

Extract Workflow

EmmaHandler

EmmaHandler downloads new XML with N Missioni
EmmaHandler will parse the XML into N JSON Missioni
EmmaHandler will send the N JSON Missioni over to Kafka

Transform Workflow

EmmaTommyConverter

EmmaTommyConverter will consume a new JSON Missione from Kafka
EmmaTommyConverter will convert the JSON Missione to a JSON Servizio
EmmaTommyConverter will send the JSON Servizio over to Kafka

TommyHandler

TommyHandler will consume a new JSON Servizio from to Kafka
TommyHandler will determine what to do with the new Servizio based on the following cases

- If the servizio (by ID) is already present in the Persistence DB
 - If the servizio has the same data (no update), discard it
 - If the servizio has updates, send error notification for manual update
- If the servizio (by ID) is not present in the Persistence DB
 - If the servizio (by ID) is already present in the Staging DB error section
 - If the servizio has the same data (no update), discard it
 - If the servizio has updates, update the database entry and move it to the new section
 - If the servizio (by ID) is not present in the Staging DB error section
 - If the servizio (by ID) is present in the Staging DB new section
 - If the servizio has the same data (no update), discard it
 - If the servizio has updates, update the database entry
 - If the servizio (by ID) is not present in the Staging DB new section
 - Decorate the servizio and create a new DB entry for it

Load Workflow

TommyPoster (Ciclically every X time)

Lock the Persistence DB (if it fails, wait till it can be locked with timeout)

Lock the Staging DB (if it fails, unlock the Persistence DB and abort)

For all the DB entries in the Error Section

- Set the MEZZO_ID as blocked for posting.

For all the DB entries in the New Section (Analysis ordered by servizio ID)

- Check if the Servizio is valid:
 - $KM > 0$
 - It has to have a MEZZO_ID
 - The MEZZO_ID must not be blocked for posting
 - The servizio should not be also present in the Error Section (Double Checking)
 - The servizio should not be also present in the Persistence DB (Double Checking)
- If the servizio is valid add it to the list of servizi to be posted (classified by MEZZO_ID)
- If the servizio is not valid, set the MEZZO_ID as blocked for posting

For every MEZZO_ID list (if not empty)

- If there isn't a poster for that MEZZO_ID, spawn it
- Send the list to the poster for that MEZZO_ID
- Wait for the Poster Response, which can be of three types:
 - Unable to Send Over to REST
 - Sent Over to REST
 - REST accepted the data
 - Send eventual received warnings for manual corrections
 - Write all the posted servizi in to the Persistence DB
 - Remove all the posted servizi from the Staging DB New Section
 - REST refuted the data with error
(the whole list of servizi is not posted if at least one servizio generates an error)
 - Move all the the unposted servizi from the Staging DB New Section to the Error Section

Unlock the Persistence DB

Unlock the Staging DB