

ETS LIMITED



EUROPEAN COMMISSION

DIRECTORATE-GENERAL
CLIMATE ACTION

EU Registry

Application Logging Plan

Contact:

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1. TRANSACTION LOG

The requirements presented in section 7.1 of the [DES] are met by the tables presented in Figure 1-1:

- The table Transactions contains the general information of a transaction (identifier, transferring/acquiring registry/account type/account identifier, etc.) for each transaction either sent or received by a registry consolidated within the EU Registry.
- The table Transaction_Block contains the list of transaction block involved in each transactions
- The table Transaction_Status_History contains the history of the transaction statuses
- The table Transaction_Response contains the list of response codes returned for a transaction
- The table TXResponse_TXBlocks make the link between transaction blocks and returned response codes.

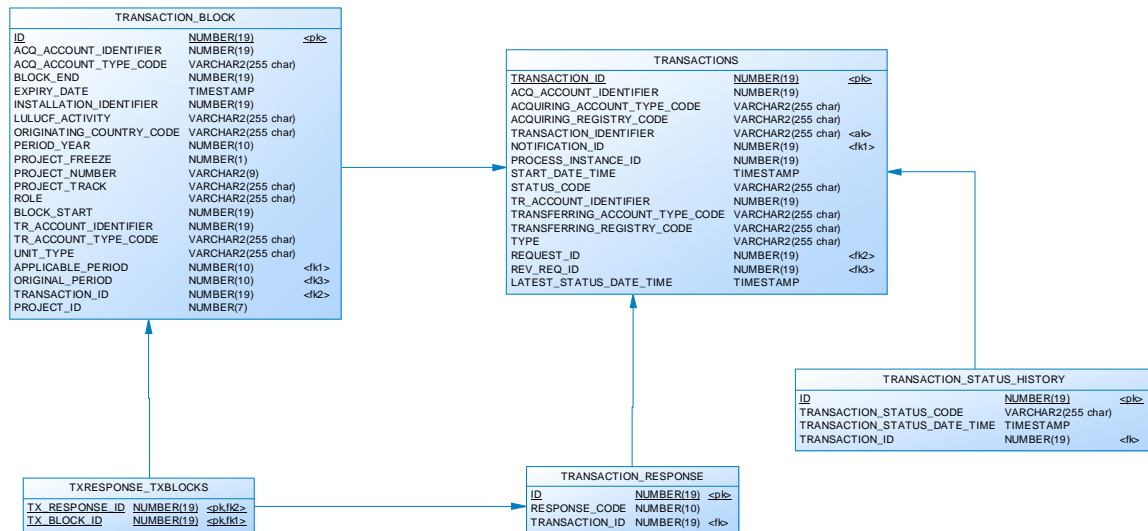


Figure 1-1: The tables related to the transaction logging

2. RECONCILIATION HISTORY LOG

The requirements presented in section 7.2 of the [DES] are met by the tables presented in Figure 2-1:

- The table Reconciliation presents each reconciliation executed for a registry consolidated within the EU Registry;
- The table Recon_Missing_Unit_Blocks contains for each reconciliation the list of blocks which were flagged as inconsistent by the ITL;
- The table Recon_Stage_History contains the status history of each reconciliation.

RECON_MISSING_UNIT_BLOCKS		
RECON_MISSING_UNIT_BLOCK_ID	NUMBER(19)	<pk>
START_BLOCK	NUMBER(19)	
END_BLOCK	NUMBER(19)	
ORIGINATING_COUNTRY_CODE	VARCHAR2(255 char)	
HOLDING_REGISTRY	VARCHAR2(255 char)	
RECON_ID	NUMBER(19)	<fk>
INVOLVED_TRANS_IDENTIFIER	VARCHAR2(255)	

RECONCILIATION		
RECON_ID	NUMBER(19)	<pk>
COMMENTS	VARCHAR2(2000 char)	
END_DATETIME	TIMESTAMP	
RECON_IDENTIFIER	VARCHAR2(20 char)	<ak>
RECON_STAGE_DATETIME	TIMESTAMP	
SNAPSHOT_DATETIME	TIMESTAMP	
RECON_STAGE	VARCHAR2(50 char)	
START_DATETIME	TIMESTAMP	
RECON_TYPE	VARCHAR2(10 char)	<ak>
REGISTRY_CODE	VARCHAR2(2 char)	<fk>

RECON_STAGE_HISTORY		
RECON_STAGE_HIST_ID	NUMBER(19)	<pk>
RECON_STAGE	VARCHAR2(50 char)	
RECON_STAGE_DATETIME	TIMESTAMP	
RECON_ID	NUMBER(19)	<fk>

Figure 2-1: The tables related to the reconciliation logging

3. NOTIFICATION LOGGING

The requirements presented in section 7.3 of the [DES] are met by the tables presented in Figure 3-1:

- The table notification contains the list of each ITL notification sent to a registry consolidated within the EU registry;
- The table Notification_Unit_Blocks contains the list of unit block contained within an Impending Expiry Date notification.

NOTIFICATION		
NOTIFICATION_ID	NUMBER(19)	<pk>
COMMITMENT_PERIOD_CODE	NUMBER(10)	<fk2>
DUE_DATE	TIMESTAMP	
IDENTIFIER	NUMBER(19)	<ak>
LULU_CF_ACTIVITY	VARCHAR2(255 char)	
NOTIFICATION_STATUS	VARCHAR2(255 char)	
NOTIFICATION_TYPE	VARCHAR2(255 char)	
RECEPTION_DATE	TIMESTAMP	
REGISTRY_CODE	VARCHAR2(255 char)	<ak,fk1>
TARGET_DATE	TIMESTAMP	
TARGET_VALUE	NUMBER(19)	
UNIT_TYPE	VARCHAR2(255 char)	
MESSAGE_DATE	TIMESTAMP	
LAST_UPDATE_DATE	TIMESTAMP	
MESSAGE_CONTENT	VARCHAR2(255 char)	
PROJECT_NUMBER	VARCHAR2(255 char)	

NOTIFICATION_UNIT_BLOCKS		
NOTIFICATION_UNIT_BLOCK_ID	NUMBER(19)	<pk>
END_BLOCK	NUMBER(19)	<ak>
ORIGINATING_COUNTRY_CODE	VARCHAR2(255 char)	<ak>
START_BLOCK	NUMBER(19)	<ak>
NOTIFICATION_ID	NUMBER(19)	<fk>

Figure 3-1: the tables related to the ITL notification logging

4. INTERNAL AUDIT LOG

The EU Registry generates log files named registry_XX.log where XX is the ISO 3166 country code of one of the registries consolidated within the EU Registry. Those log files are kept in the file system of the EU Registry server. There is such a log file for each of the consolidated registries. Each entry in those log files corresponds to an activity performed by a national user in the Web application of the EU Registry, each entry contains:

- Timestamp;
- Country code of the registry;
- Identifier of the server;
- Identifier of the user if available (some functionalities are available to anonymous users);
- Identifier of the activity;
- The IP address of the request;
- A description of the activity along with the values provided by the user.

This meets the requirements of the section 7.4 of the DES because the impacted table and fields can be deduced from the activity identifier (the same tables and fields are always impacted by the same activity). Furthermore, the sole user operations which can impact transactions and reconciliation processes are the creation, update, and deletion of unit blocks. In case of creation, the values of the unit block parameter are provided by the log entry; in case of update, the values before and after are provided; finally in case of deletion, the originating country code, unit serial start number, and unit serial end number are provided.

5. MESSAGE LOGGING

The received and sent WS requests and responses are recorded in dedicated xml files whose name format is a unique number for the day and registry suffixed by _REQ (for request) or _RES (for response). The archiving is organized by day and registry. The root of the message archive is the folder “message_archive” which is stored in the file system used by the EU Registry. This folder contains sub-folders for each registry whose name is the ISO 3166 country code of the registry. Each registry folder contains also 2 sub-folders: IN or OUT for storing separately the incoming and outgoing messages. Each of those folders contains a sub-folder per day whose name has the format YYYYMMDD (year, month, day). This folder contains a sub-folder for each server. And finally those folders contains a sub-folder whose name is a numeric, a new sub-folder is created once the current sub-folder exceed 1,000 messages. A short example of the file structure is presented below:

- Message_archive
 - GR
 - IN
 - 20111114
 - Server1
 - 000
 - 000061_REQ.xml
 - 000062_RES.xml
 - 001
 - Server2
 - 20111115
 - OUT
 - HR

The EU Registry has a table dedicated to the indexing of the received messages. This table is presented in Figure 5-1.

MESSAGE_LOG		
<u>MESSAGE_LOG_ID</u>	<u>NUMBER(19)</u>	<u><pk></u>
DATE_TIME	TIMESTAMP	
DELIVERY_STATUS	NUMBER(1)	
DIRECTION	VARCHAR2(3 char)	
MESSAGE_ID	VARCHAR2(50 char)	
MESSAGE_CONTENT	VARCHAR2(255 char)	
REGISTRY_CODE	VARCHAR2(2 char)	
REQUEST_LOCATION	VARCHAR2(255 char)	
RESPONSE_LOCATION	VARCHAR2(255 char)	
SERVER_NAME	VARCHAR2(50 char)	
WEBSERVICE_OPERATION	VARCHAR2(64 char)	

Figure 5-1: the table related to the logging of WS message