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(54) Title: PREFIX-AWARE WEIGHTED COST MULTI-PATH GROUP REDUCTION

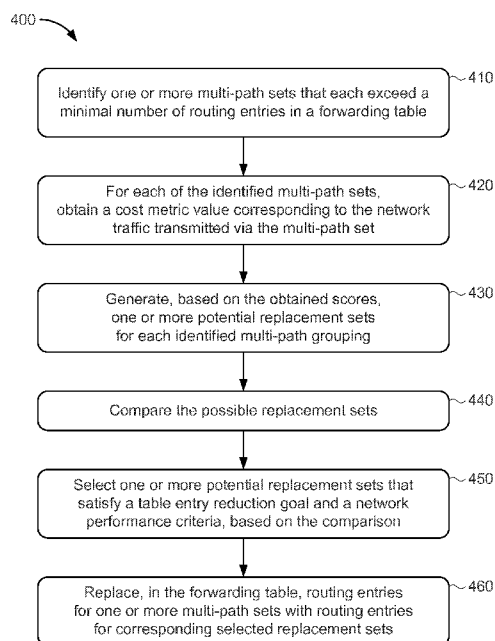


Figure 4

(57) **Abstract:** Methods and systems for generating a forwarding table for a packet switch. The system includes a route manager for the packet switch, configured to identify a plurality of multi-path groups each corresponding to a respective initial set of routing entries in the forwarding table and generate, for one or more multi-path groups, at least one replacement set of routing entries with fewer routing entries than the initial set corresponding to the respective multi-path group. The route manager selects, based on a traffic reduction cost metric, one or more of the replacement sets of routing entries, each corresponding to a different respective multi-path group, and updates the forwarding table with the selected replacement sets. In some implementations, the traffic reduction cost metric includes a traffic characteristic. In some implementations, the packet switch participates in a software-defined network (SDN) and the route manager is part of an SDN controller.



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