

Abstract

Execution query in a shortest possible time is one of the reliability of a RDBMS (Relational Database Management System). There are a lot of methods which provided by RDBMS to support performance enhancement in query execution, one of them is by using the parallel execution method. Parallel execution is one of the query execution method where a process is divided into a number of sub-processes (PX servers). Each sub-process will run and be executed as parallel with the objective is to cut down the execution time of query (elapsed time and CPU time). The number of sub-processes that formed are initialized with the value of DOP (Degree of Parallelism).

Time of query execution which run in parallel greatly influenced by the available resource. Therefore, in this Final Assignment, the testing done towards four types of different hardware configuration, i.e. single core processor with non-RAID, multi core processor with non-RAID, single core processor with RAID 1, and multi core processor with RAID 1. For each type of hardware configuration the query execution run in serial and parallel with value of DOP 2, 4, 6, 8, 10, and 12.

According to the result of testing, can be concluded that performance of SQL parallel execution will increase as long as the need of resource to execute the query in parallel can be fulfilled by the available resource.

Keywords: *Database, Performance, SQL Parallel Execution, Degree of Parallelism (DOP).*