



# ECMS | Access & GUI

Deutsche Bundesbank

Frankfurt am Main, February 2023

Updated 20 March 2023

| Title                    | ECMS   Access & GUI (counterparties)  |
|--------------------------|---|
| <b>Objectives</b>        | <p>Topic-based training on specific aspects of the ECMS application:</p> <ul style="list-style-type: none"> <li>▪ Participants will become familiar with and understand access to the ECMS via Network Service Provider (NSP) and the Eurosystem Single Market Infrastructure Gateway (ESMIG).</li> <li>▪ Participants will become familiar with and understand the graphical user interface (ECMS GUI) with regard to hardware and software requirements, structure (modules/menu/structure), screen types, screen elements and validation.</li> </ul> |
| <b>Contents</b>          | <p>ECMS   Access &amp; GUI</p> <ul style="list-style-type: none"> <li>▪ ECMS   Access – 30 minutes</li> <li>▪ ECMS   GUI overview – 60 minutes</li> <li>▪ Q&amp;A – 30 minutes</li> </ul>   |
| <b>Target group</b>      | <p>For counterparties that work directly with the ECMS (e.g. ECMS technical users, testers participating in ECMS user testing, ECMS users with a focus on technical aspects (IT units), etc.)</p>   |
| <b>Prior knowledge</b>   | <p>All participants should have completed the basic ECMS training module.</p>   |
| <b>General framework</b> | <ul style="list-style-type: none"> <li>▪ Virtual training course (online)/hosted via WebEx</li> <li>▪ 120 minutes/maximum 500 participants/in German</li> </ul>   |

## Training materials

- We will provide you with following training materials for this event:  
# Presentation slides # ECMS video(s).
- For data protection reasons, the training course will NOT be recorded.

## Q&A

- Please feel free to ask questions or add to the discussion as we go along. A separate Q&A session will also be held at the end of each training section.
- If you have any questions or wish to say something, please use the chat function.

## Training feedback

- When you were invited to this event, you were sent a link to a standardised and anonymised feedback form.
- Once the event has ended, please take a few moments to fill out the form and give us honest feedback on this training course. Thank you!

## 1. ECMS | Access

(Network Service Provider (NSP) & Eurosystem Single Market Infrastructure Gateway (ESMIG), authentication & authorisation, certificate & login name, connection timeout (U2A), GUI login (ESMIG))

## 2. ECMS | GUI overview

(Hardware & software requirements, GUI structure (modules/menu structure/screen structure), screen types, screen elements, validation)

# 1. Access

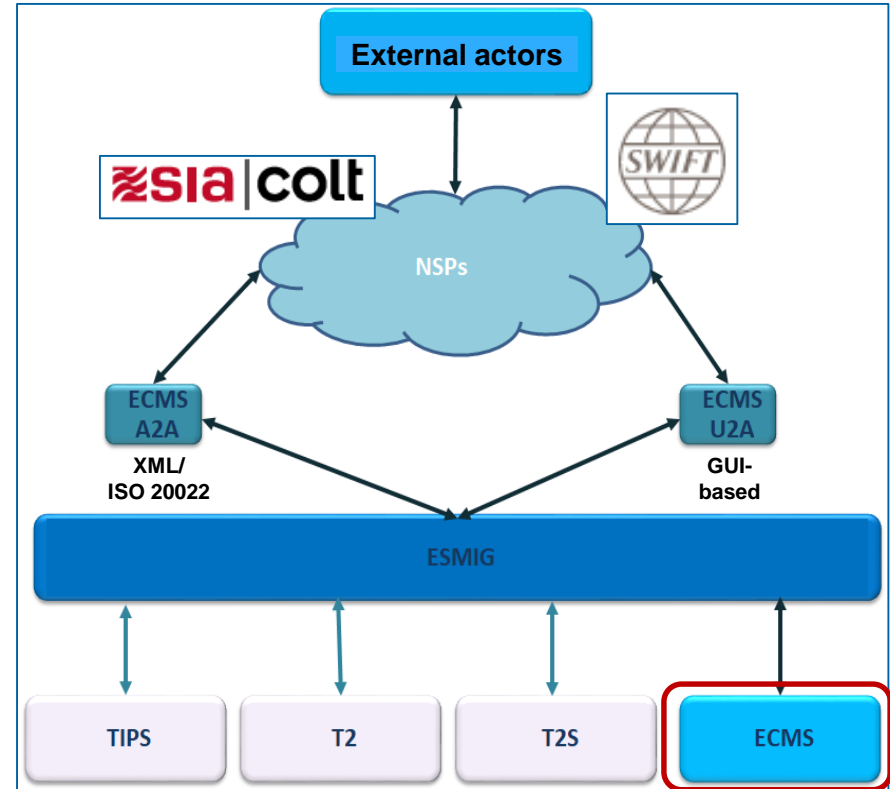
## Previous access | CAP

- Internet-based communication via **CAP** (Collateral Management Access Portal) in U2A mode or via **SWIFT/XML** in A2A mode.

## Future access | ECMS

- Access to the ECMS via **ESMIG** (Eurosystem Single Market Infrastructure Gateway).
- ESMIG** provides ECMS actors with a single access point to **all TARGET Services** (ECMS, T2, T2S and TIPS, as well as potential future services).
- ECMS actors can connect to ESMIG in U2A or A2A mode via an **NSP** (Network Service Provider/**SWIFT** or **SIA-Colt**).
- A2A** communication via XML messages; **U2A** access via the graphical user interface (ECMS GUI).
- ECMS actors that are not connected via an NSP can theoretically use **third-party** access.

## NSP & ESMIG (overview)



- When connecting to ESMIG, ECMS actors can choose between **SWIFT or SIA/Colt as licensed NSPs**.
    - The NSPs manage the **registration process** for ESMIG access, the assignment of **digital certificates** and the **ECMS Closed Group of Users (CGU)** for the connection to ECMS.
    - **CGUs are closed user groups** that include the relevant TARGET Services actors for both the production (PROD) and test environments (EAC & UTEST).
    - There is a **CGU for each environment** and **each market infrastructure** of the Eurosystem (T2, T2S, TIPS, ECMS).
    - The **ordering process** generally consists of two steps: 1) Subscription: contract with NSP  
2) Configuration: provision of access to the TARGET Service(s).
    - There is **no automatic subscription for ECMS** if other TARGET Services are already in use. In other words, existing customers have to reorder the specific ECMS service for the relevant environment from the NSP.
- See the annex for the CGU subscription workflow.

# 1. Access

## Connectivity checklist (TARGET Services & ECMS)

| Step | Action  | TARGET Service |
|------|---|----------------|
| 1    | Select the NSP of choice and select the related Services.   | ALL            |
| 2    | Ask the NSP's for an offer and order the related products.  | ALL            |
| 3    | Connectivity setup with the NSP.  | ALL            |
| 4    | Subscribe to the NSP's Services for TARGET Services (e.g. inclusion into the CGU).  | ALL            |
| 5    | Request for the NSP PKI certificates.   | ALL            |
| 6    | Create the Party in Reference Data in ECMS  | ECMS           |
| 7    | Create Party administrators in ECMS   | ECMS           |
| 8    | Create the users and the Distinguish Name in ECMS   | ECMS           |
| 9    | Connectivity test with TARGET Services A2A <ul style="list-style-type: none"> <li>• in case of schema validation error, the user will receive an adm.007 message</li> <li>• business validation errors will trigger the relevant business response message (eg. Pacs.002, camt.025 and reda.xxx according to the service/component the message has been sent to)</li> </ul> U2A <ul style="list-style-type: none"> <li>• the user will be able to reach the ESMIG landing page</li> </ul> | ALL            |

- See the annex for the workflow relating to step 6.

| Activity (Additional Details to Steps 6 to 8 in left Table)   | Actor                         |
|---|-------------------------------|
| 1. Creation of NCB/CSD/TPA party  | ECMS Operator                 |
| 2a. Creation of NCB user(s) with the role 'NCB Admin'   | ECMS Operator                 |
| 2b. Creation of CSD/TPA A2A user without any role attached (assigning a role is not needed for starting connectivity testing)   |                               |
| As from 2b. CSD/TPA A2A connectivity testing can be done  | CSD/TPA A2A User              |
| 3. Connection to the ECMS GUI landing page (and the user can access menu corresponding to his role)   | NCB Admin                     |
| 4a. Creation of NCB A2A user without any role attached (not needed for connectivity testing)  | NCB Admin                     |
| 4b. Creation of NCB User(s) with the role 'NCB – U2A General Reference Data Execution' (as from that moment the NCB user can access the menu corresponding to his role) |                               |
| As from 4a. NCB A2A connectivity testing can be done  | NCB A2A User                  |
| 5. Creation of the CPTY party   | NCB User in U2A (cf. Step 4b) |
| 6. Creation of the CPTY user(s) with the role 'CPTY Admin'  | NCB Admin                     |
| 7. Connection to the ECMS GUI landing page (and the user can access menu corresponding to his role)   | CPTY Admin                    |
| 8. Creation of CPTY A2A user without any role attached (not needed for connectivity testing)  | CPTY Admin                    |
| As from 8. CPTY A2A connectivity testing can be done  | CPTY A2A User                 |

- **ESMIG** provides all ECMS parties with a **single (central) access point** to all TARGET Services (ECMS, T2, T2S and TIPS, as well as potential future services).
  - Participants in the **various market infrastructures** can access the respective systems via a **single platform**.
  - ESMIG is **network operator-independent component** and allows ECMS actors to connect to the ECMS via one or more NSPs (SWIFT and/or SIA-Colt).
  - ESMIG **centralises** the various **networks** and **harmonises** the **protocols**, the **graphical interfaces** and the **management of certificates**.
  - **ESMIG** is available during the operating hours defined by the **ECMS business day**. The ESMIG channel is closed outside of these operating hours.
  - Users can sign in to ALL TARGET Services using a **single sign-on** and a **single certificate**.
  - ESMIG **authenticates the users** and checks whether they are authorised to use the ECMS.
  - Users can communicate with the ECMS via ESMIG in two ways: in **A2A** mode via XML messages (ISO-20022 compliant) or in **U2A** mode via a graphical user interface (ECMS GUI).



# 1. Access

## Authentication & authorisation

- Each ECMS user needs a **unique login name\*** and a **certificate** to access the ECMS.

Linked to the Distinguished Name (DN) defined by the NSP.

\* CN=max-mueller, OU=esmig1, O=MARKDEFFXXX, O=nsp

Assigned by the NSP to the ECMS user (person or application).

- The **technical sender** is the ECMS actor submitting the request to the ECMS.
  - Each technical sender is identified by means of a certificate issued by the NSP, i.e. the NSP **authenticates** the technical sender on the basis of this/its certificate.
  - The certificate DN of the technical sender represents the technical address used by the technical sender to connect to the ECMS.
- Once ESMIG has authenticated the user and checked that the user is authorised to address the ECMS, the ECMS checks the **rights of the user** to carry out a specific function in the ECMS
  - Authorisation** is granted based on the user's privileges (embedded in predefined roles) which are stored in the ECMS reference data.

- Each system user\* (human or application) that is assigned a digital certificate is given a **unique login name** (Distinguished Name (DN)/certificate DN).
  - **One certificate** can be linked to **one or more ECMS users**, even users belonging to different counterparties and/or of different countries.
  - **An ECMS user** can be linked only to **one certificate**.
  - If an ECMS party uses **two NSPs** (SWIFT and SIA-Colt), separate certificates must be provided by each NSP.

\* As a general rule, system users can be:

- For U2A communication ==> an employee, e.g. of a counterparty or an NCB
- For A2A communication ==> an application, e.g. of a counterparty or an NCB



- On the **ESMIG portal login screen**, the user is requested to authenticate themselves via the **certificate\*** used together with their **password** (session PIN).
  - Both pieces of information are only required once at the beginning of every session and the authentication remains active for the entire session.
  - The ESMIG portal guides the person wishing to access the ECMS to:
    - **choose the service** among the authorised services accessible via at least one user ID;
    - **choose the component/application** among the authorised components/applications accessible via at least one user ID;
    - **choose the user** authorised to access the selected application.
  - After this process, the ESMIG portal will redirect the user to the **ECMS homepage** (if selected).
- \* The user must first use the smart card, USB token or remote Hardware Security Module (HSM) containing the certificate for accessing ESMIG. The PIN code displayed on the token must be entered by the user. The user must have saved the ESMIG digital certificates on their PC. The same certificate can be used for all TARGET services. If desired, the same certificate can be used by multiple users.

# 1. Access

## GUI login (ESMIG)

The screenshot shows the ESMIG GUI login process. At the top, the 'target services' logo is on the left, and the user is welcomed with the date '2022-11-09 11:43'. The main heading is 'Services List' with the instruction 'Choose an Application and your System User Reference'. The process is guided by six numbered steps:

- 1**: A dialog box titled 'Zertifikat für Authentifizieren wählen' (Select certificate for authentication) is shown. It contains the text: 'Für die Website esmig-cert-iam.esmig.com, sign.swift.com443 sind Ihre Anmeldeinformationen erforderlich:' followed by a list: 'SWIFT', 'O4504G7\_esmig', and '9.6.2022'. There are 'OK' and 'Abbrechen' buttons.
- 2**: A 'Choose a Service' section with a search bar and four options: T2, T2S, TIPS, and ECMS. The ECMS option is selected with a green checkmark.
- 3**: A 'Choose Component or Application' section with a search bar and one option: ECMS. The ECMS option is selected with a green checkmark.
- 4**: A 'Choose a System User' section with a search bar and one option: ECMS ACCESS. The ECMS ACCESS option is selected with a green checkmark.
- 5**: A 'Submit' button.
- 6**: The final screen shows the user has logged in to the 'Collateral and Credit' module. The page title is 'Collateral and Credit' and the breadcrumb is 'Collateral and Credit'.

After logging in, the user is taken to the ECMS module "Collateral and Credit" by default (ECMS homepage).

\* A system administrator must be created for each NCB before the GUI is accessed for the first time. The respective NCB admin creates the users. These users can then access the GUI. Only registered users have ECMS GUI access.

# 1. Access

## GUI login (ESMIG)

- **Components/applications via ESMIG portal**
  - Billing (BILL)
  - Business Day Management (BDM)
  - Central Liquidity Management (CLM)
  - Common Reference Data Management (CRDM)
  - Data Warehouse (DWH)
  - Enhanced Contingency Solution (ECONS II)
  - **Eurosystem Collateral Management System (ECMS)**
  - Legal Archiving (LeA)
  - Real Time Gross Settlement (RTGS)
  - TARGET Instant Payment Settlement (TIPS)
  - TARGET2-Securities (T2S)

The screenshot displays the ESMIG GUI login interface. At the top, the 'target services' logo is visible. Below it, a banner reads 'Service' and 'Choose an Application and yo'. The main content area is divided into two sections: 'Choose a Service' and 'Choose Component or Application'. In the 'Choose a Service' section, four options are listed: T2, T2S, TIPS, and ECMS. ECMS is selected, indicated by a green checkmark. In the 'Choose Component or Application' section, ECMS is also selected, indicated by a green checkmark. A red box highlights the 'Choose Component or Application' section. A 'Submit' button is located at the bottom of the form.

# 1. Access

## Important documents

### Public information (in alphabetical order)

- [Connectivity\\_ESMIG-SWIFT](#)
- [ECMS info pack – access and connectivity](#)
- [ECMS User Handbook Counterparties](#), ECMS UHB CTPY v1.1
- [ESMIG\\_SIA-Colt\\_Solution\\_Overview\\_ECMS\\_v1.1](#)
- [ESMIG U2A Qualified Configurations v1.3](#)
- [TARGET Services Connectivity Guide v2.0](#)

If you have any questions or wish to say something,  
please use the chat function.





## 1. ECMS | Access

(Network Service Provider (NSP) & Eurosystem Single Market Infrastructure Gateway (ESMIG), authentication & authorisation, certificate & login name, connection timeout (U2A), GUI login (ESMIG))

## 2. ECMS | GUI overview

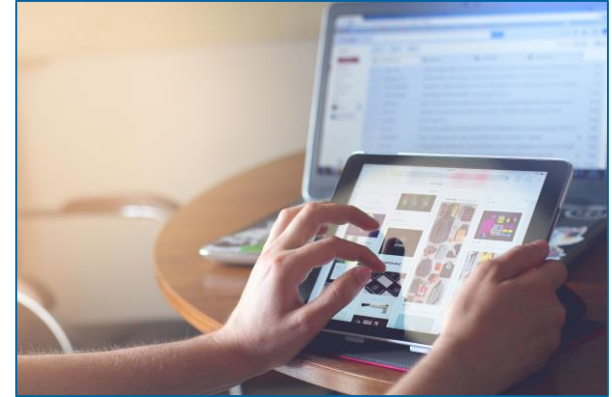
(Hardware & software requirements, GUI structure (modules/menu structure/screen structure), screen types, screen elements, validation)

## 2. GUI overview

## Hardware & software requirements (GUI)

### Hardware requirements

- Processor: minimum of 1 gigahertz (GHz), supporting streaming SIMD extensions(SSE2)
- RAM: minimum of 8 gigabytes (GB)
- CPU: minimum of 4 cores
- Hard drive: minimum of 200 megabytes (MB)
- Graphics card:  
Microsoft DirectX 9 graphics devices with Windows Display Driver Model (WDDM) supported
- Screen settings:  
minimum resolution of 1280 x 720 pixels with a colour depth of at least 24-bit (true colour). A higher colour depth of 32 bits is supported. Higher screen resolutions are recommended. Using lower screen resolutions may result in the GUI being displayed incorrectly.



### Software requirements

- **Operating system**

No particular operating system (OS) or other important software is required. Basically, any OS that supports the following browsers can be used.

- **Supported browsers**



Microsoft Internet Explorer (11)/Microsoft Edge/Google Chrome (40+)/Firefox (32+).

JavaScript and Java applets are used for client-side validations, which is why JavaScript and cookies need to be enabled. No additional plug-in based internet applications like Flash or Silverlight are required. Recommended cache size: between 1 and 2 MB.

A full definition of eligible browsers and their minimum versions and the complete replacement of applet technology are defined in ESMIG; see the ESMIG UDFS.\*

\* <https://www.bundesbank.de/en/homepage/eurosystem-single-market-infrastructure-gateway-user-detailed-functional-specifications-esmig-udfs--799238>

- See 1. ECMS | Access

## 2. GUI overview

## GUI structure (modules & menu structure)

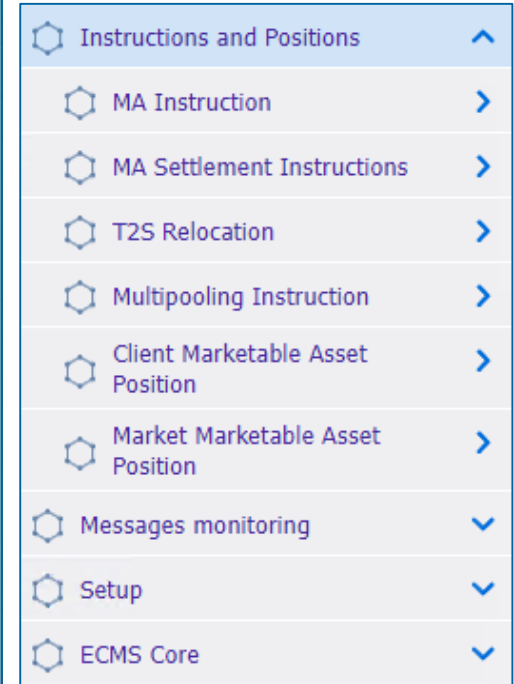
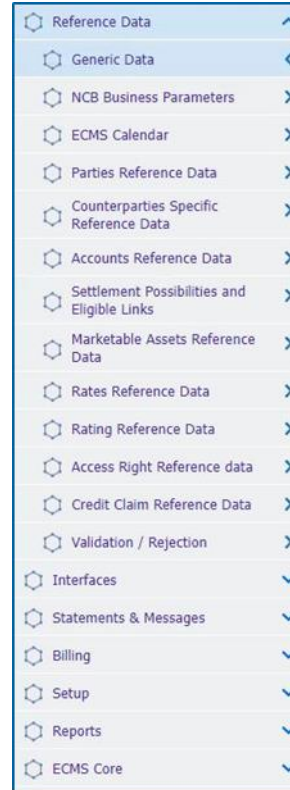
- The ECMS GUI is divided into **four different modules** (Reference Data, Instructions and Positions, Corporate Actions, **Collateral and Credit**).
- Each module contains three hierarchical levels:
  - The **first level** of each module is presented as a **menu bar** containing items that can be clicked at this level (see the annex for the main menu for each module).
  - The **second and third level** items are accessible via mouse-over on the first and second level items respectively.
  - The entries at the second menu level are **GUI menus**, while the entries at the third level are **screens**.

## 2. GUI overview

- Main menu  
Reference Data module (MegaCommon)  
[see screenshot on the left]

- Main menu  
Instructions and Positions module (MegaCustody)  
[see screenshot on the right]

## Main menu: modules (look & feel)



## 2. GUI overview

- Main menu  
Corporate Actions module (MegaCor)  
[see screenshot on the left]

- Main menu  
Collateral and Credit module (MegaLend)  
[see screenshot on the right]

## Main menu: modules (look & feel)

|   |  |
|---|--|
| Announcements   | Pool                                   |
| CA Event Display  | Pool Structure                         |
| CA Event Create   | Pool overview                          |
| Validate / Reject CA Event                              | ELA Operation                          |
| Accept / Reject CA Event<br>Blocked for Critical Update | Payment And Credit Line<br>Instruction |
| CA Events   | Collateral                             |
| Feed Management   | Exposure                               |
| CA Entitlements   | OMO Interest Rates                     |
| Movement  | Transfer                               |
| CA Position   | Validation / Rejection                 |
| Instructions  | Notification                           |
| Messages Monitoring                                     | Accounting                             |
| MegaCor Setup   | Reporting                              |
| Accounting  | Setup                                  |
| ECMS Core   | ECMS Core                              |

## 2. GUI overview

## GUI structure (menu bar/Reference Data)

| Module         | Main menu             | Description  |
|----------------|-----------------------|--|
| Reference Data | Reference Data        | <ul style="list-style-type: none"><li>Reference data on counterparties, creation of internal and external accounts (cash, securities, credit claims), establishment of settlement possibilities/eligible links, user and access rights administration, parameters for US withholding tax</li></ul> |
|                | Interfaces            | <ul style="list-style-type: none"><li>Overview of interfaces with Eurosystem services (including marketable assets, price information, exchange rates), data transfer to T2S and triparty agents</li></ul>   |
|                | Statements & Messages | <ul style="list-style-type: none"><li>Access to statement of holdings and statement of transactions</li></ul>  |
|                | Billing               | <ul style="list-style-type: none"><li>Administration of incoming invoices from the Central Securities Depository/triparty agents and outgoing invoices to counterparties</li></ul>   |
|                | Setup                 | <ul style="list-style-type: none"><li>Message subscription setup, file channel configuration</li></ul>   |
|                | Reports               | <ul style="list-style-type: none"><li>Reports from the “Reference Data” module</li></ul>   |
|                | ECMS Core             | <ul style="list-style-type: none"><li>Access to other modules</li></ul>  |



## 2. GUI overview

## GUI structure (menu bar/Instructions and Positions)

| Module                            | Main menu                  | Description   |
|-----------------------------------|----------------------------|---|
| <b>Instructions and Positions</b> | Instructions and Positions | <ul style="list-style-type: none"><li>▪ (De)mobilisation of securities, transfer of securities between asset accounts, T2S Relocation &amp; DCA Mapping</li></ul> |
|                                   | Messages Monitoring        | <ul style="list-style-type: none"><li>▪ Overview of incoming messages</li></ul>   |
|                                   | Setup                      | <ul style="list-style-type: none"><li>▪ Message subscription and processing advice setup</li></ul>  |
|                                   | ECMS Core                  | <ul style="list-style-type: none"><li>▪ Access to other modules</li></ul>   |

## 2. GUI overview

## GUI structure (menu bar/Corporate Actions)

| Module                   | Main menu           | Description   |
|--------------------------|---------------------|---|
| <b>Corporate Actions</b> | Announcements       | <ul style="list-style-type: none"><li>Administration of CA announcements received</li></ul>                           |
|                          | CA Entitlements     | <ul style="list-style-type: none"><li>Administration of calculated customer entitlements</li></ul>                    |
|                          | Movement            | <ul style="list-style-type: none"><li>Postings and payments to external accounts and customer accounts</li></ul>      |
|                          | CA Position         | <ul style="list-style-type: none"><li>View of authorised CA positions</li></ul>                                       |
|                          | Instructions        | <ul style="list-style-type: none"><li>Overview of instructions issued by customers</li></ul>                          |
|                          | Messages Monitoring | <ul style="list-style-type: none"><li>Overview of incoming and outgoing securities messages by message type</li></ul> |
|                          | MegaCor Setup       | <ul style="list-style-type: none"><li>Message subscription setup for securities messages</li></ul>                    |
|                          | Accounting          | <ul style="list-style-type: none"><li>Display and entry of general ledger accounting entries</li></ul>                |
|                          | ECMS Core           | <ul style="list-style-type: none"><li>Access to other modules</li></ul>   |

## 2. GUI overview

## GUI structure (menu bar part 1/Collateral and Credit)

| Module                | Main menu                           | Description   |
|-----------------------|-------------------------------------|---|
| Collateral and Credit | Pool                                | <ul style="list-style-type: none"><li>Creation of a new pool</li></ul>  |
|                       | Pool Structure                      | <ul style="list-style-type: none"><li>Linking of pools and internal asset accounts, credit freezing</li></ul>   |
|                       | Pool Overview                       | <ul style="list-style-type: none"><li>Overview of pools and margin calls, evaluation of pools, projected pool positions</li></ul>   |
|                       | ELA Operation                       | <ul style="list-style-type: none"><li>Administration of emergency liquidity assistance operations</li></ul>   |
|                       | Payment and Credit Line Instruction | <ul style="list-style-type: none"><li>Overview of payments and credit line changes in CLM, management of maximum credit line</li></ul>                                      |
|                       | Collateral                          | <ul style="list-style-type: none"><li>Mobilisation and management of cash collateral, triparty collateral positions, fixed-term deposits (FTDs) and credit claims</li></ul> |
|                       | Exposure                            | <ul style="list-style-type: none"><li>Administration of credit freezing, open market operations, standing facilities</li></ul>  |

## 2. GUI overview

## GUI structure (menu bar part 2/Collateral and Credit)

| Module                | Main menu            | Description  |
|-----------------------|----------------------|--|
| Collateral and Credit | OMO Interest Rate    | <ul style="list-style-type: none"><li>Display and input of interest rates for open market operations</li></ul>   |
|                       | Transfer             | <ul style="list-style-type: none"><li>Transfer of cash collateral, time deposits and open market operations between counterparties in the event of a merger, internal and external transfer of credit claims</li></ul> |
|                       | Validation/Rejection | <ul style="list-style-type: none"><li>Approval of changes in relation to pools, approval of TPA transactions</li></ul>   |
|                       | Notification         | <ul style="list-style-type: none"><li>Incoming notifications from TOP (open market operations) and CLM, outgoing notifications to counterparties, messages between ECMS and TPA</li></ul>                              |
|                       | Accounting           | <ul style="list-style-type: none"><li>Transfer of general ledger files to accounting</li></ul>   |
|                       | Reporting            | <ul style="list-style-type: none"><li>Reports from the “Collateral and Credit” module</li></ul>  |
|                       | Setup                | <ul style="list-style-type: none"><li>Message subscription setup</li></ul>   |
|                       | ECMS Core            | <ul style="list-style-type: none"><li>Access to other modules</li></ul>  |

## 2. GUI overview

## GUI structure (screen structure)

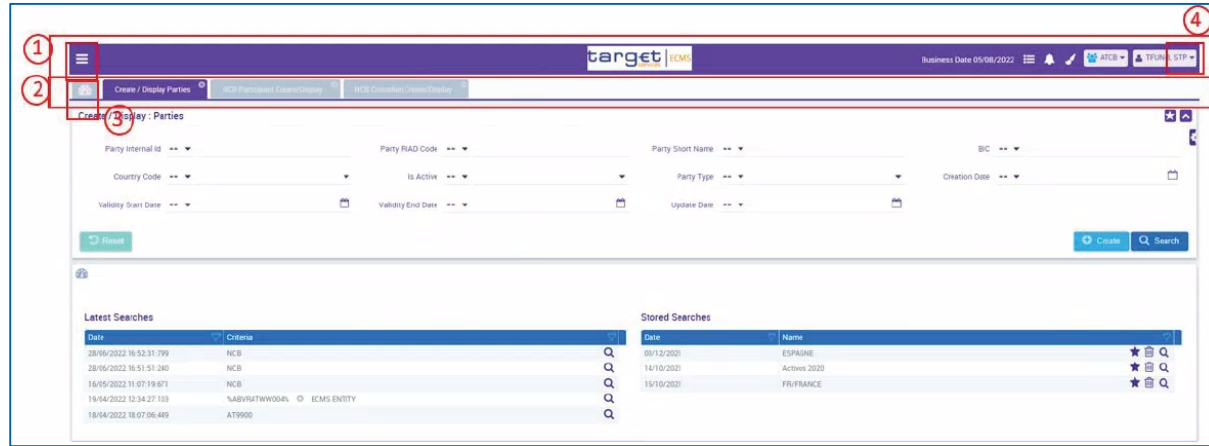
- Each screen of the ECMS GUI has the same layout, containing a **header** and a **content area**. A user can have up to 10 tabs (screens) open at the same time.

The screenshot illustrates the ECMS GUI structure, enclosed in a red border. The **Header** (level 2) is a blue bar at the top containing a menu icon, home icon, screen bar/menu name, and an information panel (user). Below the header is a navigation bar with three tabs: "Parties Create / Display" (active), "Entitles Business Roles Create / Display", and "External Securities Accounts Create / Display". The **Content area** (level 3) contains a search form for "Parties" with fields for "RIAD Code", "Party Short Name", "Is Active", and "Creation Date". A dropdown menu is open for "Is Active", showing "True" and "False" options. The search form includes "Create" and "Search" buttons. Below the search form is a "Latest searches" section with a table showing search history.

| Date | Criteria |
|------|----------|
|      |          |

## 2. GUI overview

## GUI structure (header)



- 1 Menu icon: Clicking on it displays the menu bar of the main menu of the module that is currently open.
- 2 Home icon: Takes the user to the homepage of the relevant ECMS module they currently have open.
- 3 Screen bar: Shows the menu options selected by the user (level 2) as screen tabs. A maximum of 10 tabs (screens) are allowed at one time.
- 4 Information panel: Shows the environment, tenants, business date, alerts and login names. Clicking on the login name displays some information about the user.

## 2. GUI overview

The screenshot shows a web application interface for managing 'Parties'. The interface is divided into several sections:

- 1** (Menu name): A breadcrumb trail at the top showing 'Parties Create / Display', 'Entities Business Roles Create / Display', and 'External Securities Accounts Create / Display'.
- 2** (Screen name): A search bar labeled 'Search: Parties'.
- 3** (Minimise icon): A small upward-pointing arrow icon in the top right corner of the search bar area.
- 4** (Button bar): A row of buttons labeled 'Create' and 'Search'.
- 5** (Subsection name): A section header labeled 'Footprint'.

The main content area includes a form with fields for 'RIAD Code', 'Party Short Name', 'Party Name', 'Country Code', 'Party Type', 'Activation Date', 'Closing Date', 'Is Active', and 'Creation Date'. There are also tabs for 'General Information', 'Alternative Codes', 'Address Details', and 'Contact Information'.

## GUI structure (content area)

- 1 Menu name (level 2): Shows the name of the menu the user currently has open.
- 2 Screen name (level 3): Shows the name(s) of the screen(s) the user currently has open.
- 3 Minimise icon: Minimises the current screen.
- 4 Button bar: Shows the available buttons for the current screen.
- 5 Subsection name: Shows the name of the subsection.

| Screen type | Screen prefix  | Description  |
|-------------|--|--|
| Welcome     | <ul style="list-style-type: none"><li>N/A</li></ul>                                      | <ul style="list-style-type: none"><li>Gateway to the ECMS GUI (ECMS homepage).</li></ul>   |
| Create      | <ul style="list-style-type: none"><li>Edit:</li></ul>                                    | <ul style="list-style-type: none"><li>Allows the user to enter new data records (“new mode”).</li></ul>  |
| Search      | <ul style="list-style-type: none"><li>Create/display:</li><li>Search criteria:</li></ul> | <ul style="list-style-type: none"><li>Allows the user to query the ECMS data using a predefined set of search criteria. Searches are case-sensitive.</li><li>A maximum of five latest searches are shown.</li></ul>  |
| List        | <ul style="list-style-type: none"><li>Search result:</li><li>List:</li></ul>             | <ul style="list-style-type: none"><li>Allows the user to query ECMS data by entering search criteria. After executing a search, a list of data records matching the search criteria is displayed in a table. It is also possible not to enter any search criteria. In this case no record will be excluded from the results.</li><li>The user can sort the search result by clicking on the description of the respective column.</li><li>The results displayed are limited to a maximum of 10,000 records. The user can configure the number of records to be listed (10, 15, 20, 25, 100 and 150).</li></ul> |
| Edit        | <ul style="list-style-type: none"><li>Edit:</li></ul>                                    | <ul style="list-style-type: none"><li>Allows the user to edit existing data records (“edit mode”).</li></ul>   |
| Details     | <ul style="list-style-type: none"><li>View:</li></ul>                                    | <ul style="list-style-type: none"><li>Details of a data record. The user can only access this screen via the list screen.</li></ul>  |
| History     | <ul style="list-style-type: none"><li>History:</li><li>History result:</li></ul>         | <ul style="list-style-type: none"><li>Allows the user to check the information that has been updated since the creation of the record.</li></ul>   |



## 2. GUI overview

## “Welcome” screen (look & feel)

target services ECMS Business Date 17/11/2022 BTCB AEAC-W, User UZA B...

Slide 1 Add Slide

- After logging in, the user is taken to the ECMS module “Collateral and Credit” by default (ECMS homepage).
- A system administrator must be created for each NCB before the GUI is accessed for the first time. The respective NCB admin creates the users, who can then access the GUI. Only registered users have access to the ECMS GUI.

Collateral and Credit

## 2. GUI overview

## “Create” screen (look & feel)

- Allows the user to enter new data records (“new mode”).

Edit : Party

GENERAL INFORMATION

|                                   |                   |                           |
|-----------------------------------|-------------------|---------------------------|
| Party RIAD Code                   | Party Short Name  | BIC                       |
| Party Name                        | Country Code      | Party Type<br>ECMS ENTITY |
| Validity Start Date<br>21/07/2022 | Validity End Date |                           |

Address Details [0]      Additional Codes [0]      Contact Information [0]

Reset      Save      Cancel

## 2. GUI overview

## “Search” screen (look & feel)

- Allows the user to query the ECMS data using a predefined set of search criteria.

Create / Display Parties

Create / Display : Parties

Party Internal Id -- Country Code -- Validity Start Date -- Party RIAD Code -- Is Active -- Validity End Date -- Party Short Name -- Party Type -- Update Date -- BIC -- Creation Date --

Reset Create Search

Authorised Monetary Policy Operations Create / Display

Search Criteria : Authorised MPOs

Counterparty -- Validity End Date -- Creation Date -- Monetary Policy Operation Type -- Validity Start Date -- Pool Identifier -- Update Date --

Reset Create Search

## 2. GUI overview

## “List” screen (look & feel)

- A list of data records that match the search criteria will be displayed in a table.

List : Parties

| Party Internal Id | Party RIAD Code | Party Short Name  | Party Name          | Country Code   | Party Type  | Creation Date            | Is Active | Validity Start Date | Validity End Date | Updater User Id | BIC         | Update Date              |
|-------------------|-----------------|-------------------|---------------------|----------------|-------------|--------------------------|-----------|---------------------|-------------------|-----------------|-------------|--------------------------|
| 460               | ES0162          | SHORTNAME24062022 | PartyName           | NLINETHERLANDS | ECMS ENTITY | 24/06/2022 07:17:26.3... | Yes       | 24/06/2022          |                   | STP             | KROVES6MXXX | 24/06/2022 07:17:26.3... |
| 453               | AP1235          | AP1235            | AP1235              | ES/SPAIN       | ECMS ENTITY | 23/06/2022 15:41:16.5... | Yes       | 23/06/2022          |                   | ECMS OPERATOR 1 | PAISESTFXXX | 23/06/2022 15:41:16.5... |
| 398               | ES0305          | SHORTNAME06062022 | PartyName           | NLINETHERLANDS | ECMS ENTITY | 06/06/2022 07:13:40.6... | Yes       | 03/06/2022          |                   | STP             | PNTRES6MXXX | 06/06/2022 07:13:40.6... |
| 375               | IT9900          | MOTI              | MONTE TITOLI S.P.A. | FRI/FRANCE     | ECMS ENTITY | 31/05/2022 10:10:08.6... | Yes       | 31/05/2022          |                   | ECMS OPERATOR 1 | MOTIITMMXXX | 31/05/2022 10:10:08.6... |
| 373               | ES7686          | SHORTNAME27052022 | PartyName           | NLINETHERLANDS | ECMS ENTITY | 27/05/2022 10:22:25.8... | Yes       | 27/05/2022          |                   | STP             | HJFMES6MXXX | 27/05/2022 10:22:25.8... |
| 369               | ES6321          | SHORTNAME26052022 | PartyName           | NLINETHERLANDS | ECMS ENTITY | 26/05/2022 07:04:41:1... | Yes       | 25/05/2022          |                   | STP             | TIKKE6MXXX  | 26/05/2022 07:04:41:1... |

Search Result : User

| ECMS System User Reference                           | Name                        | Is Active | Update Date             | Updater User Id |
|--|-----------------------------|-----------|-------------------------|-----------------|
| <input type="checkbox"/> ECMS OPERATOR 1             | ECMS OPERATOR 1             | Yes       | 23/06/2021 09:46:35.023 | STP             |
| <input type="checkbox"/> ECMS JobScheduler           | ECMS JobScheduler           | Yes       | 21/06/2021 17:28:22.761 | admin           |
| <input type="checkbox"/> ECMSOperationalDayScheduler | ECMSOperationalDayScheduler | Yes       | 21/06/2021 17:28:22.721 | admin           |
| <input type="checkbox"/> PTCB003                     | PTCB003                     | Yes       | 23/09/2021 10:34:08.940 | STP             |
| <input checked="" type="checkbox"/> PTCB003-2Y       | PTCB003-2Y                  | Yes       | 23/09/2021 18:22:20.549 | STP             |
| <input type="checkbox"/> PTCB007                     | PTCB007                     | Yes       | 23/09/2021 10:35:58.671 | STP             |
| <input type="checkbox"/> PTCBJobScheduler            |                             | Yes       | 22/09/2021 14:12:49.440 | admin           |
| <input type="checkbox"/> STP                         | STP                         | Yes       | 21/06/2021 17:28:22.751 | admin           |
| <input type="checkbox"/> admin                       |                             | Yes       | 21/06/2021 15:52:24.764 | admin           |

## 2. GUI overview

## “Edit” screen (look & feel)

- Allows the user to edit existing data records (“edit mode”).

Edit : Party

GENERAL INFORMATION

|                                   |                                       |                           |
|-----------------------------------|---------------------------------------|---------------------------|
| Party RIAD Code<br>ES7686         | Party Short Name<br>SHORTNAME27052022 | BIC<br>HJFMES6MXXX        |
| Party Name<br>PartyName           | Country Code<br>NL                    | Party Type<br>ECMS ENTITY |
| Validity Start Date<br>27/05/2022 | Validity End Date<br>📅                | Party Internal Id<br>373  |

Address Details [0]      Additional Codes [0]      Contact Information [0]

Foot Print

|  |                         |  |
|--|-------------------------|--|
| Creation Date<br>27/05/2022 10:22:25:874 | Creation User Id<br>STP | Update Date<br>27/05/2022 10:22:25:874 |
| Updater User Id<br>STP                   |                         |  |

Save Cancel

## 2. GUI overview

## “Details” screen (look & feel)

- Details of a data record. This screen can only be accessed via the list screen.

List : Parties > View : Party History

GENERAL INFORMATION ^

|                 |             |                   |
|-----------------|-------------|-------------------|
| Party RIAD Code | Party Name  | Party Short Name  |
| ES0000          | PartyName   | SHORTNAME19065022 |
| Country Code    | Party Type  |                   |
| NL NETHERLANDS  | ECMS ENTITY |                   |

[Address Details \[0\]](#) [Additional Codes \[0\]](#) [Contact Information \[0\]](#)

|             |                   |
|-------------|-------------------|
| BIC         | Party internal id |
| JDRDES61XXX | 365               |

Activation Details ^

|                       |                     |                   |
|-----------------------|---------------------|-------------------|
| Is Active             | Validity Start Date | Validity End Date |
| Yes                   | 19/06/2022          |                   |
| (De)Activation Reason |                     |                   |
|                       |                     |                   |

Validation details ^

|                    |          |
|--------------------|----------|
| Action To Validate | Rejected |
|                    | No       |

Foot Print ^

|                         |                  |
|-------------------------|------------------|
| Creation Date           | Creation User id |
| 19/06/2022 07:04:43:042 | STP              |
| Update Date             | Updater User id  |
| 19/06/2022 07:04:43:042 | STP              |

## 2. GUI overview

## “History” screen (look & feel)

- Allows the user to check the information that has been updated since the creation of the record.

History : Parties

| Fields           | 61 2022-01-26 14:24:27.876 2 | 61 2021-08-30 17:53:51.405 1 |
|------------------|------------------------------|------------------------------|
| Party Short Name | ABVR012 -- CAMBIO            | ABVR012                      |
| Update Date      | 26/01/2022.14:24:27.876      | 30/08/2021 17:53:51.405      |
| Party RIAD Code  | ABVR012                      | ABVR012                      |

horizontalHistoryResult : User History

| Fields                     | PTCB003-2Y 2021-09-23 18:22:20.549 1 |
|----------------------------|--------------------------------------|
| Security Property          | Rejected No                          |
| <b>Action To Validate</b>  |                                      |
| Groups                     |                                      |
| Rejection Reason           |                                      |
| <b>Security Role</b>       |                                      |
| Validation Status          |                                      |
| ECMS System User Reference | PTCB003-2Y                           |
| Name                       | PTCB003-2Y                           |
| Is Active                  | Yes                                  |
| Creation Date              | 23/09/2021 18:22:20.549              |
| Creation User Id           | STP                                  |

(2) difference(s) found.

(0) difference(s) found.

## 2. GUI overview

## Screen elements (fields & buttons/selection)

- On search and create/edit screens, users can enter information via **input fields** and **select fields**.

Select boxes

Account Type == ▾

|                                 |
|---------------------------------|
| ECMS Counterparty Asset Account |
| ECMS Cross NCB Asset Account    |

Select fields

Intraday Credit Facility

Yes  No

Check boxes

Notification Information

Event Confirmation Status (CONF - Box Checked / UCON - Box Unchecked)

Event Completeness Status (COMP - Box checked / INCO Box Unchecked)

Input fields

| Permitted characters |
|----------------------|
| a-z A-Z              |
| 0-9                  |
| -                    |
| :                    |
| ( )                  |
| .                    |
| ,                    |
| '                    |
| Space (blank)        |














- Various **buttons** allow the user to open the respective functions on a screen:





## 2. GUI overview

## Screen elements (icons/selection)

| Icon  | Description   |
|---|---|
|  | Minimises the screen  |
|  | Maximises the screen  |
|  | Shows the number of hits displayed in a list (maximum of 10,000 hits/data records)              |
|  | Enables you to export the results to an Excel file  |
|  | Enables you to export the results in different formats (.pdf, .csv, .xml)                       |
|  | Enables you to filter the results   |
|  | Enables you to delete the selected data record  |
|  | On the search and list screens: enables you to save the current search or select a saved search |
|  | Enables you to refresh the current search   |
|  | Enables you to save the reason for deactivating the reference data element                      |
|  | Enables you to edit the selected data record* (partially replaces edit button)                  |
|  | Enables you to select a date from a calendar  |
|  | Enables you to search for data from a selection screen* (partially replaces search button)      |

## 2. GUI overview

## Screen elements (search operators)

| Operator | Description   |
|----------|---|
| ==       | Equal to  |
| !=       | Different from  |
| "        | Field is null (empty)                                 |
| !"       | Field is not null (not empty)                         |
| >        | Superior to   |
| <        | Inferior to   |
| >=       | Superior or equal to                                  |
| <=       | Inferior or equal to                                  |
| []       | Between two values, e.g. [1000;2000]                  |
| ()       | In a list of values separated by ;                    |
| !()      | Not in the list of values separated by ;              |
| ~        | Looks like the text, using % to replace any character |
| ^        | Text starts with                                      |

## 2. GUI overview

## Validation (U2A)

### Front-end validation

- Part one of the validation process: comprises both field validation (= prescribed format) and cross-field validation (= data consistency across multiple fields). Click on a button to carry out this process.

### Confirmation prompt

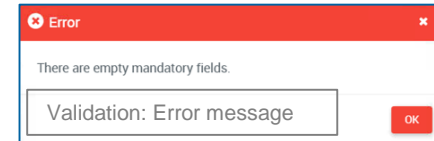
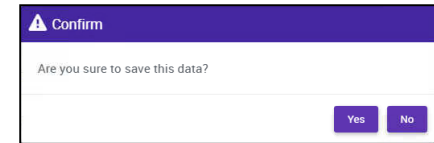
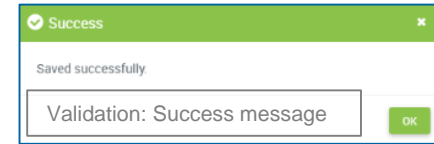
- For activities in **2-eyes mode**, a confirmation prompt is shown following successful front-end validation to allow users to send or reject them (does not appear in **4-eyes mode**).

### Back-end validation

- Part two of the validation process: following successful front-end validation, the request is sent to the back-end and checked for compliance with the business validation rules. In the event of failure, an error message is displayed.

### (Validation) result

- After each validation, the ECMS GUI informs you about the result. There are two message types available: the error message and the success message.



### 4-eyes mode

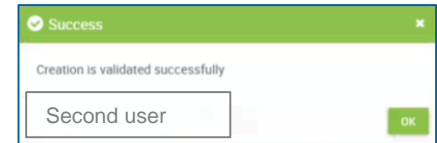
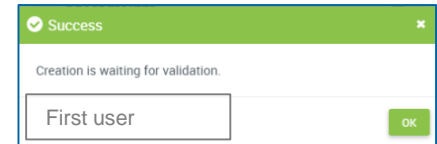
- Depending on the access rights setup, you can use the ECMS in 2-eyes mode or 4-eyes mode. The 2-eyes mode and the 4-eyes mode apply to input screens and to any kind of deletion processes. If you are a 4-eyes mode user, your actions have to be confirmed by a second user in order to be processed.

- First user**

In 4-eyes mode the first user enters, changes or deletes the data on a screen and afterwards submits the action by clicking on the submit button in the button bar. The success message that appears after successful validation contains a the 4-eyes principle. For final execution a second user is needed to confirm the action.

- Second user**

After the first user has entered, changed or deleted the data, a second user (with the required privilege) has to approve or revoke this action via the relevant screen either using the 4-eyes mode or the search functionality. As soon as the data changes are positively approved, the ECMS marks these data as approved and they are forwarded for further processing.



## 2. GUI overview

### Digital signature (NRO) for critical transactions

- To ensure non-repudiation of origin (NRO) for **critical transactions\***, the use of a digital signature has been implemented for specific screens.
- This means that the user is asked to enter a **PIN code** for signature purposes whenever an instruction is initiated. With the entry of the PIN, the ECMS attaches a **digital signature** to the instruction entered by the user.
- Users will have to install the **Ascertia Go>Sign Desktop client** on their workstation in order to be able to use ECMS via U2A for screens subject to a digital signature.
- Ascertia is the only **U2A NRO solution for TARGET Services**. Only one version of the Go>Sign Desktop client will thus be used and distributed across the different TARGET Services.

## Validation (U2A)



### Ascertia Go>Sign Desktop

#### Ascertia scope go-live\*

- 5 U2A instructions
- 5 UHB screens
- **New: April 2024**

#### Ascertia scope overall

- 177 U2A instructions
- 135 UHB screens
- **New: Q4/2024**

- \* (De-)mobilisation of a marketable asset
- \* Deletion of a (de)mobilisation of a marketable asset
- \* Instruction from the counterparty in the case of a corporate action transaction
- \* Deletion of the instruction from the counterparty in the case of a corporate action transaction
- \* (De-)mobilisation of a credit claim

## 2. GUI overview

## Important documents

### Public information (in chronological order)

- [ESMIG U2A Qualified Configurations v1\\_3](#) (2021/08)
- [ECMS User Handbook Counterparties](#), ECMS UHB CTPY v1.1 (2023/03)

If you have any questions or wish to say something,  
please use the chat function.



- When you were invited to this event, you were sent a link to a standardised and anonymised feedback form.
- The feedback form contains 11 questions with a multi-level response scale. It should take a maximum of 5 minutes to complete.
- Once the event has ended, please take a few moments to fill out the questionnaire and give us honest feedback on this training course. Thank you!





Thank you for your attention ...

[ecms-training@bundesbank.de](mailto:ecms-training@bundesbank.de)

... and all the best working with ECMS!

- Access (A2A and U2A)
- CGU Subscription Approval workflow for TARGET Service Actors
- ECMS registration process (NCBs and counterparties)

## A2A mode

**Application-to-application (A2A) communication** allows external systems to interact directly with the ECMS via XML messages in accordance with the ISO 20022 standard (= application-oriented).

- ECMS actors interacting in A2A mode have to be **ISO 20022 compliant**.
- **All** communication between CSDs, TPAs and the ECMS takes place in A2A mode; counterparties that implement A2A access always also receive U2A access.

## U2A mode

**User-to-application (U2A) access** enables screen-based online activities to be executed manually by ECMS actors via a graphical user interface (GUI) (= user-oriented).

- Only ECMS operators, NCBs and counterparties can access the ECMS in U2A mode. CSDs and TPAs **do not** have U2A access.
- Provides counterparties with access to **all ECMS functions**, in particular for monitoring and managing their collateral pools.

