Delta Migration from Postgres to Informix

The challenge is to move/migrate delta data from postgres to Informix via kafka.

1) When any DML operation takes place on the postgres table, the DB trigger created on that table will post (via postgres pg_notify) details of operations type (insert/delete/update) along with table data to node listener via json payload.
2) This payload has to be posted Kafka. (producer processor)
3) The consumer processor has to parse this data and load Informix table based on the operation type.
4) For this challenge have already setup sample function & DB trigger on postgres `scorecard` table.

1. Postgres setup:

a. Setup Postgres tcs_catalog Database, execute all 3 sql scripts.
b. Setup the trigger and function at postgres by executing sql script. Example script is shared scorecard_example_trigger_function.sql.
c. Start node pg_dbtrigger_listener.js script.
d. Try to insert or update or delete on Scorecard table.
Example: `update scorecard set name = 'Original Design Screening Scorecard 123' where scorecard_id = 1;`

e. At pg_dbtrigger_listener.js you will receive the respective table `payload` with table and its column values.

i. *Submission Expectation - Producer processor script.*
*Enhance node **pg_dbtrigger_listener.js** script to post received payload to Kafka.*

2. Informix setup:

a. Setup the Informix DB. (This is a Docker setup)
b. This Informix DB has mirror setup of tcs_catalog DB.

ii. *Submission Expectation – Consumer script along with Informix DB updates.*

a. Create a node js consumer processor script which will consume the payload from Kafka group one by one

b. The payload need to be parsed & table data needs to be updated to respective Informix table based on the `operation` values. **(I.e. if insert then insert into Informix, updates means update table at Informix and similar to delete)**

c. In this case, the scorecard table which had updates at postgres, should get mirror updates at Informix.

3. Design consideration for Informix updates.

d. For Consumer, Informix Database updates we expect generic DML code. I,e incoming payload can have any table with it's column values. The design has to support all.

e. The payload will have standard format for recognizing table name and it's respective columns with values.

f. Relevant constraints for primary/unique constraints has to be considered.

g. Refer to sample pg_sample_payload.json

Note:

a) For kakfa setup you can use landoop or other similar kakfa setup.

b) Kakfa topic is already defined at sample payload.

iii. Submission Expectation – Share complete integrated working workflow or demo with detailed documentation.

4. Submission expectation

Submission expectation		
1	Producer processor script.	
2	Consumer script along with Informix DB updates	Very important
3	Demo/workflow with documentation	Very important

5. References

References		
1	Sample payload	pg_sample_payload.json
2	Top coder Postgres schema	tcs_catalog
3	Top coder Informix Schema	https://github.com/topcoder-platform/tc-database-scripts/tree/dev/tcs_catalog
4	Top coder Informix Docker	Informix
5	Postgres DB Trigger	pg_dbtrigger_listener.js
6	Top coder Sample Informix Setup and Kafka reference Setup	https://github.com/topcoder-platform/legacy-groups-processor

Note.

Feel free to update/modify any function/trigger. If there is no data then insert. Assume if needed but document it.