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(54) **SYSTEM AND METHOD FOR EFFICIENT NETWORK RECONFIGURATION IN FAT-TREES**

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(57) **ABSTRACT**

Systems and methods are provided for supporting efficient reconfiguration of an interconnection network having a pre-existing routing. An exemplary method can provide a plurality of switches, a plurality of end nodes, and one or more subnet managers, including a master subnet manager. The method can calculate, via the master subnet manager, a first set of one or more leaf-switch to leaf-switch multipaths. The method can store this first set of one or more leaf-switch to leaf-switch multipaths at a metabase. The method can detect a reconfiguration triggering event, and call a new routing for the interconnection network. Finally, the method can reconfigure the network according to the new routing for the interconnection network.