

New Technology Initiatives at NSDL

November 9, 2022



NSDL

Technology, Trust & Reach¹

New Technology Initiatives at NSDL

1

Digitization of Customer Journeys for Depository Services [Account & Transactions]

2

Offering B2B2C model to NSDL Partners via APIfication of Services

3

DLT Blockchain Powered Security & Covenant Monitoring Platform

4

Collateral Management Suite [Margin Pledge, Loan Against Shares & Working Capital Credit]

5

Account Aggregator Model for enabling Information Sharing across FIU and FIP*

Digitization of Customer Journey for Depository Services

With the advent of Covid-19, there was an increasing demand from market participants for digitally savvy solutions enabling digitization of end to end process involving end investor.....which would have otherwise required the client to visit the DP Office

- ❑ Update of Demographic Details in DEMAT Account such as
 - Bank Account
 - Nominee Information
 - KYC Attributes [such as Email ID, Mobile Number and Gross Income Range]
- ❑ Electronic Submission of Transactions such as
 - OTP based Approvals for Account Transfers
 - Stamp Duty on Securities Transactions [API based integration with Banks]

Digitization of Customer Journey for KYC Details Update

← → 🔒 Not secure | https://115.112.16.66/instademat-kyc-nomination/#/login

Welcome Investor to NSDL's DPM Plus facility. You can now opt-in/opt-out for Nomination online in your demat account. Let us get started.

User Authentication

DP ID

IN302871

Client ID

42928589


PAN

MINHLU8767Y

OTP *


You can request otp again in: 2:26 Secs

Enter the OTP sent to your registered Mobile number 7500000006 and email ID: abcd@gmail.com



Authentication of Client

← → 🔒 Not secure | https://115.112.16.66/instademat-kyc-nomination/#/nomination-journey/client-details

 National Securities Depository Limited
DPM Plus

Online Nomination Update

Opt-in / Opt-out Nomination

Update

Submit

Please select the desired option to continue your journey

Client Details

DP ID

IN302871

Client ID

42928589

Client Name

abcd

DP Name

ABC & SECURITIES PVT. LIMITED


☐ I wish to Nominate

☐ I do not wish to Nominate

Submit

* We recommend investors use compatible browsers such as Google Chrome/Microsoft Edge/Mozilla Firefox for a better user experience.

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Nomination Opt-In / Opt-Out

Digitization of Customer Journey for KYC Details Update

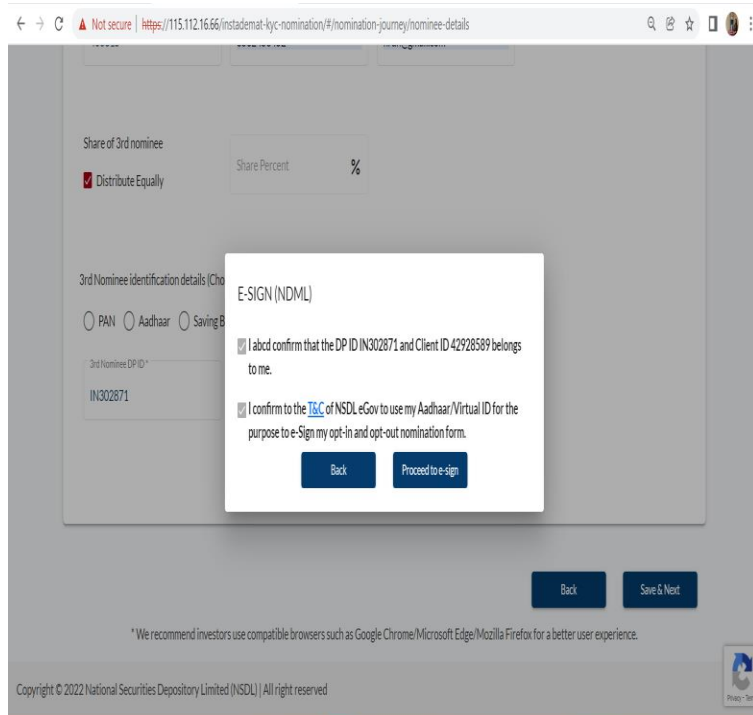
The screenshot shows the NSDL Online Nomination Update interface. The browser address bar displays a URL with a 'Not secure' warning. The page has a dark blue header with the NSDL logo and 'National Securities Depository Limited DPM Plus'. Below the header, there are three tabs: 'Opt-in / Opt-out Nomination', 'Update', and 'Submit'. The 'Update' tab is active. A modal titled 'NOMINEE IDENTIFICATION' is displayed in the center. The modal contains the text: 'Dear Investor, Please ensure to keep the PAN /Aadhaar/Savings Bank Number/DP-ID-Client ID details of the Nominee/Guardian in hand so that either of the details can be entered on the screen quickly.' and an 'ok' button. In the background, the 'Client Details' section is visible, showing a DP ID of IN302871 and a 'I wish to Nominate' radio button selected. A 'Submit' button is at the bottom right. A footer note recommends using compatible browsers like Google Chrome, Microsoft Edge, or Mozilla Firefox.

Prompt Investor for Nomination Details Availability

The screenshot shows the NSDL Online Nomination Update interface with the 'First Nominee Details' form. The browser address bar displays a URL with a 'Not secure' warning. The page has a dark blue header with the NSDL logo and 'National Securities Depository Limited DPM Plus'. Below the header, there are three tabs: 'Opt-in / Opt-out Nomination', 'Update', and 'Submit'. The 'Update' tab is active. A checkbox labeled 'I wish to make a nomination and do hereby nominate the following person(s) who shall receive all the assets held in my account in the event of my death.' is checked. The 'First Nominee Details' section is highlighted. It contains the question 'Is Nominee a Minor?' with 'No' selected. Below this are input fields for 'Name of 1st Nominee *', 'Relationship with 1st Nominee *', 'Address Line 1 *', 'Address Line 2', 'Address Line 3', 'Address Line 4', 'State of 1st Nominee', and 'Country of 1st Nominee'. Red error messages indicate that 'Name of 1st Nominee is mandatory', 'Relationship with 1st Nominee is mandatory', 'Address Line 1 of 1st Nominee is mandatory', and 'State of 1st Nominee is mandatory'. The 'Country of 1st Nominee' is set to 'India'. A 'Submit' button is at the bottom right. A footer note recommends using compatible browsers like Google Chrome, Microsoft Edge, or Mozilla Firefox.

Nomination Details Captured

Digitization of Customer Journey for KYC Details Update



The screenshot shows a web browser window with the URL <https://115.112.16.66/instademat-kyc-nomination/#/nomination-journey/nominee-details>. The page displays a nomination journey form. A modal titled "E-SIGN (NDML)" is open, containing the following text:

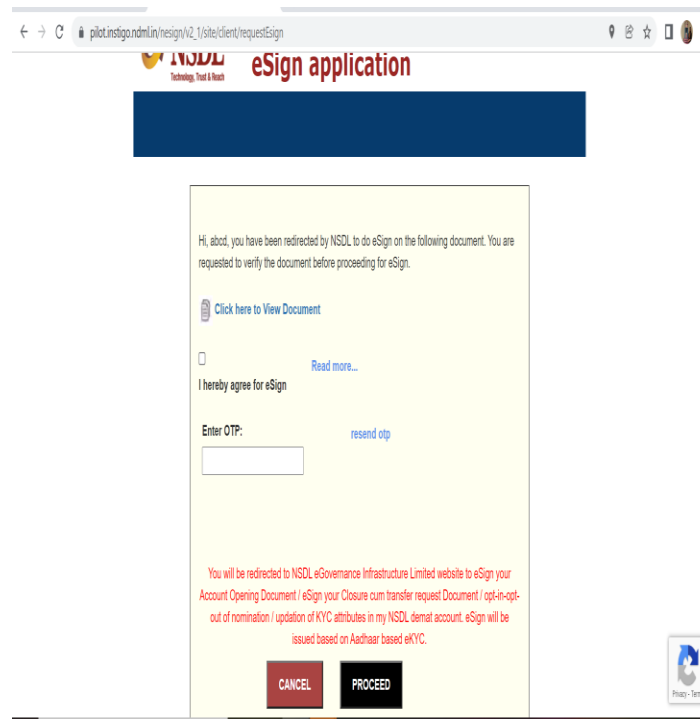
I abcd confirm that the DP ID IN302871 and Client ID 42928589 belongs to me.

I confirm to the [TSC](#) of NSDL eGov to use my Aadhaar/Virtual ID for the purpose to e-Sign my opt-in and opt-out nomination form.

Buttons: Back, Proceed to e-sign

Background form fields include: Share of 3rd nominee, Share Percent, Distribute Equally, 3rd Nominee identification details (PAN, Aadhaar, Saving B), 3rd Nominee DP ID (IN302871), and a footer with copyright information for National Securities Depository Limited (NSDL).

Prompt Investor for eSign



The screenshot shows a web browser window with the URL pilot.insigo.ndml.in/esign/v2_1/site/client/requestEsign. The page displays an "eSign application" form. The main content area contains the following text:

Hi, abcd, you have been redirected by NSDL to do eSign on the following document. You are requested to verify the document before proceeding for eSign.

[Click here to View Document](#)

☐ [Read more...](#)

I hereby agree for eSign

Enter OTP: [resend otp](#)


Buttons: CANCEL, PROCEED

Footer text: You will be redirected to NSDL eGovernance Infrastructure Limited website to eSign your Account Opening Document / eSign your Closure cum transfer request Document / opt-in-opt-out of nomination / updation of KYC attributes in my NSDL demat account. eSign will be issued based on Aadhaar based eKYC.

eSign Procedure

Digitization of Customer Journey for KYC Details Update

← → ↻ pregw.esign.gov-nsdl.com/nsdl-esp/authenticate/auth-ra?sessionid=916ED8802F94898CDFFED889E40149EF7authMod=1#no-back-button

 NSDL eSign

NSDL Electronic Signature Service

ASP Name	NSDL Database Management Limited
Transaction ID	8000901907112022090850341
Date & Time	2022-11-07T09:09:32

☐ I hereby authorize NSDL e-Governance Infrastructure Limited (NSDL e-Gov) to -

1. Use my Aadhaar / Virtual ID details (as applicable) for the purpose of e-signing of documents for opening of demat/trading/MF subscription account(s), transfer of securities and closure of demat account held with Depository Participant of NSDL etc with SEBI registered intermediaries & Mutual Fund distributors associated for/(with NSDL Database Management Limited and authenticate my identity through the Aadhaar Authentication system (Aadhaar based e-KYC services of UIDAI) in accordance with the provisions of the Aadhaar (Targeted Delivery of Financial and other Subsidies, Benefits and Services) Act, 2016 and the allied rules and regulations notified thereunder and for no other purpose.
2. Authenticate my Aadhaar / Virtual ID through OTP or Biometric for authenticating my identity through the Aadhaar Authentication system for obtaining my e-KYC through Aadhaar based e-KYC services of UIDAI and use my Photo and Demographic details (Name, Gender, Date of Birth and Address) for the purpose of e-signing of documents for opening of demat/trading/MF subscription account(s), transfer of securities and closure of demat account held with Depository Participant of NSDL etc with SEBI registered intermediaries & Mutual Fund distributors associated for/(with NSDL Database Management Limited.
3. I understand that Security and confidentiality of personal identity data provided, for the purpose of Aadhaar based authentication is ensured by NSDL e-Gov and the data will be stored by NSDL e-Gov till such time as mentioned in guidelines from UIDAI from time to time.

VID/Aadhaar:

[Click Here to generate Virtual ID.](#)
[Download Instructions to generate Virtual ID in lieu of Aadhaar.](#)

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Please do not press "Submit" button once again or the "Refresh" or "Back" buttons.

eSign – User Identification Input

← → ↻ pregw.esign.gov-nsdl.com/nsdl-esp/authenticate/auth-ra?sessionid=916ED8802F94898CDFFED889E40149EF7authMod=1#no-back-button

 NSDL eSign

NSDL Electronic Signature Service

ASP Name	NSDL Database Management Limited
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2. Authenticate my Aadhaar / Virtual ID through OTP or Biometric for authenticating my identity through the Aadhaar Authentication system for obtaining my e-KYC through Aadhaar based e-KYC services of UIDAI and use my Photo and Demographic details (Name, Gender, Date of Birth and Address) for the purpose of e-signing of documents for opening of demat/trading/MF subscription account(s), transfer of securities and closure of demat account held with Depository Participant of NSDL etc with SEBI registered intermediaries & Mutual Fund distributors associated for/(with NSDL Database Management Limited.
3. I understand that Security and confidentiality of personal identity data provided, for the purpose of Aadhaar based authentication is ensured by NSDL e-Gov and the data will be stored by NSDL e-Gov till such time as mentioned in guidelines from UIDAI from time to time.

Enter OTP:

Success! otp sent on registered mobile/email id.

[Click Here to generate Virtual ID.](#)
[Download Instructions to generate Virtual ID in lieu of Aadhaar.](#)

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Please do not press "Submit" button once again or the "Refresh" or "Back" buttons.

eSign – OTP Input

Digitization of Customer Journey for KYC Details Update

← → ↻ Not secure | https://115.112.16.66/instademat-kyc-nomination/#/nomination-journey/captured

NSDL National Securities Depository Limited
DPM Plus

Online Nomination Update

Opt-in / Opt-out Nomination Update Submit

Dear abcd, Your request for opt-in/opt-out Nomination in your Demat Account DP ID IN302871 and Client ID 42928589 has been captured successfully and submitted to your DP. You will receive the update by SMS after your request has been processed by your DP.

Close

* We recommend investors use compatible browsers such as Google Chrome/Microsoft Edge/Mozilla Firefox for a better user experience.

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Confirmation / Acknowledgement of Instruction Captured

← → ↻ Not secure | https://115.112.16.66/DPServices/#/dpAcntNomination/approveRequest

NSDL National Securities Depository Limited
DP Services

nomination Update

Request ID DP ID Client ID

Search Reset

* Click on Request ID to view Nomination Enquired PDF

Request ID	DP ID	Client ID	Client Name (as per Demat account)	DP Name	Request Submission Date	Request Type	Status	Remarks
<input checked="" type="checkbox"/> 102	IN302871	42928589	abcd	ABC & SECURITIES PVT LIMITED	07-11-2022	Nomination Update	Pending DP Checker Approval	<input type="text" value="Approve"/>
<input type="checkbox"/> 107	IN302871	87404583	Amit Kumar Mishra	ABC & SECURITIES PVT LIMITED	24-06-2022	Nomination Update	Pending DP Checker Approval	<input type="text"/>
<input type="checkbox"/> 111	IN302871	42870312	DEBENDRA KUMAR SAHU	ABC & SECURITIES PVT LIMITED	07-06-2022	Nomination Update	Pending DP Checker Approval	<input type="text"/>
<input type="checkbox"/> 119	IN302871	42871400	werwer	ABC & SECURITIES PVT LIMITED	07-06-2022	Nomination Update	Pending DP Checker Approval	<input type="text"/>
<input type="checkbox"/> 629	IN302871	20195179		ABC & SECURITIES PVT LIMITED	05-05-2022	Nomination Update	Pending DP Checker Approval	<input type="text"/>

First Previous 1 Next Last Refresh

Approve Reject

Contact us Terms of use Policy Disclaimer SSL Certificate

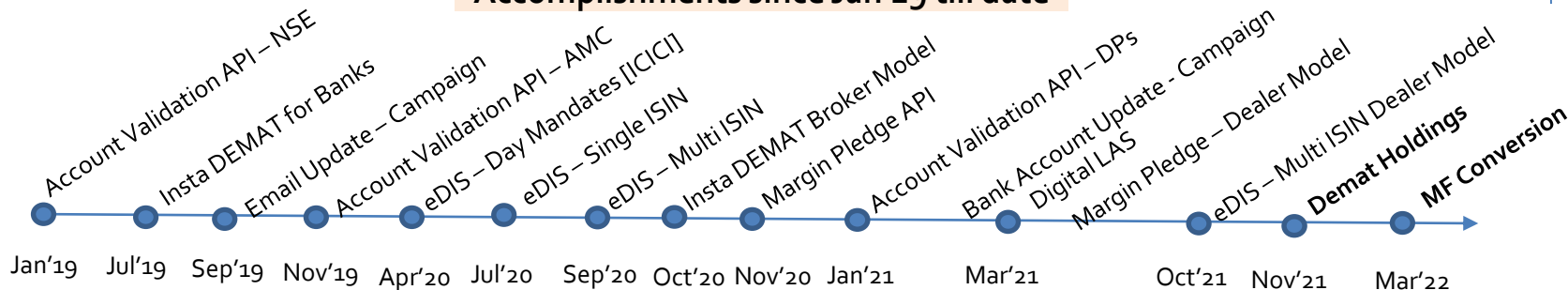
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DP views and approves the KYC update request

Enabling B2B2C Model - APIfication on NSDL Services

Focus on establishing the framework for developing demat account validation, account maintenance and transactional APIs aligned with NSDL security policy

Accomplishments since Jan'19 till date



Key API Transaction Volumes

Insta DMAT

1.2 Lakh accounts opened
real time via this facility

30 Business Partners

Delivery Inx Mandates

8 Lakh eDIS Mandates
[monthly]

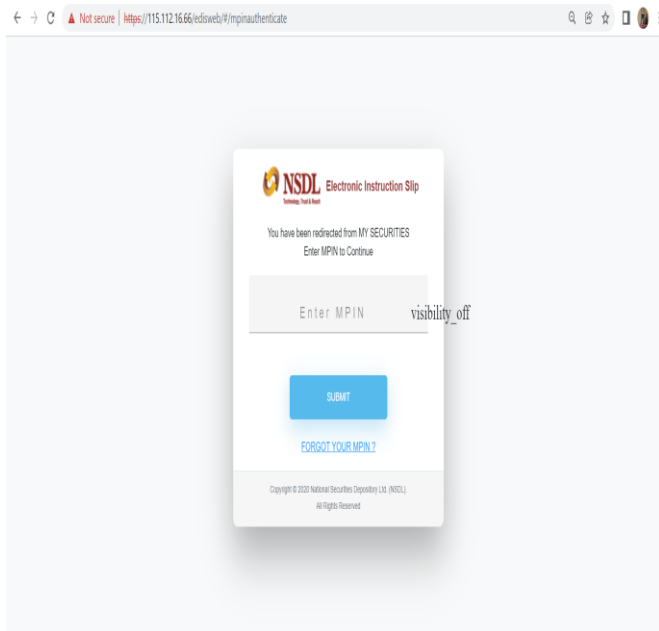
50 Business Partners

Margin Pledge

Over 65k pledge
transactions [monthly]

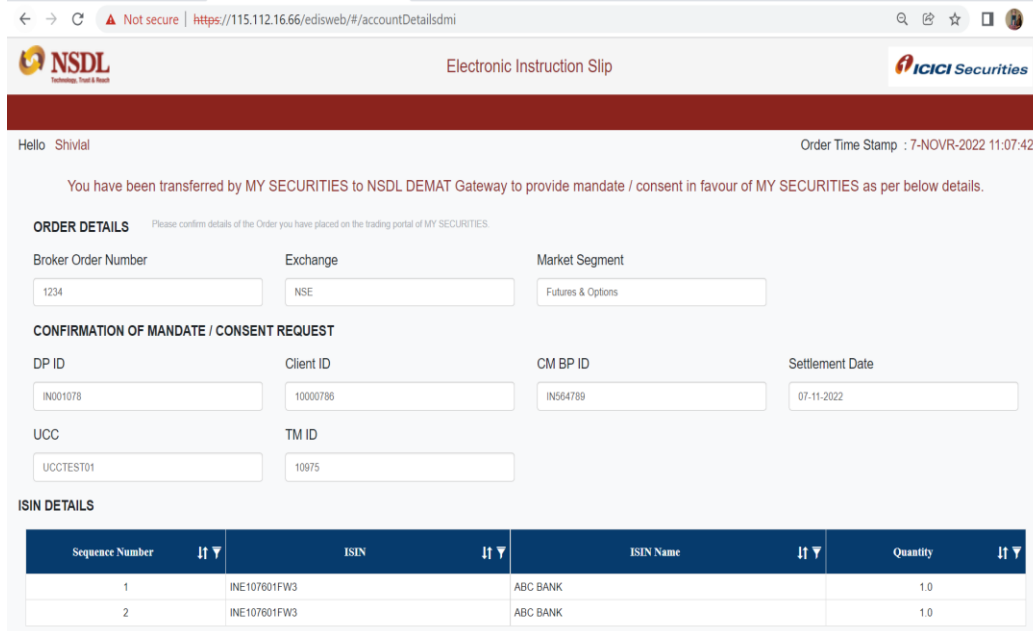
35 Business Partners

Enabling B2B2C Model - APIfication on NSDL Services



A screenshot of a web browser showing the NSDL Electronic Instruction Slip authentication page. The page has a white background with a grey header bar. The NSDL logo is on the left, and the text 'Electronic Instruction Slip' is on the right. Below the logo, it says 'You have been redirected from MY SECURITIES' and 'Enter MPIN to Continue'. There is a text input field for 'Enter MPIN' and a blue 'SUBMIT' button. Below the button is a link 'FORGOT YOUR MPIN?'. At the bottom, there is a copyright notice: 'Copyright © 2020 National Securities Depository Ltd. (NSDL). All Rights Reserved'.

Authentication of Client



A screenshot of a web browser showing the NSDL Electronic Instruction Slip account details page. The page has a white background with a grey header bar. The NSDL logo is on the left, and the text 'Electronic Instruction Slip' is on the right. Below the logo, it says 'Hello Shival' and 'Order Time Stamp : 7-NOVR-2022 11:07:42'. The main content area is titled 'ORDER DETAILS' and contains a table with the following information:

Broker Order Number	Exchange	Market Segment
1234	NSE	Futures & Options

Below the table is a section titled 'CONFIRMATION OF MANDATE / CONSENT REQUEST' with the following information:

DP ID	Client ID	CM BP ID	Settlement Date
IN001078	10000786	IN564789	07-11-2022

Below this is a section titled 'ISIN DETAILS' with the following information:

UCC	TM ID
UCCTEST01	10975

At the bottom, there is a table with the following information:

Sequence Number	ISIN	ISIN Name	Quantity
1	INE107601FW3	ABC BANK	1.0
2	INE107601FW3	ABC BANK	1.0

Electronic Capture of Instructions

Enabling B2B2C Model - APIfication on NSDL Services

Browser: Not secure | <https://115.112.16.66/edisweb/#/accountDetailsdmi>

NSDL
Technology. Trust & Risk

Electronic Instruction Slip

ICICI Securities

IN01078 10000786 IN564789 07-11-2022

UCC UCCTEST01 TM ID 10975

ISIN DETAILS

Sequence Number	ISIN	ISIN Name	Quantity
1	INE107601FW3	ABC BANK	1.0
2	INE107601FW3	ABC BANK	1.0

20 • First Previous Next Last Refresh

☒ I hereby authorise MY SECURITIES to debit and transfer securities from my demat account towards my obligation at exchange arising out of my trade(s) with MY SECURITIES in my trading account based on this mandate / consent.
☐ T&C for Clients

OTP sent successfully to Mobile number xxxxx-7106

OTP: Enter OTP

1:38 Seconds to RESEND OTP

OTP based Transaction Authorization

Browser: Not secure | <https://115.112.16.66/edisweb/#/acknowledgement>

NSDL
Technology. Trust & Risk

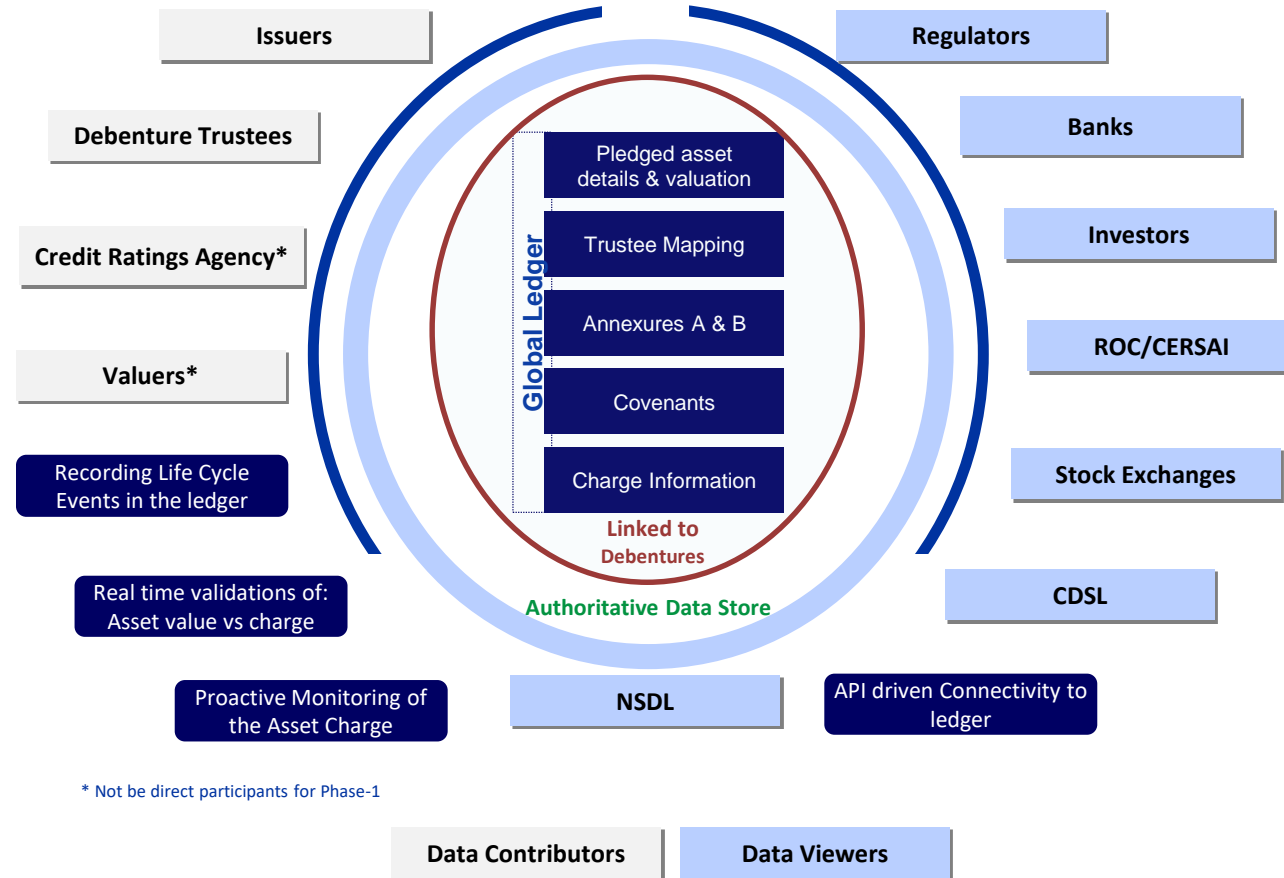
Electronic Instruction Slip

ICICI Securities

Your request for eDIS with Transaction Reference Number 6639311000683332 is successfully submitted on 07/November/2022 at 11 hr 10 min 36 sec IST

Confirmation / Acknowledgement

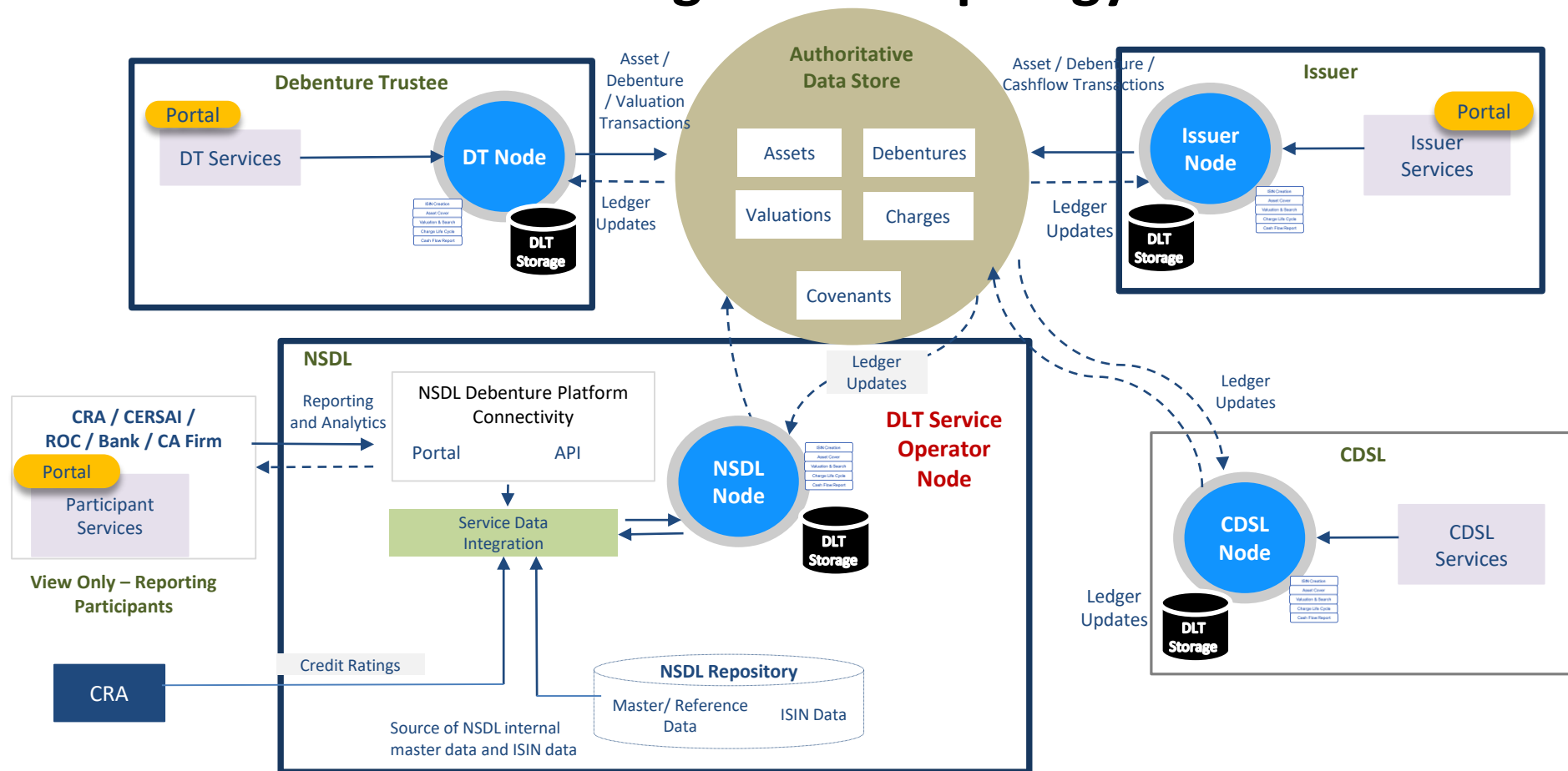
DLT Blockchain Powered Covenants Monitoring Platform



Key Concepts

- ✓ Creation of an authoritative data store by NSDL which will have the immutable, time-stamped records of the debenture and the asset/asset valuations that are backing the debentures
- ✓ The data can be shared with relevant parties and updated based on agreed mechanisms

DLT based Solution - High Level Topology



DLT Blockchain Solution - Key Features

- Workflow based platform providing complete digitisation of the manual process
- Maintain a unified view and single source of record for all the involved parties.
- Facilitate in streamlining the periodic asset valuation and approval processes.
- The **non-disputable records** on the DLT Blockchain platform will be **cryptographically secure** and offer the benefits of data auditability and tamperproof ledger, thus strengthening the **investor's confidence** in the market.
- System generated unique asset ID assigned to an asset of the issuer for effective asset creation as well as tracking
- **Avoid Duplicity of Asset** by providing an alert to the Issuer and the DT by having appropriate validation/ duplicate checks in the system for identifying possible duplicate entries for assets of an issuer
- Periodic alerts to Debenture trustees & Issuers on the upcoming compliances



Cognizant

Thank You

