



CHES Replacement Project

**Software Provider Readiness
Working Group**

13 October 2021

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

-
- Certificate Portal introduction - Customer Service Account Management solution
-
- Ledger API Updates
-
- Changes to Netting & Settlement workflow – FAQ's
-
- Introduction to Technical Accreditation
-
- Q&A
-
- Forward Schedule
-

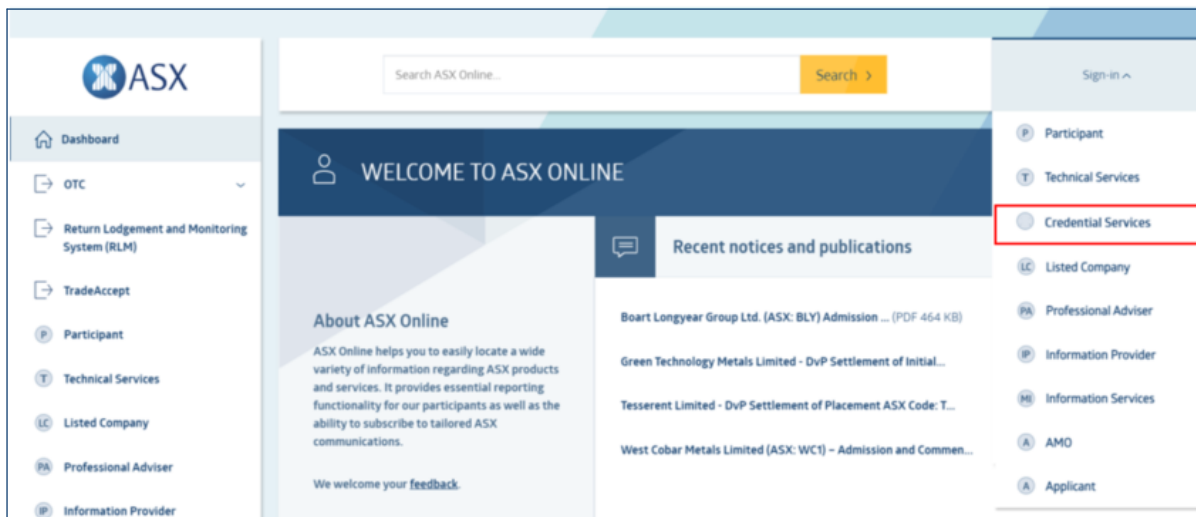
Certificate Portal Introduction - Customer Service Account Management Solution

Agenda

1. Introduction
2. Login to ASX Online Credential services
3. Enterprise Administrator Setup
 - Add new user
 - Manage users
4. CSAM Application Demo
 - Create service accounts and credentials
 - Nearing expiring certificates
 - Revoke certificate
 - Edit and Delete Service Accounts

CSAM Overview

- > Customer Service Account Management (CSAM) application is an ASX enterprise solution to allow ASX customers to manage their organisation's service accounts and credentials such as certificates for TLS & Signing which will be used to connect / sign messages to ASX services such as CHES.
- > The CSAM application is accessible via the ASX Online platform by signing into the **Credential services** menu.



How can I request access to ASX Online credential services?

- > ASX will create an Enterprise Administrator user, as per the contact information provided in the ITE1 application form.

(* This needs to be a group mailbox used for announcements relating to service availability etc.)

Security/Certificates Please provide a contact as Enterprise Administrator for the security set up

Contact Name (^)	Role	Phone	Email
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(^ This should be a person, as organisation-wide Enterprise Administrator, with authority to set up additional security users and permissions)

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- > Upon successful user creation, the Enterprise Admin contact will receive a welcome email with instructions on how to setup their account/password.
- > Existing ASX Online users (when granted credential services access) will be notified via email about the changes made to their access.

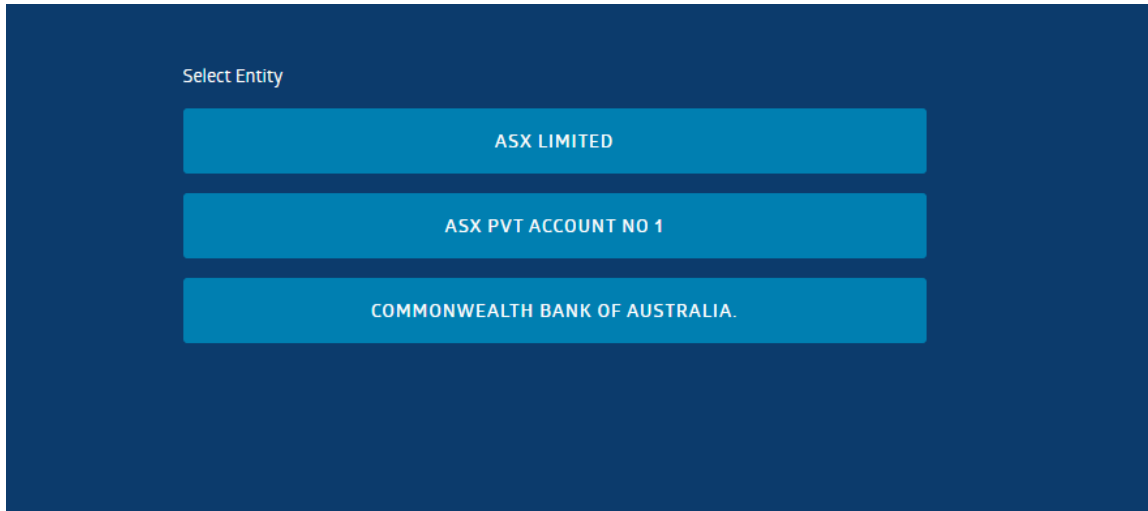
ASX Online - Credential Services menu Login

The screenshot shows the ASX Online dashboard. On the left is a navigation menu with items: Dashboard, OTC, Return Lodgement and Monitoring System (RLM), TradeAccept, Participant, Technical Services, Listed Company, Professional Adviser, and Information Provider. The main content area has a search bar at the top, a 'WELCOME TO ASX ONLINE' header, and a 'Recent notices and publications' section. On the right, a 'Sign-in' dropdown menu is open, listing roles: Participant, Technical Services, **Credential Services** (highlighted with a red box), Listed Company, Professional Adviser, Information Provider, Information Services, AMO, and Applicant.

The screenshot shows the ASX Online login page. It features the ASX logo, a 'WELCOME' heading, and the text 'Login to your account'. There are input fields for 'Your email' and 'Password', a checkbox for 'Remember my user name', and a blue 'LOG IN' button. A 'Forgot Password?' link is located below the button. A red arrow from the 'Credential Services' menu item in the previous screenshot points to the top of this login page.

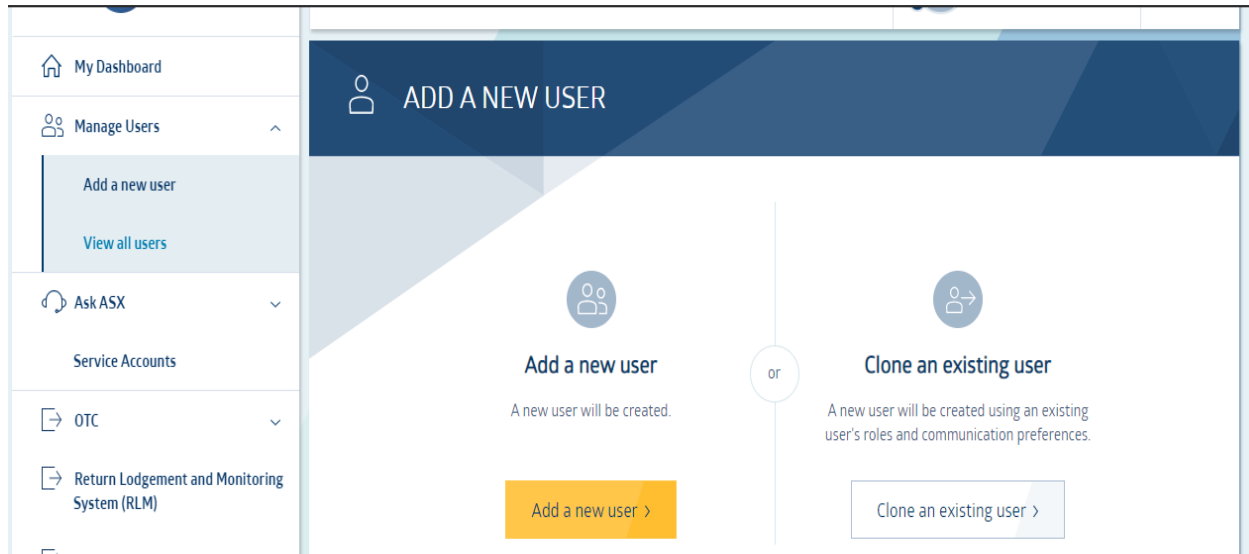
What if I am assigned to multiple entities?

- > ASX Online users, including Enterprise Administrators, who represent more than one customer will be required to select the relevant entity the user would like to represent when they sign in. An ASX Online user can only be signed in into one entity at a time.
- > To switch entities, an ASX Online user will be required to sign out and sign in again to select the entity they would like to represent.

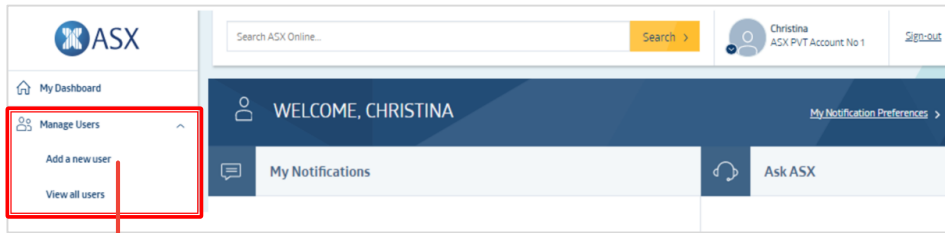


How to amend roles and permissions?

- > The Enterprise Administrator will be responsible for creating, managing and disabling authority on behalf of other users within the organization they are responsible for.
- > Sign-in to **Credential services** and then select **Manage Users**.



Credential Services EA – Provision CSAM role to users



- > The Credential Services EA is responsible for managing user access to CSAM for the organisation they are authorised to represent.
- > For CHESSE ITE1 release, the role **CHESSE – Non Prod** is to be provisioned to the relevant users.

CHESSE ITE1 (& ITE2)

How to create a service account?

- > On the Service Accounts page, select New Service Account button.

The screenshot shows the 'SERVICE ACCOUNTS' page. A button labeled 'New Service Account >' is highlighted with a black box. Below the button is a table with columns: Display name, Service, Environment, Type, Service account ID, and Status. A search bar with a 'Search >' button and a 'Clear all' link is located below the table. The left sidebar contains navigation items: My Dashboard, Manage Users, Ask ASX, Service Accounts (selected), OTC, Return Lodgement and Monitoring System (RLM), and TradeAccept.

How to create a service account?

> The Create New Service Account form will be displayed, users will be required to enter / select the following mandatory details:

> **Display Name:** <environment> <org brief name> <purpose>
(this will also be the Common Name on the certificate)

Value	Examples
<env>	ITE1 ITE2 ITM PRD
<org brief name>	Acme Ltd
<purpose>	TLS ISO 20022 Signing Ledger API User

> **Description**

> **Service Account Notification Email**

> **Service** = CHES

> **Environment** = ITE1

> **Service Account Type** = choose one

> TLS

> ISO20022

> Ledger API User

CREATE NEW SERVICE ACCOUNT

Organisation
ASX LIMITED

Display name (required)
Enter a Display name - maximum of 35 characters

Description (required)
Enter a Description - maximum of 35 characters

Service account notification email (required) ⓘ
Enter an email address for notification emails relating to this service account.

Service
-- Choose a service --

Environment
-- Choose an environment --

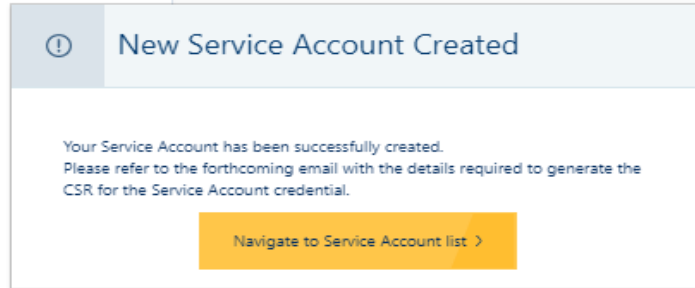
Service account type
-- Choose a service type --


Submit

Cancel

How to create a service account?

- > Upon completion of the form, click Submit. When all mandatory information have been validated, a pop-up window will appear to confirm the user's submission of the New Service Account.



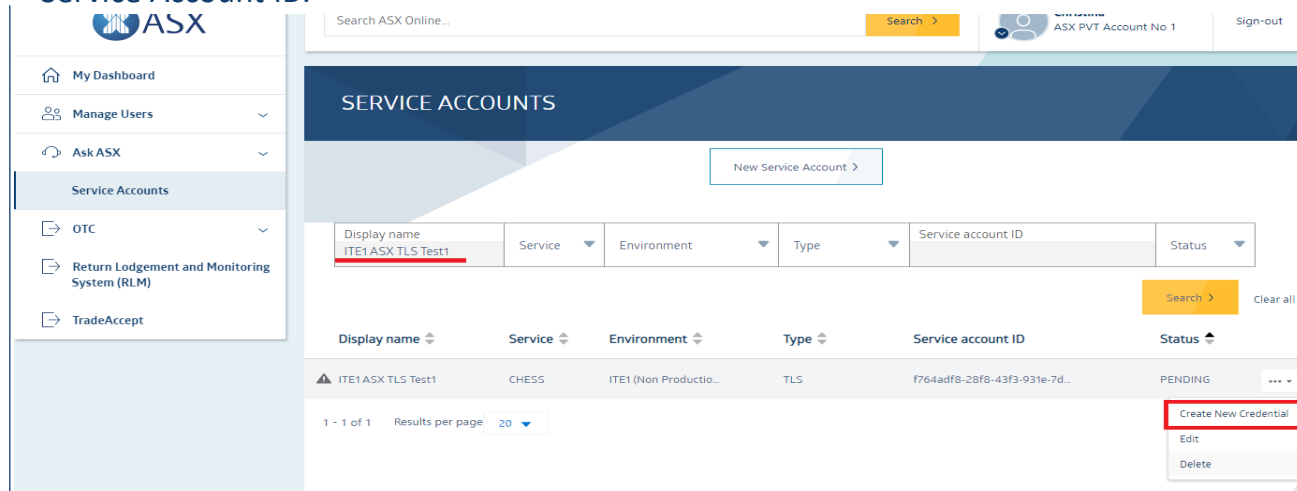
- > An email 'ASX New Service Account Created' will be sent to the creator, Organisation's CSAM CHESS environment role users and nominated Service Account notification email. 
- > The customer will receive a CSR configuration file attached to the New Service Account email with pre-filled unique values for their account.
- > Customer need to use this configuration file to create a Certificate Signing request (CSR).

A screenshot of an email titled 'ASX New Service Account Created for CHESS ITE1 (Non Production) TLS'. The email header shows a file named 'config.txt' (451 bytes) and an 'Action Items' section with a '+ Get m' link. The main body of the email features the ASX logo in a dark blue banner. Below the banner, a red warning message states: 'EXTERNAL EMAIL: Do not click on links or open attachments unless you trust the sender and know the content is safe.' The email content continues with: 'Hi ASX PVT Account No 1 Service Account Administrators,' followed by a paragraph: 'Our records indicate that your Organisation's Service Account Administrator Christina Greco PVT has created a new Service Account with the following details:'. A table follows, listing account details. Below the table, the text reads: 'Please create a Certificate Signing Request (CSR) using the configuration file attached.' The email concludes with 'Thank you' and the signature 'ASX Service Account Management Administrator'.

Display name	ITE1 ASX TLS Test
Service	CHESS
Environment	ITE1 (Non Production)
Type	TLS

Create a certificate using a CSR file

- > Once the CSR file is created, navigate back to the CSAM application to create a signed certificate using the CSR file.
- > On the Service account landing page, search for the newly created Service account with a PENDING status and a unique Service Account ID.






The screenshot shows the ASX Service Accounts page. The left sidebar contains navigation options: My Dashboard, Manage Users, Ask ASX, Service Accounts (selected), OTC, Return Lodgement and Monitoring System (RLM), and TradeAccept. The main content area has a search bar and a 'New Service Account' button. Below is a table of service accounts with columns for Display name, Service, Environment, Type, Service account ID, and Status. One entry is visible: ITE1 ASX TLS Test1, CHESS, ITE1 (Non Productio..., TLS, f764adf8-28f8-43f3-931e-7d..., PENDING. A dropdown menu is open for the PENDING status, with 'Create New Credential' highlighted by a red box. Other options in the menu are 'Edit' and 'Delete'.

Display name	Service	Environment	Type	Service account ID	Status
ITE1 ASX TLS Test1	CHESS	ITE1 (Non Productio...	TLS	f764adf8-28f8-43f3-931e-7d...	PENDING

- > Click on the more options (...) icon and select “Create New Credential”.
- > The Create New Credential form will be displayed.

Create a certificate using a CSR file

- > In the Certificate Signing Request box, Paste or Attach the generated CSR file. 
- > When all validations are successful a pop-up message with Download button will be displayed, and an email 'ASX Certificate has been created...' will be sent to the creator, Organisation's CSAM CHESS role environment users and nominated Service Account notification email. 


New Credentials Generated

Download Certificate

Your certificate has been successfully generated.

Please click on Download button to save the certificate.

If you require assistance, please contact ASX Customer Technical Support
cts@asx.com.au

1800 663 053 / +61 2 9227 0372

[Back to Service Account Credentials >](#)

[Download >](#)

CREATE NEW CREDENTIAL

ITE1 ASX TLS Test
Service account ID: 61eed8ba-19b7-4bbf-8482-fa1130a3bba8

If you have not received the Certificate Signing Request (CSR) configuration file in an email, please copy the following mandatory formatted CSR fields into a text file to be used to generate a CSR.

```
[ req ]
default_bits = 2048
prompt = no
default_md = sha256
distinguished_name = dn

[ dn ]
O=ITE1 ASX TLS Test
UID=61eed8ba-19b7-4bbf-8482-fa1130a3bba8
O=ASX PVT Account No 1
OU=OVC-CSR
```

Organisation

ASX PVT Account No 1

Paste or Attach CSR File:
[Choose file](#) No file chosen

Certificate Signing Request (required)

```
MROwGwYDVOQKCB8BUjggUfZUEfj291lxOgTr8yMTEQMAA9AUECwwHUIZDLNLT
LDDCAhndQYk6o2HwNAeEBBQDy9pADCCQocCggEBAsT9yJhASAS3E8LzLm
wF19hgjw6LzC7rnj2w6w6AAhPTG5dH485G9yVQaDyC2u3PjA9Z9p8aIT
59p9wV9mDUn9o9p9k9mE9ah9y9Wx1998499P979p989Q9k9d9p9a9
69N9C9AB9UR9W9P979D9X9F19b9u9R9y9G9M9Q9k9K969y9Z9J9Q9z9A9g9M9P9W9y9t9a9E9w9
4Z9X9E9T9B9G9SA9J9SP9y9g9J9B9U9B9G9Q9G9H9m9k9i9p9C9Z9F9m9P9w9N9y9S9
919j9u9W9d9Q9d9L9D9M9W9Y9t9B9u9R9y9G9M9Q9k9K969y9Z9J9Q9z9A9g9M9P9W9y9t9a9E9w9
c9TE9A9E9A9A9M9A9O9C9g959b9D9C9E9C9W9A9A9B9A9C9B9E9L9N9d9m9L9S9T9g9u9T9V9C9
M9y9O9s9m9j9T9B9G9T9F9v9A9B9t9c9n9T9B9H9d9h9o94989y9K959V9C9U9E9y9C9C9R9U9
69C9d9Q9v9F9Z9a9y9B9M9M9O9L9S9O9S9F9w9V9W9Y9Z9y9w9K9Q9q9V9G9Ch9O9E9S9O9r9
M9y9g9C9L9A9T9W9D9o9p9J9n9C9h9e9p9T9M9M9k9p9g9W9y9Q9b9u9R9y9G9M9P9W9y9t9a9E9w9F9g9
Z9h9C9W9G9L9A9y9F9Q9Z9B9C9D9y9CR9k9p9C9Q9C9g9FF9X9M9h9G9y9W9e9w9V9F9p9p9A9C9W9V979w9
a9P9S9L9Z9j9T9P9P9B9A919L9L9m999u9S9R9S9C9h9o9L9u9R9y9W9Y9t9h9o9w9p99
-----END CERTIFICATE REQUEST-----
```

Certificate will be valid for 2 years

[Submit >](#)
[Cancel](#)

Download a certificate

- > On the Service Account landing page, search for the Service Account.
- > Click on the more options icon (...) and select View Credentials.

My Dashboard

Manage Users

Ask ASX

Service Accounts

OTC

Return Lodgement and Monitoring System (RLM)

TradeAccept

SERVICE ACCOUNTS

New Service Account >

Display name	Service	Environment	Type	Service account ID	Status
ITE1 ASX TLS					

Search > Clear all

Display name	Service	Environment	Type	Service account ID	Status
ITE1 ASX TLS Test	CHESS	ITE1 (Non Productio...	TLS	61ee8d8a-19b7-4b8f-8482-f...	ACTIVE

1 - 1 of 1 Results per page 20

- Create New Credential
- View Credentials
- Edit

Download a certificate

- > Search the certificate to Download.
- > Click on the more options (...) icon and select Download Certificate.
- > Certificate in a .pem format will download on the local device. The Certificate is one .pem file format which consists of client certificate, ASX intermediary certificate, root certificate and is valid for 2 years.

The screenshot displays the ASX Service Accounts management interface. On the left is a navigation sidebar with 'Ask ASX' and 'Service Accounts' sections. The main content area shows details for 'ITE1 ASX TLS Test' and a table of service accounts. The table has columns for 'Common Name', 'Credential ID', 'Expires on', and 'Status'. The 'ACTIVE' row has a dropdown menu open, showing 'Revoke', 'Download Certificate', and 'Download Root Certificate' options. The 'Download Certificate' and 'Download Root Certificate' options are highlighted with red boxes.

Common Name	Credential ID	Expires on	Status
ITE1 ASX TLS Test	Odbd17a6-2728-455e-b997-4a721b4af52	2023-10-07T05:55:52.000Z	REVOKED
ITE1 ASX TLS Test	529f72a1-7657-4429-8d75-13bf669db275	2023-10-08T03:13:31.000Z	ACTIVE

Edit a Service Account

- > Users can edit a Service Account's Description and/or Service account notification email address by following the below steps:
 - > Search for the Service Account you want to edit.
 - > Select the more options (...) icon > Edit > Submit.

SERVICE ACCOUNTS

New Service Account >

Display name	Service	Environment	Type	Service account ID	Status
ASX ITE1 TLS Test					

Search > Clear all

Display name	Service	Environment	Type	Service account ID	Status
▲ ASX ITE1 TLS Test	CHESS	ITE1 (Non Production...	TLS	654b603d-52b9-4768-be73-...	PENDING

1 - 1 of 1 Results per page 20

EDIT SERVICE ACCOUNT

Organisation
ASX LIMITED

Display name (required)
ASX ITE1 TLS Test

Description (required)
ASX ITE1 TLS Test number 2

Service account notification email (required) ⓘ
team.team@asx.com.au


Service
CHESS

Environment
ITE1 (Non Production)

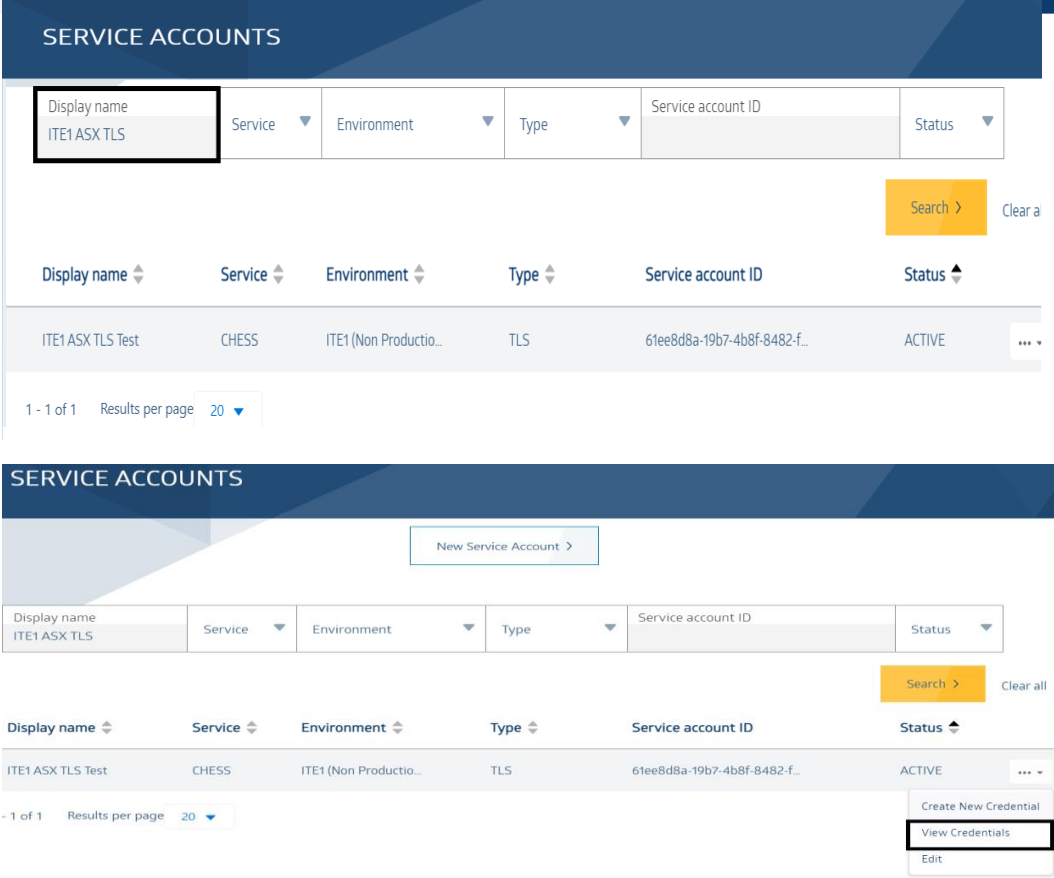
Service account type
TLS

Submit >
[Cancel](#)

Revoke a certificate credential

- > A certificate credential can be revoked if it has been compromised or if there is another reason to remove it.
- > Search for the Service Account. 
- > Select the more options icon (...) and select view credentials.
- > User will be navigated to the Credentials page.
- > Search for the certificate credential to revoke.
- > Click on the more options (...) icon and select Revoke.

1
2



The screenshot displays the 'SERVICE ACCOUNTS' interface. At the top, there is a search bar with the text 'ITE1 ASX.TLS' entered. Below the search bar is a table with columns: Display name, Service, Environment, Type, Service account ID, and Status. The first row of the table shows 'ITE1 ASX.TLS Test' under Display name, 'CHESS' under Service, 'ITE1 (Non Productio...' under Environment, 'TLS' under Type, '61ee8d8a-19b7-4b8f-8482-f...' under Service account ID, and 'ACTIVE' under Status. A 'More options' icon (...) is visible at the end of the first row. Below the table, there is a 'New Service Account' button and a 'Results per page' dropdown set to '20'. At the bottom right, a 'View Credentials' button is highlighted with a black box, and an 'Edit' button is visible below it.

Revoke a certificate credential

- > Provide a reason for certificate revocation by selecting an option from the drop-down menu.
- > Once a certificate credentials has been successfully revoked, refresh your screen to navigate back to the Service Accounts page then search for the Service Account and certificate credential to view the certificate status as REVOKED.

Service Accounts

OTE

Return Lodgement and Monitoring System (RLM)

TradeAccept

ITE1 ASX TLS Test

Service account ID: 61ee8d8a-19b7-4b8f-8482-fa1130a3bba8

Service: CHESS

Environment: ITE1

Service account type: TLS

< Back to Service Accounts

Add New Credential >

Credential ID Expires on Status

Search > Clear all

Common Name Credential ID Expires on Status

Common Name	Credential ID	Expires on	Status
ITE1 ASX TLS Test	0dbd17a6-2728-455e-bd97-4a7211b4af52	2023-10-07T05:55:52.000Z	ACTIVE

1 - 1 of 1 Results per page 20

Revoke

Download Certificate

Download Root Certificate

Environment: ITE1

Service account type: TLS

5

< Back to Service Accounts

Add New Credential >

Credential ID Expires on Status

Search > Clear all

Common Name Credential ID Expires on Status

Common Name	Credential ID	Expires on	Status
ITE1 ASX TLS Test	0dbd17a6-2728-455e-bd97-4a7211b4af52	2023-10-07T05:55:52.000Z	REVOKED

1 - 1 of 1 Results per page 20

! Confirm Revocation of Credential

4

The credential revocation process cannot be reversed. Once a credential has been revoked, it cannot be issued again. Are you sure you want to revoke this credential?

* Reason

Select Reason

Certificate Replaced

Certificate No Longer Required

Certificate / Compromised

Other

Nearing Expiry certificate credentials

- > Client certificates have a validity of two (2) years, when a certificate is nearing expiry, the Organisation portal users will receive nearing expiry email notifications and reminders commencing from 90 days prior to the certificate credential expiration date. These email reminders and in-portal alerts will cease once the certificate credential has been revoked, expired or a new (replacement) certificate credential has been created on the service account.
- > Below indicates the frequency of Nearing expiry email notifications:
Nearing Expiry certificate email notifications
 - > 90 days prior to certificate expiration date
 - > 60 days prior to certificate expiration date
 - > 30 days prior to certificate expiration date
 - > 7 days prior to certificate expiration date
 - > 3 days prior to certificate expiration date
- > In-portal alerts on the Service Accounts page:
 - > Certificates detected as nearing expiry from 90 days of expiration date are highlighted in Amber with an alert icon indicating the number of days left until the certificate expires and a status of EXPIRING
 - > Certificates detected as nearing expiry from 30 days of expiration date are highlighted in Red with an alert icon indicating the number of days left until the certificate expires and a status of EXPIRING
- > Users will be required to create a new certificate to replace the near expiring one.

Delete a Service Account

- > Users can delete a Service Account that are either in a PENDING or INACTIVE status (these Service Accounts do not contain any active certificate credentials) by following the below steps:
- > Search for the Service Account.
- > Select the more options icon of the Service Account with status Pending or Inactive > Delete.
- > Deleted Service accounts will remain in the Service account summary page for 6 months from deletion date, after this date, the Service account will be permanently deleted.

The screenshot displays the 'SERVICE ACCOUNTS' management interface. On the left is a navigation menu with options: My Dashboard, Manage Users, Ask ASX, Service Accounts (selected), OTC, Return Lodgement and Monitoring System (RLM), and TradeAccept. The main content area features a 'New Service Account' button and a table of service accounts. The table has columns for Display name, Service, Environment, Type, Service account ID, and Status. A search bar is located above the table. The table contains one entry: ITE1 ASX ISO signing test, CHESS, ITE1 (Non Productio..., ISO 20022 Signing, 883fee42-b272-4de4-b333-..., and PENDING. A dropdown menu is open for the 'PENDING' status, with 'Delete' highlighted.

Display name	Service	Environment	Type	Service account ID	Status
ITE1 ASX ISO signing test	CHESS	ITE1 (Non Productio...	ISO 20022 Signing	883fee42-b272-4de4-b333-...	PENDING

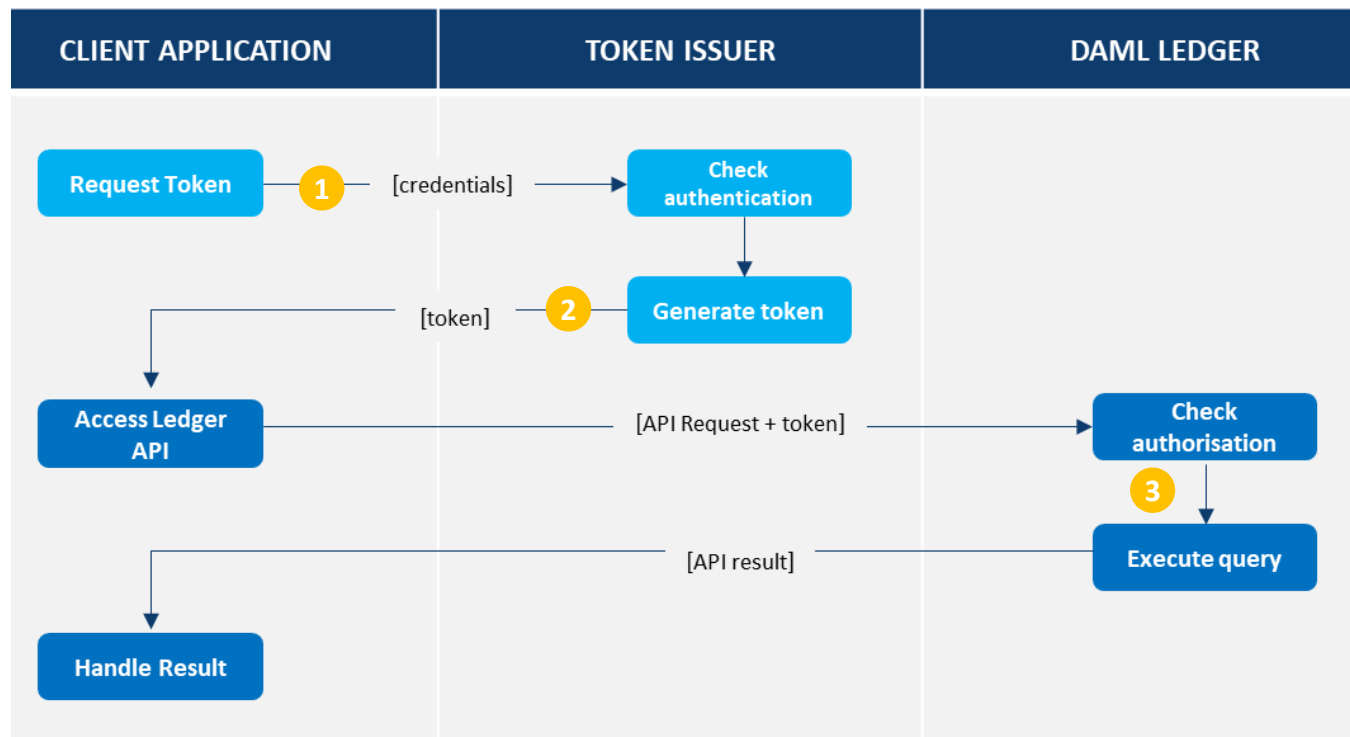
Ledger API Updates

Ledger API – Authorisation Tokens

- > ITE1 is a single environment and requires all access to be authenticated and authorised
- > To meet this requirement, Ledger API authentication and authorisation will be introduced in ITE1
- > Ledger API users will be required to securely request an authorisation token using a standards based API
- > The authorisation token
 - is signed by the ASX
 - describes the DAML party level rights
 - can be inspected by the user (not opaque)
 - must be used in all Ledger API calls

Ledger API - Authorisation Tokens

1. Application makes a token request
2. If successfully authenticated, ASX issues a standards based authorisation token
3. DAML ledger server will verify the token includes the required access rights for the requested command



Ledger API – Authorisation Tokens

- > Mandatory usage of authorisation tokens from the opening of ITE1
- > The DAML ledger supports the OAuth 2.0 standard <https://oauth.net/2/>
- > Tokens have a time-based expiry, applications will need to request a new token prior to the expiry of any current tokens (based on expiry within the current token)
- > ASX will publish technical documentation in November'21

Ledger API – Identifying Master Contracts

- > Ledger API users need to identify master contracts before they can make a choice
- > To access the master contract, applications currently need to identify which package that contract belongs to, currently this involves scanning the packages to identify the correct package ID.
- > Based on the performance of you connection this can be slow.
- > For Ledger API applications that use JAVA Codegen classes the same result can be achieved by sourcing the information directly from the JAVA Classes
- > For example;

```
public final class BmwIngressMaster extends Template {  
    public static final Identifier TEMPLATE_ID = new  
Identifier("b1f17f6d83b4268ddba131599de435d20ba94e245d2ad2dca26c3c5f7ce1b320",  
"DA.ASX.Main.Integration.BMW.Ingress", "BmwIngressMaster");  
}
```

Changes to Netting & Settlement Workflow – FAQ's

Key questions

How will I know if Trades are Novated?

- > The trade confirmation notification (sett_101) advising that a new trade has been registered will contain a novation indicator. “True” indicates the trade has been novated. “False” indicates the trade is non-novated.

Which trades are not eligible for Novation?

- > The majority of these are crossings – Crossings are not scheduled to settle and may consist of:
 - Trades registered where the buying and selling broker on a trade are the same
 - Trades registered where the buying and selling broker on a trade are not the same, but the buying and selling broker map to the same clearer
- > There are rare instances where non-crossing trades are reported to the AMO that are ineligible for novation in the clearing and settlement facility (e.g. with condition code ‘BP’) resulting in a scheduled Non-Novated Gross Market Trade.
 - This is capability supported by the existing CHES application will be carried forward into CHES Replacement.

Key questions

- > Non-Novated Gross Market Trade will be maintained by the system and settled bilaterally similarly to a BSSI:
 - Do not contribute to the NNDP reported in the netted obligation report and are not assessed as part of a NNDP within batch settlement;
 - Full Fails will result in the rescheduling of the market trade and notified by a Settlement Transaction Generation Notification (sett_130);
 - Part Fails will result in the settled component notified by a Settlement Transaction Generation Notification (sett_130) and the rescheduled component notified by an Adjusted Settlement Instruction (sett_139); and
 - Are included in the Overall Net Movement (as well as the funds component and count of obligations) in the Settlement Movement Confirmation (sett_136). A breakdown specifically for the non-novated gross market trade contributing to the overall net movement will be included on the Settlement Movement Confirmation (sett_136) identified by Movement Type 'NNGM'.

Key questions

What could change an NNDP on the morning of settlement from the NNDP that was reported in the latest Netted Obligation Report?

- > Actions which can be performed by ASX Operations / ASX Clear (i.e. reschedules, suspensions, transfers and cancellations) to manage a default or by the request of a regulator or enforcement agency
- > Updates to the First Settlement Date of a Security resulting in the rescheduling of the Novated Gross Market Trades
- > Cancellation of a Corporate Action or an update of the Ex-Period of a Corporate Action resulting in the BOM removed or added

Why has the NNDP that was reported in the latest Netted Obligation Report changed from the previous evening's Netted Obligation Report?

- > In addition to the above items, the Netted Obligation Report will be generated after any applicable corporate action adjustments and will also take into account any as at trades and any late report trades.
- > It should be noted that participants will not be able to bilaterally cancel novated gross market trades and that AMOs will only be able to cancel gross market trades on the trade date.

Do the above events apply to other settlement instructions (i.e. other than Novated Gross Market Trades)?

- > The above events also apply to other instructions as they did previously to the netting and settlement workflow changes. Only Novated Gross Market Trades will contribute to the NNDP calculations.

Key questions

How are failed settlements notified?

- > Fully failed USSIs, BSSIs, and Non-Novated GMTs continue to be notified via a Settlement Transaction Generation Notification (sett_130)
- > NNDPs that fully or partially fail continue to be rescheduled using the NSF and NRI construct that continue to be notified via a Settlement Transaction Generation Notification (sett_130)
- > Partially failed USSIs, BSSIs, and Non-Novated GMTs are now notified via two messages:
 - a Settlement Transaction Generation Notification (sett_130), for the portion that is settled; and
 - an Adjusted Settlement Instruction (sett_139), for the failed portion that is rescheduled.
- > Fully failed Novated Rescheduled Instructions (NRIs) are now notified via two messages:
 - a Settlement Transaction Generation Notification (sett_130), for the Standard Settlement Price (SSP) Amount that is settled; and
 - an Adjusted Settlement Instruction (sett_139) to reschedule the Unit Quantity and notify of the change in the Settlement Amount as a result of the SSP adjustment.
- > Partially failed NRIs are now notified via two messages:
 - a Settlement Transaction Generation Notification (sett_130), for the portion that is settled which includes the SSP Amount; and
 - an Adjusted Settlement Instruction (sett_139) to reschedule the remaining Unit Quantity and notify of the change in the Settlement Amount as a result of the SSP adjustment.

Key questions

How do these notifications link to the failed obligation?

> Where sett_130 and sett_139 notifications are sent:

- The Adjusted Settlement Instruction (sett_139) will maintain the same Transaction Id and Obligation Id of the Settlement Instruction at the time it was generated by the system (for USSIs and BSSIs the Transaction Id will be the one sent in the Participant's sett_105 request – except for accruals)
- The Settlement Transaction Generation Notification (sett_130) will contain a new unique Transaction Id and Obligation Id, as well as references to the Transaction Id and Obligation Id of the Settlement Instruction that did not fully settle (as notified in the sett_139). The reason on the sett_130 in this instance is always 'PART'.

> There is no change where a single sett_130 is sent:

- Fully failed USSIs, BSSIs, and Non-Novated GMTs continue to be notified via a Settlement Transaction Generation Notification (sett_130) maintaining the same Transaction Id and Obligation Id of the Settlement Instruction at the time it was generated by the system (for USSIs and BSSIs the Transaction Id will be the one sent in the Participant's sett_105 request – except for accruals)
- NNDP failures continue to result in the generation of a NSF and a NRI per Settlement HIN, Security and BOM combination with new unique Transaction Id and Obligation Ids within the sett_130. A Related Transaction Id continues to be used to link the NRI to the NSF

Key questions

In what order will settlement notifications be received?

- > The CHES Replacement system will send all sett_130 and sett_139 notifications relating to settlement failures and reschedules prior to sending the settlement movement confirmation (sett_136).
- > Once all the settlement movement confirmations (sett_136) have been sent, then the system will send the event notification (sett_170) to advise batch settlement has been completed.
- > Where pairs of notifications are generated, the pair will be generated and sent by the system at the same time but the order in which the pair is received cannot be guaranteed. Examples of pairs of notifications include:
 - sett_130 for the NSF and sett_130 for the NRI – generated and sent for NNDP failures
 - sett_130 for the Part Settled/SSP Settled Component and sett_139 for the Rescheduled Component – generated and sent in part settlement or in the case of a fully failed NRI

Key questions

How will settlement batch cancellation work if some instructions or NNDPs have already been rescheduled because of unit failure?

- > It can be confirmed that materialisation of rescheduled instructions onto the ledger and corresponding notifications (due to unit failure or default management) will not occur until batch settlement is in an irrevocable state (i.e. when funds have successfully moved in RITS). In the event batch settlement is cancelled, instructions that would have otherwise fully or partially failed or fully settled will be rescheduled to the next batch settlement cycle with the unit quantity and settlement amount scheduled for the current batch settlement cycle. The SSP that would have otherwise applied is not settled.
- > Settlement Instructions ineligible to settle due to the security state will remain rescheduled or suspended as have been notified.
- > NNDP (novated gross market trades) will be rescheduled using the NSF/NRI paradigm.
- > No SSP adjustment is applied or settled for NNDP's or NRI's that are rescheduled when batch settlement is cancelled.

Key questions

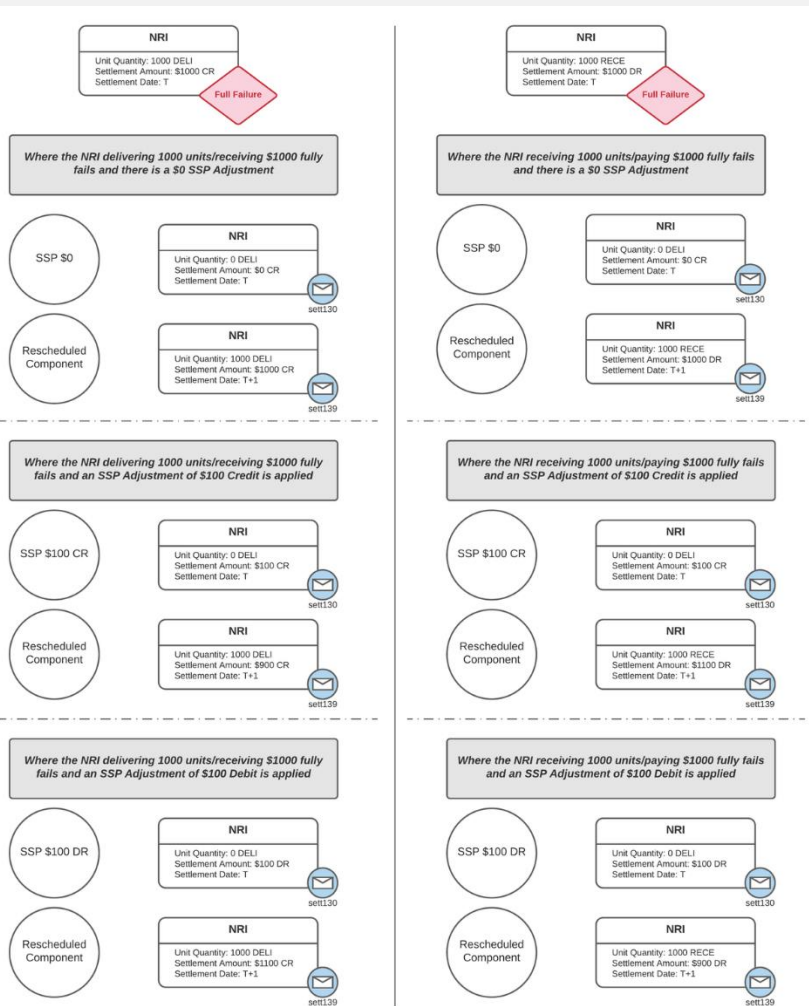
Why have the acronyms NGMT and NNGM been used instead of GMTD for the sett_136? Where else have these acronyms been used?

- > Since Non-Novated Gross Market Trades are settled bilaterally and not assessed within an NNDP, the different codes have been introduced provide this distinction on the settlement movement confirmation.
- > These codes will exist on the Reporting Request (rptg_601) when requesting the Obligation Status Report and on the Obligation Status Report (rptg_608) because they are used an investigative tool for any reconciliation issues with the sett_136

Key questions

Does the SSP settled alter the settlement amount of the rescheduled NRI?

- > The settlement amount of the rescheduled NRI will be adjusted by the SSP that is settled – the following examples will show how the SSP adjustment is applied in each scenario.



Further Questions and Information

- > Further Questions
- > Tech Docs (see sections within)
 - <https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/86836695/Batch+Settlement+Overview>
 - <https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/316506846/Reporting+Overview>
- > Summary of Netting and Settlement Workflow Changes
 - <https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/1226801153/Netting+and+Settlement+Workflow+Changes>
- > FAQs
 - <https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/23233633/FAQs+-+Functional+Specification>

Introduction To Technical Accreditation

Technical Accreditation - Overview

Objective of technical accreditation

Technical accreditation is an existing and formalised process within ASX to ensure that all systems that connect to an ASX system conform to pre-defined scripts to ensure that their systems support both the functional and non-functional requirements of ASX.

ASX are accrediting client software.

Who needs to perform technical accreditation?

Software providers perform technical accreditation

- Third party vendors
- CHESSE Users developing their own in-house system.

Where is technical accreditation performed?

Accreditation test scenarios are to be performed in the Industry Test Environment (ITE1)

What does technical accreditation involve?

Technical accreditation comprises of two components, connectivity and messaging:

Connectivity: ensures secure connectivity and resilience

Messaging: ensures software can successfully send and receive messages

When does technical accreditation need to occur?

Technical accreditation is a defined phase of the project, scheduled late April – mid July 2022

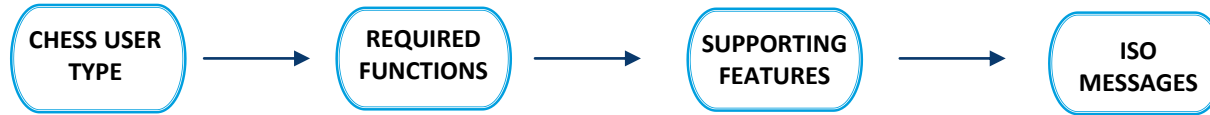
Phases dependent on technical accreditation completion

The following phases are to be performed on accredited software

- Operational Readiness
- Market Dress Rehearsal (MDR)
- Production

Messaging Accreditation

Message Accreditation Scenarios



Message accreditation Scenarios per CHES user

Software providers to perform messaging accreditation based on the CHES User type(s) their system supports:

- > Clearing and Settlement Participant
- > Settlement Participant
- > Account Participant
- > Specialist SP (Offeror)
- > Issuer (Registry)
- > Payment Provider
- > Product Issuer Settlement Participant (PISP)
- > AMO

Scenarios defined by function / feature

Accreditation test scenarios are grouped by feature and each supporting function will be tested

Mandatory/Optional/Exempted

- > Mandatory and Optional functions have separate sheets
- > Users need to execute all Mandatory scenarios and Optional scenarios that they have opted for
- > To accommodate for alternate models, system providers are requested to notify ASX and provide rationale to support the messaging accreditation exception which will be reviewed by ASX

Guiding principles of messaging accreditation

What Messaging Accreditation Scenarios cover?

- > Messaging Accreditation scenarios cover all ISO messages and fields that are relevant to particular CHES user type
- > Scenarios will be use to validate that targeted application can cover all required ISO messages with relevant fields
- > Scenarios are grouped by different functions
- > If ISO message is already covered under one function then scenario don't need to be repeated for other functions unless it uses different field set
 - For Example
 - Participant Funds Notification (sett_134) message covered under Batch Settlement
 - No scenario for Participant Funds Notification (sett_134) for Default Management
- > Field names used are ASX element names

Message Accreditation Scripts

Location

Implementation Phases >>

Industry Test Environment (ITE) >>

Technical Accreditation >>

Messaging Accreditation Overview >>

Messaging Accreditation Scripts

Messaging Accreditation Scripts

i To view a Messaging Accreditation Script, right-click the relevant link below and select "Save link as...". This will download the Messaging Accreditation Script to your computer.



Microsoft Excel Format (.xlsx)

[Account Participant](#)

[Clearing & Settlement Participant](#)

[Issuer \(Registry\)](#)

[Settlement Participant](#)

[Specialist SP \(Offeror\)](#)

[Payment Provider](#)

[Product Issuer Settlement Participant \(PISP\)](#)

[Approved Market Operators \(AMO\)](#)

Structure of Messaging Accreditation Scenarios

How to read?

Content	Explanation
Scenario Code	Identifies the test case number. Scenario Code will contain representation of CHES User type, function and a sequence number for each script.
Feature	Identifies the feature the test relates to
Scenario	Describes the test case
Required Fields	Lists the fields that must be included to meet the acceptance criteria. ASX element names are used to list required fields.
Value	Identifies explicit values to populate when required to determine scenario outcome. Where blank, system vendor can determine values.
Supplementary Information	Identifies notes or hints for successful testing, e.g. Prerequisites, Test Tool that can be used etc.
ISO 20020 Message - Sender	Identifies the party responsible for sending the message.
ISO 20022 Message -Recipient	Identifies the party responsible for receiving the message.
ISO 20022 - Message Reference	Identifies the message name and provides a link to the related messaging content on the ASX Technical Documentation portal.
Acceptance Criteria	Conditions required for a successful scenario (excludes optional criteria except when optional criteria drives functionality, or impacts production).

Next working group meeting

What to expect?

- > What's new in upcoming version of Accreditation Scenarios
- > Counterparty Scenarios - where user need to act as counter party or different CHES user to execute the scenario
- > Assistance Required Scenarios - where ASX assistance is required to execute the scenario
- > Test tools that can be used to execute the scenarios
 - Self serve Tools
 - Auto-Responders

Q&A

Forward Schedule

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: Wednesday 10 November '21

Forward Schedule

- > ITE1 Test Kit and test tooling overview
- > ITE1 onboarding
- > ISO updates (pagination & usage of pilot (!p))
- > Technical Accreditation scenario testing

Thank you.



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