Program Newsletter

CHESS Replacement Project Update

February 2021

I hope you were able to have time to take a breath and enjoy the summer and like me, try to work out what to take from 2020.

Last year's stakeholder engagement activities finished with an implementation & transition working group webinar foreshadowing the propos changes to netting and settlement workflows. These changes will allow the replacement system to provide for significantly more throughp capacity and the ability to scale more quickly to even higher throughput capacity post Day 1.

Last week, we published a consultation paper on these proposed changes which we are now seeking feedback on and can be accessed here. T changes are largely technical in nature and to help stakeholders digest the key points, we hosted a webinar earlier this week to talk through t proposal. A recording of this webinar is now available here for anyone that missed it or would like to listen to it again. Next steps with c engagement activities is to host focus groups with impacted stakeholders to facilitate an interactive discussion on the proposed soluti design. The consultation period runs for 4 weeks with feedback requested by 18 March 2021.

At the end of January, we published a revised forward release plan announcing an uplift to our customer development environment (CDE) improve users' experience with development and testing activities. The uplift which will be released later this week introduces additional test tools support user's testing in CDE, along with two new demand reports for testing.

The revised plan also brings forward mFunds functionality which will now be introduced to CDE mid-April 2021, instead of end June 2021, providi additional time for software providers.

More detailed updates on the project can be found by clicking below. For any enquires related to the CHESS Replacement project, please contin to direct them to CHESSReplacement@asx.com.au.

If 2020 is anything to go by, 2021 will be an interesting one. We look forward to continuing to work with you throughout the year.

Tim Hogben

Group Executive
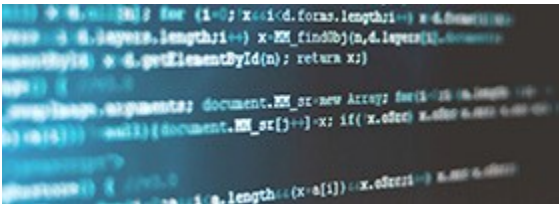Equity Post Trade and CHESS Replacement

Engagement Activities

Documentation Spotlight

This section provides a spotlight on the information presented in the ASX CHESS Replacement documentation portal. This month highlights the content relating to the new CHESS UI browser user guide.

Read more >

Implementation & Transition Working Group

ASX hosted the most recent implementation & transition working group (I&T WG) on 31 March. The date of the next working group – update on consultation feedback – will be provided in due course.

Read more >

Customer Development Environment Updates

Our latest code drop (CDE 9.5 mFunds) was released on 19 April and work continues on remaining system development. ASX will continue to publish remaining features to CDE for development and testing.

Read more >

Customer Frequently Asked Questions

We have established the CHESS Replacement mailbox and CSP Support mailbox as a means addressing any project related questions. We have highlighted the most recent questions of interest.

Read more >

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CHESSReplacement@asx.com.au

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Documentation Spotlight

Documentation Spotlight

This section provides a spotlight on the information presented in the ASX CHESS Replacement documentation portal. This month highlights frequently asked questions that have been put to our support teams about development and testing in CDE.

Updated FAQs from CDE Feedback

Our support teams continually help the developers in our Customer Development Environment (CDE) with answers to questions relating to functional specifications, test tools, expected test results etc. This feedback is valuable and often helps us to review and refine previously published content.

This month we asked our support teams to provide a spotlight on some frequently asked questions, or those that they have helped answer. We've added these common CDE questions to our existing Documentation portal FAQ pages which can be accessed through the links below.

Functionality FAQs - published here

- Is it possible to transfer an Account with an Account Type of Sponsored while the Holder Type is Unknown after the Cutover Weekend?
- When an ETO Clearing Participant rejects a collateral removal request received from a Controlling Participant, what rejection reason codes should be used?
- When a Payment Provider rejects a Payment Funds Obligation as a part of the Aggregate Funds Obligation Process, there is no attribute to provide the rejection amount. Will the rejection always be for full amount against a Payment Facility?
- Where a Participant has a single Payment Facility with a Payment Provider and a Payment Funds Obligation is rejected by the Payment Provider as a part of the Aggregate Funds Obligation Process, will all obligations for the Participant will be re-scheduled through the Default Management Back-out Algorithm Process?
- Where a Participant has multiple Payment Facilities (e.g. Payment Facilities 'A', 'B' and 'C') associated with a Payment Provider, and a Payment Funds Obligation is rejected for a single Payment Facility (i.e Payment Facility 'A') as a part of the Aggregate Funds Obligation Process, will the Default Management Back-out Algorithm be applied to Payment Facilities 'B' and 'C' in order to re-calculate the funds for the remaining Payment Facilities?
- The Total Balance of a security holding on an Account (HIN) consists of the Available Balance, Holding Administration Lock balance, one or more collateral sub-positions, one or more Bid Election sub-positions and one or more Settlement Lock Balances. Are the Settlement Lock Balances being maintained separately for each Settlement Instruction? For example, if there are two matched Bilateral Demand Settlement Instructions (BSSIs) for the same security and Account (HIN), does the CSP will maintain two separate Settlement Lock balances?

Messaging FAQs - published here

- What is the difference between the Transaction Id in the Business Application Headers (BAH) and the Transaction Id in ISO Messages?

Please continue to provide feedback or ask questions of our CDE support teams, as your question may help others who are yet to develop or test on a particular feature or capability.   Details of our CDE support teams are in our Documentation portal.

Additional information published

The following additional information was also published since our last update:

- January 2021 Documentation Release Notes:
    - Updated Forward Release Plan for CDE code drops
    - API Contracts for Collateral Management
    - New content supporting broader Technical Accreditation, including messaging accreditation test scripts for mFunds
    - Removed references and content relating to corporate actions entitlement elections functionality as it is not part of day 1 scope, in-line with previous updates

- Removed references relating to the ability to submit a corporate action election pertaining to a Scheme of Arrangement as this corporate action event type will no longer be supported.

CHESS Replacment Consultation paper - Netting and Settlement proposed changes

On 18 February 2021, ASX published a consultation paper for CHESS replacement and proposed changes to netting and settlement workflows. The consultation paper outlines proposed changes to the design of both the netting and settlement confirmation workflows to deliver processing efficiencies and reduce subsequent messaging volumes as part of the overnight end-of-day process and daily batch settlement.

The proposed changes will allow the CHESS replacement system to support clearing and settlement of significantly greater trading volumes and are largely in response to the extreme record trading activity in March 2020, which redefined the Day 1 capacity requirements of the replacement system.

Written submissions in response to the consultation paper are due by **18 March 2021**.

Coming up

Further documentation and accreditation details will continue to be published in 2021 as part of the CHESS replacement project. Our next CDE code and documentation release is expected at the end of February 2021.

Further information

Other topics relating to CHESS Replacement documentation can be found at the following links:

- Documentation Portal - home page
- ASX Operational Procedures & Guidelines
- Documentation Release Notes
- Documentation What's New updates
- Documentation FAQs

Implementation & Transition Working Group

![ASX logo]

Implementation & Transition Working Group

ASX has hosted the most recent implementation & transition working group (I&T WG) on 23 February 2021.

I&T WG - February 2021

This I&T WG webinar primarily focused on the recently published consultation paper on the proposed changes to netting and settlement workflow. It provided members with a recap on the background and key drivers and walked through the changes in detail, including a providing an overview of the trade lifecycle for the proposed target state to help scene set with the big picture on the changes before stepping through each proposed change in more detail. The webinar also highlighted what is changing between current CHESS, the code already delivered to CDE, and how CHESS will operate under the proposed changes.

In addition, members were also provided with an update on upcoming stakeholder engagement activities, the changes to be promoted to CDE at the end of February (see here for further details), as well as providing further details on the ASX Registration Details tool, including the Terms of Use that will also be published on the documentation portal at the end of February.

A copy of an audio recording for the 23 February webinar and presentation materials can be found here. The Q&A is targeted to be published on the CHESS replacement webpage in early March 2021.

Coming up

The next I&T WG webinar will be on **31 March 2021** and will include a demonstration on the ASX Registration Details tool.

As outlined in February's webinar ASX will initially launch the tool to software providers that require it for the purpose of converting CHESS registrations from EIS to ISO 20022 attributes, and Issuer (Registries) for use with their sub-registries. During the March WG ASX will outline our data cleansing plan and can provide further details on this work and how other CHESS users will be able to use the Registration Details tool.

Invitations for the working group will be issued shortly.

Materials from previous I&T Working Group meetings can be accessed via the CHESS Replacement Stakeholder Engagement website.

REMINDER:
For your consideration in planning your implementation.

CHESS Changes:

- If you are planning any migrations or other significant changes to your CHESS configuration please contact the Customer Readiness team at participant.transitions@asx.com.au

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A list of upcoming project activites can be read here.

Customer Development Environment Updates

Customer Development Environment Updates

ASX's customer development environment (CDE) follows the development cycle of the CHESS Replacement project. Functionality, security features and test capabilities will be progressively added to the environment during the life of the project in iterative cycles. Details and objectives of CDE and how to access are provided in our technical documentation portal here.

Our ninth code drop (CDE 9) was released on 30 November and work continues on remaining system development. At the end of January 2021 ASX updated our Forward Release Plan for CDE code drops (CDE uplift, CDE mFunds), in addition to the previously published remaining releases (CDE 10, CDE 11).

ASX expect to publish our next release as an uplift to CDE by the end of **February** later this week.

CDE - Release 9

ASX published the last application code release into CDE on **30 November 2020** (CDE 9), code release notes are here.

CDE - uplift

ASX are planning an additional CDE release at the end of **February 2021** to improve users' experience with development and testing activities. This release will include new on-demand reports and also new test tools. Some additional information about this release are summarised below and full release notes will be issued shortly.

- New demand reports:
  - Holding Balance (HBAL) and
  - Holding Subposition Balance (HSBL).
- New self-service test tools:
  - Broadcast request - for use as Issuer (Registry), Controlling Participant, Payment Provider, Product Issuer Settlement Participant
  - SRN enquiry - for use as Issuer (Registry)
  - Transfer and conversion - for use as Issuer (Registry).
- New Auto-responder test tool:
  - Bid election / election withdrawal - for use as Controlling Participant, Offeror.

CDE - mFunds

ASX are also planning an additional CDE release **mid-April 2021** to introduce the mFund functionality to CDE ahead of the previously published release date with CDE 10 (end June 2021).

CDE - Release 10

ASX expect to publish this release to CDE by **end June 2021**. Updated Release 10 column on our Forward Release Plan clarifies the new CDE 10 scope which includes the changes to 'netting and settlement' following a consultation period with the market, as well as the removal of remaining mFunds functionality. New capabilities introduced with this drop are indicated in our Forward Release Plan on our Technical Documentation portal with previous releases.

> **CDE reminders:**
> CDE supports early access development and low volume transaction and functional testing, following iterative development of the technical solutions.

- From CDE 5 ASX advised that they will refresh environments every two weeks for internal CDE maintenance. ASX will always notify CDE Subscribers prior to any environment refresh.
- We have published for users details of CDE constraints and any known limitations.
- Details of how to request access to the CDE are available in our Technical Documentation portal.

A list of upcoming project activites can be read here.

Customer Frequently Asked Questions

Customer Frequently Asked Questions

We have established the CHESS Replacement mailbox and CSP Support mailbox as a means of addressing any project related or functional questions. We have highlighted below the most recent questions of interest.

Some other frequently asked questions recently raised on development and testing in CDE have been included in this month's February Documentation Spotlight section.

Implementation & Transition

⌄ Is a software vendor developing a solution to support CHESS Replacement required to undergo separate Technical Accreditation tests for each clearing and settlement participant client?

A software vendor only needs to accredit software once, so long as the same version of software is used by multiple clients.

Details on Technical Accreditation can be found in our Technical Documentation portal.

⌄ Will message content be verified by ASX as part of technical accreditation or will this form part of operational readiness?

Yes, message content will be verified as a part of the messaging component of the Technical Accreditation activity.

Details on Messaging Accreditation can be found in our Technical Documentation portal.

⌄ When will test packs and test scripts be available?

The first release of message test scenarios for technical accreditation was made available from April 2020. Additional message test scenarios will be progressively released in tranches in line with the published plan.

Details on Messaging Accreditation can be found in our Technical Documentation portal.

⌄ Further Implementation & Transition questions - click for details

Questions relating to the approach to transition, cutover and accreditation will be published in our Technical Documentation portal under Frequently Asked Questions. We will continue to highlight any common questions in our regular newsletter.

Connectivity

⌄ Do software vendors, and CHESS Users more broadly, need to have CHESS Browser connectivity?

CHESS Users don't need to have access via the new CHESS Browser; it is an optional connectivity channel that replaces CHESS PC software.

Product Issuer Settlement Participants (PISPs) are heavy users of CHESS PC and ASX anticipates this cohort to use the browser. Another potential cohort is an organisation that wants to use the browser as a supplementary connectivity channel for low volume corner cases.

⌄ When will ASX publish documentation on the ASX Customer Identity Access Management system?

All access channels will be authenticated by ASX, for AMQP users this will be via ISO 20022 message signing and for Ledger API users via Token Authentication. ASX will provide details of Token Authentication in the June publication to the Technical Documentation portal.

⌄ Ledger API - click for details

⌄ What is a DAML Party?

CHESS Users are represented as a DAML party in the system. A party is identified in the system by its unique DAML Party Identifier. To connect to the CSP via the Ledger API, CHESS Users undergo a formal on-boarding process which grants them one or more DAML Party Identifier(s) and permits them to access a master ingress contract.

For further details on Ledger API connectivity refer to the CHESS Replacement Technical Documentation - Connectivity.

What is a Master Ingress Contract?

The master ingress contract is a non-consuming DAML contract that allows CHESS Users to issue a command to the CSP to start the associated workflow.

Each DAML party in the system is permissioned to execute specific commands and business workflows as set out in the party's master ingress contract. Each command, is a combination of choice with a parameter, which when exercised, sends an instruction to the CSP. A party can initiate a workflow by exercising a choice on the master ingress contract, which triggers a piece of code, representing a workflow, and results in one or more contracts being created or archived on the ledger.

For further information refer to Identify the Master Ingress Contract.

For further details on Ledger API connectivity refer to the CHESS Replacement Technical Documentation - Connectivity.

How do I view exercised events committed to the Ledger?

When developing a Ledger API client application, events can be viewed using the getTransactionClient.getTransactionsTrees() method.

This will produce not just the committed event but the entire transaction in a tree structure. The Transaction Tree structure contains exercised choices, contracts created, and scenarios run among other events. For further information and a full description of all the attributes visible on a transaction tree, refer to the DAML SDK.

For further details on Ledger API connectivity refer to the CHESS Replacement Technical Documentation - Connectivity.

Functionality & Specifications

Where are details on how the Account locking and unlocking process will work?

The functional process and specification for Account and Holder Locking and Unlocking are published in our Technical Documentation portal. Plus we have some addional information here - FAQs - Account Locking & Unclocking.

Is there a simple guide how the old EIS message formats map to the new ISO standards?

As part of our ISO 20022 Messaging technical specifications that have been published, ASX has provided a useful cross reference page to help users relate from EIS to the new standard. Please see the following page - ISO 20022 Messaging - TM - EIS to ISO 20022 Cross Reference Guide.

Connectivity - ISO message signing

Which access channels require ISO message signing?

Customers wishing to access the CHESS Replacement system via AMQP will be required to use ISO message signing for production. During the CDE development phase customers can opt-in to use ISO message signing.

Further details can be found in the Technical Documentation Connectivity - Message Connectivity pages.

When will ISO message signing be available?

ISO message signing will be available from CDE 6 (from Tuesday 3 March 2020) and customers can 'opt in' to use it within CDE. Release notes will be published to accompany CDE 6. To opt-in to ISO Messaging signing in CDE, click here to send an email to the ASX CTS team.

Many other questions about CHESS Replacement can be found at the following links:

- General CHESS Replacement questions
- Technical Documentation FAQs

Upcoming Activities

Date	Activity
End February 2021	CDE uplift release (refer here)
End February 2021	Publication of market-facing documentation (refer here)
Late February / early March 2021	Focus Groups with impacted stakeholders on NBO and settlement process redesign
End April 2021	CDE mFund code release (refer to Forward Release Plan)
Early 2021	Information paper on system design & solution for Electronic CHESS holding statements
Q1 2021	Engagement with clearing & settlement participants on pricing for Day 1 clearing, settlement and other services
Late Q1 2021	Pricing model published for Electronic CHESS holding statements
Late Q1 2021	Target go-live for Electronic CHESS Holding Statements
End March 2021	Publication of market-facing documentation inc. specifications for NBO and settlement process redesign
End June 2021	CDE 10 code drop (refer to Forward Release Plan)