

ABSTRACT

A communications server apparatus for a distributed sharding database related to a transportation service comprising a processor and a memory, the communications server apparatus being configured, under control of the processor, to execute instructions stored in the memory to: determine whether rebalancing of a plurality of shard replicas stored on a plurality of server instances is required based on two or more quantitative metrics; if rebalancing is required, select a plurality of candidate rebalancing plans; and rank the candidates, and execute a selected rebalancing plan from the ranking if two or more quantitative metrics criteria are met for the selection.

(Fig. 2)