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THE SERVER REASSIGNMENT FOR LOAD BALANCING

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Abstract

Application layer peer to peer networks are considered to be the most important development for next generation internet infrastructure. For these systems to be effective, load balancing among the peers is critical. Mostly ID space partitioning schemes are used for load balancing. Peer to Peer systems make it possible to harness resources such as storage, bandwidth and computing power of large populations of networked computers in a cost effective manner. In this system data items are spread across distributed computers. However, location of each item is determined in a decentralized manner using a distributed hash lookup table (DHT). Structured Peer to Peer systems based on distributed hash lookup table mechanism have proven to be an effective design for resource sharing on a global scale and on top of which many applications have been designed such as file sharing, distributed file systems, real time streaming and distributed processing. In these systems each data item is mapped to a unique identifier ID drawn from an identifier space. The identifier space is partitioned among the nodes so that each node is responsible for a portion of the ID space called as zone and storing all the objects that are mapped into its zone.

Keywords : Distributed hash table, load balance, structured Peer to Peer system, generalized assignment problem.