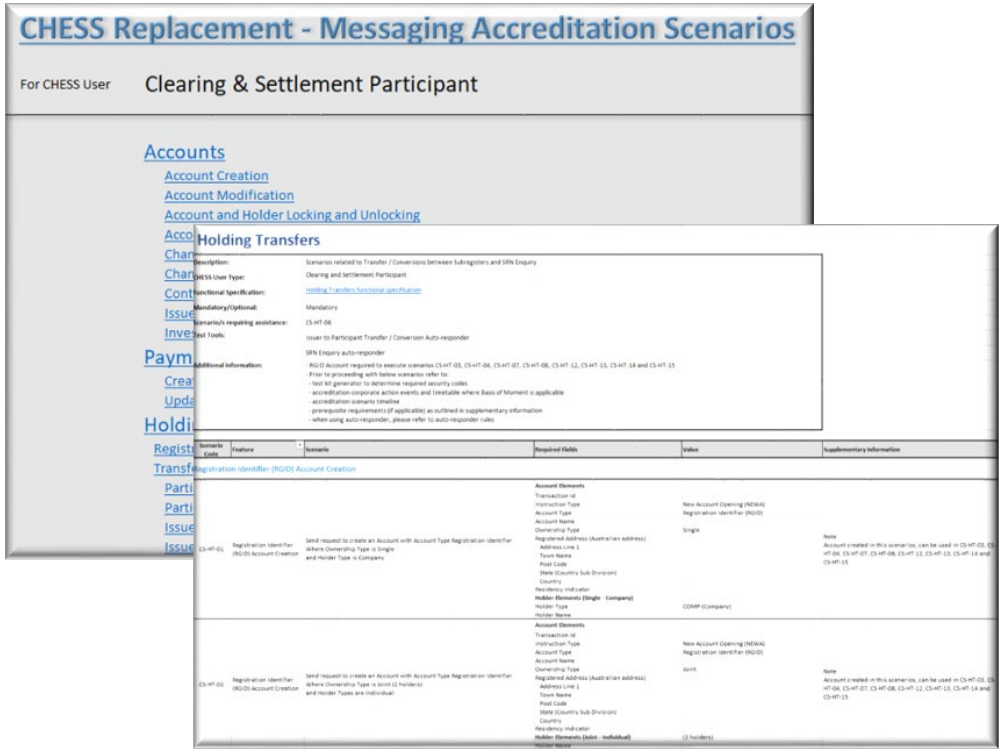
- Uplifted version of Messaging Accreditation Scenarios
- Counterparty Scenarios
- Test Tools for Messaging Accreditation
- Assistance Required Scenarios
- Additional Information
  - BizMsg ID
  - DRP Mandatory Scenario
- Introduction to Technical Accreditation Guide
- Action items for Software providers

Technical Accreditation

Messaging Accreditation Scenarios

Uplifted version of Scenarios

- Header in each Sheet
- More details in Supplementary Information
- Previously executed scenarios can be used as prerequisite but not mandatory
- Test Tools that can be used
- RGID scenarios moved with Holding Transfers Scenarios (Clearing and Settlement, Settlement and Account Participants)
- BDSI Payment Facility scenario is moved with BDSI scenarios (Clearing and Settlement and Settlement Participants)
- Assistance Required Scenarios are marked
- Scenarios are marked as Mandatory / Optional



Technical Accreditation

Counterparty Scenarios

How to read and execute counterparty scenarios?

- Where user need to act as counterparty/other type of CHESS user
- Messages are marked in Green
- Important to read Supplementary Information

Technical Accreditation

Test Tools

Tools that can help execute the scenarios

- ITE1 Test Tools will be available for Accreditation
- Self serve tool – Self-Service Tools are provided by ASX to support vendors and participants simulate events where a counter-party is required
- Auto Responders – An Auto-responder feature is provided by the ASX to help vendors and participants simulate events where a Counter-party response is required

Alternate to Test Tools

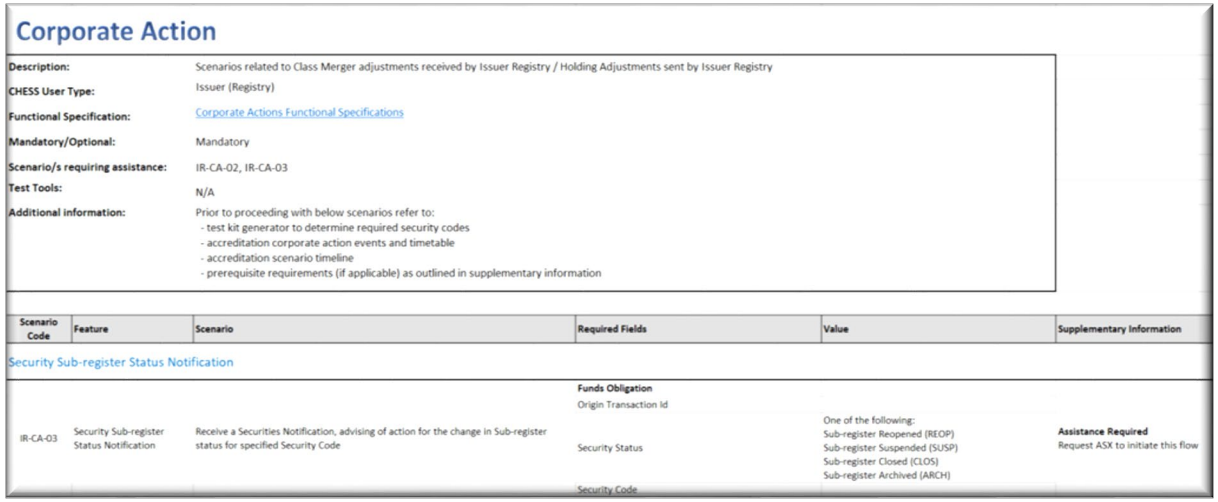
- Different UIC (from Test kit) can also be used to act as counterparty
- CHESS UI - Can be used as an alternative to the Self-Service Tools

Technical Accreditation

Assistance Required

ASX Assistance is required

- ASX Assistance is required to execute the scenarios
- Scenarios are marked in sheet header and in Supplementary Information
- List of assistance required scenarios for each CHESS user type will be part of Scenarios Timelines (Technical Accreditation Guide)



Corporate Action

Description:	Scenarios related to Class Merger adjustments received by Issuer Registry / Holding Adjustments sent by Issuer Registry
CHESS User Type:	Issuer (Registry)
Functional Specification:	Corporate Actions Functional Specifications
Mandatory/Optional:	Mandatory
Scenario/s requiring assistance:	IR-CA-02, IR-CA-03
Test Tools:	N/A
Additional information:	Prior to proceeding with below scenarios refer to: - test kit generator to determine required security codes - accreditation corporate action events and timetable - accreditation scenario timeline - prerequisite requirements (if applicable) as outlined in supplementary information

Scenario Code	Feature	Scenario	Required Fields	Value	Supplementary Information
Security Sub-register Status Notification					
IR-CA-03	Security Sub-register Status Notification	Receive a Securities Notification, advising of action for the change in Sub-register status for specified Security Code	**Funds Obligation** Origin Transaction Id Security Status Security Code	One of the following: Sub-register Reopened (REOP) Sub-register Suspended (SUSP) Sub-register Closed (CLOS) Sub-register Archived (ARCH)	**Assistance Required** Request ASX to initiate this flow

Technical Accreditation

Additional Information

Business Message ID

- This is an existing process where software providers need to provide BizMsgID as evidence of test
- ASX invested in automating the verification process
- Software providers are no longer required to provide BizMsgID as evidence of test
- ASX reserves the right to contact software providers to ask about evidence for randomly picked scenarios

DRP/BSP Mandatory Scenario

- DRP/BSP is an optional function for
  - Clearing and Settlement Participants
  - Settlement Only Participants
  - Account Participants
- DRP/BSP scenarios are optional for above mentioned participants
- Issuer (Registry) Initiated DRP/BSP Election Cancellation scenario is **Mandatory**
- For Issuer (Registry) DRP/BSP function and all scenarios are mandatory

Technical Accreditation

Technical Accreditation Guide

High-level Overview

- Objective of technical accreditation
- Accreditation Process overview
- Application Accreditation Checklist
- Connectivity Accreditation Scenarios
- Messaging Accreditation Timeline
- Corporate Action Timeline
- Additional Information
  - Counterparty scenarios
  - Assisted Scenarios
  - Optional/Mandatory scenarios matrix

Technical Accreditation

Action Items

Actions to perform

- Go through all the scenarios in detail
- All related scenarios must be part of functional testing
- How to execute scenarios e.g. Prerequisites, act as counterparty
- Check the Corporate Action Requirements for scenarios
- Provide feedback to ASX. That will help us improve the scenarios

Technical Accreditation

Next working group

- Technical Accreditation Guide
- Application Accreditation Checklist
- Messaging Accreditation Time-line
- Exemption Process

Q&A

Forward Schedule

Next steps

Review and feedback:

- Slides and Q&A will be published on the CHESS Replacement webpage
- Provide feedback by contacting **CHESSReplacement@asx.com.au** – use “SPR – WG” as the subject heading

Next Software Provider Readiness Working Group meeting:

- Date: Jan 19 2022

Forward Schedule

- ITE1 Update
- Registration Details update
- Connectivity Accreditation overview
- CHESS UI demonstration
- Member topics - TBC

Thank you.

ASX

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