

ABSTRACT

ANALYSIS AND COMPARISON OF PERFORMANCE MODEL FOR IMPLEMENTATION OF ARCHITECTURE REFERENCE AND MASTER DATA MANAGEMENT FOR OPEN SOURCE TOOLS

Case Study: BPOM

By

IMMANUELA CHRISTIANTARI PERDANA

1202164156

Data is the most important asset for a company. Of course, the data to be used must be accurate, relevant and consistent because it will be a reference in making corporate decisions. But usually there are obstacles when the data management process, namely the occurrence of data redundancy and inconsistent data because there is no integration between applications. This also happens because the data is stored in different databases. The problems that occur can be reduced and overcome by applying good governance data. By implementing data governance, companies will be easier to control and access data. One process related to data governance is reference and master data management.

By implementing master data management (MDM), the stored data will remain consistent, accurate, and relevant. In implementing MDM, there are four implementation models, each of which has a different function and method of implementation. The implementation model is consolidation, registry, centralized, and coexistence. Implementation of the implementation model will depend on the needs and problems that occur. This research will compare several models in accordance with case studies, namely coexistence with centralized models.

In addition to the implementation model, application performance can also affect a company's business. If the company has an application that has poor performance, it can be said that the application does not provide more profit to the company. This research focuses on analyzing the implementation of master data management architecture and comparing the performance of architectural models that have been made previously with those proposed in BPOM company case studies. The method used in this research is iterative incremental method.

The results of this study are the proposed architectural design, and performance measurement based on performance testing of the coexistence implementation

model with centralized. Performance testing is carried out using standard deviation calculations. The results of these calculations, obtained the standard deviation of the coexistence model on the 3.67 master data matching algorithm, then on the 8.9 master data insert, and on the master data update 1.41.

Whereas in the centralized model, the matching standard data deviation algorithm is 2.34, the insert data algorithm is 2.34, and the master data update with a standard deviation of 1.51. From the test results it can be seen that the centralized model has better data consistency than the coexistence model, because it has a smaller standard deviation on each algorithm.

Keywords: data, data governance, master data management, application performance