

<b>General Information (Origin of Request)</b>		
<input type="checkbox"/> User Requirements (URD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
<b>Request raised by:</b> Operations Managers Group	<b>Institute:</b> ECB	<b>Date raised:</b> 12/12/2013
<b>Request title:</b> Blocking of U2A interface for any activity that lead to change of T2S database during reconciliation process post RAD (Recovery After Disaster)		<b>Request ref. no:</b> T2S 0446 SYS
<b>Request type:</b> Common	<b>Urgency:</b> Normal	
<b>1. Legal/business importance parameter:</b> High	<b>2. Market implementation efforts parameter:</b> Medium	
<b>3. Operational/Technical risk parameter:</b> High	<b>4. Financial impact parameter:</b> Medium	
<b>Requestor Category:</b> T2S Sub-group	<b>Status:</b> Authorised at steering level	

**Reason for change and expected benefits/business motivation:**

In case of a regional disaster T2S will failover to second region. In case the connections in the first region cannot be properly closed before the failover, a loss of data (RPO <2 minutes) may occur following the latency and asynchronous updates performed in the alternate region. Reconciliation for the alternate region is performed in order to synchronise T2S, and the missing data is reloaded. It is currently possible to switch off the A2A communication channel completely (i.e. the receipt of new instructions, queries, update requests, etc. in T2S during the time of the reconciliation). It is currently not possible to technically block the U2A for T2S Actors (excl. ICPs)..A proper reconciliation will not be possible unless the possibility to enter new instruction is fully blocked and queries are fully allowed. Without proper reconciliation there will be a negative impact on the restart of settlement activities.

During the reconciliation, the T2S Actors (excl. ICPs) would check the instructions and data updates received before the failover that have been identified as sent to T2S in its own records against the instructions and data updates that are present in T2S in order to identify the instructions that have been lost and retransmit the instructions.

Whilst a regional disaster is seen as a rare event, it is key that the reconciliation process, aiming at identifying the missing instructions, transactions and movements, can be performed rapidly and accurately by the impacted T2S Actors (excl. ICPs). The main condition to secure the reconciliation process is the fact that the T2S databases are not altered during this process. Whilst by design no A2A messages, which can alter the T2S databases, are treated during the reconciliation process, this is in the current design not the case for U2A messages. All end-users that have a write access on the T2S GUI will be able to send any message to T2S, hence updating the T2S Databases. This fact will render the reconciliation process extremely cumbersome, or make it even impossible. Be aware that CSDs are responsible for reconciliation of the DCPs<sup>1</sup>, the same as CBs for its Payment Banks (under the assumption that CBs can get access to all those pieces of information concerning securities account linked to the DCAs held by the Payment banks that are necessary to quickly perform such a reconciliation).

Although during a regional disaster and subsequent recovery activities all T2S Actors will be made sufficiently aware of the situation by Broadcast messages and warning messages displayed via the GUI; it cannot be excluded that T2S Actors (excl. ICPs), after several hours of unavailability of T2S, will try to submit new instructions or change existing instructions once T2S is available again, rendering the reconciliation more cumbersome and delaying the process.

When this change request is not implemented the operational risk that the reconciliation is delayed or may even become impossible, will increase substantially. The OMG considered and discarded alternative solutions:

- Blocking of the U2A channel as the reconciliation can also be performed using A2A, however, this would not allow those DCPs that only have U2A access to perform its reconciliation. Moreover, participants consider that read access to the GUI is required in order to perform monitoring and checks during this reconciliation phase.
- De-activating the write-access user profile and activating a read-only user profile is possible, however, the maintenance of such activity was seen as very cumbersome and error prone carrying as this would mean that on a continuous basis two user profiles need to be maintained of which one will rarely be used and if one the day that profile is needed it may be outdated / no longer useable. This solution also bears the risk that access rights are not revoked in such a timely manner, potentially resulting, in case of error, in two active users on the platform.

<sup>1</sup> There is a need for CSDs to coordinate with DCPs during reconciliation, in case the DCP has sent new instructions to T2S while the copy of the instruction has not been received by the CSD, these instructions need to be identified and aligned with the CSD

**Description of requested change:**

During the reconciliation process post RAD, all requests that lead to changes of the T2S database shall be blocked. At the same time, all T2S query functionality shall be fully available. This shall apply in the same way to A2A and U2A. In order to achieve this, two types of changes are required:

1. **U2A:** Develop a functionality to allow the T2S Operator to prevent the submission and verification of new U2A instructions restrictions and cancellations for cash and securities, in the T2S GUI. The modification of instructions including priority, partial settlement, linkage, hold and release, etc. should be prevented. Cancellation of settlement instructions and restrictions, creation of immediate liquidity transfers and any update to the static data should also be prevented.
2. **A2A:** During the reconciliation process post RAD, remove the blocking of query related messages and enable T2S to send all query responses to T2S Actors. This shall be applicable for all communication channels, real-time and store-and-forward. It should be applicable in the same way for all NSPs (SIA-Colt and SWIFT).

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**Submitted annexes / related documents:**

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**Proposed wording for the SYS Change request:**

There shall be a functionality available to the T2S operator to block the below activities during the reconciliation process post RAD in U2A (currently blocking is only performed in A2A).

- Submission and verification of new instructions and restrictions (on securities and cash)
- Amendment of existing instructions and restrictions including priority, partial settlement, linkage, hold and release, etc.
- Cancellation of settlement instructions and restrictions
- Creation of immediate liquidity transfers
- Any updates to the static data (including creation, amendment and cancellation of standing/predefined liquidity transfers)

The query functionality should be made available at any time during the reconciliation process in A2A currently only possible in U2A mode. This should apply to all existing T2S communication channels.

Upon attempting to enter new data while the entry in the U2A is blocked an error message shall be returned that the entry is not possible or the functionality is not available in the menu.

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**High level description of Impact:**

All the screens through which a T2S Actor can submit the following operations:

- instructions
- restrictions
- cancellations of settlement instructions and restrictions
- immediate liquidity transfers
- any static data update

must be not accessible during the post-RAD reconciliation phase as per Framework Agreement, schedule 6, par. 3.1 (Eurosystem's responsibilities). This can be achieved by setting, at access rights configuration level, the Deny flag to "True" for all the privileges related to the relevant screens that had been granted to the system users defined in T2S.

As there is no differentiation in T2S between A2A and U2A privileges, such approach will also allow preventing the usage of the same functions in A2A mode.

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**Outcome/Decisions:**

- \* CRG meeting of 10 February 2014: The CRG decided to put the Change Request on hold and wait for further clarifications from the OMG.
- \* CRG Telco of 14 March 2014: The CRG agreed to make some minor changes in the wording of the Change Request for clarification purposes, and decided to launch the detailed assessment on the updated Change Request.
- \* CRG meeting of 28 May 2014: The CRG agreed to make a minor change in the Change Request and one update in the detailed assessment of the Change Request (both for clarification purposes). The CRG also recommended to put the Change Request on hold and asked the OMG to consider some further elements brought from the T2S PO and the 4CB during the CRG given the current phase of the project and the priority to focus on the stabilisation of the application.
- \* OMG written procedure from 30 May to 12 June 2014: Following the feedback received on the CRG proposal to postpone the implementation of the Change Request 446 for a future release of T2S, no objections were received. One CSD proposed to consider the implementation for Wave 2 in 2016 (supporting the request of the 4CB to focus on stabilising the application for Go Live).
- \* CRG meeting of 16 July 2014: The CRG decided to park the Change Request for a future release of T2S potentially.
- \* CRG meeting on 8-9 February 2016: The CRG identified the Change Request as a candidate for the Release 1.3. The CRG agreed to re-discuss the Change Request in the next CRG teleconference on 24 February 2016 when deciding on the list of Change Requests for Release 1.3. The CRG agreed to check with the OMG whether it is necessary from the operational viewpoint to include this CR in Release 1.3.
- \* CRG Telco of 24 February 2016: The CRG decided to put the Change Request on hold for T2S Release 2.0 potentially.
- \* CRG on 17 October 2016: During the written procedure from 10 - 17 October 2016, the CRG recommended to launch the preliminary assessment on the Change Request from 24 October 2016 to 15 November 2016 (batch 2).
- \* OMG on 08 November 2016: During a written procedure from 28 October - 08 November 2016, the Operations Managers Group did not identify any blocking operational impact of the Change Request.
- \* CRG telco on 16 November 2016: The CRG took note of the T2S functionalities/modules impacted by the Change Request following the 4CB preliminary assessment.
- \* CRG meeting on 24 January 2017: The CRG agreed to make some changes and recommended to launch the detailed assessment of the updated Change Request and asked the 4CB to check the feasibility to deliver the Change Request in the T2S Release 2.0.
- \* Advisory Group on 02 February 2017: In a written procedure from 26 January 2017 to 02 February 2017, the Advisory Group was in favour of launching the detailed assessment on the Change Request.
- \* CSD Steering Group on 03 February 2017: In a written procedure from 26 January 2017 to 03 February 2017, the CSD Steering Group was in favour of launching the detailed assessment on the Change Request.
- \* Operational Managers Group on 29 May 2017: Following a written procedure from 22 - 29 May 2017, the Operations Managers Group reconfirmed that the Change Request does not have any blocking operational impact.
- \* CRG meeting on 07 June 2017: The CRG was in favour of recommending the Change Request for approval and inclusion into T2S Release 2.0, subject to CRG agreement on the cost drivers shared by the 4CB as the CRG would like to have better view on the cost drivers or reasons for the cost considering that the CR required development of only 2 scripts.. In addition, some CRG members were of the opinion that the Change Request should be classified as 'corrective maintenance' and agreed to seek the guidance from the steering level.
- \* PMG on 1 August 2017: During a written procedure from 31 July to 1 August 2017, the Project Managers Group was in favour of adding the Change Request to Release 2.0 from a planning perspective.
- \* Advisory Group on Market Infrastructures for Securities and Collateral (AMI-SeCo) on 7 August 2017: Following a written procedure from 1 to 7 August 2017, the AMI-SeCo was in favour of approving the Change Request and its inclusion in T2S Release 2.0
- \* CSD Steering Group on 8 August 2017: Following a written procedure from 1 to 8 August 2017, the CSG adopted the resolution to approve the Change Request and its inclusion in T2S Release 2.0

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**Preliminary assessment:**

- **Impacted functionality / module:** U2A, SDMG
- **Financial impact parameter:** Medium (preliminary assessed)
- **To be considered:**
  - Detailed assessment of 05/2014 is totally outdated and needs to be revalidated. Potential Impact

- on Operation/Migration to be verified during the update of the Detailed Assessment.
- Modify the list of screens to be impacted:
  - Add Restriction Type Rule - New/Edit Screen in the 2nd group
  - Add Data changes - Details Screen (approve) in the 2nd group
  - Add Working closing day - New/Edit Screen (Operator only) in the 2nd group.
- **Following issues have to be clarified before the start of detailed assessment:**
  - With regards to the proposal to add Data Changes - Details screen to the lists, we understand that the screen itself remains available post-RAD reconciliation process, but only the approval button should not be clickable.

No further functional, technical and risk related issues have been identified beyond the elements already described in the Change Request.

**EUROSYSTEM ANALYSIS – GENERAL INFORMATION**

<b>Impact On T2S</b>	<b>Static data management</b>		<b>Interface</b>		
		Party data management		Communication	
		Securities data management		Outbound processing	
		T2S Dedicated Cash account data management		Inbound processing	
		Securities account data management			
	X	Rules and parameters data management			
	<b>Settlement</b>		<b>Liquidity management</b>		
		Standardisation and preparation to settlement		Outbound Information Management	
		Night-time Settlement		NCB Business Procedures	
		Daytime Recycling and optimisation		Liquidity Operations	
		Daytime Validation, provisioning & booking	<b>LCMM</b>		
		Auto-collateralisation		Instructions validation	
				Status management	
	<b>Operational services</b>			Instruction matching	
		Data Migration		Instructions maintenance	
		Scheduling	<b>Statistics, queries reports and archive</b>		
		Billing		Report management	
		Operational monitoring		Query management	
				Statistical information	
				Legal archiving	
		All modules (Infrastructure request)			
		No modules (infrastructure request)			
		Business operational activities			
	Technical operational activities				

<b>Impact on major documentation</b>				
<b>Document</b>	<b>Chapter</b>		<b>Change</b>	
Impacted GFS chapter				
Impacted UDFS chapter				
Additional deliveries for Message Specification				
UHB				
External training materials				
Other documentations				
Links with other requests				
Links	Reference		Title	

**OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT**

**Summary of functional, development, infrastructure and migration impacts**

The T2S Service Desk will have to coordinate the different steps of the process allowing blocking and unblocking the relevant settlement-related functions during the post-RAD reconciliation process, following the indications given by the Crisis Managers and the Settlement Managers during the process.

The solution will have no impact on the T2S software and will be based on the modification of the access rights configuration of system privileges and object privileges:

- 6 new scripts will be developed from scratch to set the Deny flag to "True" for all the system users (with the exception of the system users linked to the T2S Operator). This will block all the relevant settlement-related functions that must be prevented during the post-RAD reconciliation process.
  - o 2 scripts are related to the saving of object privileges and system privileges

- 2 scripts are related to the modification of the access rights configuration (object privileges and system privileges) only for all the relevant settlement-related functions that must be prevented during the post-RAD reconciliation process
  - 2 scripts are related to the reload of object privileges and system privileges previously saved
  - each couple of scripts has to be implemented under complex and secure execution conditions (no LLI for scripts execution but TWS scripts encapsulation/automation that can be executed only by TT after service request by OT)
- Additional procedures will be implemented to save the access rights configuration before the application of scripts, and to reload it after the end of the post-RAD reconciliation process.
  - 4CB will plan and execute complex test campaign (e.g. RAD, NSP).

List of dynamic data screens that shall be blocked during the post-RAD reconciliation process:

- Settlement Instruction – New Screen
- Amendment Securities Instruction – New Screen
- Cancellation Securities Instruction – New Screen
- Hold/Release Instruction – New Screen
- Intra-Position Movement – New Screen
- Immediate Liquidity Transfer – New Screen
- Amendment Cash Instruction – New Screen
- Cancellation Cash Instruction – New Screen
- Intra-Balance Movement – New Screen
- Data Changes – Details (the screen itself remains available post-RAD reconciliation process, but only the approval button will not be clickable.)

List of static data screens that shall be blocked during the post-RAD reconciliation process (as changes in this area would trigger the settlement instructions revalidation process):

- Party – Edit/New Screen
- Securities – Edit Screen (Delete function)
- Security CSD Link – Edit Screen
- Eligible Counterpart CSD – Edit Screen (Delete function)
- Security Account – Edit Screen (Delete function, Details Screen)
- CMB Securities Account Link – Edit Screen (Delete function)
- T2S Dedicated Cash Account – Edit Screen (Delete function)
- Attribute Domain – Edit Screen
- Restriction Type – New/Edit Screen (Delete function)
- Restriction Type Rule - New/Edit Screen
- Limit – Edit/New Screen
- Standing Predefined LTO – Edit/New Screen
- Data changes - Details Screen (approve)
- Working closing day - New/Edit Screen
- Restriction Type Rule – New/Edit Screen

Summary of project risk

None

Security analysis

No potentially adverse effect was identified during the security assessment. On the contrary, the change will improve the capacity of the T2S Operator to comply with the SLA.

DG - MARKET INFRASTRUCTURE & PAYMENTS  
 MARKET INFRASTRUCTURE MANAGEMENT

ECB-PUBLIC



19 May 2017

## Cost assessment on Change Requests

<b>T2S-0446-SYS – Blocking of U2A interface for submitting new instructions to T2S during reconciliation process post RAD (Recovery After Disaster)</b>			
One-off	Assessment cost*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Project phase costs	198,028.59	Euro
Annual	Operational costs	15,646.90	Euro

\*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).

T2S-0446-SYS was assessed for the first time in May 2014: whereas the assessment costs were included in the T2S pricing envelope in 2014. Since the assessment performed in 2014 became outdated, T2S-0446-SYS was assessed for the second time in 2016.

Detailed assessment from 22 May 2014 – **outdated** –

**ANALYSIS – GENERAL INFORMATION**

<b>Impact On T2S</b>	<b>Static data management</b>		<b>Interface</b>	
		Party data management		Communication
		Securities data management		Outbound processing
		T2S Dedicated Cash account data management		Inbound processing
		Securities account data management		
		Rules and parameters data management		
	<b>Settlement</b>		<b>Liquidity management</b>	
		Standardisation and preparation to settlement		Outbound Information Management
		Night-time Settlement		NCB Business Procedures
		Daytime Recycling and optimisation		Liquidity Operations
		Daytime Validation, provisioning & booking	<b>LCMM</b>	
		Auto-collateralisation		Instructions validation
				Status management
	<b>Operational services</b>			Instruction matching
		Data Migration/Support tools		Instructions maintenance
		Scheduling	<b>Statistics, queries reports and archive</b>	
		Billing		Report management
		Operational monitoring		Query management
				Statistical information
				Legal archiving
		All modules (Infrastructure request)		
		No modules (infrastructure request)		
		Business operational activities		
		<input checked="" type="checkbox"/> Technical operational activities		

<b>Impact on major documentation</b>			
Impacted GFS chapter			
Impacted UDFS chapter			
Additional deliveries for Message Specification			
UHB			
External training materials			
Other documentations			
<b>Links with other requests</b>			
Links	Reference		Title



Overview of the impact of the request on the T2S system and on the project
Summary of functional, development, infrastructure and operational impacts
<p>The T2S Service Desk will have to coordinate the different steps of the process allowing blocking and unblocking the relevant settlement-related functions during the post-RAD reconciliation process, following the indications given by the Crisis Managers and the Settlement Managers during the process.</p> <p>The solution will have no impact on the T2S software and will be based on the modification of the access rights configuration of system privileges and object privileges:</p> <ul style="list-style-type: none"> <li>- 2 scripts will be developed to set the Deny flag to "True" for all the system users (with the exception of the system users linked to the T2S Operator). This will block all the relevant settlement-related functions that must be prevented during the post-RAD reconciliation process.</li> <li>- Additional procedures will be implemented to save the access rights configuration before the application of scripts, and to reload it after the end of the post-RAD reconciliation process.</li> </ul> <p><u>List of dynamic data screens that shall be blocked during the post-RAD reconciliation process:</u></p> <ul style="list-style-type: none"> <li>• Settlement Instruction – New Screen</li> <li>• Amendment Securities Instruction – New Screen</li> <li>• Cancellation Securities Instruction – New Screen</li> <li>• Hold/Release Instruction – New Screen</li> <li>• Intra-Position Movement – New Screen</li> <li>• Immediate Liquidity Transfer – New Screen</li> <li>• Amendment Cash Instruction – New Screen</li> <li>• Cancellation Cash Instruction – New Screen</li> <li>• Intra-Balance Movement – New Screen</li> </ul> <p><u>List of static data screens that shall be blocked during the post-RAD reconciliation process (as changes in this area would trigger the settlement instructions revalidation process):</u></p> <ul style="list-style-type: none"> <li>• Party – Edit/New Screen</li> <li>• Securities – Edit Screen (Delete function)</li> <li>• Security CSD Link – Edit Screen</li> <li>• Eligible Counterpart CSD – Edit Screen (Delete function)</li> <li>• Security Account – Edit Screen (Delete function, Details Screen)</li> <li>• CMB Securities Account Link – Edit Screen (Delete function)</li> <li>• T2S Dedicated Cash Account – Edit Screen (Delete function)</li> <li>• Attribute Domain – Edit Screen</li> <li>• Restriction Type – New/Edit Screen (Delete function)</li> <li>• Limit – Edit/New Screen</li> <li>• Standing Predefined LTO – Edit/New Screen</li> </ul>
Summary of project risk
No risk on the T2S project itself.
Security analysis
No security impact (do not entail any additional costs related to the implementation of security controls).

**COST ASSESSMENT ON CHANGE REQUEST – OUTDATED**

<b>T2S-0446-SYS Blocking of U2A interface for submitting new instructions to T2S during reconciliation process post RAD (Recovery After Disaster)</b>		
Project phase costs (total)	121,379.12	in Euro
Running costs (annual average over cost recovery period)	9,752.57	in Euro