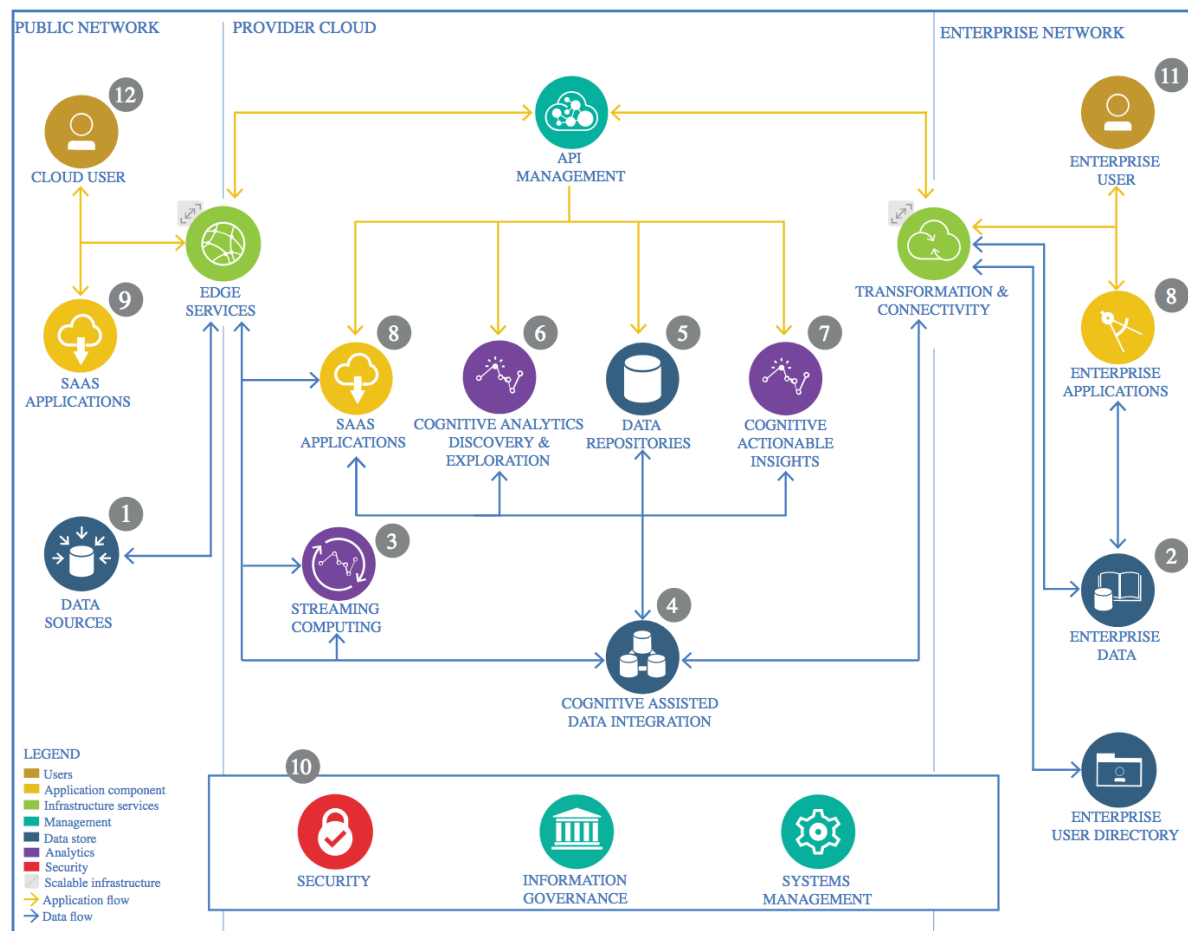


The Lightweight IBM Cloud Garage Method for Data Science

Architectural Decisions Document Template

1 Architectural Components Overview



IBM Data and Analytics Reference Architecture. Source: IBM Corporation

1.1 Data Source

1.1.1 Technology Choice

Csv Files provided by Kaggle

1.1.2 Justification

High Quality and almost ready to use.

1.2 Feature engineering

1.2.1 Technology Choice

Use of ETL and adding real values to the missing values

1.2.2 Justification

We needed as much as data as possible to train the model and we couldn't simply drop the data if we were able to attribute a real value in a smart way.

1.3 Algorithm

1.3.1 Technology Choice

Use a deep learning model, based on the LSTM algorithm

1.3.2 Justification

According to some studies about Gold prediction, The LSTM layer appear to perform pretty well when predicting the Gold price based on it's previous values

1.4 Framework

1.4.1 Technology Choice

Deep learning model containing 1 LSTM layer and the Dense output layer

1.4.2 Justification

Since we wanted to detect a pattern in the gold prices to predict future values, a time series model seemed to be a good option

1.5 Model performance indicator

1.5.1 Technology Choice

We used the mean square error loss (MSE)

1.5.2 Justification

It was a great indicator to follow the model performance when predicting the test data and the unknown data, and we could also compare its results with the results of the LR model.