



CHES Replacement Project

**Implementation & transition
working group webinar**

23 February 2022

Housekeeping: trouble shooting

- Check your system requirements
- Audio options:
 1. Use your computer's mic and speakers ("Computer audio"). Check that your computer's audio is unmuted
 2. Use a telephone to dial in ("Phone call")
 - Phone number: **+61 3 8488 8990**
 - Access code: **556-994-838**
 - No need to enter an Audio PIN as audience is muted
 3. If you are still experiencing audio difficulties, try downloading the GoTo Webinar Application on your smart phone, and enter the Webinar ID: **959-049-003**

Further information:

<https://support.goto.com/webinar/how-to-join-attendees>

GoToWebinar Attendee System Check for Webcast Webinars

Looks good! You can join a webinar.

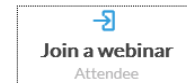


- ✔ OS - Windows 8.1
- ✔ Browser - IE 11
- ✔ Internet connection - Strong
- ✔ Flash - Enabled

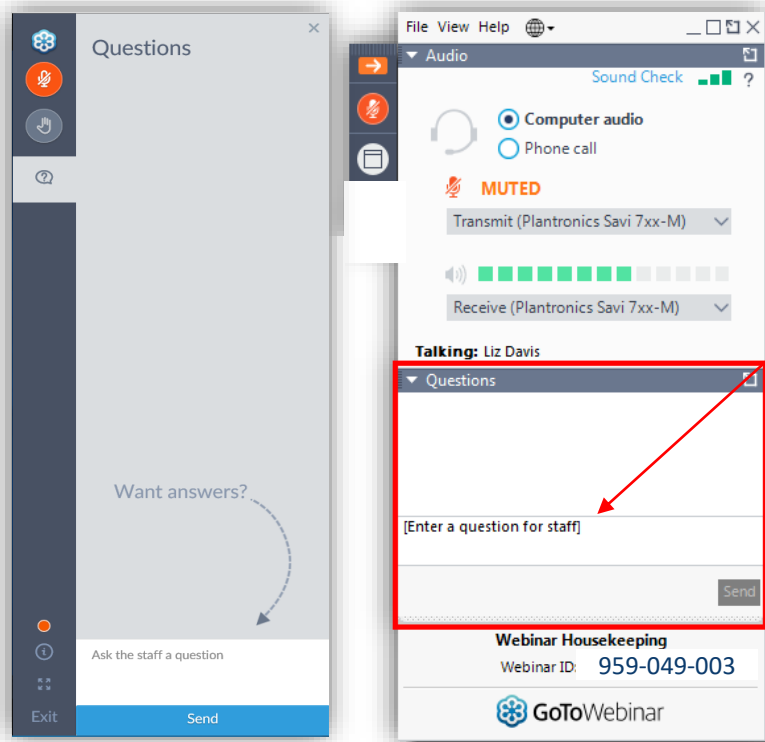
Test your system again

View System Requirements

Next steps



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 [CHES Replacement web page](#)

Agenda

- Project update
 - ITE1
 - New documentation
 - Data remediation
 - CHESS name
 - ITE2 readiness – certificate management
 - Cutover & migration - preparation for market dress rehearsals
 - Q&A
 - Next steps
-

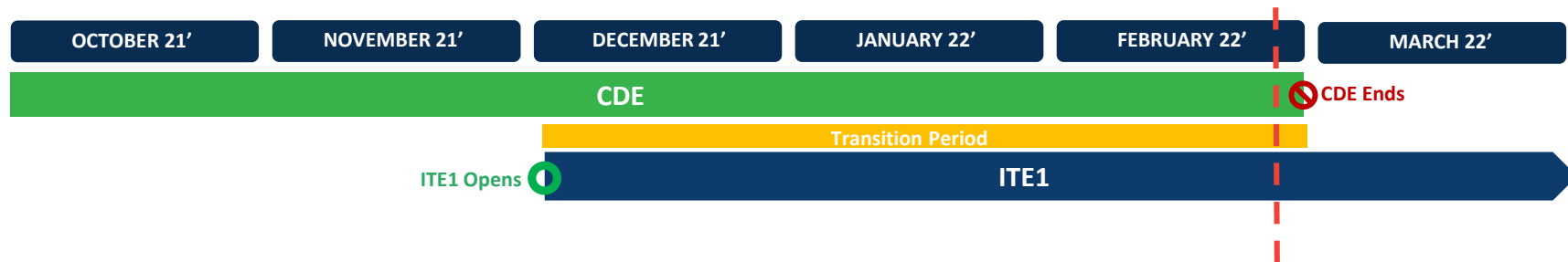
Presenters and introductions

-
- Keith Purdie
-
- Fraser Moodie
-
- David Brine
-
- Nick Heffernan
-
- Kirtee Shree
-
- Reza Karim
-

Project Update

ITE1 Update

- > ASX has been working with software providers and supporting their transition from CDE to ITE1
- > ITE1 is a new single shared environment, operating on the latest version of the CHES application and infrastructure along with the introduction of the CHES UI and uplifted support tooling
- > The latest release of software ITE1 (v1.2) was made available at the end of Jan'22
- > ASX is aiming to complete the transition of software providers by the end of this month before decommissioning the customer development environment (CDE)



Industry testing supporting documentation

Refer to Section 6 of the Industry Test Plan for updates

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**
- > ITE2 application form – **Dec 21**
- > Cutover & Migration Strategy – **Dec 21**
- > User Guide (ITE2) – **Jan 22**
- > Ops Readiness Guide & Scenarios (ITE2) [1 of 3] – **Jan 22**

Upcoming documentation (end Feb):

- > Ops Readiness Scenarios (ITE2) [2 of 3] – **Feb 22**
- > Accreditation scripts (updates) – **Feb 22**

Upcoming key documentation milestones

- > User Guide updates (ITE2) – **Mar 22**
- > FIX exceptions – **Mar 22**
- > Ops Readiness Scenarios (ITE2) [3 of 3] – **Mar 22**
- > Performance & failure testing details (ITE1) – **subsequent release**
- > Details of single cutover weekend – **end Q1 22 / early Q2 22**
- > Market Dress Rehearsal (MDR) details – **Jul 22**
- > Industry Wide Testing details – **May & Sep 22**

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

Already published documentation

Operational readiness guide & scenarios – publishing under way

<https://asxchessreplacement.atlassian.net/wiki/spaces/CSP/pages/1716355148/Operational+Readiness+Guide>

Operational Readiness Guide



This section covers: Operational Readiness Guide:

i Children Pages

- [Section 01 - Introduction to the Operational Readiness Guide](#)
- [Section 02 - Operational Readiness Assessment Phase](#)
- [Section 03 - Performing Operational Readiness](#)
- [Section 04 - Supplementary Information](#)

Operational Readiness Guide published as part of 'CHESS User Readiness' phase

Details of:

- > The assessment to ensure that CHESS users have the necessary processes and procedures in place for the essential business functions that will be performed in the CHESS replacement system
- > Cohort specific scenarios published in 'Section 04 - Supplementary Information'

HIN data remediation

Progress update

- > From May 2021 to February 2022, >25% of reported exceptions have been remediated
- > 17 clearing & settlement and settlement-only participants have remediated all of their reported exceptions in that time
- > ASX targeting the bulk of the 'fail' exceptions to be remediated by the end of March 2022
- > A clean production HIN data set will help ASX data migration testing in preparation for MDRs later in 2022
- > We appreciate and thank participants for managing the additional customer engagement as part of this clean-up
- > This will be an on-going tracking milestone for ASX and we will continue to advise participants of exceptions through 2022 and in the lead up to go-live

CHESS replacement name

No changes required

- > The CHESS name is understood across all customers, including investors, and is a well established brand both domestically and overseas
- > Any rebrand, however small, costs money and time with participants and other CHESS users having to update client forms and online customer portals
- > Based on our analysis and the strong distinctive CHESS brand, ASX have decided the CHESS name has value and recognition and that it is worth **retaining the name CHESS for the replacement system**
- > To avoid confusion between 'old CHESS' and 'new CHESS', we will continue to use **CHESS** and the **CHESS replacement system** to distinguish between the two versions
 - CSP (clearing and settlement platform) has been widely used to date e.g. functional specifications and messaging requirements. ASX does not intend to update references to CSP in documentation but CSP will be less frequently used going forward.
- > CHESS will continue to be capitalised and refer to the Australian equity post trade system operated by ASX Clear and ASX Settlement

Other project updates

February 2022

- > New CHES user working groups kicked off on 16 February with clearing and settlement participants; other cohort CHES user working groups to follow
- > ITE2 now open for connectivity testing; application forms to be submitted by mid-March

ITE2 Readiness - Customer Service Account Management (CSAM)

ITE Security Model Update

Certificate credentials used to securely connect to ASX services such as CHES

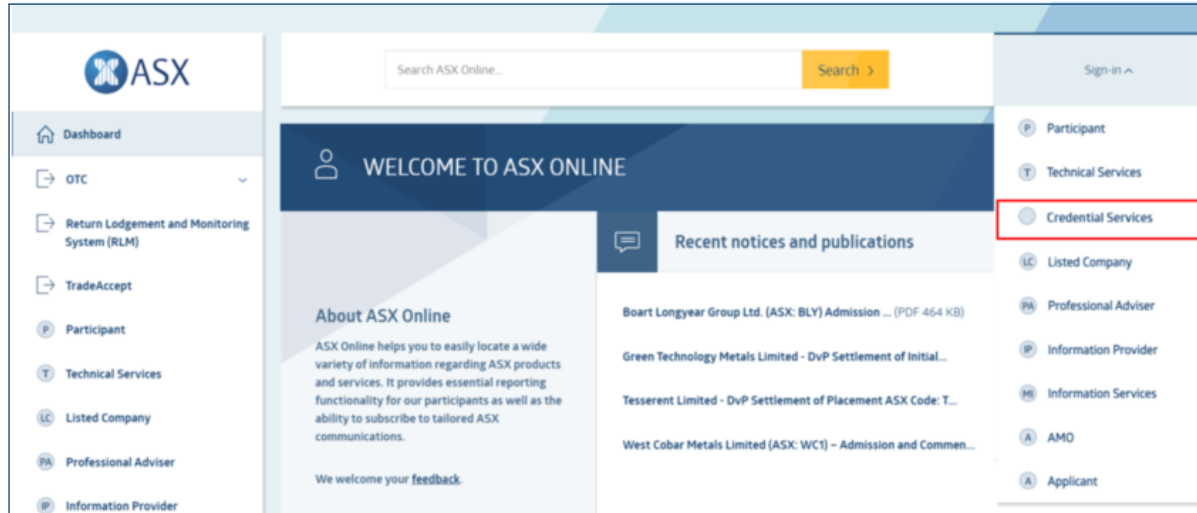
> CHES Replacement has **uplifted security model** to support connectivity to ASX:

<https://asxchesreplacement.atlassian.net/wiki/spaces/CSP/pages/1699217643/Section+07+-+ITE+Certificate+Management>

Access Method	Format	Transport	Security
Ledger API	DAML equivalent of ISO 20022	HTTP/2, gRPC	Certificate (bound to ASX Net IP address) Token authentication
AMQP	ISO 20022 XML	AMQP 1.0	Certificate (bound to ASX Net IP address) ISO 20022 XML signing
CHES User Interface	Manual entry	HTTPS	Multi-factor authentication 4 eyes approval workflow for all transactions Access via ASX Net only, not public internet Appointed Administrator can manage their own users within organisation
FIX (Approved Market Operators Only)	FIX 5.0	FIX 5.0	Certificate (bound to ASX Net IP address) Application user name and secret
SWIFT	ISO 20022 XML	SWIFT InterAct	SWIFT InterAct security

CSAM Overview

- > Customer Service Account Management (CSAM) application will allow ASX customers to manage their organisation's service accounts and credentials such as TLS & signing certificates for connecting and using CHES Service
- > The CSAM application will be 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
------------------	------	-------	-------

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

© 2021 ASX Limited ABN 98 008 624 691 | Version 2.3 | September 2021 ASX CSP - ITE1 Order form 2/4

- > 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.

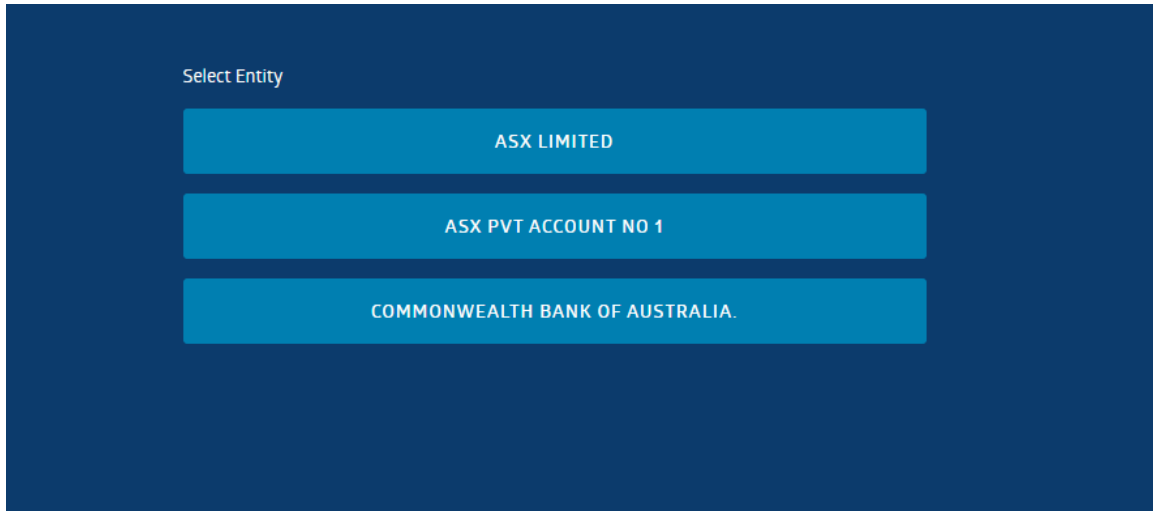
ASX Online - Credential Services menu Login

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. A red arrow points from the 'Credential Services' menu item to the login page on the right.

The screenshot shows the ASX Online login page. It features the ASX logo at the top left, the text 'WELCOME Login to your account', and two input fields for 'Your email' and 'Password'. There is a checkbox for 'Remember my user name' and a blue 'LOG IN' button. A 'Forgot Password?' link is located at the bottom right of the page.

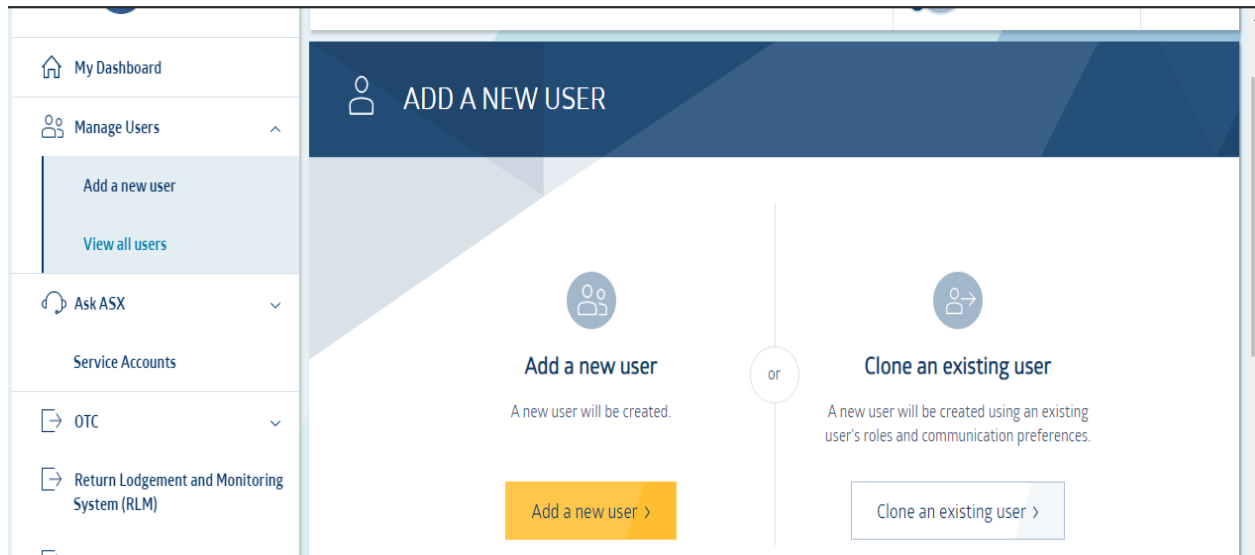
What if I am assigned to multiple entities?

- > 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.

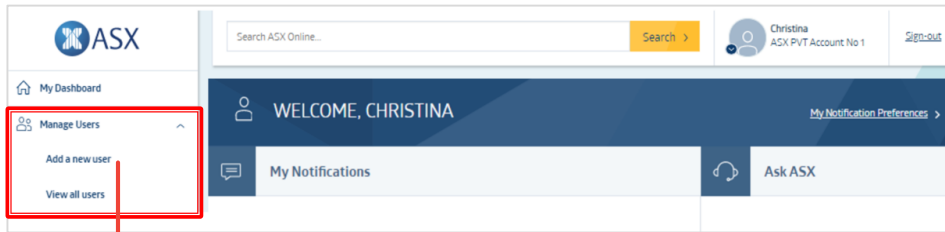


How to amend roles and permissions?

- > 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 ITE2 release, the role **CHESSE – Non Prod** is to be provisioned to the relevant users.

The screenshot shows the 'CREATE A NEW USER' form. The form is divided into two steps: 'User Details' and 'Assign Role'. The 'User Details' step is active, showing fields for Email Address, First Name, Last Name, Job Title (optional), Department (optional), Mobile Number (optional), Office Number, Office Address (optional), and Time Zone. A red arrow points from the 'Add a new user' button in the previous screenshot to this form.

The screenshot shows the 'Please select one or more roles below.' dialog. The dialog shows a list of roles: 'Credential Services', 'CHESSE - Non Prod', 'CHESSE - Prod', and 'Enterprise Administrator'. The 'CHESSE - Non Prod' role is selected with a green checkmark. A red arrow points from the 'CHESSE ITE1 (& ITE2)' label below to the 'CHESSE - Non Prod' role. A 'Save Changes >' button is visible at the bottom.

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 'New Service Account >' button 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 to the right of the table. The left sidebar contains navigation links: 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

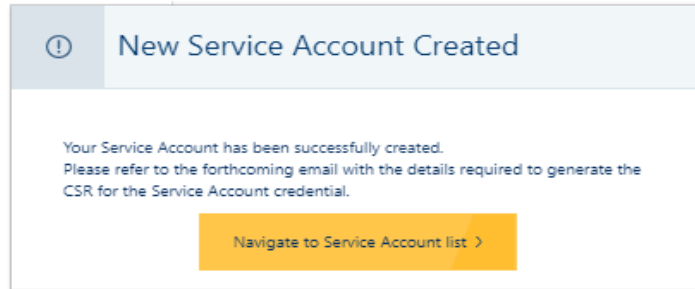
-- Choose a service type --


Submit

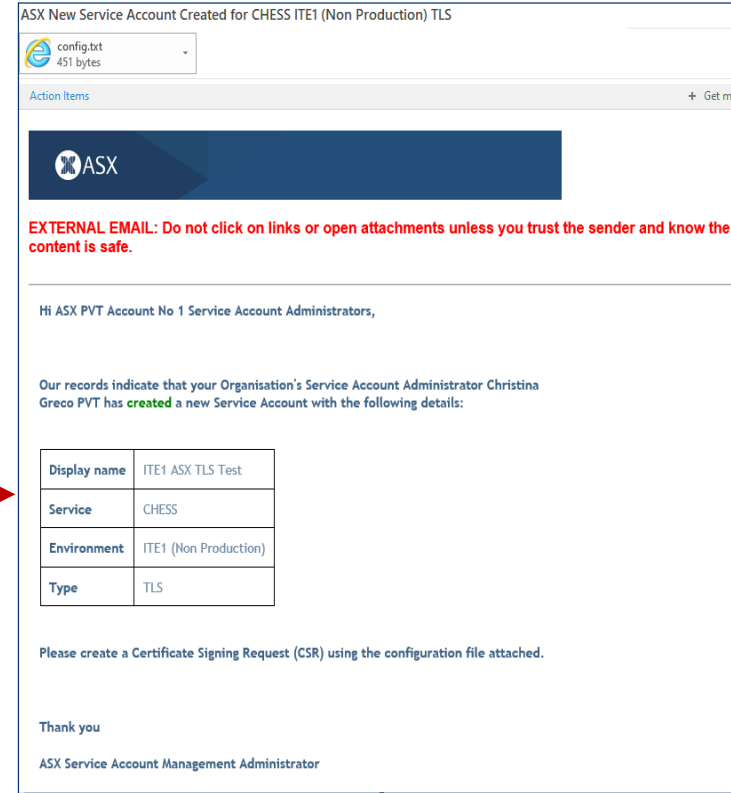
< Cancel

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.



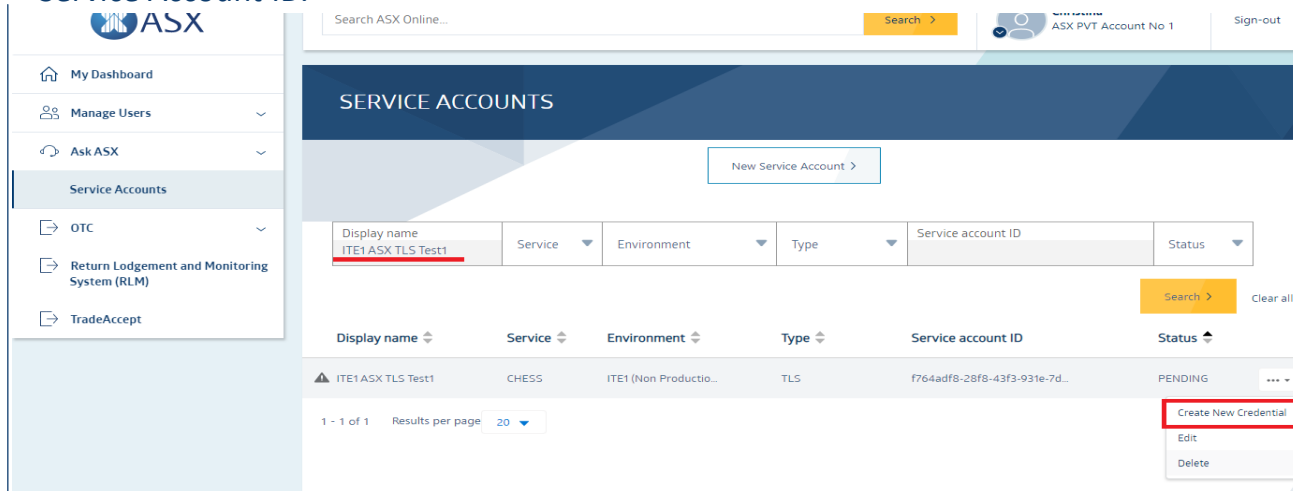
- > An email 'ASX New Service Account Created' will be sent to the creator, Organisation's CSAM CHESS environment role users and nominated Service Account notification email. 
- > The customer will receive a CSR configuration file attached to the New Service Account email with pre-filled unique values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



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-19b7-4b8f-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-19b7-4b8f-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)

```
-----BEGIN CERTIFICATE REQUEST-----
MROwGwYDQoCBBRBUjggUzUEFjZ91lxOgTn8yMTEQMAAStUECwWU1ZDLUNT
LUDCA5hDQYk6ZthvNAEBBQDy9PADCQAQcCg9BA5T9yJ4LSAS3SELuM
wF1-9hgjw6u3C7m9jzww6AAk7F6SdH82BgYVdQdYQ2u3PmZ9P8aTt
59p9wV9mDULNng9p9kccrE8ahy6Wx1H86w9F9T7p86wQk2d8Ap8
6NwCABFURWPT7D5XSF1bduRyT8yQM8y5K96oyZICAgzMMF2Wyt8Ewt
4ZuEG78935AUySPNyy9gA9R1kUB9y0G6HqmMkqPQZBFmPwNhy5
81j9wW6403d8LdVAMWY1y8dLwNA8BQZ558F8mKSLg8AK8K8eCO
cTECAwEAAMMOGCSqGSIbDQCEwUAA8BAGCBwEUNdcmJL5T9kwtTMO:
MjY0y5m9j7P8yGTvF8AB8tcx78Hd0w0489yJk5VC7CUly9CCRZU
61C8BQvF8Z5y5B8MM9U5205F9wV1uZy7hw4QkqVwGCh08E50nr
MjY0y5m9j7P8yGTvF8AB8tcx78Hd0w0489yJk5VC7CUly9CCRZU
Zn3CWGLA8yFQZ38CdyCR8yCpCq9FFX3MhGyVw6wVf8p8ABCWV7Bw
eP8SLTZy01P8P8H41uL2m986u8G8R8Ch8u8Rw7W1ch0wP89
-----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.

The screenshot displays the 'SERVICE ACCOUNTS' management interface. On the left is a navigation sidebar 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: Display name, Service, Environment, Type, Service account ID, and Status. A search bar is located below the table headers. The table contains one entry: ITE1 ASX TLS Test, CHESS, ITE1 (Non Productio..., TLS, 61ee8d8a-19b7-4b8f-8482-f..., ACTIVE. A dropdown menu is open for the first entry, with 'View Credentials' highlighted in a red box. Other options in the dropdown are 'Create New Credential' and 'Edit'. At the bottom left of the table area, it shows '1 - 1 of 1' and 'Results per page 20'.

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

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 shows the ASX Service Accounts management interface. On the left is a navigation sidebar with 'Ask ASX' and 'Service Accounts' selected. The main content area displays details for 'ITE1 ASX TLS Test' and a table of service accounts. A dropdown menu is open for the 'ACTIVE' row, with 'Download Certificate' and 'Download Root Certificate' highlighted in red boxes.

ITE1 ASX TLS Test
Service account ID: 61ee8d8a-19b7-4b8f-8482-fa1130a3bba8
Service: CHES5
Environment: ITE1
Service account type: TLS

[< Back to Service Accounts](#) [Add New Credential >](#)

Common Name	Credential ID	Expires on	Status
ITE1 ASX TLS Test	0dbd17a6-2728-455e-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

1 - 2 of 2 Results per page 20

- Revoke
- Download Certificate
- Download Root Certificate

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:
 - > 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.

CSAM portal

Connectivity Guide – Section 05 is published to support you

<https://asxchesreplacement.atlassian.net/wiki/spaces/CSP/pages/1672020722/Section+06+-+CSAM+Security+Details>

Table of Contents

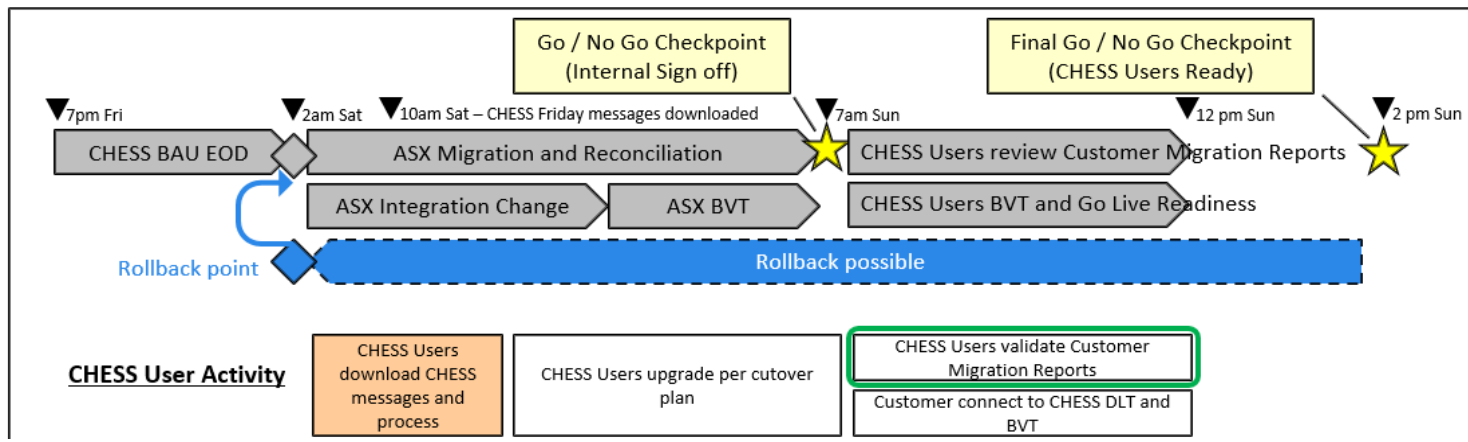
- 6.1 Overview
- 6.2 Access Types
 - 6.2.1 Creating a Credential Services Enterprise Administrator Account
 - 6.2.2 Creating a User Account
- 6.3 Service Accounts
 - 6.3.1 Creating a Service Account
 - 6.3.2 Modifying a Service Account
 - 6.3.3 Deleting a Service Account
- 6.4 Certificate Signing Request
 - 6.4.1 Creating a Certificate using a CSR
 - 6.4.2 Downloading a Certificate
 - 6.4.2 Downloading the ASX Root Certificate
 - 6.4.3 Revoke a Certificate Credential
 - 6.4.4 Resolving Nearing Expiry Certificate Credentials

Cutover & Migration - Preparation for Market Dress Rehearsals

Customer Migration Reports

Background

- > On Sunday of the cutover weekend, after ASX has completed and signed off the data migration a set of customer migration reports will be provided to CHES users
- > The reports communicate outcomes of ASX's data migration and provide CHES users post-migration positions of data relevant to them
- > CHES users will be expected to review these reports and provide confirmation as part of a final checkpoint



Customer Migration Reports

Context

Scope

- > The reports provide verified migrated data as well as data not migrated

Characteristics

- > All reports provide a post-migration position with some reports providing summarised information and some providing detailed information
- > Each participant will receive reports with relevant information only
- > The method of dissemination of the reports are still to be finalised and must consider the sensitivity of the data

Q&A

Next steps

Next steps

Key points from today's webinar:

- > CDE targeted to be decommissioned end of this month
- > ITE2 application forms should be submitted by mid-March
- > New CHES user working groups have commenced and separate calendar invitations to follow; consider the questions posed for the upcoming working group meetings on cutover and migration activities
- > Consider who else in your organisation needs to be across certificate management (CSAM) to securely connect to ITE2

Review and feedback:

- > Webinar recording, slides and Q&A will be published on the CHES Replacement webpage
- > Provide feedback by contacting CHESReplacement@asx.com.au – use “I&T webinar” as the subject heading
- > Feedback welcome by COB Wednesday, 9 March '22

Next I&T Working Group meeting:

- > TBC

Thank you.



Disclaimer

This document provides general information only. 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.

© 2022 ASX Limited ABN 98 008 624 691