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(54) Title: STREAMING RESTORE OF A DATABASE FROM A BACKUP SYSTEM

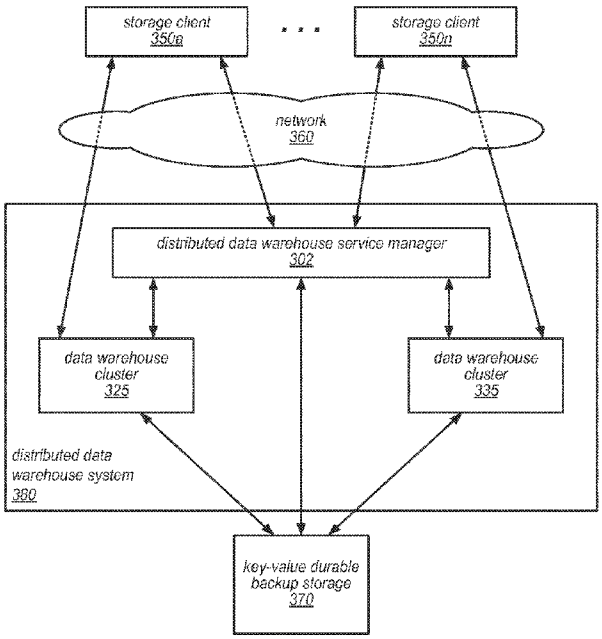

FIG. 3

(57) Abstract: A distributed data warehouse system may maintain data blocks on behalf of clients in multiple clusters in a data store. Each cluster may include a single leader node and multiple compute nodes, each including multiple disks storing data. The warehouse system may store primary and secondary copies of each data block on different disks or nodes in a cluster. Each node may include a data structure that maintains metadata about each data block stored on the node, including its unique identifier. The warehouse system may back up data blocks in a remote key-value backup storage system with high durability. A streaming restore operation may be used to retrieve data blocks from backup storage using their unique identifiers as keys. The warehouse system may service incoming queries (and may satisfy some queries by retrieving data from backup storage on an as-needed basis) prior to completion of the restore operation.

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