

Part 1 - Technical Knowledge Self Assessment

1. Please put your score (1 to 5) based on comprehension and hands-on experience of the following technologies. Feel free to add other items if you have experience in other tools/methods/technology that are still related.
 - a. Data Visualization
 - i. Metabase: 1
 - ii. Tableau : 2
 - iii. Google Data Studio : 3
 - iv. Power BI : 2
 - v. IBM Cognos Analytics : 4
 - vi. IBM Cognos Report Studio : 5
 - b. Streaming Platform/Message Queue
 - i. Apache Kafka: 1
 - ii. Debezium : 1
 - c. Data Warehouse Solution:
 - i. Google BigQuery: 2
 - ii. Amazon Redshift: 1
 - iii. Oracle : 4
 - d. CI/CD
 - i. Amazon CodePipeline: 1
 - ii. Bitbucket Pipeline: 2
 - iii. Gitlab Pipeline: 2
 - e. Data Monitoring
 - i. Grafana: 1
 - ii. IBM Datastage : 4
 - f. Infrastructure Orchestration
 - i. Airflow: 1
 - ii. AnsibleL: 1
 - g. Container Orchestration
 - i. Kubernetes: 1
 - ii. Docker Swarm: 1
 - h. Programming Lang:
 - i. Java: 1
 - ii. Python: 4
 - iii. R: 1
 - iv. PHP : 2
 - v. Oracle SQL : 4
 - vi. PostgreSQL : 3
 - i. Container Technology
 - i. Docker: 1
 - ii. RKT: 1
 - iii. Kubernetes: 1

2. Put some brief description about your experience in data engineering project and how you involved (if you don't have, leave it blank)

Answer:

I have experience working on a data engineering project: Local Currency Settlement (LCS) as a data warehouse programmer.

Local Currency Settlement (LCS) is the settlement of bilateral transactions carried out by two countries using the local currency prevailing in each country, the transaction will be done by an Appointed Cross Currency Dealer (ACCD) bank selected by the country state authority.

My involvement in the EDW LCS project is doing full-cycle development, the process starts by receiving some files from the bank as data sources in Excel file (.xls) extension, the .xls file going to be processed using IBM Datastage and separated into several text files (based on the number of sheets).

After the separation process, the text file will be inserted into staging area of data warehouse in the oracle database without changing any information or data structure, the next process is data modeling using Data Vault 2.0, where any LCS table on staging will be distributed into Business Key, Links, Context, and Reference in the Stored Persistent Staging (SPS) area. After the model is done, the next step is designing Data Mart (DM) based on business rules. The data mart model is using star schema, where the fact is created by joining any related table from the SPS. in LCS, there is about 8 DM (8 views + 8 tables) plus 7 DM (aggregate data).

The last step is creating data visualization using IBM Cognos Analytics. the output is 15 fixed reports based on user requirements. after that, we will configure the access to the report on IBM Cognos Administrator to make sure only the confirmed user can access the reports.
