Abstract

Server localization refers to introduction of local servers that are connected to a main centralized server. The banking system currently prevailing in the country maintains two databases: one for transaction management while the other is maintained for backup. The transactional data from various branches across the country is maintained by a centralized server. In this scenario, given one centralized server, the access overhead becomes too high since all the branches access the main server only. As a part of day-end closing, the database in the main server is duplicated. The proposed system introduces an algorithm named Transaction Overhead Reduction by Localization of Servers (TORLS) – where servers are locally placed region wise and they contain local databases pertaining to that region. Hence, for intra-regional transactions, it is sufficient that the local servers alone are accessed. For inter-regional transactions, the two region-based local servers are accessed via the main server. The measure of decrease in the overhead is calculated as the number of intra-regional transactions. The duplication server is optional since the integration of local server databases
will constitute the main database. The main database is updated at the end of each day thus alleviating the need for duplication.

References


Index Terms

Computer Science Databases

Keywords

Server localization, access overhead, inter-regional transactions, intra-regional transactions, replication