ABSTRACT

Data are now a major commodities for an organization because it changed their way of business, communicates and makes decisions. The data obtained is in form of big data. One type of organization that rely on big data is political party.They use it to analyze the likelihood of their candidate winning in the election. But in Indonesia, its has not been to utilized because of limited infrastructure. Therefore, to utilized the use of big data. It required a data storage management that can accommodate big data. One of these databases is graph database. In this study, the author examines three database tools that often used, namely PostgreSQL representing relational database, MongoDB representing document-based database and Neo4J representing graph database. The author performs searching query that has a JOIN clause on all three databases. To compare their performance, the author uses Big O Notation which is a notation that is commonly used in describing the complexity of a data processing system. The conclusion from this study is that MongoDB is very good for managing Big Data elections. Where MongoDB has complexity of O(1). This happens because document based database like MongoDB easy to store and query data in the same collection.

Keywords: big data, postgresql, mongodb, neo4j, big o, database performance