

General Information (Origin of Request)		
<input type="checkbox"/> User Requirements Document (URD) <input checked="" type="checkbox"/> User Detailed Functional Specification (UDFS) <input checked="" type="checkbox"/> User Handbook (UHB) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: 4CB	Institute: ECB	Date raised: 01.02.2021
Request title: Data propagation and data loading adaptations (Part C - Operational Tools and data consistency adaptations)		Request ref. no: CSLD-0075-UDFS
Request type: Common		
1. Legal/business importance parameter: Low/Medium/High	2. Market implementation efforts parameter – Stakeholder impact: Low/Medium/High	
3. Operational impact: Low	4. Financial impact parameter: High; Free of cost for L2	
5. Functional/ Technical impact: High	6. Interoperability impact: Low (impact on T2S: editorial CR needed)	
Requestor Category:		Status: 4CB detailed assessment

Reason for change and expected benefits/business motivation:

In order to facilitate a smooth data propagation from CRDM to CLM/RTGS and to ensure consistent data within CLM/RTGS, the 4CB internal testing campaign showed that some operational tools need be implemented in order to facilitate the timely data loading in CLM/RTGS.

Moreover, based on the latest test campaign some further adaptations in the data propagation and loading process are required in order to prevent errors in CLM/RTGS.

Description of requested change:

A. Operational Tools

Dedicated operational tools and procedures are required to manage any residual issue that may block the data propagation.

In order to manage issues or a blocking situation concerning the data propagation from CRDM to RGTS / CLM, the following operational requirements and possibilities have been identified.

1) To run an operational procedure, blocking issues need to be clearly identified. Therefore it is a pre-requisite to perform a pre-check of any CRDM data to be propagated / loaded into CLM / RTGS that could create an inconsistency. Such pre-checks should be foreseen on a regular basis, but should also be possible ad hoc. In any case, the pre-check(s) must be conducted before the regular data propagation. They are only foreseen for the data to be loaded for the upcoming business day.

2) In order to cope with situations not identified by the pre-check or too late to allow the CB to correct them in time, two options need to be supported:

- Rerun the data propagation after adjustments in CRDM,
- Skip the propagation: in this case the data from previous business day for the respective currency would still be valid until the next regular data propagation is executed during following end of day.

In addition, in order to be able to analyse and support the decision making process on whether or not to skip the data propagation / loading process, a further operational requirement is to have a tool which provides clear and detailed information on all T2 related data changes in CRDM for the upcoming business day.

This data shall be provided in a file that can be shared with the NCBs and the ECB.

B. Adaptation of business rules and filtering data configurations not used in T2

1. Validity date issues in CLM/RTGS

Like TARGET2 today, the CLM/RTGS processing is based on data valid for the relevant business day in the respective currency only. The internal testing identified that some data propagated by CRDM referring to each other (ie existing parent/child relationships) cause consistency issues on CLM/RTGS side. However, these inconsistency issues on CLM/RTGS side cannot be avoided by CRDM as in line with the agreed concept in CRDM such data (with or without validity dates) refer either to objects valid in the future or closed objects where CRDM does not/cannot enforce the deletion of data referring to e.g. closed parties.

The agreed concept in CRDM allows to set up certain information without validity date in CRDM as the data is related to other CRDM objects with validity dates or objects without validity dates.

In case data without validity dates (e.g. PTA) refers to CRDM objects (e.g. Party) with a validity date which is not relevant in CLM/RTGS for the upcoming business day in the respective currency, the data cannot be considered in CLM/RTGS in the local data model for further processing. This is mainly the case for CRDM data referring to parties and/or cash accounts not valid on the upcoming business day in the respective currency due to the fact the party/cash account is closed or only valid as of a future date.

In addition, some other very specific data constellations in CRDM also require that some data is not considered for further processing in CLM/RTGS.

Consequently, also in case inconsistencies are detected between two objects without validity dates (e.g. User and Roles) or between two objects with validity dates (e.g. Authorised Account User and DN-BIC Routing) for the upcoming business day in the respective currency for certain data constellations cannot be considered in CLM/RTGS for further processing as this would violate the integrity of the data.

In general data records/objects which include an attribute referring to another attribute not valid on the upcoming business day will be not taken into account on the upcoming business day in CLM/RTGS local data base.

The CLM/RTGS actors need to pay special attention to the following issues where only one attribute of the data record provided is ignored by CLM/RTGS :

- a) Additional Account Configuration Data - Invalid co-manager reference
In case the Additional Account Configuration Data includes a reference to a co-manager which is invalid on the upcoming business day the relevant cash account (i.e. the account which is co-managed) is to be loaded into the CLM data base without any reference to co-mangement (ie co-managed flag set to False and no reference to a co-manager is included as the data propagated is not valid on the upcoming business day).
- b) Invalid CLM/RTGS Configuration Data

In case the CLM/RTGS Configuration Data includes a reference to a Party Service Link which is invalid on the upcoming business day the relevant data is not loaded into the CLM/RTGS data base as from a CLM/RTGS point of view inconsistent data was provided.

c) Invalid CLM Configuration Data CBs

In case the CLM Configuration Data includes references to cash accounts (for the settlement of eg other interests) which are not valid on the upcoming business day the reference data pointing to cash accounts not active on the upcoming business day is not loaded into the CLM/RTGS data base.

2. Routing configuration

In line with the agreed CRDM functionality it is not mandatory for CLM/RTGS Acotrs to set up a routing configuration. Consequently, we might have AS and payment banks/CBs without routing configuration,

- In case of AS without routing configuration the related AS transfer notice will not be produced.
- In case of other actors without a routing configuration it is not possible to send "notifications not being a response to an instruction" and reports (see UDFS 2.5 for details) or to forward payments in A2A (in RTGS). Such actors need to be treated as U2A only actors.
Note: This also implies that for CBs without routing configuration no general ledgers will be created/sent. In order to safeguard the proper functioning in CLM/RTGS a dedicated handling will be implemented (data loading) in order to treat such actors as U2A only actors and propagated message subscription/report configurations are "ignored".

3. CRDM validation rules

In order to strengthen the consistency between CRDM and CLM/RTGS validations, the following adaptations will be implemented on CRDM side:

- Business rules DRC9052, DRD9066 and DRU9206 will be enhanced in order to ensure that T2 Bilateral or Multilateral Limit keep validity dates consistent with those of the related Cash Account, in line with the existing validation on Cash Account side (DCU1030).
- The Purge Reference Data function will be enhanced in order to physically purge Role User, Role Party, Grantee System Privilege and Grantee Object Privilege instances related to deleted User/Parties along with the related Users/Parties.

Submitted annexes / related documents:

none

Proposed wording for the Change request:

UDFS

CLM UDFS

2.5 Communication between CLM and CLM Actors
Table 3 - Deduction of PTA

Note: In case of other actors without a routing configuration it is not possible to send "notifications not being a response to an instruction" and reports. Such actors need to be treated as U2A only actors in CLM.

For further information see the CRDM UDFS, chapter "Party Data Management".

3.6 Interaction between CLM and CRDM

... As far as CLM is concerned, all reference data set-up and maintenance operations are performed in CRDM with the exception of changes on local data which are performed in CLM directly. ~~The Central Banks have to ensure the correct set-up of reference data in CRDM.~~

The agreed concept in CRDM allows it to set up certain information without validity date in CRDM as the data is related to other CRDM objects with validity dates or objects without validity dates.

Especially in case data without validity dates (e.g. PTA) refers to CRDM objects (e.g. Party) with a validity date which is not relevant in CLM for the upcoming business day in the respective currency, the data cannot be considered in CLM in the local data model for further processing. This is mainly the case for CRDM data referring to parties and/or cash accounts not valid on the upcoming business day in the respective currency due to the fact the party/cash account is closed or only valid as of a future date.

It is worth highlighting that the usage of data not valid on the upcoming business day for the respective currency has the consequence that CLM cannot consider the complete data row for further processing. Therefore, it is of utmost importance that the users in CRDM ensure a consistent set up.

RTGS UDFS

2.5 Communication between RTGS and RTGS Actors

Table 3 - Deduction of PTA

Note:

In case of AS without routing configuration the related AS transfer notice will not be produced.

In case of other actors without a routing configuration it is not possible to send "notifications not being a response to an instruction" and reports. Such actors need to be treated as U2A only actors in RTGS.

For further information see the CRDM UDFS, chapter "Party Data Management".

3.6 Interaction between RTGS and CRDM

... As far as RTGS is concerned, all reference data set-up and maintenance operations are performed in CRDM with the exception of changes on local reference data which are performed in RTGS directly.

The agreed concept in CRDM allows it to set up certain information without validity date in CRDM as the data is related to other CRDM objects with validity dates or objects without validity dates.

Especially in case data without validity dates (e.g. PTA) refers to CRDM objects (e.g. Party) with a validity date which is not relevant in RTGS for the upcoming business day in the respective currency, the data cannot be considered in RTGS in the local data model for further processing. This is mainly the case for CRDM data referring to parties and/or cash accounts not valid on the upcoming business day in the respective currency due to the fact the party/cash account is closed or only valid as of a future date.

It is worth highlighting that the usage of data not valid on the upcoming business day for the respective currency has the consequence that RTGS cannot consider the complete data row for further processing. Therefore, it is of utmost importance that the users in CRDM ensure a consistent set up.

CRDM UHB

4.3.2.42 Limits – Search/List Screen (References for Error Messages)

Reference for error message	Field or Button	Error Text	Description
DRD9066	IRestore button	Limit to be restored not found	When performing a T2 Bilateral Limit or T2 Multilateral Limit restore request, it must refer to an existing and active Cash Account instance in CRDM with Account Type equal to RTGS Dedicated Cash Account <u>which is open throughout the validity period of the Limit.</u>

4.3.2.43 Limits – New/Edit Screen (References for Error Messages)

Reference for error message	Field or Button	Error Text	Description
DRC9052	ICash Account Number field	Unknown Cash Account Identifier	When performing a Limit create request, the Cash Account specified

Reference for error message	Field or Button	Error Text	Description
	ISubmit button		must refer to an existing and active instance in CRDM. <u>For T2 Bilateral and Multilateral Limits, the Cash Account must also be open in the intended Limit validity period.</u>
...			
DRU9206	IValid From field IValid To field ISubmit button	Valid To invalid	When performing a Limit update request, the Valid To date must be equal to or greater than the current date, and equal to or greater than the Valid From <u>and equal to or earlier than the related Cash Account Closing Date.</u>

High level description of Impact:

Impacts on other projects and products:

Low impact on T2S: Part of the impact of CSLD CR-0075 is on CRDM, so T2S-SDMG is involved for these two changes:

1. Business rules for the Limit object will be modified in order to make sure that the Limit dates are consistent with the related Cash Account. This is only relevant for CLM/RTGS ac-counts, not T2S, since T2S Limits do not use the Valid To field.
2. The Purge Reference Data function will be enhanced in order to delete internal “tech-nical” instances representing privilege and role assignments to Users and Parties when the related Users and Parties are physically purged. This will not have an impact on the user ex-perience (those technical instances are currently left in the system but effectively unusable without the related User/Party) but it will allow to clean up the database periodically.

The amendments have to be reflected in a corresponding T2S-SDD-CN and subsequently included in an editorial T2S-CR.

ECMS/TIPS: No impact

Outcome/Decisions:

			Process	User Interaction	Business Data Definition	Non-functional Requirements	
CENTRAL LIQUIDITY MANAGEMENT (CLM)	GENERAL	CLM Payment Order					
		CLM Liquidity Transfer Order					
		CLM Liquidity Reservation					
	CENTRAL BANK SERVICES	Modify Credit Line					
		Connected Payments					
		Overnight Deposit					
		Marginal Lending					
		Minimum Reserve Management					
		EoD General Ledger Files					
	REAL-TIME GROSS SETTLEMENT (RTGS)	GENERAL	RTGS Payment Order				
			Queue Management				
RTGS Liquidity Transfer Order							
RTGS Liquidity Reservation							
RTGS Services for Ancillary Systems (AS)							
CB SER-VICES							
COMMON COMPONENTS	GENERAL	ESMIG					
		CRDM	X				
		Business Day					
		User Roles and Access					
		Information and Reporting					
		Data Warehouse Services					

	CENTRAL BANK SERVICES	Billing				
		Legal Archiving				
		Contingency Settlement				
4CB internal categories		Operational Tools	X			
		Automation				

Impact on major documentation						
Document	Chapter			Change		
Impacted UDFS chapter	RTGS: <ul style="list-style-type: none"> • 2.5 Communication between RTGS and RTGS Actors • 3.6 Interaction between RTGS and CRDM CLM: <ul style="list-style-type: none"> • 2.5 Communication between CLM and CLM Actors • 3.6 Interaction between CLM and CRDM 					
Additional deliveries for Message Specification/ MyStandards						
UHB	CLM Operator UHB CRDM UHB			New Chapter Amendment of DRC9052, DRD9066 and DRU9206		
External training materials						
Other documentations						
Links with other requests						
Links	Reference			Title		
OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2SYSTEM AND ON THE PROJECT						
Summary of functional, technical, operational, stakeholder, financial and interoperability impacts						
A. Operational Tools						

Additional operational tools have to be provided for ensuring consistent data loaded from CRDM to RTGS and CLM.

B. Adaptation of business rules and filtering data configurations not used in T2

Moreover, some further adaptations of the data propagation and loading process are required :

1. Validity dates issues in CLM/RTGS

In order to ensure consistent data to be used on the upcoming business day for the respective currency in CLM/RTGS, data inconsistencies detected between objects

- where one object has a validity date and another has not and
- where both objects do not have any validity dates and
- where both objects do have a validity date

are not considered in CLM/RTGS and the inconsistent data is not available in CLM/RTGS (ie not available in local data base) on the upcoming business day in the respective currency.

Note : In case of CRDM objects with validity dates referring to each other (ie parent/child relationships) it is the primary responsibility of the user to ensure that the data set up is defined in a consistent manner.

2. Routing configuration

In line with the agreed CRDM functionality it is not mandatory for CLM/RTGS Acotrs to set up a routing configuration. Consequently, we might have AS and payment banks/CBs without routing configuration, In order to safeguard the proper functioning in CLM/RTGS a dedicated handling will be implemented (data loading) in order to treat such actors as U2A only actors and propagated message subscription/report configurations are "ignored".

3. CRDM validation rule

Amendment of business rules related to Limit object in order to ensure consistency with Cash Account validity dates.

New purging logic for role/privilege assignments (grantee system/object privilege, Role User, Role Party) which will be purged along with the related grantee (user, role or party) after the set retention period from the grantee object's logical deletion.

Summary of dependencies

T2S/TIPS: CRDM Limit object is also used in T2S and TIPS, although the business rule amendments will be implemented in order to be triggered only for CLM/RTGS Cash Accounts.

The purging of role/privilege assignment data will also affect T2S and TIPS data. Since it will refer to purged users/parties, its only effect will be to clean up internal technical tables and improve the database consistency.

Summary of project risk

None

Security analysis

No potentially adverse effect was identified during the security assessment.