

Thesis Title	The Implementation of Parallel Join Operation in PostgreSQL using PVM
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Candidate	Mr. Werachart Jantarataeme
Supervisor	Assoc. Prof. Wichian Chutimasakul
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#### Abstract

The very large-scale data can be processed faster by using high performance computers and efficient database management system (DBMS) that are expensive. This thesis purposes the implementation of parallel join operation in PostgreSQL DBMS using parallel virtual machine (PVM) in order to build a cheaper PC cluster system replacing the expensive high performance computers and employ the open source software instead of commercial software.

The prototype is designed and developed by applying PVM in Parallel Hybrid Hash Join algorithm which is the efficient parallel join algorithm. The prototype's architecture is designed by using the concept of intraoperator parallelism. The speedup and scaleup experiment of the developed system are tested. The result shows that the performance of Join operation is increased during adding up the computers into the system. However, the speedup curve is saturated when the number of computers added into the system are 13 due to the limitation of data distribution.