Abstract

In a distributed system, synchronization of time is an important functionality for supporting real-time scenario like online banking applications, database queries and real time applications etc. A clock synchronization is necessary to measure the duration of activities that start on one node and terminate on another one. Although the some of the existing algorithms for time synchronization depend on sending and receiving messages from different system. Scheduling such task sets with time constraints requires timing information to be accurate. Synchronizing these clocks allows services in higher layers to assume a global time within certain bounds of accuracy. The system clocks of different nodes are not works on same clock time. Usually, there is an offset between the times, so accuracy is not achieved. The clock time collection interval, in which clock time of remote nodes are collected and corrected with global time, which determines the period of the correction of the local clocks. Such a decomposition can reduce delay and achieve accuracy in network. The paper presented in approach towards Delay Tolerant Synchronization Algorithm (DTSA) which is combination of Network Time Protocol (NTP) and Delay Tolerant Protocol (DTP) which synchronizes nodes in a network with Global Time Server (GTS) using NTP. Simulation results show that the DTSA reduces delay and achieve accuracy in scattered network.
Performance Analysis of DTSA in Distributed Network

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Index Terms

Computer Science

Networks

Keywords

Clock Synchronization  Clock Accuracy  Clock drift  scattered environment  Group synchronization

Network Delay

Synchronization issues