



CHES Replacement Project

**Software Provider Readiness
Working Group**

19 January 2022

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 Update
 - Transition Timeline
 - Certificate Management
 - ISO Message Signing
 - Ledger API
 - CHES UI
-

- Registration Details Tool Update
-

- Forward Schedule
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- Q&A
-

ITE1 Update

ITE1 Transition Timeline



- > ITE1 (v1.0) opened at the end of November '21
- > Software providers must now transition from CDE to ITE1, CDE will be decommissioned end of Feb'22
- > ITE1 (v1.2) will be made available from 31 Jan'22
 - Corporate Action events will be enabled from this date
 - CTS will e-mail updated test kits (20/01/22) to all software providers, these will contain CA events to the end of Dec'22
 - ITE (v1.2) will also include a new participant self service tool, Bid Offer Transfer to allow for additional takeover/buyback testing
 - Certificate update for ISO 20022 messages signed by ASX
 - This release will result in a system refresh, software providers will need to reset their systems

ITE1 (v1.1) was an internal only release deployed in Dec'21

ITE1 - Certificate Management

ASX TLS Certificates

ASX provides TLS certificates for the *.asx.com.au domain, via the public certificate authority DigiCert, for Ledger API Connectivity, AMQP and FIX Messaging.

This requires connecting systems to ensure the following DigiCert certificate chain is in their trust store:

- > Root Certification: “[DigiCert Global Root CA](#)”
- > Intermediate Certificate: “[GeoTrust RSA CA 2018](#)”

Details of how to install these (if required) can be found [here](#)

Verifying TLS is in place

The following command allows clients to test their mutual TLS connection is working prior to connecting their application.

```
openssl s_client -connect http://ite1-amqp.asx.com.au:40<xx> -key <directory to private key> -cert <directory to client certificate> -CAfile <directory to trust store>
```

Details for both can be found [here](#)

ITE1 – ISO 20022 Message Signing

ISO 20022 message authentication

AMQP applications should verify the authenticity of all messages received by CHES, this includes two checks;

- > validating the certificate that was used to sign the message
- > validating the signature

Certificate Verification effective from release ITE1 (v1.2)

Check the public key in the ISO 20022 message is issued by the ASX certificate authority for the purpose ASX ISO message signing for a specific environment;

- > The public key certificate is located in the <ds:X509Certificate> element of the BAH of every message sent by CHES, refer [here](#)
- > The certificate must be issued by the expected ASX CA (ISO20022.PEM files containing the intermediate and root ASX CA certificates are provided as part of ITE1 on boarding)
- > The Subject O (Organisation) field must contain the expected ASX organisation name - ASX Settlement Pty Ltd
- > The Subject CN (Common Name) field must contain the expected value for the specific environment, for ITE1 this is ASX CHES ISO 20022 Signing ITE1
- > Once CSAM is available clients will be able to download the root certificate directly

Validating the signature

Detailed in prior sessions and details can be found [here](#).

ITE1 – Ledger API

Check IP, port numbers and host name using on-line documentation, found [here](#)

Service Name Destination	Address	Port	Host
ITE1 Ledger ALC	203.4.179.144	3000	ite1-node-1.asx.com.au
ITE1 Ledger SDC	203.4.179.144	3500	ite1-node-2.asx.com.au
ITE1 Ledger JWT Server	203.4.179.146	6005	ite1-dlt-iam.asx.com.au

Ledger API call outs

- > Token acquisition and authentication mandatory from ITE1 opening, details [here](#)
- > Public party in ITE1 will be 'public' (used for reference data access)
- > ApplicationID must be supplied when submitting commands
- > Token isn't bound with a 'ledgerID' or 'participantID' [will be populated in higher environments but no application impact]
- > Ledger API error code changes – release ITE1 (v1.3) – release date TBC

Ledger API access will be unavailable Thursday 19 Jan (9.30am – 12.30pm) due to system maintenance.

ITE1 - CHESS UI

CHESS UI

- > Only available only ASX Net (it's not publically facing)
- > Software providers will need to ensuring internal routing for addresses below
- > Two IP's required to be whitelisted
- > Connectivity details [here](#)

4.4.1 CHESS UI Networking for ITE1

Service Name Destination	Address	Port	Host
ITE1 CHESS User Interface	203.4.179.145	443	ite1-ui.asx.com.au
ITE1 CHESS User Interface (Authentication)	203.4.179.146	443	ite1-auth.asx.com.au

- > 2FA authentication not currently enabled for non-Australian mobile numbers
- > CHESS UI user set up recommendations [here](#)

ITE1 – Self service tools

Self service, due to networking changes between CDE and ITE1 some clients may need to supply an additional parameter, details [here](#)

- ❗ For ITE1, ASX is aware that some customers may need to include an additional line of code based on the operating system and the version of code they are using. This line is to be implemented if the curl request hangs. This is in addition to the code snippets shown in the “Connection Details” sections of the individual self-service tool pages. The line of code is:

```
-H "Expect: 100-continue"
```

This informs recipients that the client is about to send a message body in this request and wishes to receive a 100 (continue) interim response.

Test kits reminder;

- > Must only use security codes provided in your test kits.
- > Some file formats for self-service tools have changed between CDE and ITE1
- > Trade Ingest tool ensure you use the new format for TSN, details [here](#).
- > Reminder to identify any support requests as CDE or ITE1 in e-mail subject header

Registration Details

Tool changes

Registration Details Tool - Recap

- > All accounts (HINs) will be migrated from CHES to CHES Replacement during cut-over weekend
- > CHES EIS formatted registration details will be migrated from their current CHES EIS format into a more structured format (in line with ISO 20022)
- > Sponsoring participants and issuers may wish to reflect the change to this new format in their own host systems, but optional.
- > A number of options are available to achieve this;
 - Use of the ASX Registration Details Tool (released May'21)
 - Applying the mapping published on the ASX documentation website
 - Post go-live using the Ledger API to access state on the ledger
 - No change required if systems already record account data in a structured format

Future Registration Detail changes

Registration Details Tool Changes

ASX are reviewing the following changes to the Registration Detail Tool, requesting software provider feedback prior to finalising a release candidate;

- > To support Share Registries reconciliation (SRN) across multiple securities a new optional column to provide uniqueness will be added
- > Tool does not recognise logical line breaks (30, 60, 90, 120)
- > Additional errors where there is a missing holder before or after the plus (+) symbol for joint accounts types
- > Additional warning when prohibited keywords denoting trust are used (i.e. Trstee[sic])
- > Additional warning when New Zealand towns cannot be identified
- > Allow reference data file to be supplied separately to the tool
- > Configure the tool to disable log files by default

ASX are looking for feedback by 11 Feb to incorporate changes into the next release candidate.

Interim release

ASX will be providing an interim release of the Registration Details tool w/c 24 Jan, this is a non-functional only release and updates the version of the third party library log4j from version v2.10 to v2.17.1

Registration Details Tool subscribers will be notified via CTS when available

Forward Schedule

Industry testing supporting documentation

Refer to Section 6 of the Industry Test Plan

Documentation already published:

- > Industry Test Strategy – **Jun 21**
- > Connectivity Guide (ITE1) – **Jul 21**
- > Guide to Testing Services (ITE1) – **Sep 21**
- > Failover & Recovery details (ITE1) – **Sep 21**
- > Connectivity Guide (ITE2) – **Sep 21**
- > Connectivity Guide (Security) – **Oct 21**
- > Accreditation Guide for ITE1 – **Nov 21**
- > ITE1 open release – **Nov 21**
- > Cutover & Migration Strategy – **Dec 21**

Upcoming documentation (end Jan):

- > Ops Readiness Scenarios (ITE2) – **Jan 22**
- > User Testing Guide (ITE2) – **Jan 22**

Upcoming key documentation milestones

- > Performance testing details – **subsequent release**
- > Ops Readiness Scenarios (ITE2) – **Feb & Mar 22**
- > Details of single cutover weekend – **end Q1 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.

Q&A

Next steps

Review and feedback:

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

Next Software Provider Readiness Working Group meeting:

- > Date: 9 Feb 2022

Forward Schedule

- > ITE1 updates
- > Connectivity Accreditation
- > Performance testing
- > Ledger API error code changes

Thank you.



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