

SENIOR DATA OPS EVALUATION TEST

BACK STORY

GROWENS has a complex structure, composed of different business units spread around the world. In order to let the Business Control team work with comparable data it is mandatory to have daily economic value of currencies and exchange rates provided by Bank of Italy.

EXERCISE

We'd like you to create a service that **ingests this data** in a sql database and **calculates** the kpis, and to define the **deployment** of this service.

The service should be developed in any development language and framework (preferably running on JVM) , in order to ingest and update exchange rates from some csv file (previously downloaded by Bank of Italy and attached to this test) **into a sql table**; the csv files are referred to last(s) day(s) exchange rates and their data must be inserted in a table that already contains historical data.

We need some kpis calculated **on top of ingested data**:

- for each currency, on monthly and yearly basis:
 - average exchange rate
 - day and value of minimum/maximum exchange rate

We also need to define the **deployment** of this service:

- architecture on which it will run
- deploy strategy
- scheduling
- monitoring

The output of this process will be used together with group financial data, and each business unit member can view only his business unit data; please define security and segregation strategy to allow access to the final data, along with audit strategy.

NOTES

You are not expected to write production ready code and architecture, but a skeleton program and deployment are enough.

Comments that highlight strategies to make it production ready will be considered a plus.

We are interested in exchange rates against EUR for USD and DKK currencies (but in future other currencies could be interesting).

Exchange rate csv: [zip file](#)

You can send your solution as a zip-file with name to data_analytics@growens.io.

You should provide an additional readme file explaining your solution and any assumptions that were made during the exercise.

This test has two components: data ingestion and kpi calculation measures data engineer capabilities, while deployment of the service measures dataops skills. They have the same weight; please balance your effort based on this information.

The estimated duration of the test is 3/4 hours, but you can spend more time if you need it.