

Change Request form

| General Information (Origin of Request) | | |
|--------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------|
| <input type="checkbox"/> User Requirements Document (URD) | | |
| <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS) | | |
| <input type="checkbox"/> Other TIPS Documentation (OTD) | | |
| <i>(to be filled in by CoG)</i> | | |
| Request raised by: TIPS Contact Group | Date raised: 28/08/2018 | |
| Request title: Routing Enhancements | Name of Central Bank: Banco de España | Request ref. no: TIPS 0010 SYS |
| Categorisation of changes | | |
| 1. Functional/technical importance parameter: Medium | 4. Legal importance parameter: Low | |
| 2. Operational importance parameter: Medium | 5. Financial importance parameter: Low | |
| 3. Stakeholder importance parameter: Medium | | |
| Status: Allocated to a Release | | |

Description of requested change:

TIPS uses the Party Technical Address attribute of a Party to select the correct Distinguished Name to use in order to deliver to said Party notifications (i.e. floor/ceiling notifications and debit/credit notifications) to the owner of a TIPS account and reports to the relevant subscribers.

Currently TIPS allows each Party to define one and only one Party Technical Address to be used both for notifications and reports.

The requested change is twofold:

- to allow each Party to define two different Party Technical Addresses, one to be used for notifications and one to be used for reports.
- to allow each Party to define multiple Party Technical Addresses to be used to deliver multiple copies of the same report.

Reason for change and expected benefits/business motivation:

The first proposed change, i.e. allowing the usage of different Party Technical Addresses to deliver notifications and reports, aims at covering potential business cases like the following:

- when a TIPS participant wants to send instant payments via an Instructing Party but it is also interested in receiving the EoD balance report for treasury management purposes;
- when a TIPS participant manages its own instant payments and it is interested in routing the notifications and reports to two different technical addresses.

The objective of the second proposed change is to ensure the full coverage of TIPS.UR.06.070: "TIPS shall allow sending the same report to different technical addresses".

Submitted annexes / related documents:

2018-07-04 TIPS CG - item 10. TIPS ROUTINGS

Proposed wording update to the documentation to address the requested change:

The proposed wording will be provided as part of the outcome of the 4CB detailed assessment.

TIPS UDFS v1.1.0 section 1.3.1.5 Reference data for parties in TIPS

Table 1 – Party reference data

| Attribute | Description |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Party BIC | 11-character Business Identifier Code (BIC11) to uniquely identify the party in TIPS. |
| Party Type | Type of party. The exhaustive list of party types is as follows: <ul style="list-style-type: none">• TIPS Operator• Central Bank• Participant• Reachable Party |
| Country | Country code of the Central Bank the party belongs to. |
| Party Technical Address | Distinguished Names defined for the receipt of messages relevant for the Party as account owner, such as reports and floor/ceiling notifications. |
| Blocking Status | Blocking status for the Party, only relevant for TIPS Participants. Exhaustive list of possible values: <ul style="list-style-type: none">- Blocked for credit;- Blocked for debit;- Blocked for credit and debit;- Unblocked. |

TIPS UDFS v1.1.0 section 2.1 Message routing

- Outbound messages: TIPS shall ensure that there is a many-to-one relation between Beneficiary Participant or Reachable Party and receiver distinguished names, meaning that any given Beneficiary Participant BIC may be linked to one and only one Distinguished Name for the receipt of instant payment messages. The couple (DN, BIC) is stored in the "Outbound DN-BIC Routing" table. In addition, it is possible to configure a separate Distinguished Names per TIPS Participant as "Party Technical Addresses"; one for the receipt of ~~messages~~ notifications relevant for account owners, such as ~~reports and~~ floor/ceiling notifications, and one or more for the receipt of reports. The types of messages to be routed to each Party Technical Address can be configured through a Routing configuration.

[...]

Therefore, as a general rule, when TIPS cannot identify an actor DN from an input message or in case of push-mode communication, TIPS uses the Outbound DN-BIC routing table or the Party Technical Address (in combination with the Routing Configuration) to find the correct outbound DN.

Based on the transaction types and on the role assumed by the Actors, the following table specifies the type of outbound routing used for the different data exchange scenarios.

Table 2 – Outbound routing

| Data Exchange | Outbound DN-BIC | Party Technical Address + Routing | Sender DN |
|--------------------------------------------------------|-----------------|-----------------------------------|-----------|
| Instant Payment transactions answer (Originator role) | x | x | ✓ |
| Instant Payment transactions answer (Beneficiary role) | ✓ | x | x |
| Timeout message generated by TIPS | ✓ | x | ✓ |
| Inbound/Outbound Liquidity transfers receipts | x | x | ✓ |
| Investigation answers | x | x | ✓ |
| Query answers | x | x | ✓ |
| Recall answers (Assigner role) | x | x | ✓ |
| Recall answers (Assignee role) | ✓ | x | x |
| Error on input messages | x | x | ✓ |
| Reference data answer messages | x | x | ✓ |
| Notifications | x | ✓ | x |
| Reports | x | ✓ | x |

Entering in detail on the single message:

- "Outbound DN-BIC Routing" table is used to select the correct DN for a TIPS actor identified by a BIC, in case of:
 - o Messages forwarded to other TIPS Actors, i.e.
 - [FtoFICustomerCreditTransfer](#) forwarded to the Beneficiary;
 - [FIToFIPaymentCancellationRequest](#) forwarded to the Assignee;
 - [ResolutionOfInvestigation](#) forwarded to the Assignee;
 - [PaymentReturn](#) forwarded to the Recall Assigner (Beneficiary).
 - o [FIToFIPaymentStatusReport](#) sent to the Beneficiary in case of Timeout;
- "Party Technical Address" is used in combination with the "Routing Configuration" for the specific message to select the correct DN for a TIPS actor in case of:
 - o Notifications, for the Owner of the Account/CMB, i.e.
 - Floor/Ceiling notification on Account/CMB;
 - Credit/Debit notification on Account.
 - o [Reports sent](#) to the subscribing TIPS actors.
- The sender DN is used to answer to an input message in case of:
 - o Error messages generated by TIPS as result of a failed check on an input message;
 - o Every other answer, i.e.:
 - [FtoFIPaymentStatusReport](#) sent to the Originator of an Instant Payment transaction;
 - [FIToFIPaymentStatusReport](#) as result of an investigation;
 - [Receipt](#) of a Liquidity transfer order;
 - Answers to a Query:
 - [ReturnAccount](#).
 - o Reference data answer messages:
 - [PartyStatusAdvice](#);
 - [AccountRequestAcknowledgement](#);
 - [AccountRequestRejection](#);
 - [Receipt](#).

TIPS UDFS v1.1.0 section 2.5.1.1.1 Successful scenario – Inbound Liquidity Transfer order is settled in TIPS

- The system verifies if in table "Accounts", the Credit Notification Flag related to the Account to be credited is set to "True"; if so, it retrieves the Account Owner DN from the "Routing Configuration" in combination with the "Party Technical Address" (<ou=dept_123, o=prtyabmmxxx, o=a2anet>) to be notified with a positive message ([Bank To Customer Debit Credit Notification](#)) by the Output Dispatcher component.

TIPS UDFS v1.1.0 section 2.8.1.1.1 Statement of Account Turnover

- The system identifies the Recipient DN from the "Routing Configuration" in combination with the "Party Technical Address"

TIPS UDFS v1.1.0 section 2.8.2.1.1 Statement of Accounts – Full mode

- The system identifies the Recipient DN from the “Routing Configuration” in combination with the “Party Technical Address”

TIPS UDFS v1.1.0 section 2.8.2.1.2 Statement of Accounts – Delta Mode

- The system identifies the Recipient DN from the “Routing Configuration” in combination with the “Party Technical Address”

TIPS UHB v1.1.0 section 1.2.2 Common Reference Data Management

Table 1 – Responsible Actors for CRDM actions

| Area | Object | Responsible TIPS Actor |
|-----------------------|----------------------------------------|---------------------------------------------|
| [...] | | |
| Network Configuration | Network Service | Operator |
| | Technical Address Network Service Link | Operator, Central Bank |
| | DN BIC Routing | Operator, Central Bank |
| | <u>Routing Configuration</u> | <u>Operator, Central Bank, Payment Bank</u> |
| [...] | | |

CRDM-TIPS UDFS v1.1.0 section 1.2.2.1.2 Privilege

New privileges to be listed for Creation, Update and Deletion of Routing Configuration, as well as accessing the new Routing – Search/list GUI screen

CRDM-TIPS UDFS v1.1.0 section 1.2.4 Graphical User Interface

Table 20 – CRDM U2A Functions

| Function | Actor |
|-----------------------|-----------------------------------|
| [...] | |
| <u>Create Routing</u> | <u>Central Bank, Payment Bank</u> |
| <u>Update Routing</u> | <u>Central Bank, Payment Bank</u> |
| <u>Delete Routing</u> | <u>Central Bank, Payment Bank</u> |
| <u>Query Routing</u> | <u>Central Bank, Payment Bank</u> |
| [...] | |

CRDM-TIPS UDFS v1.1.0 section 1.3 Reference data model

Data model to be updated with new Routing configuration object.

CRDM-TIPS UDFS v1.1.0 section 1.4.3.1 Common reference data objects

Table 31 – Common Reference Data Objects

| AREA | OBJECT | RESPONSIBLE CRDM ACTORS |
|-----------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| [...] | | |
| Network configuration | DN BIC Routing Network service Technical address Network service link <u>Routing</u> | Payment Bank CRDM Operator CRDM Operator, Central Bank <u>Central Bank, Payment Bank</u> |
| [...] | | |

CRDM-TIPS UDFS v1.1.0 section 1.4.3.3 Validity of common reference data objects

Table 33 – Common Reference Data Objects with Unlimited Validity Period

| AREA | OBJECT |
|-----------------------|-----------------------------------------------------------------------------|
| [...] | |
| Network configuration | Network service Technical address Network service link <u>Routing</u> |
| [...] | |

CRDM-TIPS UHB v1.1.0

New sections for screens “Routing – New/Edit and “Routing – Search List”

New business rules for aforementioned screens

New privileges for aforementioned screens

High level description of Impact:

The requested change impacts both TIPS and CRDM^{TIPS}.

As far as the impact on the CRDM^{TIPS} is concerned, the requested change is fully transparent for T2S and T2S users and it does not require any update of T2S Scope Defining Documents.

Outcome/Decisions: [ECB Team should update this section]

| L3 analysis - General Information | |
|-----------------------------------|-------------------------------------|
| Impact on TIPS | |
| Business Interface | |
| X | A2A Interface |
| | U2A Interface |
| Settlement Engine | |
| | Payment Transaction |
| | Liquidity Transfer |
| | Recall |
| Queries and Reports | |
| | Queries |
| X | Reports |
| Common Components | |
| | ESMIG |
| X | CRDM |
| | Archiving |
| | Billing |
| | DMT |
| Operational Tools | |
| | SLA Reporting |
| | TMS |
| | Technical Monitoring |
| | Change Management |
| | Capacity Management |
| Infrastructure request | |
| | Application components impacted |
| | Application components not impacted |
| Operational activities | |
| | Business activities impacted |
| | Technical activities impacted |
| New functionalities | |
| | |
| | |

| Impact on documentation | | |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Document | Chapter | Change |
| UDFS | TIPS UDFS (§.1.3.1.5, §.2.1, §.2.5, §.2.8) CRDM ^{TIPS} UDFS (§.1.2.2.1.2, §.1.2.4, §.1.3, §.1.4.3.1, §.1.4.3.3) | See "Proposed wording..." section |
| UHB | TIPS UHB (§1.2.2) CRDM ^{TIPS} UHB (§.2.3.6.3, §.2.3.6.4) | See "Proposed wording..." section |
| Training documentation | FN.070 (Queries, reports and notifications) | Detailed changes will be identified during the implementation phase. |
| Other documents | CRDM ^{TIPS} IDFS CRDM ^{TIPS} GUI-DFS | Detailed changes will be identified during the implementation phase. |

| Overview of the impact of the request on TIPS (L2 view) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Summary of functional, operational, development, infrastructure and security impacts |
| <p><u>Summary of functional impact:</u></p> <ol style="list-style-type: none"> 1. Enhancement of the Message Routing component of TIPS, in order to allow (i) sending reports and notifications to two different technical addresses and (ii) sending the same report to multiple technical addresses. 2. Enhancement of the Party Reference Data component and implementation of a Routing Configuration component in CRDM^{TIPS}, in order to allow (i) setting up for a given party different technical addresses for delivering reports and notifications and (ii) setting up for a given party multiple technical addresses for sending the same report. 3. The assumption is that no migration of reference data is required. This implies each party shall adapt the configuration of their technical addresses autonomously, after the deployment of this change request. <p><u>Summary of operational impact:</u></p> <p>No operational impact.</p> <p><u>Summary of application development impact:</u></p> <ol style="list-style-type: none"> 1. CRDM-U2A: add new screens to collect new information needed for new technical addresses (DNs) for notifications and reports and new DN's for multiple copies of reports. 2. CRDM Backend: add new functions to read and maintain new information. Allow the extraction of new data and distribution to TIPS nodes. 3. TIPS: enhance the management of CRDM data to upload the new data coming from CRDM into memory. |

4. TIPS: enhance the notification functionality in order to make it use the new DN dedicated to notifications.
5. TIPS: enhance the report subsystem to allow "broadcasting" of reports to several DNs using routing information.
6. TIPS: to change the report "retry logic" used for resending of files to NSP until they confirm the sending to final recipient. Retry of sending attempts and storing of related status information must be based on DNs instead of Party-Id.

All TIPS changes must be designed, implemented and tested in such a way that they could be deployed without any service disruption, i.e. old and new version of software and database will coexist for a period of time.

Summary of infrastructure impact:

No infrastructure impact.

Summary of security impact:

No security impact.