

# **T2/T2S consolidation**

## **Training for user testing**

Deutsche Bundesbank

## User testing in the context of T2/T2S consolidation

- 1 Module 1 – Basic information
- 2 Module 2 – Connectivity testing
- 3 Module 3 – Pre-migration and reference data set-up in CRDM
- 4 Module 4 – Community testing and T2 mandatory test cases
- 5 Module 5 – Migration testing

## 1 Module 1 – Basic information

1.1. User testing

1.2. Reference data set-up in CRDM

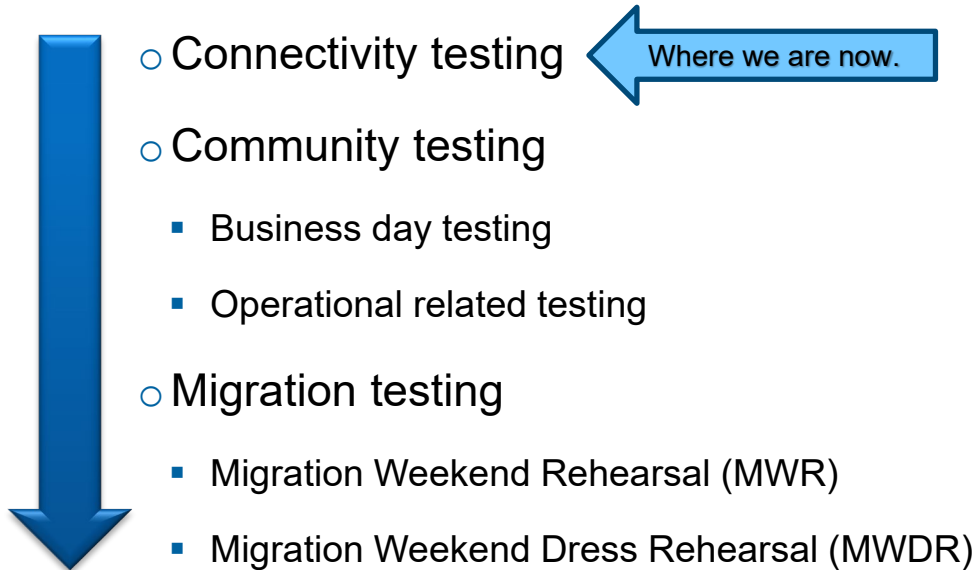
- The migration milestones set out in the milestone plan – CSLD.IST1, CSLD.IST2, CSLD.NCO1 and CSLD.NCO2 – form the basis of the training for user testing.
  - **CSLD.IST1** “*Training for user testing started*”. Deadline: 1 September 2021
  - **CSLD.IST2** “*Training for user testing completed*”. Deadline: 30 November 2021
  - **CSLD.NCO1** “*Network connectivity tests started*”. Deadline: 1 September 2021
  - **CSLD.NCO2** “*Network connectivity tests completed*”. Deadline: 30 November 2021

- The order and timeline for establishing connectivity, connectivity testing and all subsequent test phases and activities are specified in the [T2 User Testing Terms of Reference \(UT ToR\)](#).
- The various deadlines and checkpoints are published in the [T2 User Testing Calendar](#).
- The mandatory test cases to be performed are summarised and defined in the [T2 Mandatory Test Cases](#) document.
- Basic information can also be found in the [T2 Migration, Testing and Readiness Strategy](#).



[Overview of all documents on consolidation](#)

### User testing is divided into various phases



→ All user tests will be performed in the UTEST test environment.

- **Successful connectivity** to and **successful communication** with the T2 platform (or the ESMIG) should be demonstrated during the connectivity testing phase.
- This phase comes three months before the start of the actual user testing (UT) phase, beginning on **1 September 2021** and ending on **30 November 2021**.
- Depending on the type of connection selected, proof of a successful A2A and/or U2A connection must be provided.
  - **U2A-only** participants only demonstrate a successful **U2A connection**.
  - **A2A** participants demonstrate successful **A2A and U2A connections**.

- This phase begins on **1 December 2021 (total duration: approx. seven months)**.
- T2 participants' reference data creation in the test environment lays the foundation for the community testing phase – this is done partly by the responsible NSD and partly by participants themselves (in that order).
- Community testing takes place using system structures and data configurations that are realistic to the live environment and cover all functionalities – including the mandatory tests for participants – defined in the **UT mandatory test cases**.
- There will be **test entry and exit criteria** for participants to meet – set out in the ToR.



- During the 3.5-month **business day testing phase**, participants shall test their **processes in line with a regular business day for them** to ensure that their internal systems can follow the production schedule.
- The testing will subsequently run **for a week** over a pre-agreed period with the **live timing schedule**.
- During this phase, T2 participants can, in particular, carry out self-defined test cases, including exchanging messages with other T2 participants on a bilateral basis.
- The business day testing phase also encompasses **end-to-end testing with the other TARGET services, such as T2S and TIPS**.

- The **operational related tests** are performed following the procedure defined in the **Information guide for TARGET participants** – this includes, for example, contingency tests in ECONS II.
- These operational related tests are performed during the UT community and/or UT business day testing phase **once T2S and TIPS are connected to T2 in the UTEST environment.**
- The ECB is responsible for planning and fixing the relevant dates; the details of the tests are correspondingly communicated by the NSD before the start of the operational related tests and published in the UT calendar.

### Side note on ECONS II

Do the ECONS II tests cover the same testing scope (as in ECONS I)?

Regular contingency tests will also be organised in future. These tests will also continue to cover the settlement of critical and very critical transactions.

Is participation in the ECONS II procedure also optional for banks (up to two years after go-live) just like participation in ECONS I is?

Participation in ECONS II is optional for your institution if no (very) critical payments are settled when ECONS II goes live and no obligation for your institution to participate in ECONS I currently exists. Connectivity first becomes mandatory for all **RTGS participants** two years after go-live.

- The **migration tests** (PMR, MWR and MWDR) are intended to ensure that all necessary information from TARGET2 can be migrated to T2 and the propagation of new reference data from CRDM is performed in a timely manner.
- **Pre-Migration Rehearsal (PMR)** – refers to the transfer of TARGET2 reference data to CRDM and the propagation of data in T2 according to the schedule.
- Successful execution of the pre-migration rehearsal is the prerequisite for starting the **Migration Weekend (Dress) Rehearsal**. The objective of a MW(D)R is to rehearse the initialisation of balances on T2 and their reconciliation at the central banks' and participants' level. Participation in the rehearsals for the MW(D)R is mandatory for both T2 participants and central banks.

Planned MW(D)R **dates for testing phases in 2022:**







- ❖ MWR from 28 March to 1 April 2022 (during the week)
- ❖ MWDR from 8 July to 11 July 2022 (over the weekend)
- ❖ MWDR from 23 September to 26 September 2022 (over the weekend)
- ❖ Optional MWDR in October 2022 (to be confirmed)



# T2/T2S consolidation

## Module 1 – User testing – Q4 2021 to Q1 2022

Test phases	2021				2022			
	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Connectivity 	→							
Registration form submission 		→						
Community – reference data set-up (first NSD then T2 participants)				→				
Community – mandatory test cases				→				
PMR and MW(D)R								

### Reference data for the UTEST test environment

- Deadline for submitting the registration form by email: **19 November 2021**.
- After receiving a positive response from the customer service team (KBS): submission of the form by post as soon as possible.
- From **1 December 2021**: Bundesbank sets up party reference data, accounts, etc.
- **Thereafter**<sup>1</sup>: Participants submit additional reference data (see following slide) and begin test activities.

<sup>1</sup> We will inform participants of the start of this phase (after the Bundesbank has completed reference data creation).

# T2/T2S consolidation

## Module 1 – Reference data set-up in CRDM



### Mandatory for participants to record:

- **Set up users** (all U2A and A2A users except admins)
  - Identify the business sender of an A2A message or identify the actor (U2A)
- **Record the certificate distinguished name (DN)** (except admin users)
- **Record the user certificate distinguished name link** (except admin users)
- Role assignment for all users
- Enter the DN-BIC routing (for all AAUs with “direct” and “multi addressee” participation types)<sup>1</sup>

### Optional for participants to record:

- Report configurations (e.g. BanktoCustomerStatement camt.053)
- **Message subscription rule sets (e.g. BankToCustomerDebitCreditNotification camt.054)**
- (Default) routing (required to receive reports)
- Target amount after breaching floor/ceiling amount
- Floor notification/ceiling notification
- Account Monitoring Group
- Standing/predefined liquidity transfer order (required for rule-based LTs with regard to floor/ceiling)
- Standing order reservation
- Limits

<sup>1</sup> Only relevant for A2A.



**2** **Module 2 – Connectivity testing**

2.1. Connectivity testing for A2A participants

2.2. Connectivity testing for U2A participants

# T2/T2S consolidation

## Module 2 – Connectivity testing



- The **connectivity test** is used to demonstrate a successful connection to and successful communication with the T2 platform.
- Testing the connection to the T2 test environment (UTEST) has been possible **since September 2021**; the connectivity test phase ends on **30 November 2021**.
- Depending on the type of connection selected, evidence of a successful A2A connection and/or U2A connection must be demonstrated.
  - **U2A-only** participants only demonstrate a successful U2A connection.
  - **A2A participants** demonstrate successful A2A and U2A connections.
- If your connection takes place via a third party (e.g. service bureau), it can complete the connectivity test for you. However, this does not exempt you from having to independently submit evidence.
- **Co-managers** submit evidence on behalf of all of their co-managed institutions.

- To be able to successfully demonstrate evidence of an **A2A connection**, an ISO 20022-compliant message must be sent via the NSP to T2 (via ESMIG).
- As no reference data will have yet been recorded in the test environment (UTEST), you will receive a **response message containing an error** from T2.
- According to ESMIG UDFS, Chapter 1.5.4.2.1, you should receive an **admi.007** message in response. This can contain various error codes as justification:

### 1.5.4.2 Outbound Messages

#### 1.5.4.2.1 *Outbound Messages for TARGET Services (excluding TIPS)*

Currently, one outbound message is generated by the ESMIG for all TARGET Services, excluding TIPS. The reasons for the rejection are due to:

- Invalid digital signature;
- Timeout management;
- Oversized management.

**Table 6 - Outbound messages generated by ESMIG for TARGET Services (excluding TIPS)**

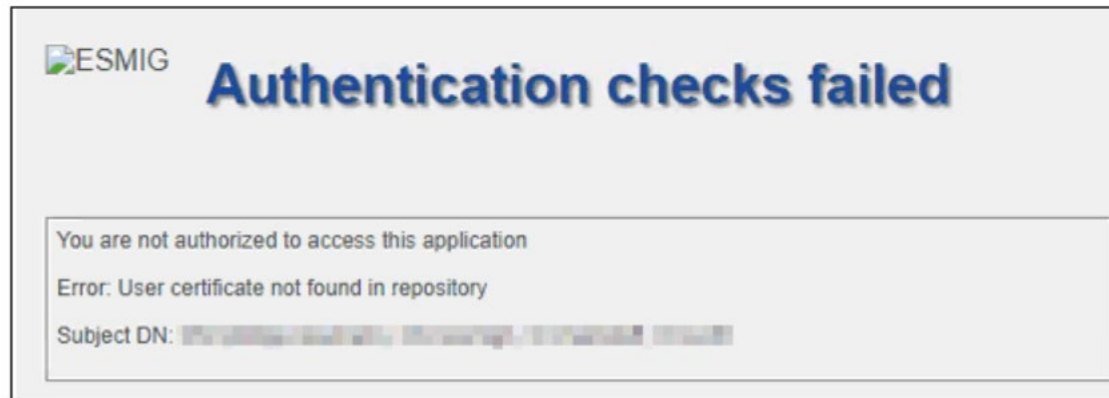
ISO MESSAGE / MESSAGE USAGE	ISO CODE
ReceiptAcknowledgement / "Inbound Processing Rejections"	admi.007.001.01

- As **all back-end modules for the UTEST will only be fully available from 26 November 2021 onwards**, at the current time the platform cannot yet respond to messages received via the store and forward channel and to which a valid signature has been added.



This means that, until then, admi.007 messages with the **error code *time-out*** are only available **via the real-time channel**.

- To be able to successfully demonstrate evidence of a **U2A connection**, the **ESMIG landing page** must be able to be called up.
- As no reference data will have yet been recorded in the test environment (UTEST), an error of this kind will be displayed:

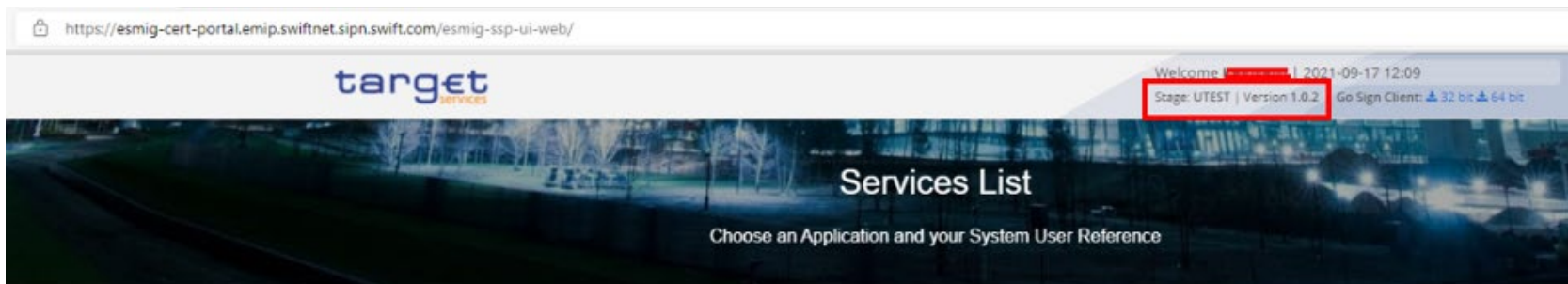


# T2/T2S consolidation

## Module 2 – Connectivity testing for U2A participants with TIPS



- For participants that already have access to TIPS, more of the ESMIG landing page will be displayed – you can tell this from where it says “**Stage UTEST**” and shows the **TIPS service options**.



Submit

### Exit criteria according to UT ToR:

- A successful **U2A connection** is demonstrated by a **screenshot of the ESMIG landing page** or the corresponding error displayed.
- A successful **A2A connection** is demonstrated by the sending of a **corresponding response message with the accompanying error code or admi.007**.
- Please send evidence **as soon as possible** (but by **30 November 2021 at the latest**) stating your BIC11 (party BIC) and institution name to:

[targetservices-test@bundesbank.de](mailto:targetservices-test@bundesbank.de)

- Information provided by the Eurosystem on the topic of connectivity can be found in the Connectivity Guide (published on our [website](#))

### **3** **Module 3 – Pre-migration and reference data set-up in CRDM**

3.1. Pre-migration phase

3.2. Mandatory test cases – Reference data set-up

3.3. Set-up of other necessary reference data



# T2/T2S consolidation

## Module 3 – Pre-migration phase



- In line with the **Pre-Migration Schedule**, new participants have to record some reference data **themselves** in CRDM.
- Once **party and admin users** have been set up, we will inform the contact persons provided on the forms. You can then get started with entering data at your end:
  - setting up **A2A users**;
  - setting up **U2A users**;
  - recording of **DNs**;
  - linking of **DNs with the user**;
  - **assigning roles** to users. (Roles which have been assigned to users in four-eyes mode, will be ignored in the case of an A2A user.)

- **Report configuration** (e.g. RTGS directory or statement of account)
- **Default routing** is essential for receiving reports such as the statement of account. A default routing must be set up for each participant per selected network service link (including co-managed).
- **Message subscription rule** set and rule for the receipt of messages, e.g. pacs.002 (positive receipt), camt.054 or camt.077, etc.
- In addition, you should review the reference data we have set up and inform the Bundesbank if you identify any need for changes.

# T2/T2S consolidation

## Module 3 – Pre-migration phase



- Once the **accounts** have been set up, we will again inform the contact persons provided on the forms. It will then be possible for you to:
  - set up **a DN-BIC routing (mandatory)**;
  - set up **account monitoring groups**;
  - set up **floor and ceiling amounts** on the accounts;
  - record **standing orders** (liquidity transfer orders, reservations and limits).
- The first migration test will not take place until March 2022. To ensure that you can already test in advance, we will provide your account with **liquidity** ahead of time and inform you of this.

# T2/T2S consolidation

## Module 3 – Pre-migration phase



- Only once you have made these entries (previous slide) will we set up your:
  - direct debits;
  - liquidity transfer groups;
  - settlement bank groups;
  - banking groups;
  - billing groups;
  - invoice configuration; and
  - contact itemsin the reference data.
  
- As soon as we have recorded all reference data, we will inform you once more and ask you to again check all the information entered.
  - If you notice anything beforehand, please inform the National Service Desk via the usual email address or hotline.
  
- According to the current Pre-Migration Schedule, seven business days are pencilled in for the payment banks and setting up of your reference data. This document will, however, be revised once more and supplemented with lessons learned from the user tests.

# T2/T2S consolidation

## Module 3 – Pre-migration phase



	B	C	D	E
4	<b>PMCP4</b>	<b>ALL</b>	<b>PCMP4 - Reference data capture part 2 completed</b>	<b>0 days</b>
5		<b>ALL T2Ps</b>	<b>Reference data capture part 3</b>	<b>7 days</b>
6		<b>ALL T2Ps</b>	<b>First batch T2Ps</b>	<b>7 days</b>
1	T2.PM.T2P.SA	DE-T2Ps	System access	3 days
6	T2.PM.T2P.ARC.CU	DE-T2Ps	Access rights configuration	2 days
1	T2.PM.T2P.RFDV	DE-T2Ps	Registration form verification	1 day
6	T2.PM.T2P.RC	DE-T2Ps	Routing configuration	1 day
1	T2.PM.T2P.MSG.RC	DE-T2Ps	Report configuration	1 day
6	T2.PM.T2P.MSG.RSC	DE-T2Ps	Message subscription rule set configuration	1 day
1	T2.PM.T2P.MSG.MSC	DE-T2Ps	Message subscription rules	1 day
6	T2.PM.T2P.DCA.AC	DE-T2Ps	CLM and RTGS accounts configuration	1 day
1	T2.PM.T2P.SOR.RES	DE-T2Ps	Standing Orders for Reservation (T2 participants CLM and RTGS accounts)	1 day
6	T2.PM.T2P.AMGC	DE-T2Ps	Account monitoring group configuration	1 day
1		DE-T2Ps	End of 1st Batch T2Ps	0 days
2		<b>ALL</b>	<b>PMCP6</b>	<b>0 days</b>
8	<b>PMPCP6</b>	<b>ALL</b>	<b>PMCP6 T2Ps Reference Data completed</b>	<b>0 days</b>
9		<b>ALL</b>	<b>PMCP8</b>	<b>0 days</b>
0	<b>PMPCP8</b>	<b>ALL</b>	<b>PMCP8 Pre-Migration Reference Data completed</b>	<b>0 days</b>

#### Mandatory test cases:

- T2\_TC\_AH\_ID1 – Create Message Subscription Rule Set
- T2\_TC\_AH\_ID2 – Create Certificate DN
- T2\_TC\_AH\_ID3 – Create User Certificate DN Link
  - Precondition for test case ID3: A user is set up

Test description	The test case describes how to set up a rule set and add a rule to this set.
Preconditions	The user has the required permissions to open the GUI. The rule set must be created before rules can be added.
Expected result	The rule set is successfully created and at least one rule has been added to the rule set.
Test evidence	CRDM GUI screenshot
Relevant documentation	CRDM UDFS: 1.2.3 Message subscription CRDM UHB: 2.3.4 Message and Reports, 2.3.4.1 Message Subscription Rule Sets – Search/List Screen, 2.3.4.2 Message Subscription Rule Set – Details Screen Context of Usage Pre-Migration Schedule: T2.PM.T2P.MSG.RSC
Necessary privileges	Create Message Subscription Rule Set Update Message Subscription Rule Set Create Message Subscription Rule Update Message Subscription Rule

# T2/T2S consolidation

## Module 3 – ID2 – Create Certificate DN



Test description	This test case describes how to create a new user certificate distinguished name.
Preconditions	The user has the required permissions to open the GUI.
Expected result	The user certificate distinguished name is successfully created.
Test evidence	CRDM GUI screenshot
Relevant documentation	CRDM UDFS: 1.3.4 Access rights management CRDM UHB: 3.3.2.2 Create a New Certificate Distinguished Name Pre-Migration Schedule: T2.PM.AH.ARC.CU
Necessary privileges	Create Certificate Distinguished Name User Certificate DN Link Query

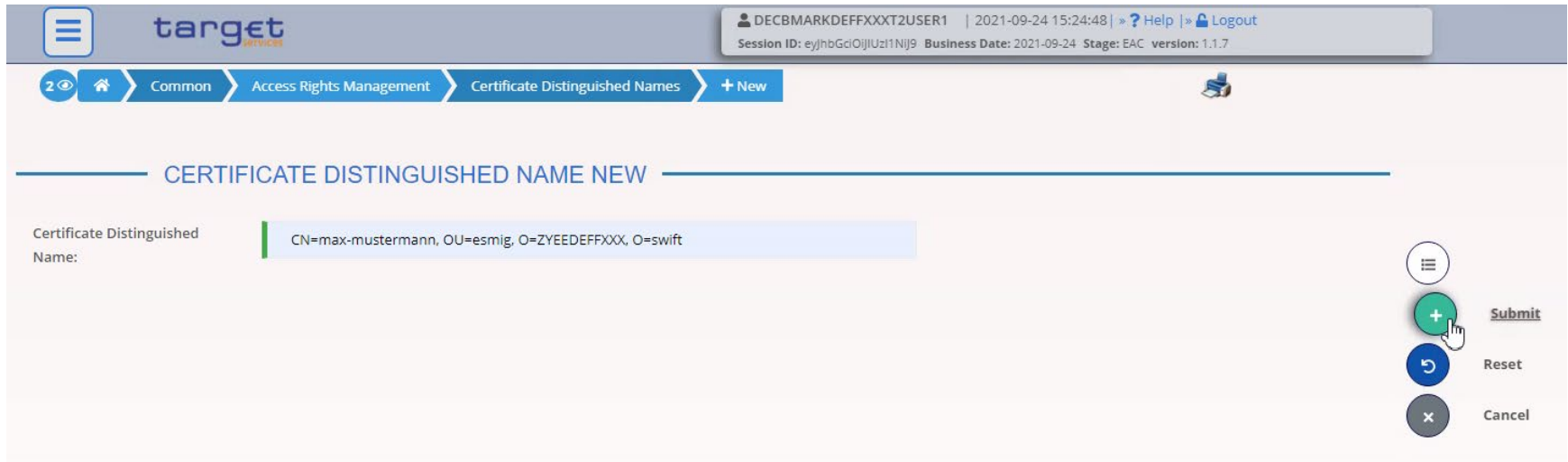


# T2/T2S consolidation

## Module 3 – ID2 – Create Certificate DN

Path:  Common > Access Rights Management > Certificate Distinguished Names > + New

Screenshot:



Important: Please note the correct naming convention for the U2A DN.  
Attributes (CN, OU, O) in upper case with a space after the comma

SWIFT example:

CN=Max-Mustermann, OU=t2, O=abcdxxyy, O=swift

SIA example:

CN=Max-Mustermann, OU=U2A, O=12345, DC=sianet, DC=sia, DC=eu

Test description	This test case describes how to create a new user certificate distinguished name link.
Preconditions	The user has the required permissions to open the GUI. A user and a certificate distinguished name must be created before the link can be configured.
Expected result	The link is successfully created.
Test evidence	CRDM GUI screenshot
Relevant documents	CRDM UDFS: 1.2.2.1.4 User, 1.2.2.3.2 Configuration of access rights at user level CRDM UHB: 3.2.2 Configuration of a User, 3.2.2.1 Create a New User, 3.2.2.3 Create a New Certificate Distinguished Name Link
Necessary privileges	Create User Certificate Distinguish Name Link User Certificate DN Link Query

# T2/T2S consolidation

## Module 3 – ID3 – Create User Certificate DN Link



Path: Common > Access Rights Management > User Certificate Distinguished Name Links > + New

Screenshot:

target services

DECEBMARKDEFFXXXT2USER1 | 2021-09-24 15:25:49 | > ? Help | > Logout  
Session ID: eyjhbGd0JlUz11Nij9 Business Date: 2021-09-24 Stage: EAC version: 1.1.7

Common > Access Rights Management > User Certificate Distinguished Name Links > + New

### USER CERTIFICATE DISTINGUISHED NAME NEW

Login Name:

Certificate Distinguished Name:

Default:  Main User:

Submit  
Reset  
Cancel

**Default:** If multiple users are linked to a single DN, the Default User is shown at the top of the list of available users (this has no functional significance).

**Main User:** Only relevant for TIPS – allows a TIPS user to access the TIPS GUI. This additionally requires that the corresponding roles have been assigned.

Description	Creating a user in CRDM
Preconditions	The user has the required permissions.
Expected result	The user is successfully created.
Relevant documents	CRDM UDFS: CRDM UHB: 2.3.3.3 User – New/Edit Screen
Necessary privileges	Create User Update User

# T2/T2S consolidation

## Module 3 – Further necessary set-up: setting up a user



Path: Common > Access Rights Management > Users > + New

Screenshot:

The screenshot shows the 'USER NEW' form in the Target Services system. The form is titled 'USER NEW' and is located in the 'Access Rights Management > Users > + New' path. The form includes the following fields and controls:

- Login Name:** ZYEEDEFFXX Max Mustermann
- System User Reference:** ZYEEDEFFXX Max Mustermann
- Name:** Max Mustermann
- Lockout:**
- Lockout From Date:** yyyy-mm-dd
- Time:** HH : MM
- Parent BIC:** MARKDEFFXX
- Party BIC:** ZYEEDEFFXX

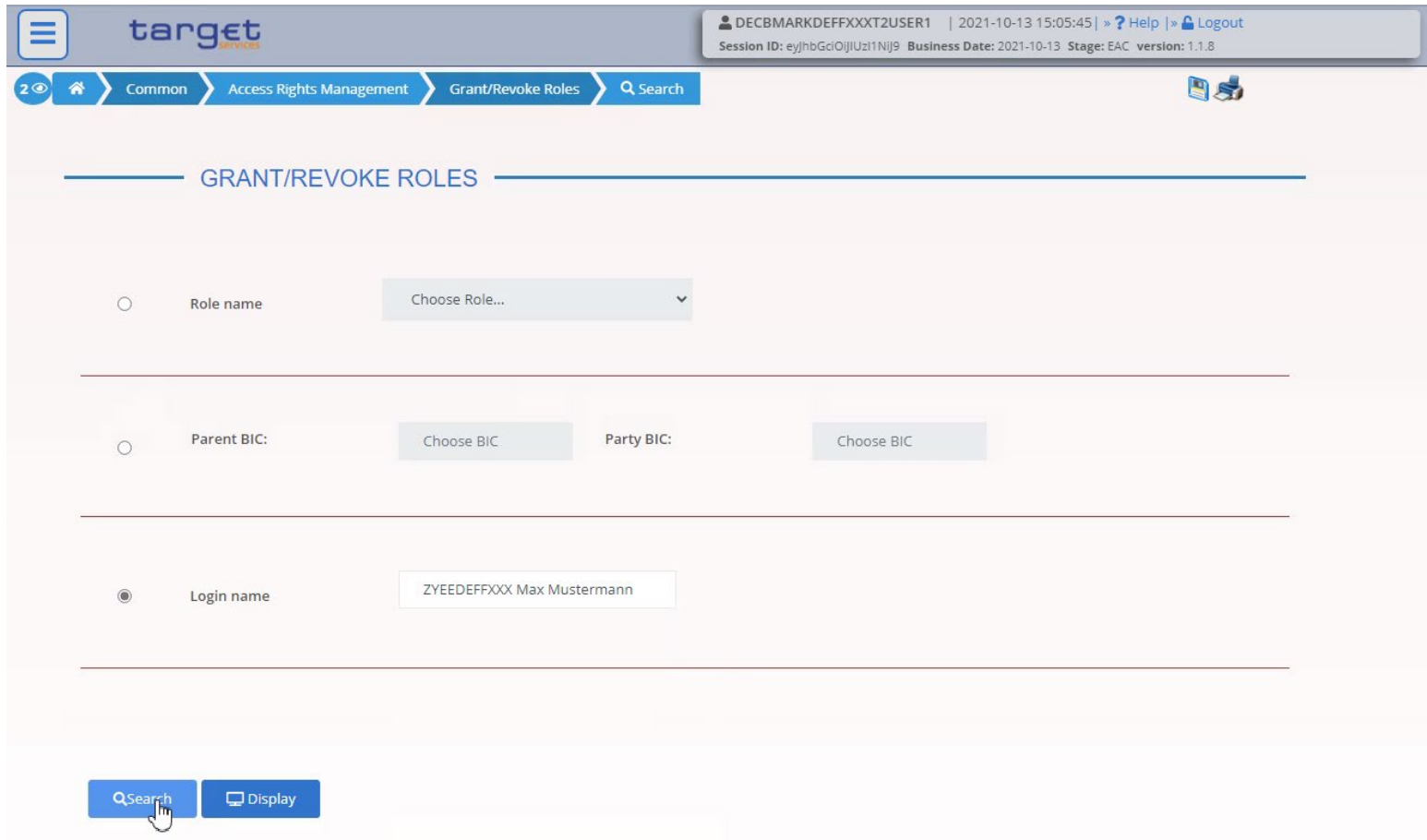
On the right side of the form, there are three circular buttons: a green button with a plus sign (highlighted with a green circle and a mouse cursor), a blue button with a refresh icon, and a grey button with an 'x' icon. To the right of these buttons are the labels 'Submit', 'Reset', and 'Cancel'.

# T2/T2S consolidation

## Module 3 – Further necessary set-up: granting a role to a user

Path:  Common  Access Rights Management  Grant/Revoke Roles  Search

Screenshot 1:



The screenshot shows the 'GRANT/REVOKE ROLES' interface. At the top, there is a navigation bar with the 'target services' logo and a session information box containing: 'DECBMARKDEFFXXT2USER1 | 2021-10-13 15:05:45 | ? Help | Logout' and 'Session ID: eyJhbGciOiJIUzI1NiJ9 Business Date: 2021-10-13 Stage: EAC version: 1.1.8'. Below the navigation bar, the breadcrumb path is 'Common > Access Rights Management > Grant/Revoke Roles'. The main content area is titled 'GRANT/REVOKE ROLES' and contains three radio buttons for selection:

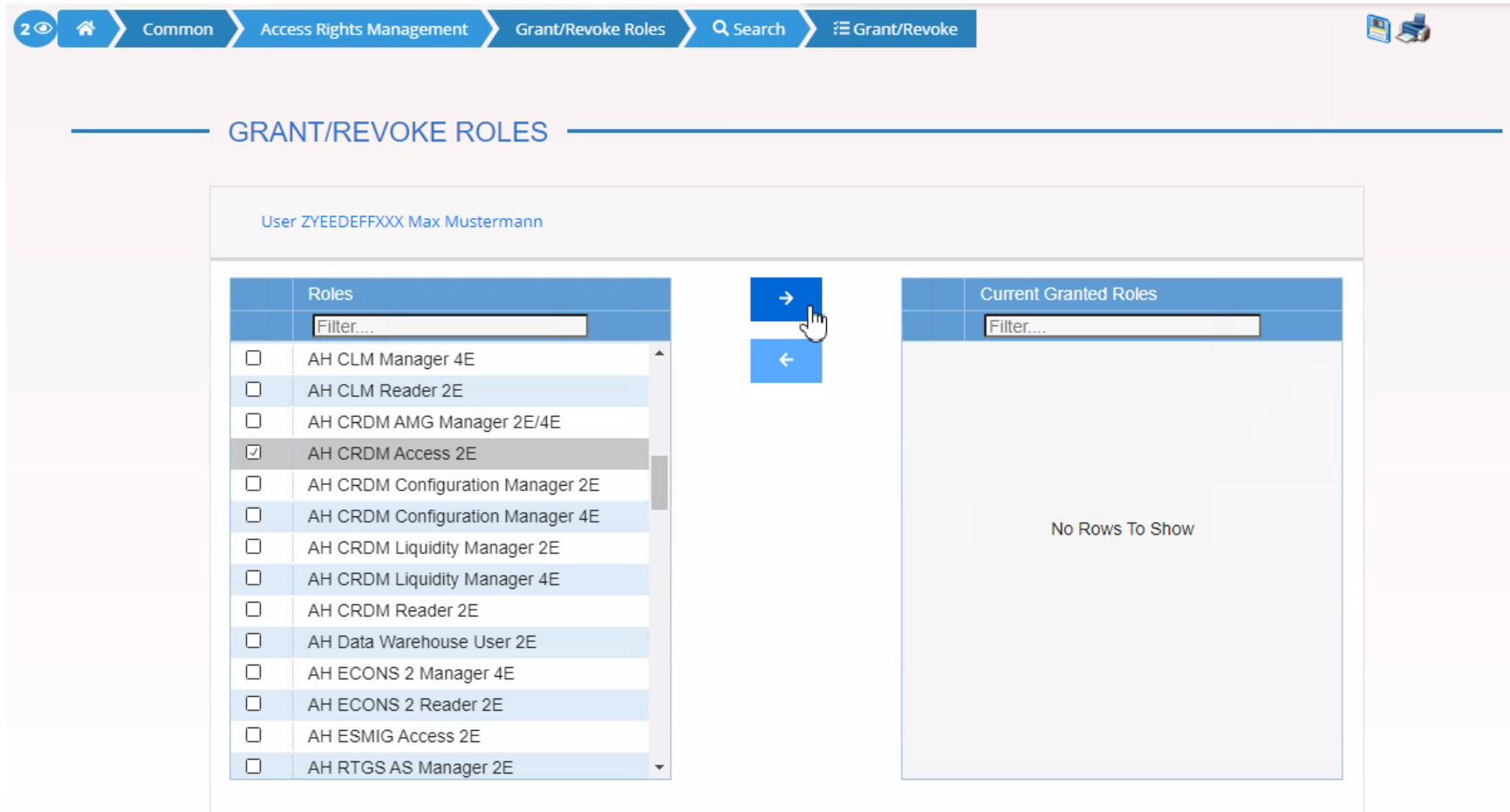
- Role name: Choose Role... (dropdown menu)
- Parent BIC: Choose BIC (input field) Party BIC: Choose BIC (input field)
- Login name: ZYEEDEFFXXX Max Mustermann (input field)

At the bottom left, there are two buttons: 'Search' and 'Display'.

# T2/T2S consolidation

## Module 3 – Further necessary set-up: granting a role to a user

Screenshot 2:



User ZYEEDEFFXXX Max Mustermann

Roles	
Filter...	
<input type="checkbox"/>	AH CLM Manager 4E
<input type="checkbox"/>	AH CLM Reader 2E
<input type="checkbox"/>	AH CRDM AMG Manager 2E/4E
<input checked="" type="checkbox"/>	AH CRDM Access 2E
<input type="checkbox"/>	AH CRDM Configuration Manager 2E
<input type="checkbox"/>	AH CRDM Configuration Manager 4E
<input type="checkbox"/>	AH CRDM Liquidity Manager 2E
<input type="checkbox"/>	AH CRDM Liquidity Manager 4E
<input type="checkbox"/>	AH CRDM Reader 2E
<input type="checkbox"/>	AH Data Warehouse User 2E
<input type="checkbox"/>	AH ECONS 2 Manager 4E
<input type="checkbox"/>	AH ECONS 2 Reader 2E
<input type="checkbox"/>	AH ESMIG Access 2E
<input type="checkbox"/>	AH RTGS AS Manager 2E

→

←

Current Granted Roles	
Filter...	
No Rows To Show	

# T2/T2S consolidation


## Module 3 – Further necessary set-up: granting a role to a user



Screenshot 3:

Results

Done!



Requests Successfully Processed: 1  
Requests in Error: 0  
Requests Timed out: 0

---

OK

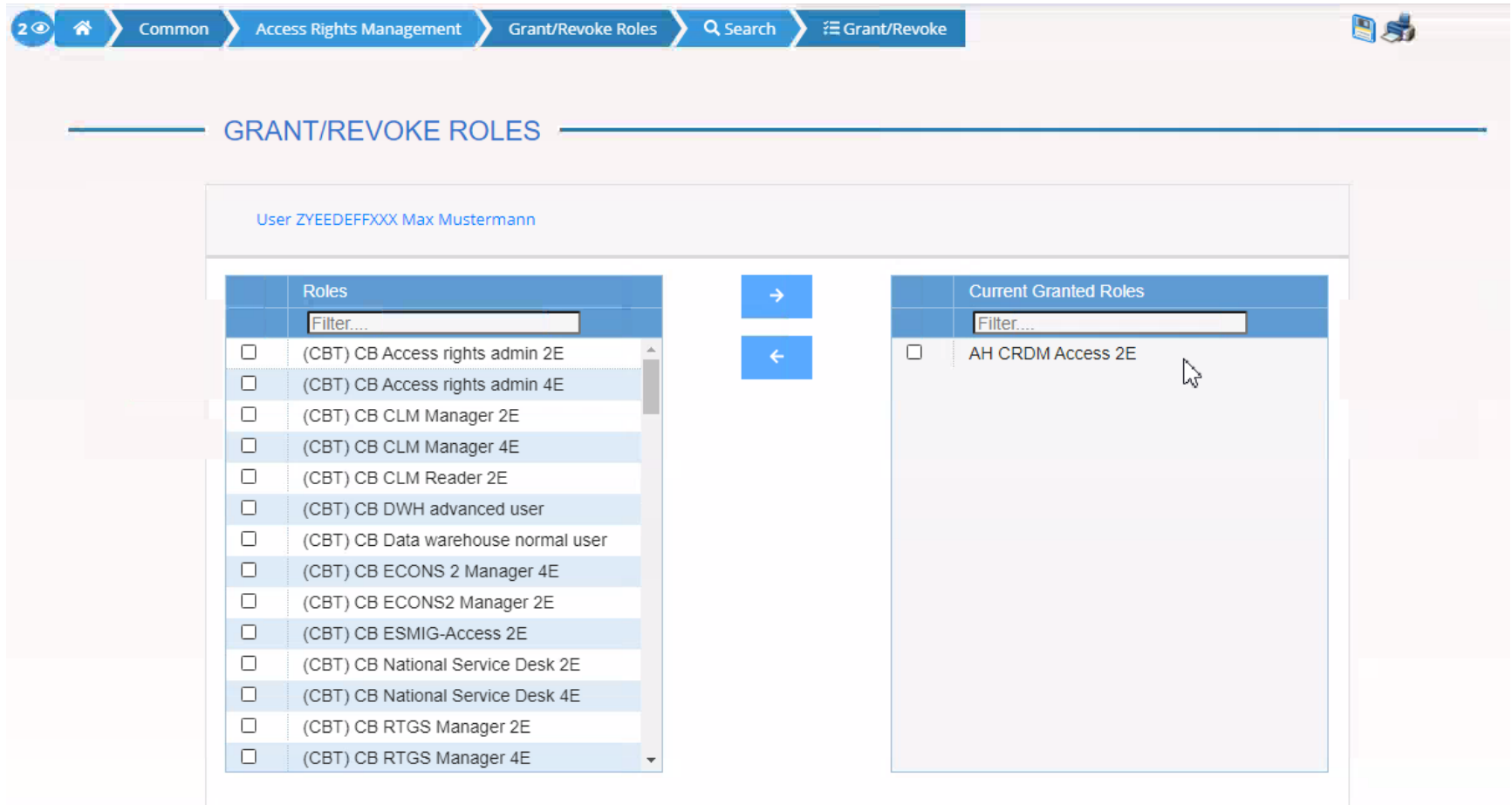
A screenshot of a web application interface showing a successful completion message. The word "Results" is at the top left. Below it, the word "Done!" is displayed above a full-width green progress bar with diagonal stripes. Underneath the progress bar, three lines of summary statistics are shown: "Requests Successfully Processed: 1" in blue, "Requests in Error: 0" in red, and "Requests Timed out: 0" in orange. A horizontal line separates this section from the rest of the page. At the bottom right corner, there is a blue button labeled "OK" with a mouse cursor pointing at it.



# T2/T2S consolidation

## Module 3 – Further necessary set-up: granting a role to a user

Screenshot 4:



The screenshot displays the 'GRANT/REVOKE ROLES' interface for the user 'ZYEEDEFFXX Max Mustermann'. The interface is divided into two main sections: 'Roles' and 'Current Granted Roles'. The 'Roles' section on the left contains a list of 16 roles, each with a checkbox and a description. The 'Current Granted Roles' section on the right contains a list of 1 role, 'AH CRDM Access 2E', with a checkbox. A mouse cursor is pointing at the role in the 'Current Granted Roles' list. The interface also includes a navigation bar at the top with tabs for 'Common', 'Access Rights Management', 'Grant/Revoke Roles', 'Search', and 'Grant/Revoke'.

Roles	
<input type="checkbox"/>	(CBT) CB Access rights admin 2E
<input type="checkbox"/>	(CBT) CB Access rights admin 4E
<input type="checkbox"/>	(CBT) CB CLM Manager 2E
<input type="checkbox"/>	(CBT) CB CLM Manager 4E
<input type="checkbox"/>	(CBT) CB CLM Reader 2E
<input type="checkbox"/>	(CBT) CB DWH advanced user
<input type="checkbox"/>	(CBT) CB Data warehouse normal user
<input type="checkbox"/>	(CBT) CB ECONS 2 Manager 4E
<input type="checkbox"/>	(CBT) CB ECONS2 Manager 2E
<input type="checkbox"/>	(CBT) CB ESMIG-Access 2E
<input type="checkbox"/>	(CBT) CB National Service Desk 2E
<input type="checkbox"/>	(CBT) CB National Service Desk 4E
<input type="checkbox"/>	(CBT) CB RTGS Manager 2E
<input type="checkbox"/>	(CBT) CB RTGS Manager 4E

Current Granted Roles	
<input type="checkbox"/>	AH CRDM Access 2E

# T2/T2S consolidation

## Module 3 – Further necessary set-up: DN BIC routing



Path: Common Network Configuration DN-BIC Routing + New

Screenshot:

**DN-BIC ROUTING NEW**

Distinguished Name:  Direction:

Participation Type:

Valid From:  Valid To:

BIC (mandatory):   
 ZYEEDEFFXXX

Submit, Reset, Cancel buttons are visible on the right side.

## 4 Module 4 – Community testing and T2 mandatory test cases

4.1. Information on community testing

4.2. CLM test cases

4.3. CLM + RTGS test cases

4.4. AS test cases

- **Community testing** will take place in the new **T2 UTEST** environment.
- During the testing phase of the user tests, there will be four different operational day schedules.

Operational day schedule	Description
T2 standard day	Used when daily operations in T2S and T2 do not need to be synchronised (i.e. there is no connection between T2 and T2S UTEST)
T2-T2S synchronised standard day	Used when daily operations need to be synchronised (i.e. T2 and T2S UTEST are connected)
T2-T2S synchronised release day	Day schedule to be used on a day a release is deployed
T2 live timing schedule	Day schedule which aligns with the schedule in the live environment and is used e.g. in business day testing.

### Availability of UTEST:

- standard hours: 07:00-19:00 Monday to Friday

### Exceptions:

- 1 January, Good Friday, Easter Monday, 1 May, 24-26 December and 31 December
- During maintenance
- During implementation of a software release (where planned)
- **From Monday to Thursday**, the **T2 standard day** schedule should normally apply
- **On Fridays** the **T2-T2S synchronised release day** schedule normally applies – regardless of whether or not a release is being implemented at the time.



# T2/T2S consolidation

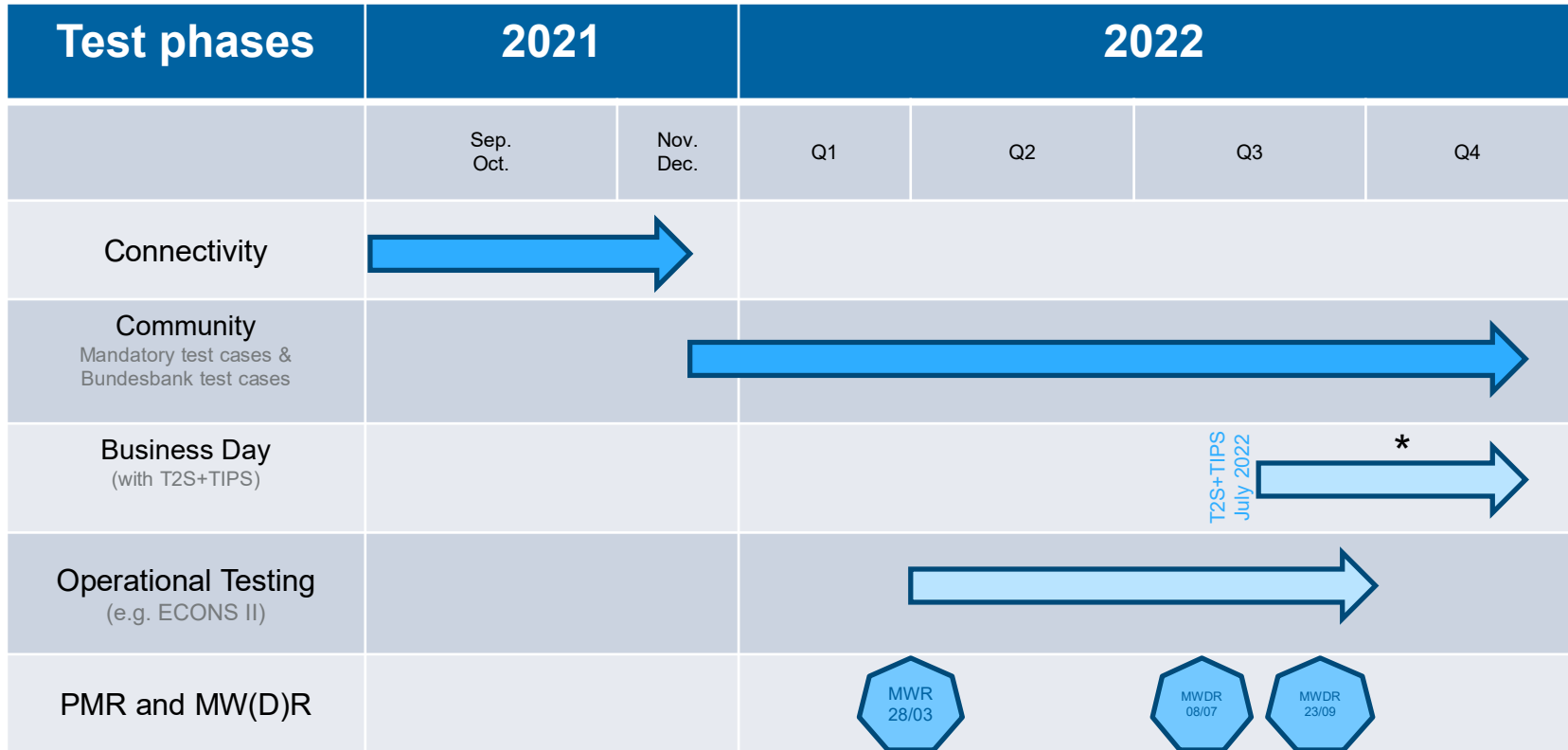
## Module 4 – Operational day schedule



- PLACEHOLDER for an overview of the testing periods – Operational day schedule (should be an ANNEX of the UT ToR)

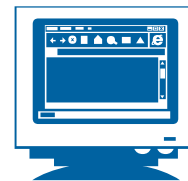
# T2/T2S consolidation

## Module 4 – Testing phase overview



**A T2S simulator will be available for testing** until T2S has been connected to T2.

- The following **inbound messages** are accepted by the T2S simulator:
  - camt.003 (GetAccount)
  - camt.050 (LiquidityCreditTransfer)
  
- The T2S simulator can answer with the following **outbound messages**:
  - ✓ camt.004 (ReturnAccount)
  - ✓ camt.025 (internal Receipt)
  - ✓ camt.050





### What can the T2S simulator do?


- ✓ The simulator can respond to a camt.050 with a camt.025 or a camt.050.
- ✓ The camt.025 contains a predefined positive or negative settlement status.
- ✓ If a camt.050 targets a DCA not included in the simulator's master data, the simulator answers with the same camt.050 – the message is interpreted as “pull LT”.
- ✓ A camt.003 prompts the automatic creation and sending of a camt.004. This reports all balances as recorded in the simulator's master data or – if no data are available – returns a value of €0.

### What can the T2S simulator NOT do?

- No message validation is carried out.
- No messages are mirrored.
- No liquidity is booked (camt.050) – account balances in the T2S DCAs remain unchanged.
- Answers provided by the simulator – whether positive/valid or negative/invalid – must be configured ahead of time by the operator (NCB specifies responses).

Which master data does the T2S simulator include and where do they originate?

- **All DCAs active in T2S UTEST** will be available to be addressed in the simulator.
- **The balances of all** the DCAs will be predefined by the NSD. Every DCA's balance will be the same amount, e.g. €10,000.00.
- The camt.050 response mode will be set by the NSD – at the beginning of the testing phase – to **“AUTPOS” = automatic positive response**.
- During the community testing phase the master data in the T2S simulator will be altered at a predetermined date – it is not possible to create different data for individual participants.

 The function of the simulator for TIPS DCAs should also be transferred; it is not yet known if this will be the case at the start of the community testing phase.

A Bundesbank simulator will continue to exist for T2 – ZYBLDEFFXXX

- A “familiar face” – but now as the live BIC **ZYBLDEFFXXX**
- Address in the <To> header of **pacs.008 or pacs.009** – direct RTGS participant
- Mirroring\* will be activated as before with a code word specified in the following XML element:
  - <RmtInf>
  - <Ustrd>**ECHORTGSn**</Ustrd>
  - </RmtInf>
- As before, the “n” in Field 72 must be filled in **with a number from 1 to 9** depending on the desired number of mirrored payments.
- Mirroring can **only be used in the RTGS service** – not for CLM.

\* i.e. the production of liquidity through multiple payments in the opposite direction.

Overview of all mandatory test cases for CLM:

- **T2\_TC\_CLM\_AH\_ID1 – CLM liquidity transfer order to RTGS DCA**
- T2\_TC\_CLM\_AH\_ID2 – CLM liquidity transfer order between two MCAs
- **T2\_TC\_CLM\_AH\_ID3 – Available liquidity CLM query**
- T2\_TC\_CLM\_AH\_ID4 – Recourse to a deposit facility
- T2\_TC\_CLM\_AH\_ID5 – Verify Credit Line increase

# T2/T2S consolidation

## Module 4 – CLM test cases

Choose a Service

TIPS  T2

Choose Component or Application

- Business Day Management
- CLM
- CRDM
- Data Migration Tool
- Data Warehouse
- RTGS

- Select the CLM component in ESMIG

Test description	This test describes the necessary steps for a liquidity transfer between CLM and an RTGS DCA.
Preconditions	The debtor party must be a CLM account holder. The user has the necessary privileges for this area of the GUI. The user has access to the “New Liquidity Order Page” (U2A). There is sufficient liquidity on the MCA.
Expected results	The LT is executed successfully.
Test evidence	U2A: Screenshot of the executed LT A2A: A copy of camt.025
Relevant documents	CLM UDFS: 5.4.2.3.3 Immediate inter-service liquidity transfer between two dedicated accounts in different settlement services CLM UHB: 5.2.1 CLM Cash Account Liquidity – Query Screen 5.2.5 Liquidity Transfer – New Screen 6.2.1 Display cash account liquidity (one service only)
Necessary privileges	Create Liquidity Transfer Order, Liquidity Transfer Order Detail Query, Liquidity Transfer Order List Query, CLM Initiate Immediate Liquidity Transfer, CLM Query Cash Transfer Detail, CLM Query Cash Transfer

# T2/T2S consolidation

## Module 4 – ID1- CLM liquidity transfer order to RTGS DCA



- First, the menu for liquidity transfers is called up in CLM.
- This can be accessed via the tab “Liquidity” and then “New Liquidity Transfer”.

target services | T2 Central Liquidity Management  
EXTERNAL ACCEPTA... | Business Day 2021-08-03

Welcome  
WIP

Cash Transfers and Messages	▶	
Liquidity	▶	Query CLM Cash Account Liquidity
Liquidity Management Features	▶	New Liquidity Transfer
Query Standing Facilities		
Minimum Reserves	▶	
Reference Data	▶	
Administration	▶	

# T2/T2S consolidation

## Module 4 – ID1- CLM liquidity transfer order to RTGS DCA



- All of the relevant information can then be entered on the next page.
- If necessary, all of the entries can be deleted by clicking on “Reset”.
- Once the transfer is successful, the screen “Operation Successful” appears in green. Click on this to access details on the transfer directly:

### Liquidity Transfer Account Information

#### Debit Account

Account Number\*

MDEEURZYEEDEFFXXX



Display Liquidity

#### Credit Account

Account Number\*

RDEEURZYEEDEFFXXX



Display Liquidity

### Liquidity Transfer Details

Amount\*

10 EUR

End To End ID\*

T2TCLMAHID1

Submit

Reset

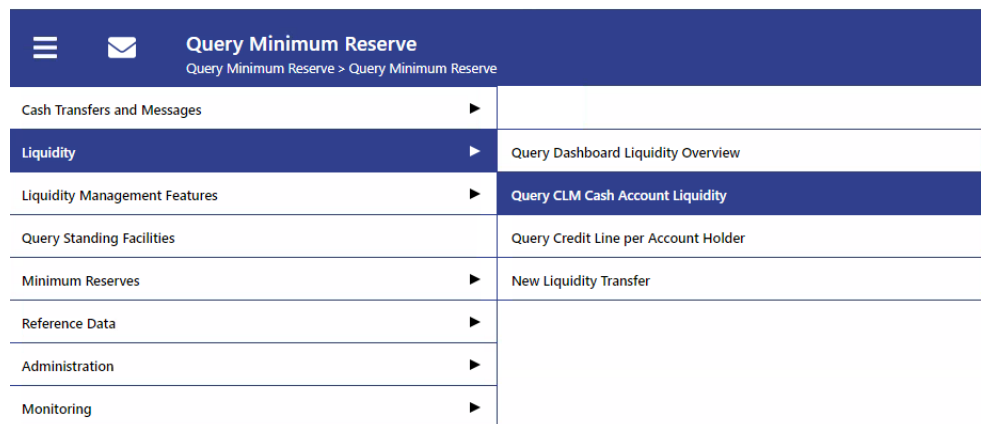
Operation Successful

The created New Liquidity Transfer Task can be found here: 5846

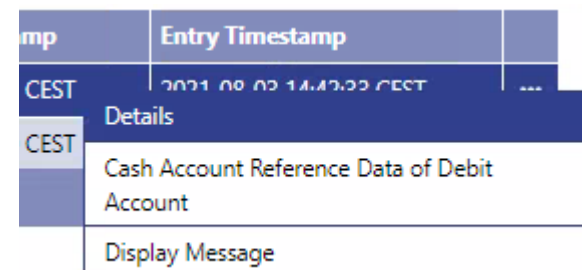
1 Completed ✕



- Alternatively, the executed LT can be called up via the tab “Liquidity” and then “Query CLM Cash Account Liquidity”.
- Here, all of the LTs executed can be found by clicking on “Settled Debit Liquidity Transfers”.
- You can then view the details of the LT by selecting the respective LT and clicking on the three dots on the right and then on “Details”.



Query Minimum Reserve	
Query Minimum Reserve > Query Minimum Reserve	
Cash Transfers and Messages	▶
Liquidity	▶ Query Dashboard Liquidity Overview
Liquidity Management Features	▶ Query CLM Cash Account Liquidity
Query Standing Facilities	▶ Query Credit Line per Account Holder
Minimum Reserves	▶ New Liquidity Transfer
Reference Data	▶
Administration	▶
Monitoring	▶



mp	Entry Timestamp	
CEST	2021-08-03 14:42:22 CEST	...
Details		
CEST	Cash Account Reference Data of Debit Account	
Display Message		

# T2/T2S consolidation

## Module 4 – ID1- CLM liquidity transfer order to RTGS DCA



- If “Settled” appears on the “Cash Transfer Status” screen, the test was carried out successfully.

Corresponding Cash Transfer

Queue Position	Instruction ID	End to End ID	Message Type	Debit Account	Credit Account	Amount	Cash Transfer Status	Earliest Debit Timestamp	Latest Debit Timestamp	Settlement Timestamp	Entry Timestamp
		MCAtoRTGSDCALiquiTest1		RDEEURZYEEDEFFXXX	RDEEURZYEEDEFFXXX	10.00 EUR	Settled			2021-09-21 16:03:13 CEST	2021-09-21 16:03:12 CEST

General

Queue Position: [ ] Amount: 10.00 EUR Value Date: 2021-09-21

Cash Transfer Status: Settled Cash Transfer Type: Liquidity Transfer Message Type: [ ] Counterparty Country: DE

Account and Party Information

Debit Account: RDEEURZYEEDEFFXXX Debit Account Type: MCA Credit Account: RDEEURZYEEDEFFXXX Credit Account Type: CLM Dedicated Transit Account For RTGS

From BIC (BAH): [ ] To BIC (BAH): [ ]

Identifier

Instruction ID: [ ] End to End ID: MCAtoRTGSDCALiquiTest1

UETR: [ ]

Timing

Earliest Debit Timestamp: [ ] Latest Debit Timestamp: [ ]

Account	Amount	Cash Transfer Status	Earliest Debit Timestamp
RDEEURZYEEDEFFXXX	10.00 EUR	Settled	

Value Date: 2021-09-21

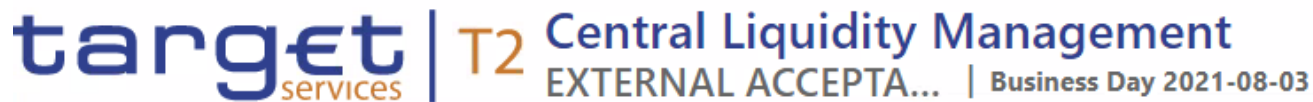
Test description	The purpose of the test is to verify that the user is able to check the liquidity on different CLM accounts
Preconditions	A “party with accounts” should exist in CLM and RTGS
Expected results	The user can view the total liquidity of the selected account according to search criteria.
Test evidence	U2A: Screenshot of the overall liquidity of an account A2A: Screenshot of the ReturnAccount camt.004
Relevant documents	CLM UDFS: 8.6 Query management – CB specific queries 8.7 Business/liquidity monitoring for CBs 9.25.1.2 Messages 12.2 Cash management (camt) CLM UHB: 5.2.1 CLM Cash Account Liquidity – Query Screen
Necessary privileges	CLM Query Available Liquidity, CLM Query Account Balance, CLM Query local party cash account reference data, CLM Query Monitoring Screen “Available Liquidity per Account Holder”



# T2/T2S consolidation

## Module 4 – ID3 – Available liquidity CLM query



- First, the menu for liquidity transfers is called up in CLM.
- This can be accessed via the tab “Liquidity” and then “New Liquidity Transfer”.



  <b>Welcome</b> WIP	
Cash Transfers and Messages ▶	
<b>Liquidity</b> ▶	<b>Query CLM Cash Account Liquidity</b>
Liquidity Management Features ▶	New Liquidity Transfer
Query Standing Facilities	
Minimum Reserves ▶	
Reference Data ▶	
Administration ▶	

# T2/T2S consolidation

## Module 4 – ID3 – Available liquidity CLM query



- This overview displays the current account balance, incoming and outgoing payments, liquidity transfers and other information:

Search Criteria	
Results CLM	
Account Information	
Party BIC	Party Name
ZYEEDEFFXXX	NSD Testbank 2
Account Number	Account BIC
1MDEEURZYEEDEFFXXX	ZYEEDEFFXXX
Liquidity Information	
<b>Starting Balance</b>	<b>1,009,018.23 EUR</b>
Settled Cash Transfers	
<ul style="list-style-type: none"> <li>Settled Debit Liquidity Transfers</li> <li>Settled Credit Liquidity Transfers</li> <li>Settled Debit Payments</li> <li>Settled Credit Payments</li> </ul>	5.55 EUR 0.00 EUR 0.00 EUR 0.00 EUR
<b>Current Balance</b>	<b>1,009,012.68 EUR</b>
Credit Line	0.00 EUR
<b>Available Liquidity</b>	<b>1,009,012.68 EUR</b>
Queued Cash Transfers	
<ul style="list-style-type: none"> <li>Queued Debit Payments</li> <li>Queued Credit Payments</li> <li>Pending Credit Line Changes</li> </ul>	0.00 EUR 0.00 EUR 0.00 EUR
Earmarked Cash Transfers	
<ul style="list-style-type: none"> <li>Earmarked Debit Cash Transfers</li> <li>Earmarked Credit Cash Transfers</li> </ul>	0.00 EUR 0.00 EUR
<b>Projected Liquidity</b>	<b>1,009,012.68 EUR</b>
Reservations	
Reservations for Central Bank Operations	0.00 EUR
Reservations for Seizure of Funds	0.00 EUR
Pending Reservations	
Reservations for Central Bank Operations	0.00 EUR
Reservations for Seizure of Funds	0.00 EUR
Floor/Ceiling Information	
Floor Threshold	0.00 EUR
Ceiling Threshold	0.00 EUR

[New Liquidity Transfer Order](#)

# T2/T2S consolidation

## Module 4 – ID3 – Available liquidity CLM query



- Enlarged view

### Liquidity Information

<b>Starting Balance</b>	<b>0.00 EUR</b>
<b>Settled Cash Transfers</b>	
▶ Settled Debit Liquidity Transfers	-10.00 EUR
	1,000,000,000.00
▶ Settled Credit Liquidity Transfers	EUR
▶ Settled Debit Payments	0.00 EUR
▶ Settled Credit Payments	0.00 EUR
	<b>999,999,990.00</b>
<b>Current Balance</b>	<b>EUR</b>
Credit Line	0.00 EUR
	<b>999,999,990.00</b>
<b>Available Liquidity</b>	<b>EUR</b>

### Queued Cash Transfers

▶ Queued Debit Payments	0.00 EUR
▶ Queued Credit Payments	0.00 EUR
▶ Pending Credit Line Changes	0.00 EUR

### Earmarked Cash Transfers

▶ Earmarked Debit Cash Transfers	0.00 EUR
▶ Earmarked Credit Cash Transfers	0.00 EUR

	<b>999,999,990.00</b>
<b>Projected Liquidity</b>	<b>EUR</b>

### Reservations

Reservations for Central Bank Operations	0.00 EUR
Reservations for Seizure of Funds	0.00 EUR

### Pending Reservations

Reservations for Central Bank Operations	0.00 EUR
Reservations for Seizure of Funds	0.00 EUR

### Floor/Ceiling Information

Floor Threshold	0.00 EUR
Ceiling Threshold	0.00 EUR

Overview of all mandatory test cases for RTGS:

- T2\_TC\_RTGS\_AH\_ID1 – Send Liquidity Credit Transfer camt.050
- T2\_TC\_RTGS\_AH\_ID2 – Receive Liquidity Credit Transfer camt.054
- T2\_TC\_RTGS\_AH\_ID3 – Receive Resolution Of Investigation camt.029
- **T2\_TC\_RTGS\_AH\_ID4 – Send Financial Institution Credit Transfer pacs.009**
- **T2\_TC\_RTGS\_AH\_ID5 – Receive Financial Institution Credit Transfer pacs.009**
- T2\_TC\_RTGS\_AH\_ID6 – Send Customer Credit Transfer pacs.008
- T2\_TC\_RTGS\_AH\_ID7 – Receive Customer Credit Transfer pacs.008
- T2\_TC\_RTGS\_AH\_ID8 – Send Financial Institution Direct Debit pacs.010
- **T2\_TC\_RTGS\_AH\_ID9 – Request payment order revocation**
- T2\_TC\_RTGS\_AH\_ID10 – Send Payment Return pacs.004
- T2\_TC\_RTGS\_AH\_ID11 – Receive Payment Return pacs.004

# T2/T2S consolidation

## Module 4 – CLM + RTGS test cases

Choose a Service

TIPS  T2

Choose Component or Application

Business Day Management

CLM

CRDM

Data Migration Tool

Data Warehouse

RTGS

- Select the RTGS component in ESMIG



# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



Test description	Sending a FinancialInstitutionCreditTransfer via pacs.009 message.
Preconditions	Both submitting and correspondent actors have a valid RTGS account. Both accounts must be open at the value date of the payment. The submitter has a message subscription in place to receive the pacs.002 message.
Expected results	The credit transfer passes business validation and is settled with the full amount. U2A: A message confirming successful submission of the CT is displayed. A2A: The correspondent receives the forwarded pacs.009 “outbound”. The submitting actor receives a positive status report (pacs.002) (optional/if configured). (Credit/debit notifications are not created/sent for CT orders.)
Test evidence	U2A: Screenshot of the payment status in “Cash Transfers and Messages > Cash Transfers – Query Screen” A2A: Copy of the pacs.009 message and, if necessary, of the pacs.002 message
Relevant documents	RTGS UDFS: 12.4.4 FinancialInstitutionCreditTransfer (CORE and COV) (pacs.009), RTGS UHB: 5.7.4 Cash Transfer Order Totals by Status – List Screen, 5.1.7 Messages – Query Screen, 5.1.13 Financial Institution Credit Transfer – New
Necessary privileges	RTGS Enter Financial institution credit transfer (except mandated payments), RTGS Query Message, RTGS Query Message Details, RTGS Send Financial Institution Credit Transfer, RTGS Send Financial Institution Credit Transfer (except mandated payments)

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



- Select the service “RTGS”
- “Query RTGS Cash Account Liquidity”
- Select “Cash Transfer and Messages”
- Here, open the sub-category “New Financial Institution Credit Transfer”.

Query RTGS Cash Account Liquidity	
Query RTGS Cash Account Liquidity > Query RTGS Cash Account Liquidity	
Cash Transfers and Messages	▶ Query Cash Transfers
Liquidity	▶ Query Messages
Liquidity Management Features	▶ Query Business Cases
Ancillary System	▶ Query Account Postings
Reference Data	▶ New Customer Credit Transfer
Administration	▶ <b>New Financial Institution Credit Transfer</b>
Monitoring	▶ New Payment Return
	▶ Upload A2A File or Message

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



- Add the necessary data to the pacs.009.

+	Business Application Header*
-	FinancialInstitution Credit Transfer*
-	Credit Transfer Transaction Information*
+	Instructing Agent*
+	Debtor*
+	Debtor Agent
+	Instructed Agent*
+	Creditor*
+	Creditor Agent
+	Interbank Settlement*
+	Payment ID*
+	Settlement Time Request
+	Payment Type Information
+	Remittance Information
+	Previous Instructing Agents
+	Intermediary Agents

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



- Check that the task has been executed successfully.

#### Corresponding Task

Task ID	Business Case ID	Entry Timestamp	Task Type	Attribute	Amount	Old Value	New Value	Status	Initial User	Second User
7802	31317	2021-08-30 16:38:34 CEST	Enter Payment	pacs.009	5.00 EUR			Confirmed	DECBMARKDEFFXXXT2USER1	DECBMARKDEFFXXXT2USER1

<< < 1 > >> Results 1 to 1 of 1

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009

- View successfully executed pacs.009 (Status settled).

Corresponding Cash Transfer

Queue Position	Priority	Instruction ID	End to End ID	Message Type	Debit Account	Credit Account	Amount	Cash Transfer Status	Earliest Debit Timestamp	Latest Debit Timestamp	Settlement Timestamp	Entry Timestamp
	Normal	Pacs.009 Test	Pacs.009 Test	Financial Institution Credit Transfer (Pacs.009)	ZYEEDEFFXXX	ZYELDEFFXXX	5.00 EUR	Settled			2021-08-30 16:39:04 CEST	2021-08-30 16:38:35 CEST

General

Queue Position	Priority	Amount	Value Date
	Normal	5.00 EUR	2021-08-30
Cash Transfer Status	Cash Transfer Type	Message Type	Counterparty Country
Settled	Payment	Financial Institution Credit Transfer (Pacs.009)	DE

Account and Party Information

Debit Account	Debit Account Type	Credit Account
ZYEEDEFFXXX	RTGS DCA	ZYELDEFFXXX
From BIC (BAH)	To BIC (BAH)	
ZYEEDEFFXXX	ZYELDEFFXXX	

Identifier

Instruction ID	End to End ID	Business Case ID
Pacs.009 Test	Pacs.009 Test	31317
UETR	Original UETR	AS Batch Message
5cb792eb-d437-44c4-b6fe-ba39b99ffc9e		

Timing

Earliest Debit Timestamp	Latest Debit Timestamp	Settlement Timestamp	Entry Timestamp
		2021-08-30 16:39:04 CEST	2021-08-30 16:38:35 CEST

Summary Table:

Debit Account	Amount	Cash Transfer Status	Earliest Debit Timestamp
ZYELDEFFXXX	5.00 EUR	Settled	

## T2/T2S consolidation

### Module 4 – T2\_TC\_RTGS\_AH\_ID4

#### Send Financial Institution Credit Transfer pacs.009



Test description	Receipt of a FinancialInstitutionCreditTransfer via pacs.009 message.
Preconditions	Both submitting and correspondent actors have a valid RTGS account. Both accounts must be open at the value date of the payment. A pacs.009 message has been initiated.
Expected results	The recipient is credited on the RTGS account and confirms receipt via pacs.009 message.
Test evidence	U2A: Screenshot of the CT received in “Cash Transfers and Messages “Cash Transfers – Query Screen” A2A: Copy of the pacs.009 message received
Relevant documents	RTGS UDFS: 5.1.13 Financial Institution Credit Transfer – New Screen 6.1.9 Enter payment order – pacs.009 RTGS UHB: 12.4.4 FinancialInstitutionCreditTransfer (CORE and COV) (pacs.009)
Necessary privileges	RTGS Query Message RTGS Query Message Details

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

Send Financial Institution Credit Transfer pacs.009



- Select “Query RTGS Cash Account Liquidity”.
- “Liquidity” tab
- Here, open sub-category “Query RTGS Cash Account Liquidity”.

The screenshot shows a web application interface with a dark blue header. On the left, there is a hamburger menu icon and an envelope icon. The header text reads "Welcome" followed by a breadcrumb trail: "Query RTGS Cash Account Liquidity > Display RTGS Cash Account Liquidity > List of Cash Transfers > Details of Cash Transfer". Below the header is a navigation menu with several items, each with a right-pointing arrow. The "Liquidity" item is highlighted in dark blue and contains the sub-item "Query RTGS Cash Account Liquidity". Other items include "Cash Transfers and Messages", "Liquidity Management Features" (with sub-item "New Liquidity Transfer"), "Ancillary System", "Reference Data", and "Administration".

Cash Transfers and Messages	▶	
<b>Liquidity</b>	▶	<b>Query RTGS Cash Account Liquidity</b>
Liquidity Management Features	▶	New Liquidity Transfer
Ancillary System	▶	
Reference Data	▶	
Administration	▶	

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



- Enter the appropriate search criteria (BIC).

**Search Criteria**

**General\***

Account Number: RDEEURZYELDEFFXXXDCA1

Account BIC: ZYELDEFFXXX

- Check the credits received under “Results”.

**Search Criteria**

**Results** Last Refresh: 2021-08-30 17:39:37 CEST Refresh

**Account Information**

Party BIC	Party Name	Account Number	Account BIC
ZYELDEFFXXX	NSD Testbank 1	RDEEURZYELDEFFXXXDCA1	ZYELDEFFXXX

**Liquidity Information**

<b>Starting Balance</b>	<b>672.62 EUR</b>
<b>Settled Cash Transfers</b>	
Settled Debit Liquidity Transfers	0.00 EUR
Settled Credit Liquidity Transfers	0.00 EUR
Settled Debit Payments and AS Transfers	0.00 EUR
Settled Credit Payments and AS Transfers	5.00 EUR
<b>Current Balance</b>	<b>677.62 EUR</b>
<b>Queued Cash Transfers</b>	
Queued Debit Liquidity Transfers	0.00 EUR
Queued Debit Payments and AS Transfers	0.00 EUR
Queued Credit Payments and AS Transfers	0.00 EUR
<b>Earmarked Cash Transfers</b>	
Earmarked Debit Cash Transfers	0.00 EUR
Earmarked Credit Cash Transfers	0.00 EUR
<b>Projected Liquidity</b>	<b>677.62 EUR</b>

**Total Liquidity**

RTGS DCA Liquidity	677.62 EUR
Total Sub-Account Liquidity	0.00 EUR
<b>Total RTGS Liquidity</b>	<b>677.62 EUR</b>

**Sub-Account(s)**

No Entries found.



# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID4

### Send Financial Institution Credit Transfer pacs.009



- Summary of cash transfer by clicking on “Settled Credit Liquidity Transfers”

Corresponding Cash Transfer

Queue Position	Priority	Instruction ID	End to End ID	Message Type	Debit Account	Credit Account	Amount	Cash Transfer Status	Earliest Debit Timestamp	Latest Debit Timestamp	Settlement Timestamp	Entry Timestamp	
	Normal	Pacs.009 Test	Pacs.009 Test	Financial Institution Credit Transfer (Pacs.009)	ZYEEDEFFXXX	ZYELDEFFXXX	5.00 EUR	Settled			2021-08-30 16:39:04 CEST	2021-08-30 16:38:35 CEST	...

General

Queue Position	Priority	Amount	Value Date
	Normal	5.00 EUR	2021-08-30
Cash Transfer Status	Cash Transfer Type	Message Type	Counterparty Country
Settled	Payment	Financial Institution Credit Transfer (Pacs.009)	DE

Account and Party Information

Debit Account	Debit Account Type	Credit Account	Credit Account Type
ZYEEDEFFXXX	RTGS DCA	ZYELDEFFXXX	RTGS DCA
From BIC (BAH)	To BIC (BAH)		
ZYEEDEFFXXX	ZYELDEFFXXX		

Identifier

Instruction ID	End to End ID	Business Case ID	Clearing System Reference
Pacs.009 Test	Pacs.009 Test	31317	10851
UETR	Original UETR	AS Batch Message Reference	
5cb792eb-d437-44c4-b6fe-ba39b99ffc9e			

Timing

Earliest Debit Timestamp	Latest Debit Timestamp	Settlement Timestamp	Entry Timestamp
		2021-08-30 16:39:04 CEST	2021-08-30 16:38:35 CEST

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID9

### Request payment order revocation



Test description	Revocation of a payment to a RTGS account which has not yet been settled.
Preconditions	<p>“Revoking Financial Credit Institution Credit Transfer” is possible<sup>1</sup> for</p> <ul style="list-style-type: none"> <li>- pacs.004</li> <li>- pacs.008</li> <li>- pacs.009</li> </ul> <p>with the status “Warehoused”, “Earmarked” or “Queued” and for AS transfer orders with AS settlement procedure E.<sup>2</sup></p>
Expected results	<p>U2A: A “completed” message comes up in the “Cash Transfers – List Screen“ view.</p> <p>A2A: Receipt of a payment order revoked – payment order revocation execution message (camt.029)            Receipt of a payment order revocation message (pacs.002)</p>
Test evidence	<p>U2A: Screenshot of the relevant notification once the revocation has been accepted</p> <p>A2A: copy of the pacs.002 message received</p>
Relevant documents	<p>RTGS UDFS: 5.3.7</p> <p>UHB RTGS: 6.1.3</p>
Necessary privileges	RTGS Revoke Payment Order

<sup>1</sup> In accordance with RTGS UDFS, pacs.010 messages can also be revoked – but this is not part of the test case.

<sup>2</sup> Only possible for ancillary systems.

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID9

### Request payment order revocation



- Select the payment to be revoked via “Query `RTGS Cash Account Liquidity`” or “Query Cash Transactions”.

target services | T2 Real Time Gross Settlement  
EXTERNAL ACCEPTA... | Business Day 2021-09-23

Display RTGS Cash Account Liquidity  
Query RTGS Cash Account Liquidity

Liquidity Information		Total Liquidity
<b>Starting Balance</b>	<b>165,227.62 EUR</b>	RTGS DCA Liquidity
<b>Settled Cash Transfers</b>		Total Sub-Account Liqui
▶ Settled Debit Liquidity Transfers	0.00 EUR	<b>Total RTGS Liquidity</b>
▶ Settled Credit Liquidity Transfers	0.00 EUR	– Sub-Account(s)
▶ Settled Debit Payments and AS Transfers	1.00 EUR	No Entries found.
▶ Settled Credit Payments and AS Transfers	0.00 EUR	
<b>Current Balance</b>	<b>165,226.62 EUR</b>	
<b>Queued Cash Transfers</b>		
▶ Queued Debit Liquidity Transfers	0.00 EUR	
▶ Queued Debit Payments and AS Transfers	520,000,000.00 EUR	
▶ Queued Credit Payments and AS Transfers	0.00 EUR	
<b>Earmarked Cash Transfers</b>		
▶ Earmarked Debit Cash Transfers	0.00 EUR	
▶ Earmarked Credit Cash Transfers	0.00 EUR	
<b>Projected Liquidity</b>	<b>-519,834,773.38 EUR</b>	
<b>Reservations</b>		
Urgent	0.00 EUR	

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID9

### Request payment order revocation

- or via “Query Cash Transactions”



Item	Priority	Test Nr	Test Nr	Financial Institution Credit Transfer (Pacs.009)	ZYEEDEFFXXX	ZYELDEFFXXX	20,000,000.00 EUR	Queued			
<input checked="" type="checkbox"/>	Normal	Test Nr 1	Test Nr 1	Financial Institution Credit Transfer (Pacs.009)	ZYEEDEFFXXX	ZYELDEFFXXX	20,000,000.00 EUR	Queued			
<input type="checkbox"/>	Normal	TestFab1	NOTPROVIDED	Financial Institution Credit Transfer (Pacs.009)	ZYEEDEFFXXX	ZYELDEFFXXX	1.00 EUR	Settled			
<input type="checkbox"/>	Urgent	46817	SO-MCA-to-RTGS	Liquidity Transfer (camt.050)	NEUEURECBFDEFFXXXRTGS	RDEEURZYEEDEFFXXX	2.22 EUR	Rejected			

« < 1 > » Results 1 to 4 of 4

- Revoke
- Details
- Modify Priority
- Cash Account Reference Data of Debit Account
- Display Message

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID9

### Request payment order revocation

- Notification following successful revocation

☰
✉
List of Cash Transfers
Query RTGS Cash Account Liquidity > Display RTGS Cash Account Liquidity

Operation Successful 1 of 1 Completed Restore Notifications ✕

Position	Priority	Instruction ID	End to End ID	Message Type	Debit Account	Credit Account	Amount
	Normal	TestID9	NOTPROVIDED	Financial Institution Credit Transfer (Pacs.009)	ZYEEDFFXXX	ZYELDEFFXXX	500,000,000.00

ID : 10094

+ Search Criteria

---

- Results Last Refresh: 2021-09-23 10:46:14 CEST Refresh

List of Cash Transfers

	ity	Instruction ID	End to End ID	Message Type	Debit Account	Credit Account	Amount	
<input checked="" type="checkbox"/>	nal	TestID9	NOTPROVIDED	Financial Institution Credit Transfer (Pacs.009)	ZYEEDFFXXX	ZYELDEFFXXX	500,000,000.00	⋮
<input type="checkbox"/>	nal	Test Nr 1	Test Nr 1	Financial Institution Credit Transfer (Pacs.009)	ZYEEDFFXXX	ZYELDEFFXXX	20,000,000.00	⋮



⏪ ⏩ 1 ⏪ ⏩
Results 1 to 2 of 2

# T2/T2S consolidation

## Module 4 – T2\_TC\_RTGS\_AH\_ID9

### Request payment order revocation

- Check new status


  **List of Task Queue**  
Query Task Queue > List of Task Queue

**+ Search Criteria**

**- Results** Last Refresh: 2021-09-23 11:37:46 CEST

List of Task Queue

Task ID	Business Case ID	Entry Timestamp	Task Type	Attribute	Amount	Old Value	New Value	Status	Initial User	Second
10096	46893	2021-09-23 10:48:37 CEST	Revoke Cash Transfer Order	Cash Transfer Status	20,000,000.00 EUR	Revoked	Revoked	Completed	DECBMARKDEFFXXXT2USER1	DECBM/ ...
10094	46917	2021-09-23 10:46:45 CEST	Revoke Cash Transfer Order	Cash Transfer Status	500,000,000.00 EUR	Revoked	Revoked	Completed	DECBMARKDEFFXXXT2USER1	DECBM/ ...

« < 1 > » Results 1 to 2 of 2 

# T2/T2S consolidation

## Module 4 – Validation of A2A messages

- The ISO 20022 messages can be validated in advance via the [SWIFT myStandards Readiness Portal](#)
- [MyStandards & Readiness Portal – Guideline](#)



target: **RTGS\_pacs\_guidelines**  
Technical version: v.92 imported , Version: UDFS v2.1 , Status: Final

+ New Version Follow Export

Show details

Usage Guidelines Technical Versions

pac002_FIToFIPaymentStatusReport_pacs.002.001.10	📄
pac004_PaymentReturn_pacs.004.001.09	📄
pac008_FIToFICustomerCreditTransfer_pacs.008.001.08	📄
pac009_FIToFIFinancialInstitutionCreditTransfer_pacs.009.001.08	📄
pac010_InterbankDirectDebit_FinancialInstitutionDirectDebit_pacs.010.001.03	📄



target: **BusinessApplicationHeader**  
Technical version: v.10 From v.9 , Version: CRDM UDFS v2.1

+ New Version Follow Export

Show details

Usage Guidelines Technical Versions

head001_BusinessApplicationHeader_head.001.001.01	📄
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**5** Module 5 – Migration testing

5.1. Migration testing



- The following **migration tests** are planned during the user testing phase:
  - Migration Weekend Rehearsal on 28 March to 1 April 2022 (during the week)
  - Migration Weekend Dress Rehearsal on 8 July to 11 July 2022 (over the weekend)
  - Migration Weekend Dress Rehearsal on 23 September to 26 September 2022 (over the weekend)
  - Optional Migration Weekend Rehearsal in October 2022 (to be confirmed)
- There will probably be a **cleaning up procedure** prior to the migration testing. This involves the deletion of dynamic data such as balances, minimum reserve holdings and requirements, etc.
- During the **migration weekend**, you should check whether liquidity has been correctly migrated from TARGET2 CUST to T2 CLM and possibly distribute liquidity to other accounts.

# T2/T2S consolidation

## Module 5 – Migration testing



ID	Activity code	Resource Names	Task Name	Duration	Start	Finish	Predecessors
1			<b>Migration Weekend</b>	<b>3.56 days</b>	<b>18/11/22 18:45</b>	<b>19/11/22 23:15</b>	<b>12</b>
2	T2.MW.T2O.GLAS	T2 OP	Send last TARGET2 GL file and account statements	15 mins	18/11/22 18:45	18/11/22 19:00	
3	<b>MWCP0</b>	<b>ALL</b>	<b>MWCP0 - Start of Migration Weekend</b>	<b>10 mins</b>	<b>18/11/22 19:00</b>	<b>18/11/22 19:10</b>	<b>2</b>
4	T2.MW.T2O.CRDM.LC	T2 OP	CRDM loading to CLM/RTGS	30 mins	18/11/22 19:10	18/11/22 19:40	
5	T2.MW.T2O.TAR2.DIST	T2 OP	<b>Technical connectivity</b>	<b>1.4 days</b>	<b>18/11/22 19:10</b>	<b>19/11/22 06:20</b>	<b>3</b>
6	T2.MW.T2O.TAR2.DIST	T2 OP	TARGET2 disconnected from T2S and TIPS	240 mins	18/11/22 19:10	18/11/22 23:10	
7	T2.MW.T2O.T2.CON	T2 OP	T2 connected to T2S and TIPS	240 mins	18/11/22 23:10	19/11/22 03:10	
8	T2.MW.CB.ESMIG	ALL CBs	CB connect internal systems to ESMIG	375 mins	18/11/22 19:10	19/11/22 01:25	
9	T2.MW.T2P.ESMIG	ALL T2Ps	T2P connect internal systems to ESMIG	240 mins	18/11/22 19:10	18/11/22 23:10	
10	T2.MW.T2P.ESMIG	ALL T2Ps	T2P connect internal systems to ESMIG - buffer	430 mins	18/11/22 23:10	19/11/22 06:20	
11	T2.MW.T2O.CL.MIG	T2 OP	<b>Migration of Credit Lines</b>	<b>0.03 days</b>	<b>18/11/22 19:40</b>	<b>18/11/22 19:54</b>	<b>4</b>
12	T2.MW.T2O.CL.MIG	T2 OP	Migration of Credit Lines	15 mins	18/11/22 19:40	18/11/22 19:54	
13	T2.MW.CB.CL.REC	AT-CB	CB reconciliation of migrated credit lines	0.19 days	18/11/22 19:55	18/11/22 21:25	
14	T2.MW.CB.CL.REC	AT-CB	CB reconciliation of migrated credit lines	60 mins	18/11/22 19:55	18/11/22 20:55	11
39	T2.MW.T2O.CL.REP	T2 OP	Credit lines repair	20 mins	18/11/22 20:55	18/11/22 21:15	14, 15, 16
40	<b>MWCP1</b>	<b>ALL</b>	<b>MWCP1</b>	<b>10 mins</b>	<b>18/11/22 21:15</b>	<b>18/11/22 21:25</b>	<b>39</b>
41	T2.MW.T2O.BL.MIG	T2 OP	Migration of balances	0.13 days	18/11/22 21:25	18/11/22 22:25	
42	T2.MW.T2O.BL.MIG	T2 OP	Migration of balances	60 mins	18/11/22 21:25	18/11/22 22:25	
43	T2.MW.CB.BR	AT-CB	CB balance reconciliation	0.4 days	18/11/22 22:25	19/11/22 01:35	41, 42
44	T2.MW.CB.BR	AT-CB	CB balance reconciliation	120 mins	18/11/22 22:25	19/11/22 00:25	41, 42
69	T2.MW.T2P.BL.REP	T2 OP	Repair balances	60 mins	19/11/22 00:25	19/11/22 01:25	44, 45, 46
70	<b>MWCP2</b>	<b>ALL</b>	<b>MWCP2</b>	<b>10 mins</b>	<b>19/11/22 01:25</b>	<b>19/11/22 01:35</b>	<b>69, 48</b>
71	T2.MW.T2O.BD.CHG	T2 OP	CLM & RTGS Start of Business Day	0.64 days	19/11/22 01:35	19/11/22 06:40	
72	T2.MW.T2O.BD.CHG	T2 OP	CLM & RTGS Start of Business Day	15 mins	19/11/22 01:35	19/11/22 01:50	
73	T2.MW.CB.SF.REC	AT-CB	Reconciliation of the reimbursement of the SF and related interest calcul	60 mins	19/11/22 01:50	19/11/22 02:50	
98	T2.MW.CB.CL.MOD	AT-CB	Credit Line modification	15 mins	19/11/22 02:50	19/11/22 03:05	
123	T2.MW.CB.CL.M.LD	AT-CB	CB liquidity distribution from CLM	180 mins	19/11/22 03:05	19/11/22 06:05	
148	T2.MW.CB.CL.M.A2A.C	AT-CB	CB verification of sent messages	15 mins	19/11/22 06:05	19/11/22 06:20	123
173	<b>MWCP3</b>	<b>ALL</b>	<b>MWCP3</b>	<b>10 mins</b>	<b>19/11/22 06:20</b>	<b>19/11/22 06:30</b>	<b>148, 174</b>
174	T2.MW.T2O.A2A.CHC	T2 OP	Operator check that A2A messages have been received	10 mins	19/11/22 06:30	19/11/22 06:40	173
175	T2.MW.T2O.CLM.STA	T2 OP	CLM Start of provisioning liquidity	0.03 days	19/11/22 06:40	19/11/22 06:55	
176	T2.MW.T2O.CLM.STA	T2 OP	CLM Start of provisioning liquidity	15 mins	19/11/22 06:40	19/11/22 06:55	174
177	T2.MW.CB.CLM.LR	AT-CB	CB liquidity distribution reconciliation and repair	0.4 days	19/11/22 06:55	19/11/22 10:05	
178	T2.MW.CB.CLM.LR	AT-CB	CB liquidity distribution reconciliation	120 mins	19/11/22 06:55	19/11/22 08:55	176
203	T2.MW.CB.CLM.RP	AT-CB	CB Liquidity distribution from CLM repair	60 mins	19/11/22 08:55	19/11/22 09:55	178
228	<b>MWCP4</b>	<b>ALL</b>	<b>MWCP4</b>	<b>10 mins</b>	<b>19/11/22 09:55</b>	<b>19/11/22 10:05</b>	<b>203, 204</b>
229	T2.MW.T2P.CLM.LD	AT-T2Ps	T2P liquidity distribution from CLM and repair	0.38 days	19/11/22 10:05	19/11/22 13:05	
230	T2.MW.T2P.CLM.LD	AT-T2Ps	T2P liquidity distribution from CLM	60 mins	19/11/22 10:05	19/11/22 11:05	228
255	T2.MW.T2P.CLM.LR	AT-T2Ps	T2P liquidity distribution reconciliation	60 mins	19/11/22 11:05	19/11/22 12:05	230
280	T2.MW.T2P.CLM.LRP	AT-T2Ps	T2P liquidity distribution from CLM repair	60 mins	19/11/22 12:05	19/11/22 13:05	255
305	T2.MW.T2O.CLM.SORT	T2 OP	CLM standing orders: Processing, reconciliation and repair	0.3 days	19/11/22 13:05	19/11/22 15:30	
306	T2.MW.T2O.CLM.SORT	T2 OP	Processing of CLM standing orders	15 mins	19/11/22 13:05	19/11/22 13:20	281
307	T2.MW.CB.CLM.SOR	AT-CB	CB CLM standing orders reconciliation	60 mins	19/11/22 13:20	19/11/22 14:20	306
332	T2.MW.T2P.CLM.SORAT	T2Ps	T2P CLM standing orders reconciliation	60 mins	19/11/22 13:20	19/11/22 14:20	306
357	T2.MW.T2O.CLM.SORT	T2 OP	CLM standing orders repair	60 mins	19/11/22 14:20	19/11/22 15:20	307, 308
358	<b>MWCP5</b>	<b>ALL</b>	<b>MWCP5</b>	<b>10 mins</b>	<b>19/11/22 15:20</b>	<b>19/11/22 15:30</b>	<b>357</b>
359	T2.MW.T2O.RTGS.SOT	T2 OP	RTGS standing orders: Processing, reconciliation and repair	0.3 days	19/11/22 15:30	19/11/22 17:55	

# T2/T2S consolidation

## Module 5 – Migration testing



T2		Migration Weekend Playbook							
ID	Activity code	Resource Names	Task Name	Duration	Start	Finish	Predecessors		
								12	15
360	T2.MW.T2O.RTGS.SOT2	OP	Execution of RTGS standing orders	15 mins	19/11/22 15:30	19/11/22 15:45	358		
361	T2.MW.CB.RTGS.SOFAT	CB	CB RTGS standing orders reconciliation	60 mins	19/11/22 15:45	19/11/22 16:45	360		
386	T2.MW.T2P.RTGS.SO	AT-T2Ps	T2P RTGS standing orders reconciliation	60 mins	19/11/22 15:45	19/11/22 16:45	360		
411	T2.MW.T2P.RTGS.SO	T2 OP	RTGS standing orders repair	60 mins	19/11/22 16:45	19/11/22 17:45	361,362		
412	MWCP6	ALL	MWCP6	10 mins	19/11/22 17:45	19/11/22 17:55	411		
413	T2.MW.CB.RTGS.LD	AT-CB	Liquidity distribution from RTGS	0.4 days	19/11/22 17:55	19/11/22 21:05	412		
414	T2.MW.CB.RTGS.LD	AT-CB	CB liquidity distribution from RTGS	60 mins	19/11/22 17:55	19/11/22 18:55	412		
439	T2.MW.CB.RTGS.LR	AT-CB	CB liquidity distribution reconciliation	60 mins	19/11/22 18:55	19/11/22 19:55	414		
464	T2.MW.CB.RTGS.LRPAT	CB	CB liquidity distribution from RTGS repair	60 mins	19/11/22 19:55	19/11/22 20:55	439		
489	T2.MW.T2P.RTGS.LD	AT-T2Ps	T2P liquidity distribution from RTGS	60 mins	19/11/22 17:55	19/11/22 18:55	412		
514	T2.MW.T2P.RTGS.LR	AT-T2Ps	T2P liquidity distribution reconciliation	60 mins	19/11/22 18:55	19/11/22 19:55	489		
539	T2.MW.T2P.RTGS.LR	AT-T2Ps	T2P liquidity distribution from RTGS repair	60 mins	19/11/22 19:55	19/11/22 20:55	514		
564	MWCP7	ALL	MWCP7	10 mins	19/11/22 20:55	19/11/22 21:05	464,465		
565	T2.MW.CB.MRB	AT-CB	CB minimum reserve balances update	0.27 days	19/11/22 21:05	19/11/22 23:15			
566	T2.MW.CB.MRB	AT-CB	CB minimum reserve balances update	120 mins	19/11/22 21:05	19/11/22 23:05	564		
591	MWCP8	ALL	MWCP8	10 mins	19/11/22 23:05	19/11/22 23:15	566,567		

# TARGET2/T2S consolidation

## Services provided by the Bundesbank

