# TARGET Services Test Guidelines

## Authorisation for new participants

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|---|---|
| Responsible: | Deutsche Bundesbank |
| Author: | National Service Desk |
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## List of versions

| Version | Date | Author | Description of change |
| --- | --- | --- | --- |
| 1.0 | 1 May 2024 | Timon Graßl National Service Desk | Document creation |

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# 1 Purpose of the document

This document describes the framework and conditions for test activities relating to the authorisation procedure for TARGET participants via the Deutsche Bundesbank. The test cases described are those which must be completed as a precondition for certification as a new participant in the relevant TARGET service (T2, T2S or TIPS). A detailed description of all the test cases can be found in the document "T2 Mandatory Test Cases" published on our website.

# 2 Organisation of the test phase

## 2.1 Contacts

The following contacts are available at the Bundesbank.

Participants are each requested to designate a contact as "test manager" using the registration form "New"; that contact will be saved in the TARGET master data.

## 2.2 Reporting and certification

Participants must document all successfully run tests and provide evidence in the form of a screenshot. Please add your screenshots to the designated Excel spreadsheet entitled "Certification test template for T2 participants" and email them to targetservices-test@bundesbank.de, stating your BIC. You will find this spreadsheet on the Bundesbank's website.

Once the mandatory tests have been successfully completed, test participants will receive a certificate of completion of the test cases in the form of a PDF document.

## 2.3 Test times

The test environment (UTEST) is generally available on all T2 business days (Mondays – Thursdays) during the *T2-T2S Synchronised Standard Day Schedule* from 06:30 to 19:00 CE(S)T. On Fridays, the *T2-T2S Synchronised Release Day Schedule* applies, with the UTEST environment only being available until 17:30 CE(S)T.

A detailed overview of how the individual phases of a business day in the test environment are scheduled can be found in the T2 User Testing Conditions: T2 User Testing Terms of Reference (UT TOR) and the associated T2-T2S – CLM/RTGS testing schedules UTEST.

## 2.4 Available BICs

A dedicated T2 directory is provided for routing payments.

Each direct participant is registered in this directory with its own BIC.

Furthermore, the UTEST T2 Directory contains the following Bundesbank BICs (see table) that customers can use as addressees to complete their test cases.

| BIC | BIC addressee | Description |
|---|---|---|
| ZYELDEFFXXX | ZYELDEFFXXX | Direct participant test bank 1 |
| ZYEEDEFFXXX | ZYEEDEFFXXX | Direct participant test bank 2 |
| ZYBLDEFFXXX | ZYBLDEFFXXX | Direct participant (used as a customer simulator) |

The T2 Single Shared Platform uses the following technical BICs:

| BIC | Description |
|---|---|
| TRGTXEPMCLM | Technical BIC of the CLM component |
| TRGTXEPMRTG | Technical BIC of the RTGS component |
| TRGTXE2SXXX | Technical BIC of the ECONS II component |
| TRGTXE2SXXX | Technical BIC of the BILL component |
| TRGTXE2SXXX | Technical BIC of the T2S Service |
| TRGTXETTTIP | Technical BIC of the TIPS Service |
| TRGTECMXXX | Technical BIC of the ECMS Service |

## 2.5 Test simulator

Test simulator for **T2**:

The Bundesbank's customer simulator is available for receiving SWIFT MX messages. The customer simulator "echoes" messages addressed to the BIC ZYBLDEFFXXX and sends them back to the submitter.

For this to happen, the "remittance information" field has to be populated with the codeword:

ECHORTGSn (replace "n" with a number from 1 to 9 for the number of echoes).

Test simulator for **TIPS**:

When sending a pacs.008 message, the submitting customer can trigger certain simulator functions by populating the "/RmtInf/Ustrd" field. The "Instructed Party" field of the pacs.008 message has to quote the BIC ZYBLDEFFXXX. The "/RmtInf/Ustrd" field must begin with the string "ECHOTIPS", immediately followed by a single-digit number indicating the number of echoes (1-9). It is not possible to trigger more than nine echoes. The message is echoed in the "Debtor" and "Creditor" blocks of the pacs.008 message. If only the string "ECHOTIPS" is stated, the message will not be echoed; instead, only the positive confirmation will be sent to TIPS in the form of a pacs.002 message. If the sender does not populate the "/RmtInf/Ustrd" field with "ECHOTIPS", the message will not be echoed, nor will any response be sent.

# 3 Tests for new participants

## 3.1 General information

To ready new participants for direct participation in T2 via the Bundesbank, the test activities described below are carried out to check whether:

- any software that has been developed by the direct participant itself or provided by a third party functions properly;

- outgoing payment messages from the direct participant can be generated in and sent from the participant's own back-office application without error;

- incoming messages for the direct participant can be processed by the participant's own back-office application without error;

- the participant's access via each TARGET Service's GUI functions correctly.


New direct participants are only admitted to T2 live operations if the specifications laid down in the T2 User Detailed Functional Specifications (UDFS) have been met and the procedural requirements have been fulfilled in both technical and specialist terms.
To this end, a two-stage test procedure is carried out. The connectivity tests must have first been successfully completed before the technical tests can begin. This prevents infrastructure problems from hindering the technical tests. The technical tests encompass the payment settlement process.

When recording payments to other direct or to addressable participants, we ask that you note the respective test ID in the payment references for the test case shown.

Certification is granted once the entire test programme has been completed. You are nonetheless strongly advised to replicate and test all the business cases that will be required and used in live operations, alongside the mandatory test cases.


## 3.2 Useful documents

This section lists the main useful documents that will help you with your onboarding process and test operations:

- TARGET Services Registration and Onboarding Guide: TARGET Services Registration and Onboarding Guide v1.2
- TARGET Services Connectivity Guide: TARGET Services Connectivity Guide v2.0
- Information on NRO software: ESMIG U2A Qualified Configurations v1.3/Information on Ascertia GoSignDesktop version 6.9.0.9
- T2 Starting Guide: T2 Starting Guide incl. DWH

- T2 User Testing Terms of Reference: T2 User Testing Terms of Reference (UT TOR)

## 3.3 Participation via SWIFT or NEXI/SIA

Participation via SWIFT or NEXI/SIA services is the access route for direct participation. Communication via the network service provider's network and the ESMIG's online interface allows all the Bundesbank's TARGET Services to be used. To facilitate this, the NSP creates and manages closed groups of users (CGUs) for both the live (PROD) and test (UTEST) environments for each Eurosystem market infrastructure (T2, T2S, TIPS, ECMS and possible future services).

Before starting the testing phase, please make sure you have carried out the following:

- SWIFT e-ordering
- NEXI/SIA e-ordering

Contact your NSP for further details.

## 3.4 Scope of testing

Concerning authorisation as a new participant in **T2**, please refer to the **T2 Mandatory Test Cases**, which you can also find on our website: T2 Mandatory Test Cases

Please note the following points:
- If you are a CLM/RTGS participant and have opted for A2A connectivity, you must attach the A2A messages as proof of testing (submission of RTGS test cases ID4 to ID7 as evidence is compulsory).
- We will only accept submission of U2A test evidence (without A2A evidence for the corresponding test case) or non-submission of evidence in general on justified grounds → e.g. A2A functionality not intended for use in live operations.

The test cases for the ECONS II module are mandatory for critical participants or participants with critical payments. More on this can be found in the Information Guide for TARGET participants: Part 1 – Fundamentals.

The mandatory tests for certification comprise the following test cases.

Connectivity tests:

| Test ID | Description |
| --- | --- |
| CON-T2-ESMIG | Access the ESMIG landing page |
| CON-T2-A2A | Send a T2 A2A message |
| CON-T2-ECONS II | Access ECONS II via GUI |

Technical tests for MCA and/or RTGS account holders in **T2**:

These tests should follow the T2 Mandatory Test Cases defined for the Eurosystem, which you can find on our website: T2 Mandatory Test Cases.

Technical tests for DCA holders in **T2S**:

Technical tests for DCA holders in T2S consist of two parts:

1. Please carry out the following certification test cases from Section 1.3 of the ECB document "Certification Testing Test Cases": CERT_07, CERT_12, CERT_13 and CERT_17. This document can be found here on the ECB's website.
2. Please carry out the IOP-T2SI test cases 010 to 040 that we have defined in Section 4.2 of this document:

| Test ID | Description |
| --- | --- |
| IOP-T2SI-010 | Send a liquidity transfer from T2 to T2S via GUI |
| IOP-T2SI-020 | Send a liquidity transfer from T2 to T2S via A2A |
| IOP-T2SI-030 | Send a liquidity transfer from T2S to T2 via CLM |
| IOP-T2SI-040 | Set up a standing order to transfer liquidity to T2S (CRDM GUI) |

Technical tests for the use of **TIPS** can be found in Section 4.3:

| Test ID | Description |
| --- | --- |
| IOP-TIPS-100a | Send a liquidity transfer from T2 to TIPS via CLM |
| IOP-TIPS-150 | Set up a standing order to transfer liquidity to TIPS via CRDM |
| IOP-TIPS-170a | Initiate a liquidity transfer from TIPS via CLM |

| IOP-TIPS-200 | Monitor available liquidity on the TIPS DCA |
|---|---|
| IOP-TIPS-210 | Monitor TIPS DCAs via CLM |

Technical tests for the use of **ECONS II** can be found in Section 4.4:

| **Test ID** | **Description** |
|---|---|
| IOP-ECONSII-ID1 | Send a payment in ECONS II to a direct participant |
| IOP-ECONSII-ID2 | Download list of payments when using ECONS II over several days |

Technical tests for the use of the **Data Warehouse** can be found in Section 4.5:

| **Test ID** | **Description** |
|---|---|
| IOP-DWH-STA01 | Request a statement of account |
| IOP-DWH-TRN01 | Request payment details |
| IOP-DWH-MIR01 | Request minimum reserve details |

# 4      Test content

## 4.1      Connectivity tests

The connectivity tests check whether the technical connection to the ESMIG and the individual modules is correct.

Test ID:          **CON-T2-ESMIG**

Function:          Access the ESMIG landing page

Time:              Available permanently


Requirements:
- TARGET registration completed
- Accessing user has the requisite roles


Contents:          The accessing user proceeds to the ESMIG landing page and can select the various TARGET services.


Test ID:          **CON-T2-A2A**

Function:          Send a T2 A2A message (e.g. camt.003, camt.050)

Type:              Optional (mandatory for A2A participants)

Time:              Available permanently

Contents:        Participant sends an XML file.

Result:          The message is successfully sent to T2; the sender receives
                 a confirmation.

Test ID:         **CON-T2-ECONSII**
Function:        Demonste connectivity to the ECONS II GUI (see Connectivity tests)
Type:            Mandatory for critical T2 participants or participants with critical payments
Time:            Whilst ECONS II is activated (usually open in UTEST on Wednesdays
                 between 10:00 and 12:00)

Contents:        In ESMIG, the T2 participant selects ECONS II under the menu item "T2"
                 and calls up the system status by going to "Display system status".

Result:          The participant is shown the correct system status ("open").
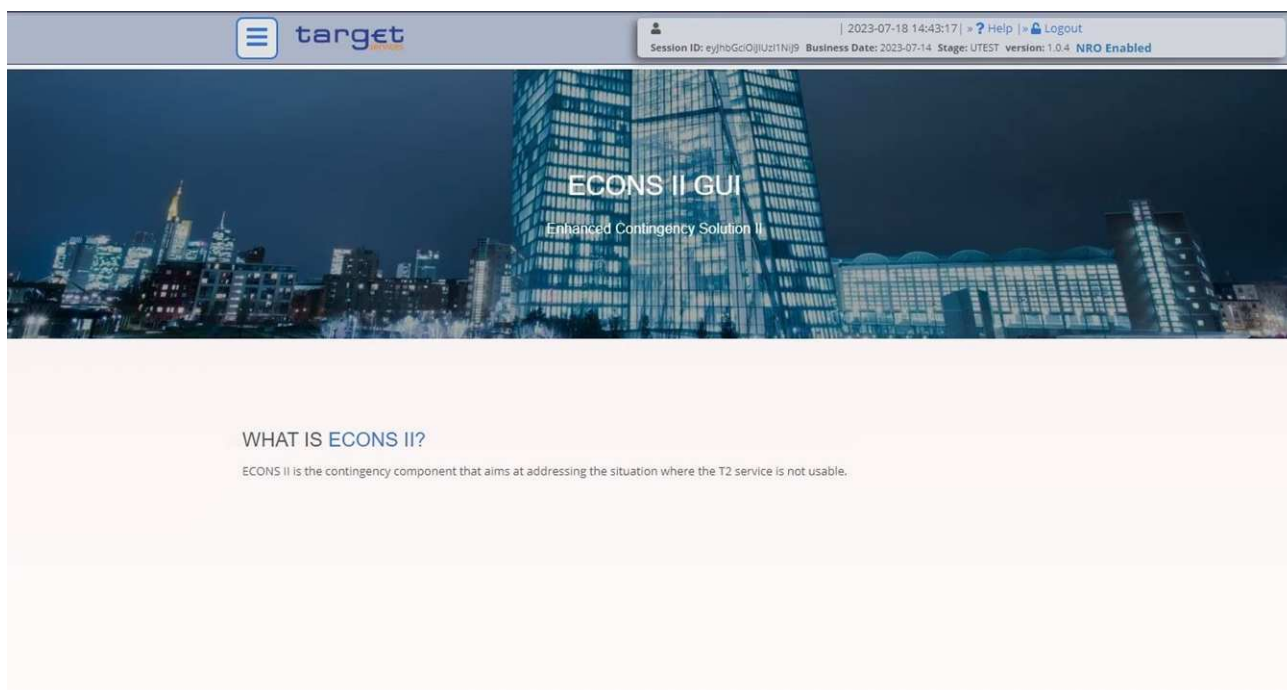


## 4.2      Technical tests for T2S DCAs
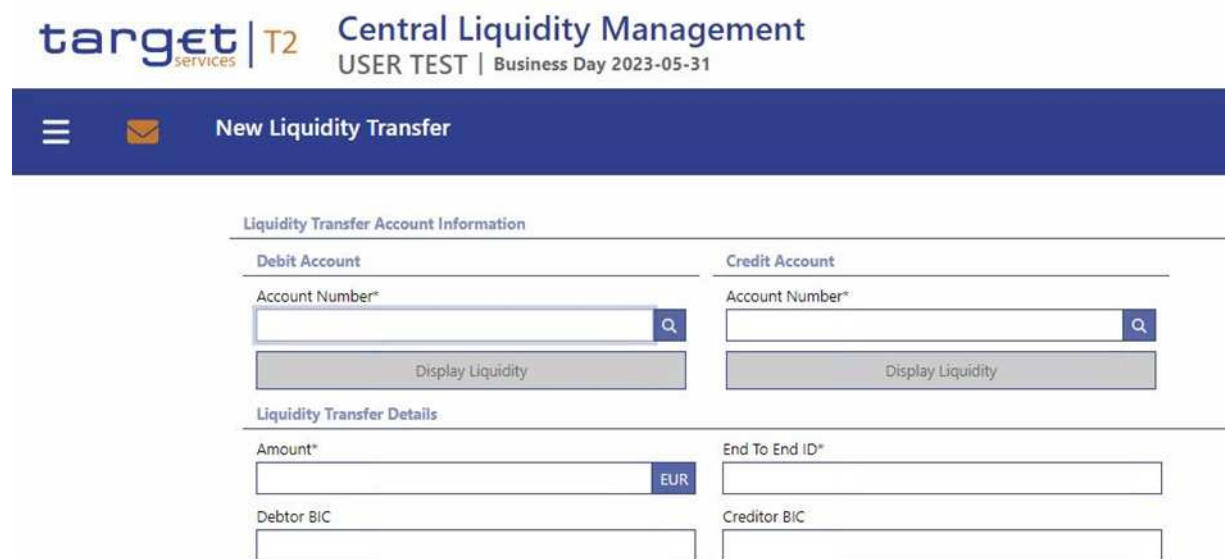
Test ID:         **IOP-T2SI-010**

Function:        Send a liquidity transfer from T2 (CLM/RTGS) to T2S (DCA) via CLM-U2A

Type:          Mandatory for T2S participants

Time:          07:00 (settlement of AS night-time processing) up to 15:15

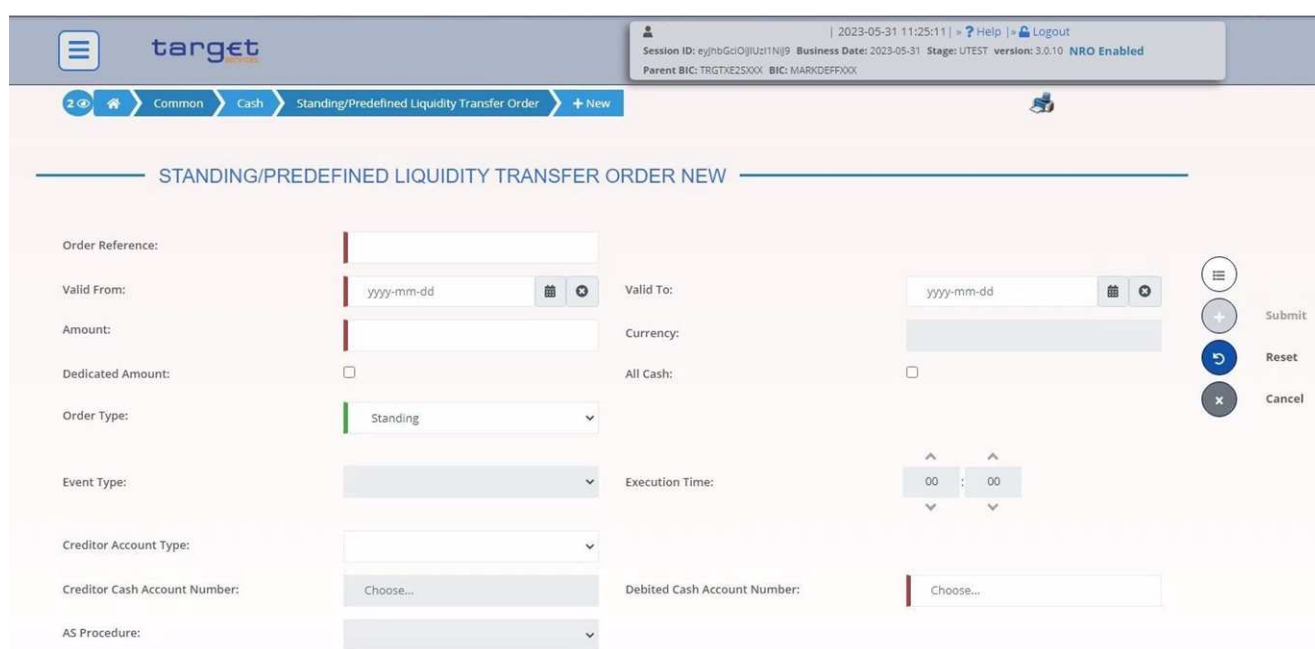Contents:      Participant enters a liquidity transfer from T2 to T2S in the GUI.



Result:        The MCA has been debited and the T2S DCA has been credited.
               Depending on the settings configured in the master data, the participant
               receives a confirmation or notification (e.g. camt.025/camt.054). Since there
               are differences between the way the TARGET Services work, please refer
               to the latest T2S UDFS for details.

Test ID:       **IOP-T2SI-020**
Function:      Send a liquidity transfer from T2 to T2S by means of XML messages
               (camt.050)
Type:          Mandatory for T2S participants **(only in the case of A2A connection)**
Time:          17:00 (settlement of AS night-time processing) up to 15:15
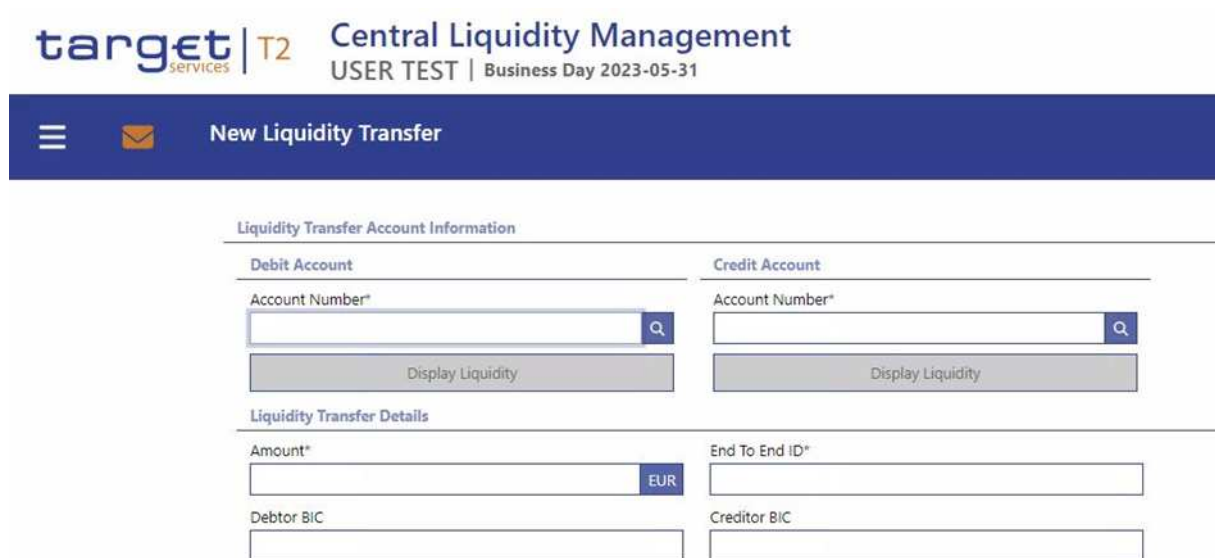
Contents:      Participant sends a LiquidityCreditTransfer (camt.050) from T2 to T2S.

Result:        The MCA has been debited and the T2S DCA has been credited.
               Depending on the settings configured in the master data, the participant
               receives a confirmation or notification (e.g. camt.025/camt.054). Since
               there are differences between the way the TARGET Services work, please
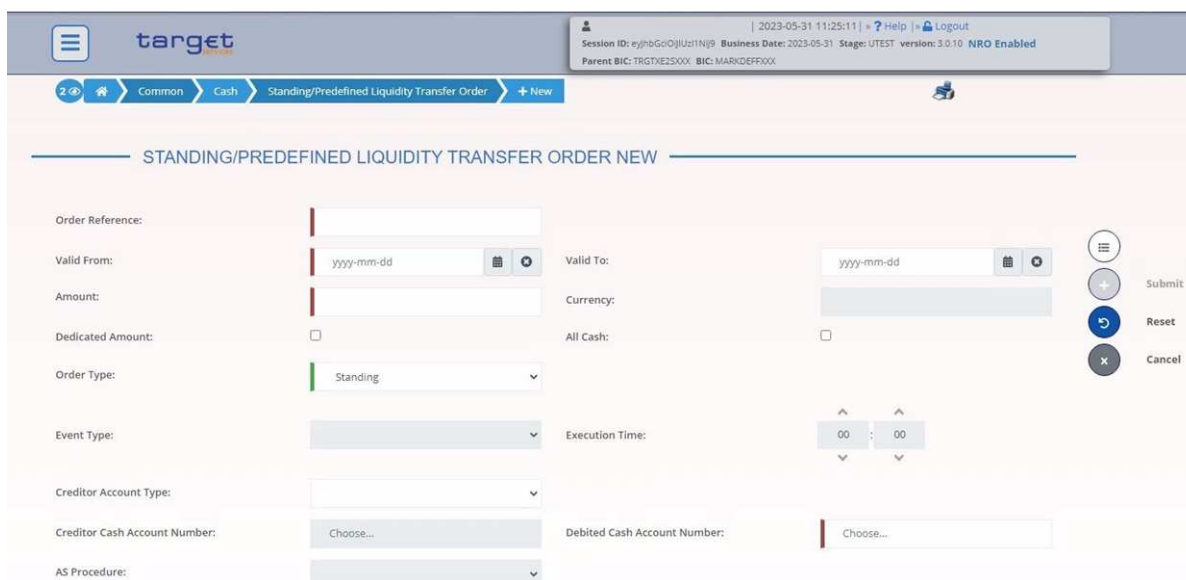               refer to the latest T2S UDFS for details.

Test ID:          **IOP-T2SI-030 (pull)**

Function:       Send a liquidity transfer from T2S to T2 via CLM-U2A

Type:             Mandatory for T2S participants

Time:             17:00 (settlement of AS night-time processing) up to 15:15

Contents:       Participant enters a liquidity transfer from T2S to T2 in the GUI.



Result:           The amount has been debited to the DCA and the MCA has been credited. Depending on the settings configured in the master data, the participant receives a confirmation or notification (e.g. camt.025/camt.054). Since there are differences between the way the TARGET Services work, please refer to the latest T2S UDFS for details.

Test ID:        **IOP-T2SI-040**

Function:       Set up a standing order to transfer liquidity to T2S in CRDM

Type:           Mandatory for T2S participants

Time:           Daytime or night-time processing

Contents:       Participant creates a standing order liquidity transfer from the MCA or RTGS DCA to the T2S DCA via the CRDM GUI.



Result:         If set up correctly, T2 executes the standing order and supplies the specified DCA with liquidity.

## 4.3 Technical tests for the use of TIPS

### 4.3.1 U2A connection
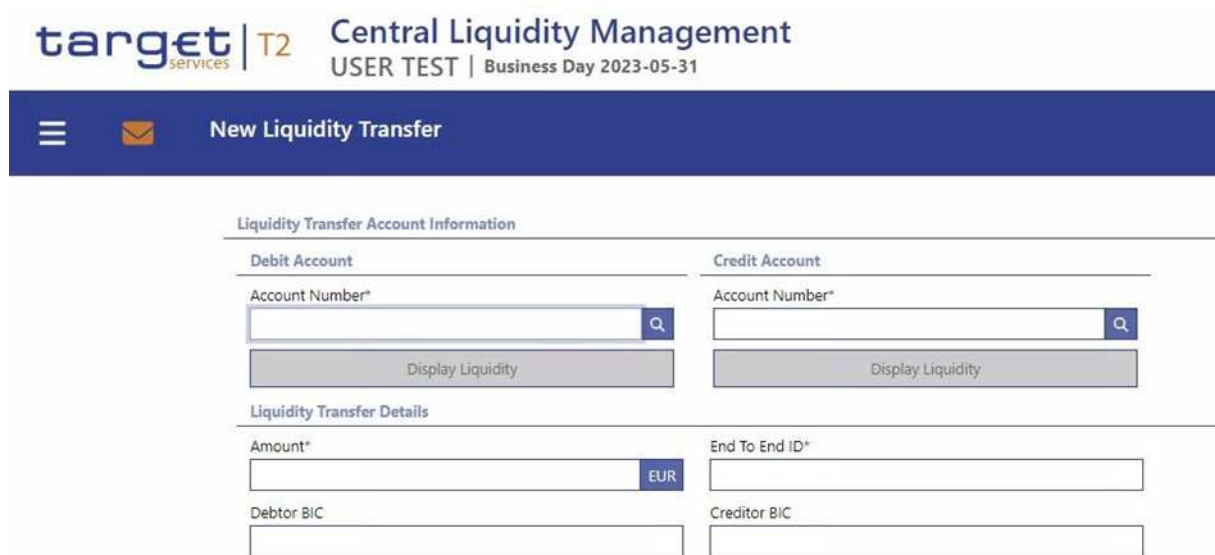
Test ID:        **IOP-TIPS-100a (push)**

Function:       Send a liquidity transfer from T2 to the TIPS DCA via CLM

Type:           Mandatory for T2S participants

Time:           07:15 to 14:00

Requirements:

- Access to the CLM GUI confirmed through successful test
- Sufficient funds on the MCA

Contents:      Participant generates a liquidity transfer to the TIPS DCA via the CLM GUI.



Result:      The MCA has been debited and the DCA has been credited.

Depending on the settings configured in the master data, the participant receives a confirmation or notification (e.g. camt.025/camt.054). Since there are differences between the way the TARGET Services work, please refer to the latest TIPS UDFS for details.

Test ID:      **IOP-TIPS-150**
Function:      Set up a standing order to transfer liquidity to TIPS via CRDM
Type:      Optional for TIPS participants
Time:      07:15 to 14:00

Requirements:
- Access to the CRDM GUI confirmed through successful test
- Sufficient funds on the MCA

Contents:      Participant creates a standing order liquidity transfer from the MCA to the TIPS DCA via CRDM.

Test ID:         **IOP-TIPS-170a (pull)**
Function:        Initiate a liquidity transfer from TIPS via CLM
Type:            Mandatory for TIPS participants
Time:            07:15 to 14:00

Requirements:

- Access to CLM confirmed through successful test

Contents:        Participant transfers liquidity from the TIPS DCA to the MCA.

Result:          The correct TIPS DCA can be selected in CLM and the liquidity transfer can be processed.

Test ID:        **IOP-TIPS-210**
Function:       Monitor TIPS DCAs via CLM
Type:           Mandatory for TIPS participants
Time:           07:15 to 14:00

Requirements:
- Access to the CLM GUI confirmed through successful test
- At least one TIPS DCA is linked with the MCA that the participant is monitoring

Contents:       Participant selects the view "Query Dashboard Liquidity Overview" and then picks out its MCA and TIPS DCA.

Result:         Participant can view the current balance of the TIPS and T2S DCAs.

### 4.3.2   A2A connection

Test ID:          **IOP-TIPS-110**
Function:         Send a liquidity transfer from T2 to TIPS DCA via A2A
Type:             Optional for TIPS participants
Time:             07:15 to 14:00

Requirements:
- There is sufficient liquidity on the MCA

Contents:         Participant sends a LiquidityCreditTransfer camt.050 from T2 to the TIPS DCA.

Result:           The MCA has been debited and the TIPS DCA has been credited. Depending on the settings configured in the master data, the participant receives a confirmation or notification (e.g. camt.025/camt.054). Since there are differences between the way the TARGET Services work, please refer to the latest TIPS UDFS for details.
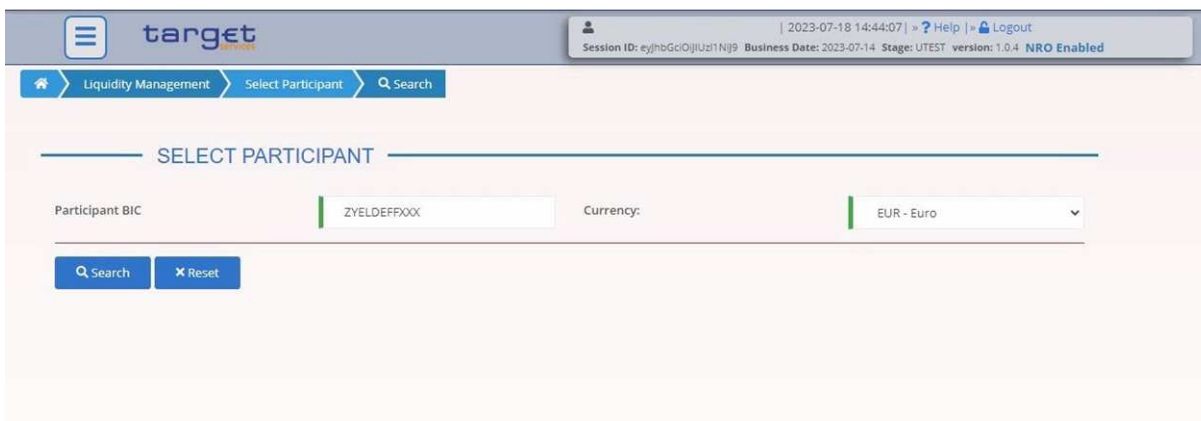
Test ID:       **IOP-TIPS-170c**

Function:    Initiate a liquidity transfer from TIPS via A2A

Type:        Optional for TIPS participants

Time:        07:15 to 14:00

Requirements:

- There is sufficient liquidity on the MCA

Contents:     Participant sends a liquidity transfer to T2 using camt.050, which is forwarded to TIPS for settlement after validation.

Result:       The TIPS DCA has been debited and the T2 account has been credited. Depending on the settings configured in the master data, the participant receives a confirmation or notification (e.g. camt.025/camt.054). Since there are differences between the way the TARGET Services work, please refer to the latest TIPS UDFS for details.

Test ID:       **IOP-TIPS-220**

Function:    Monitor TIPS DCAs via A2A

Type:        Optional for TIPS participants

Time:        07:15 to 14:00

Requirements:
- Access to CLM confirmed through successful test
- At least one TIPS DCA is linked with the MCA that the participant is monitoring

Contents:     Participant checks the TIPS account balance of the linked TIPS accounts via T2's A2A interface by sending a GetAccount message (camt.003).

Result:       Participant can check information about the current balance of one or more TIPS DCAs.

T2 will separate the request for several DCAs and send individual account balance requests to TIPS.

The individual responses from TIPS are grouped in T2 and transferred to the participant as a single response via ReturnAccount (camt.004).

## 4.4 Technical tests for the use of ECONS II

Test ID:          **IOP-ECONS-ID1**
Function:        Send a payment from one ECONS II participant to another ECONS II participant
Type:              Optional for T2 participants
Time:              Whilst ECONS II is activated

Contents:        T2 participant sends a contingency payment to another
                       T2 participant in ECONS II.



Result:           The contingency payment has been settled successfully in ECONS II (upon confirmation by the central bank).

Test ID:          **IOP-ECONS-ID2**
Function:        Download transaction activity from ECONS II as a .xlsx/.csv file
Type:              Optional for T2 participants
Time:              After completion of an ECONS II procedure

Contents:        T2 participant downloads its transactions in ECONS II from the GUI as a .xlsx or .csv file after completion of contingency procedure.
                       (ECONS II closing day up to a maximum of ten business days after ECONS II opens.)

Result:           Participant receives a statement of account listing its ECONS II transactions.

## 4.5 Technical tests for the use of the DWH

| | |
|---|---|
| Test-ID: | **IOP-DWH-STA01** |
| Function: | Request a statement of account |
| Type: | Optional for T2, T2S and TIPS participants |
| Time: | Anytime |

| | |
|---|---|
| Contents: | Participant selects the "Data Warehouse" service in ESMIG. The menu button at the top left leads to the "Content" option. The path "Team Content/Predefined Reports" takes the user to the "STA – Statement Reports" selection. Once there, select "STA01 – Statement of account (single account)". Complete the required fields listed and click "Finish". |

| | |
|---|---|
| Result: | The statement of account is displayed to the participant and can be downloaded in a variety of formats. |



| | |
|---|---|
| Test-ID: | **IOP-DWH-TRN01** |
| Function: | Request payment details |
| Type: | Optional for T2, T2S and TIPS participants |
| Time: | Anytime |

| | |
|---|---|
| Contents: | Participant selects the "Data Warehouse" service in ESMIG. The menu button at the top left leads to the "Content" option. The path "Team Content/Predefined Reports" takes the user to the "TRN – Transaction |

Reports" selection. Once there, select "TRN01 – Cash transfer (order) search and details". Complete the required fields listed and click "Finish".

Result: Participant is shown all payments that meet the search criteria. The payment details for each individual payment can be downloaded in various formats.



**Test-ID:** **IOP-DWH-MIR01**

Function: Request minimum reserve details

Type: Optional for T2, T2S and TIPS participants

Time: Anytime

Contents: Participant selects the "Data Warehouse" service in ESMIG. The menu button at the top left leads to the "Content" option. The path "Team Content/Predefined Reports" takes the user to the "MIR – Minimum Reserve Reports" selection. Once there, select "MIR01 – Minimum Reserve Information". Complete the required fields listed and click "Finish".

Result: A report is generated and displayed to the participant. It can be downloaded in a variety of formats.