## ABSTRACT

Telin (Telkom Indonesia International) is a Company that focus on providing Telecommunications services. One of the service that provided by Telin is SMX (SMS Exchange) which is a system that provide secure relocation between International Provider and Local Indonesian Provider. It gave a gateway of a Provider to handover an SMS data to reach its destination with a certain condition. Every SMS data that comes to usage of SMX System will be counted based on where this data came from, after overall SMS data was counted than the system will generate a bill for the provider that use handover of their data to the destination. Almost 10000 SMS data that comes every hour and the billing system itself cannot keep up with the fast amount of data and how big it is to pile up of the unprocessed data. Therefore, in this research there will be an implementation of Big Data and Cluster Computing System which may so be bring positif aspect to the Billing System in ISMS System Telin HongKong. Because with using Big Data would make the system execute more faster and more accurate.

Key Word: Big Data, Cluster Computing, Hadoop, Docker