

ABSTRACT

A computer-implemented system and method for automated inventory using data associated with stock keeping unit SKU and fulfillment centers (FC) to initialize a data structure comprising a plurality of nodes, determine a weight associated with each FC based on the capacity of each FC, assignment SKU to one or more FCs, perform a preliminary mapping for the plurality of FCs, determining whether to rebalance the preliminary mapping of the quantity, and rebalancing the preliminary mapping based on the weights associated with each FC, to promote maximum utilization of the network.