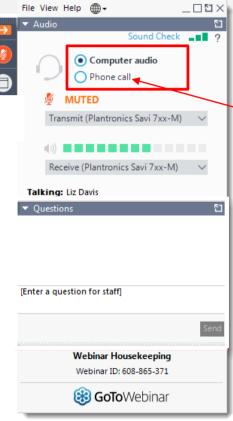


Housekeeping: Audio Trouble Shooting

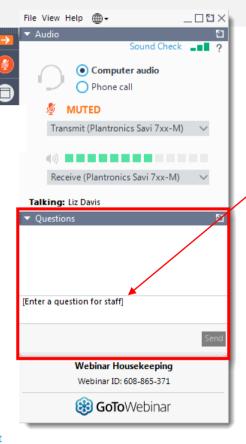


Your Participation

- Having trouble hearing via Computer Audio? Switch to Phone call!
- Refer to your registration and / or reminder email for dial in details



Housekeeping: How to submit questions



Your Participation

- To submit your text questions and comments use the Questions panel
- Note that your questions will not be seen by other attendees

For more information - refer to the webinar tips published on the ASX <u>CHESS Replacement web page</u>



Presenters and introductions



Cliff Richards
Executive General
Manager,
Equity Post Trade



Manager, Integration and Connectivity, Equity Post Trade

Fraser Moodie



Russell Eyre
Enterprise Architect,
Technology



Agenda

Introduction

- **Project Update**
- Overview of technical documentation
- Purpose of Connectivity & Integration Webinar

Connectivity options

- Direct integration (node)
- Message based
- Browser based
- Reporting
- Q&A



Project update

- > Response Paper to the consultation on CHESS Replacement business requirements
 - 41 responses from a broad cross section of the industry
 - Narrowed the go-live date to March or April 2021
 - Revised new scope items including deferring the implementation of 7 new features to post Day 1.
- > Connectivity & Integration working groups and focus groups to commence end October
- > Delivery of the first tranche of technical documentation remains on track for December 2018
- > Software development continues to build and test the solution in readiness for CDE in April 2019



Overview of Technical Documentation

Technical Documentation Release Tranche Package



- CHESS Replacement Synopsis
- Release Notes
- APG Replacement
 - APG Synopsis
 - APG Sections



- Messaging Catalogue
 - MyStandards Usage Guidelines
 - MyStandards User Guide
- Technical Manual
 - CHESS Cross Reference Guide
 - ASX Proprietary Code List
 - ASX Error Code List



Purpose of Connectivity & Integration Webinar

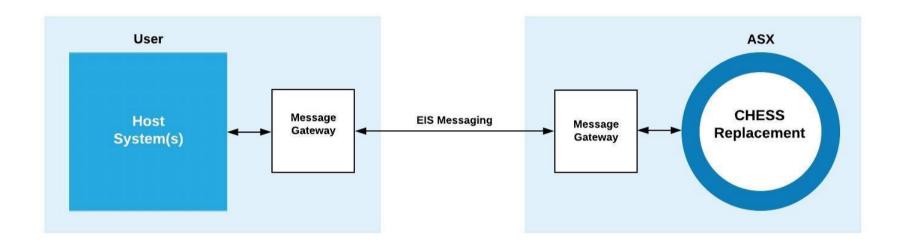
- > To provide information to a wide audience regarding connectivity and integration prior to commencement of working group
- > To assist participants and vendors define their connectivity option(s)
- > To address questions received via submissions to the Consultation Paper
- All documentation relating to the CHESS Replacement project available https://www.asx.com.au/services/chess-replacement.htm



Existing CHESS Connectivity



Connectivity – Current CHESS Flows (all users)



Today users all connect to CHESS using the CHESS proprietary EIS messaging over ASX Net, iVPN or other providers.

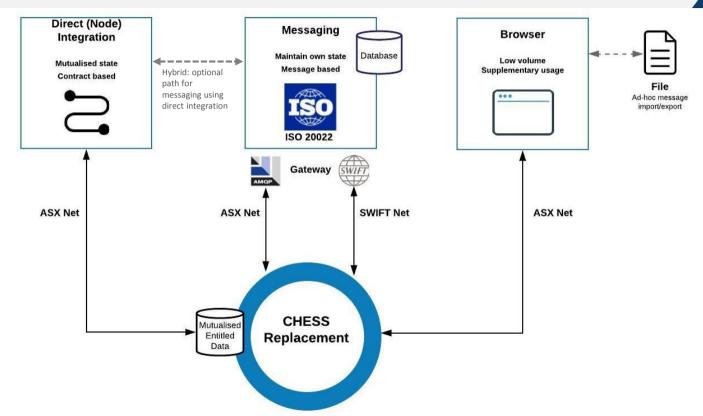
In the future the ASX are implementing industry recognised standards in terms of message protocols, security and providing users multiple connectivity options to the new solution.



CHESS Replacement Connectivity Options



Connectivity Options

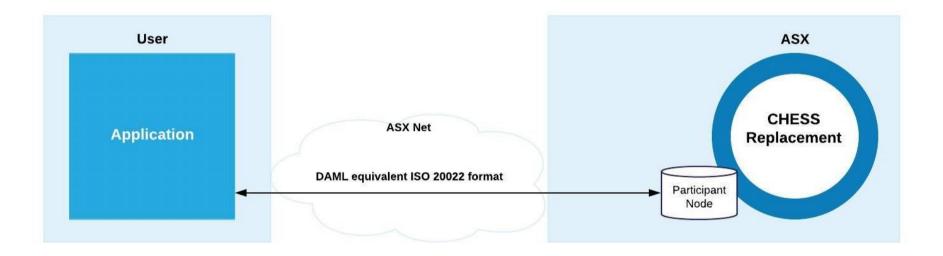




Direct Integration (Node)



Direct Integration (Node)



- Transaction Format: DAML equivalent ISO 20022 format
- Network: ASX Net

- Direct connectivity means no need for separate message infrastructures
- Mutualised data maintains current state
- Applications can access mutualised data and provide workflow through using DAML
- Interaction through Ledger API

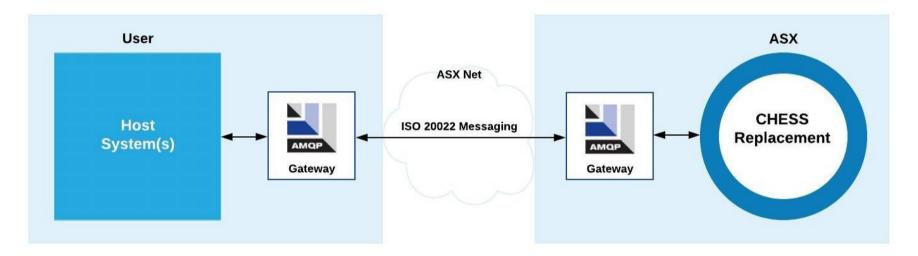


Message Based Connectivity



Messaging Based Connectivity

Message Queuing (AMQP – Advanced Message Queuing Protocol)

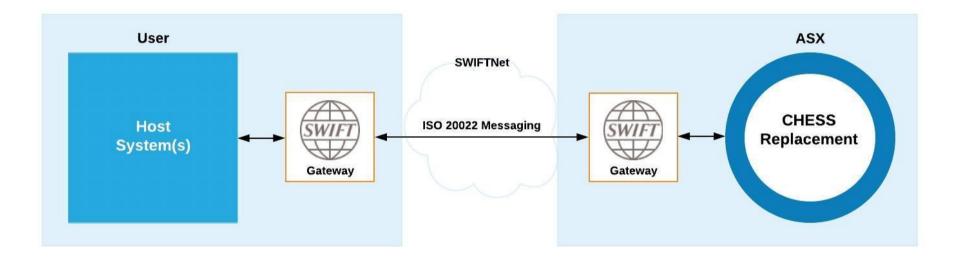


- Message Format: ISO 20022
- Message Transport: AMQP
- Network: ASX Net

- Secure guaranteed store and forward delivery
- Designed for financial markets
- Adopted by other clearing houses, e.g. Eurex Clearing
- Open standards messaging protocol
- Expected minimal infrastructure requirements
- ASX developing implementation model and user experience



Messaging Based Connectivity SWIFT



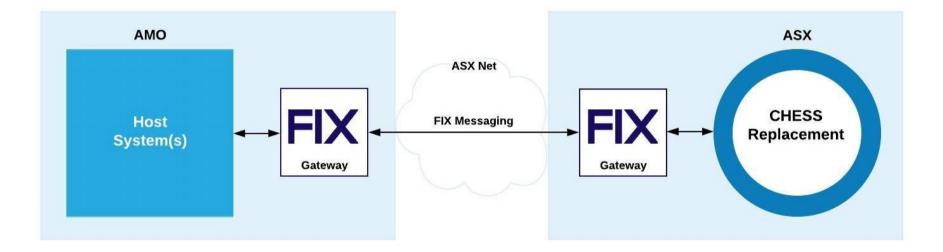
- Message Format: ISO 20022
- Message Transport: InterAct
- Network: SWIFTNet

- Secure guaranteed store and forward delivery via SWIFT Gateway
- Users will need to be a SWIFT member
- Messages are routed using SWIFT Distinguished Name (DN)

- Access is controlled through the ASX administered CUG (Closed User Group)
- Messages are MX (not MT FIN messages)
- Messages are sent to / from CHESS (not between other SWIFT users)



Message Based Connectivity Trading Venue Specific (AMO)



- Message Format: FIX 5.0
- Message Transport: FIX 5.0
- Network: ASX Net

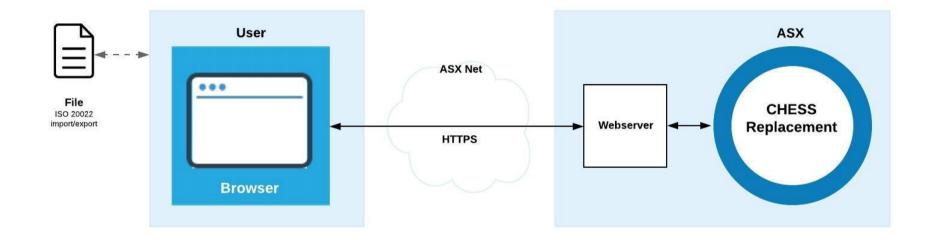
- Secure guaranteed delivery
- Global standard for trade reporting
- For notification of the trade executions and end of day prices



Browser Based Access



Browser Based Access



Network: ASX Net

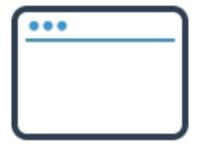
- Suitable for low volume users
- Support manual entry of all ISO 20022 messages
- Secure browser

- Capability to upload/download files containing ISO 20022 content
- Supplementary use with other connectivity options



Browser Based Access CHESS ACCESS and CHESS PC

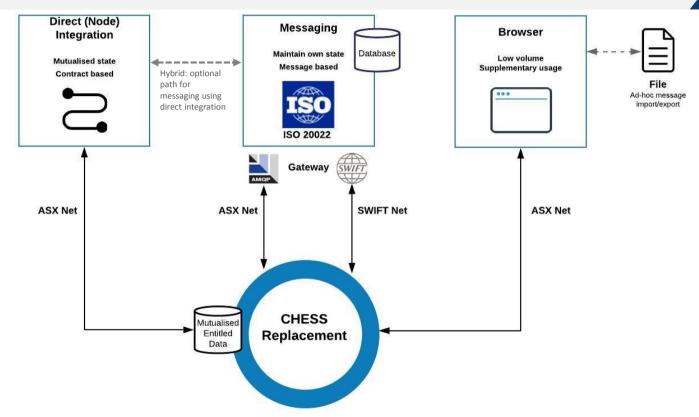
- > The ASX currently provide two solutions to support CHESS connectivity, CHESS Access and CHESS PC, both these solutions will be decommissioned. Users of these products will need to select one of the previously described connectivity options
- For low volume users the new browser solution will provide equivalent functionality to that supported by CHESS PC today





Connectivity Options

Not mutually exclusive





Reporting



Reporting

Direct Integration (Node)



Direct (node) event based data streaming: customisable, flexible

Data API



The Data API allows data requests using a web service call: pre-defined reports

Messaging







Message based reporting allows users to request reports using ISO 20022 over either AMQP or SWIFT: on demand reporting



Recap

- Users have a number of connectivity options including direct, message based and browserbased
- Connectivity options are not mutually exclusive, and indeed users may change their connectivity model over time
- > ASX recommends users consider their transaction and reporting requirements bearing in mind that they do not need to use the same connectivity option



Q&A



Thank you.



Disclaimer

This document provides general information only and reflects matters put forward for discussion at a point in time. You should obtain independence advice before making any decisions. ASX Limited (ABN 98 008 624 691) and its related bodies corporate ("ASX") makes no representation or warranty with respect to the accuracy, reliability or completeness of the information. To the extent permitted by law, ASX and its employees, officers and contractors shall not be liable for any loss or damage arising in any way (including by way of negligence) from or in connection with any information provided or omitted or from anyone acting or refraining to act in reliance on this information.

© Copyright 2019 ASX Operations Pty Limited ABN 42 004 523 782. All rights reserved.

