The Study of Load Balance and Fault Tolerance of SIP Proxy Server

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ABSTRACT

SIP （Session Initiation Protocol） is a well-known technology of the feature IP network. SIP is also adopted for the technical standard of the feature wireless multimedia communication by the third generation mobile communication system （3G）. In RFC3261, there is no detailed definition of how to manage multiple SIP proxy servers. We have proposed a method in this paper, which enable the fault-tolerant and load-sharing function of SIP proxy server by using multiple SIP proxy servers. The proposed load-sharing scheme increases the usability of the SIP system. It adjusts the number of the replicas of the user ’s data according a priority, which is calculated by a function of called-rate of a user. By replicating user ’s data, the proposed method does not merely share the load of each proxy server; it also can reduce the impact of the server-crashing. Finally, the simulation shows the load-sharing and priority-based data replication method significantly reduces the average loading per proxy server and improves the usability of SIP system.

Keywords : SIP, 3GPP, SIP Proxy Server, Load Sharing, Fault Tolerance

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