

ABSTRACT

The needs and maintenance of information are important component in an enterprise or organization. The easiness to gather information and time consumed become a good or bad parameter for information system. Database is collection of structured data, which in storing and maintenance need the role of Database Management System (DBMS). Relational Database Management System (RDBMS) is DBMS which is used to maintenance relational database. While Object Database Management System (ODBMS) is DBMS which is used to maintenance object-based database. In order to fulfill enterprise needs and developments, database not only use as centralized architecture, but also distributed database become one of the solution. There are two types of Distributed database, which are homogeneous and heterogeneous. The emerge of cloud computing paradigm followed by Database as a Service (DBaaS) paradigm offer some profits in Economics of scale, Pay-per-use, and Outsourced administration. In this study, the writer tried to develop the handling of heterogeneous distributed database in DBaaS in terms of system performance using response time, throughput, query, error rate, concurrency, and consistency parameters on RDBMS oracle and ODBMS db4o.

The result of this research is the implementation of Object Database Management System (ODBMS) in heterogeous distributed database which can decrease the response time and throughput on Database as a Service (DBaaS)

Key Words: db4o, oracle, DBaaS, heterogeneous distributed database