Modified Dynamic Source Routing Protocol using Distributed Cache Replacement Algorithm in Mobile Ad-hoc Network

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January 17, 2022

Reference Details

Paper link :
https://www.sciencedirect.com/science/article/pii/S1877050916002210

Modification Methodology

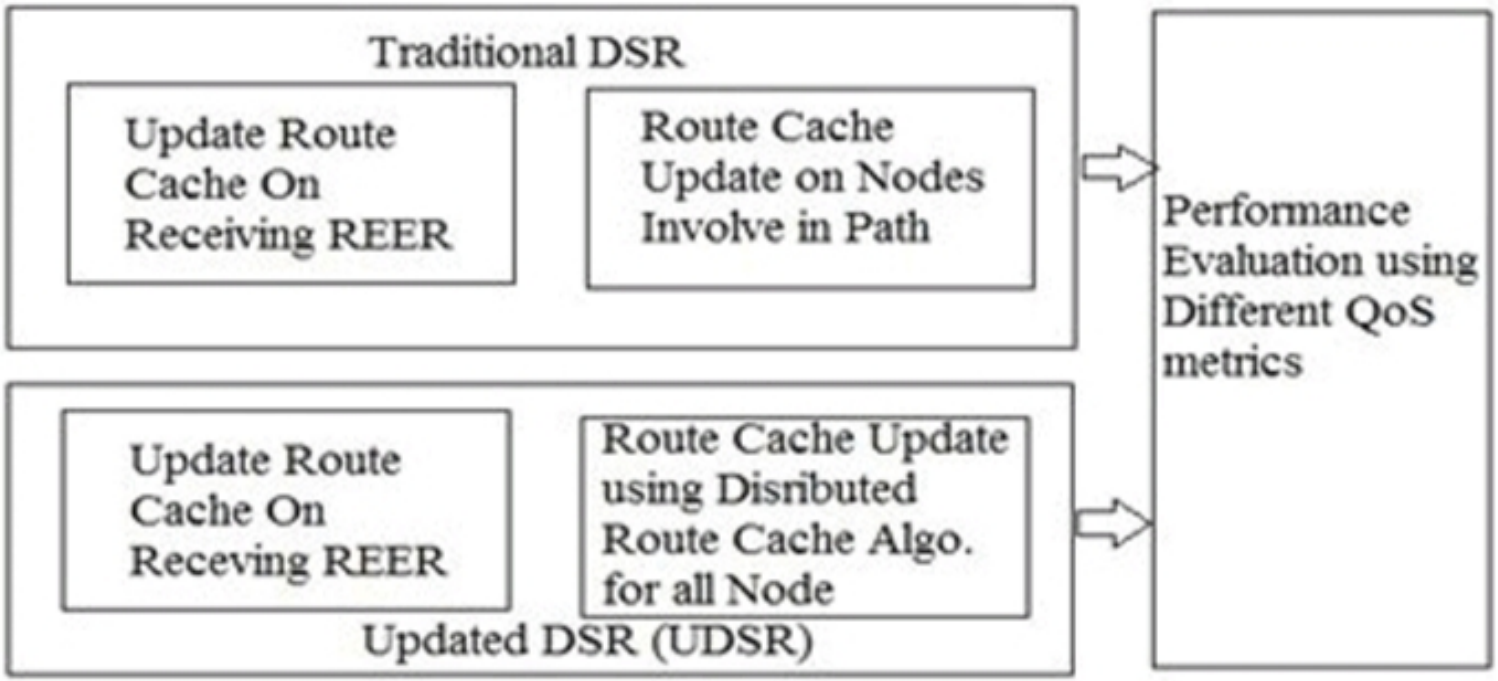


Fig.1: Block Diagram of Proposed System

Proposed Algorithms

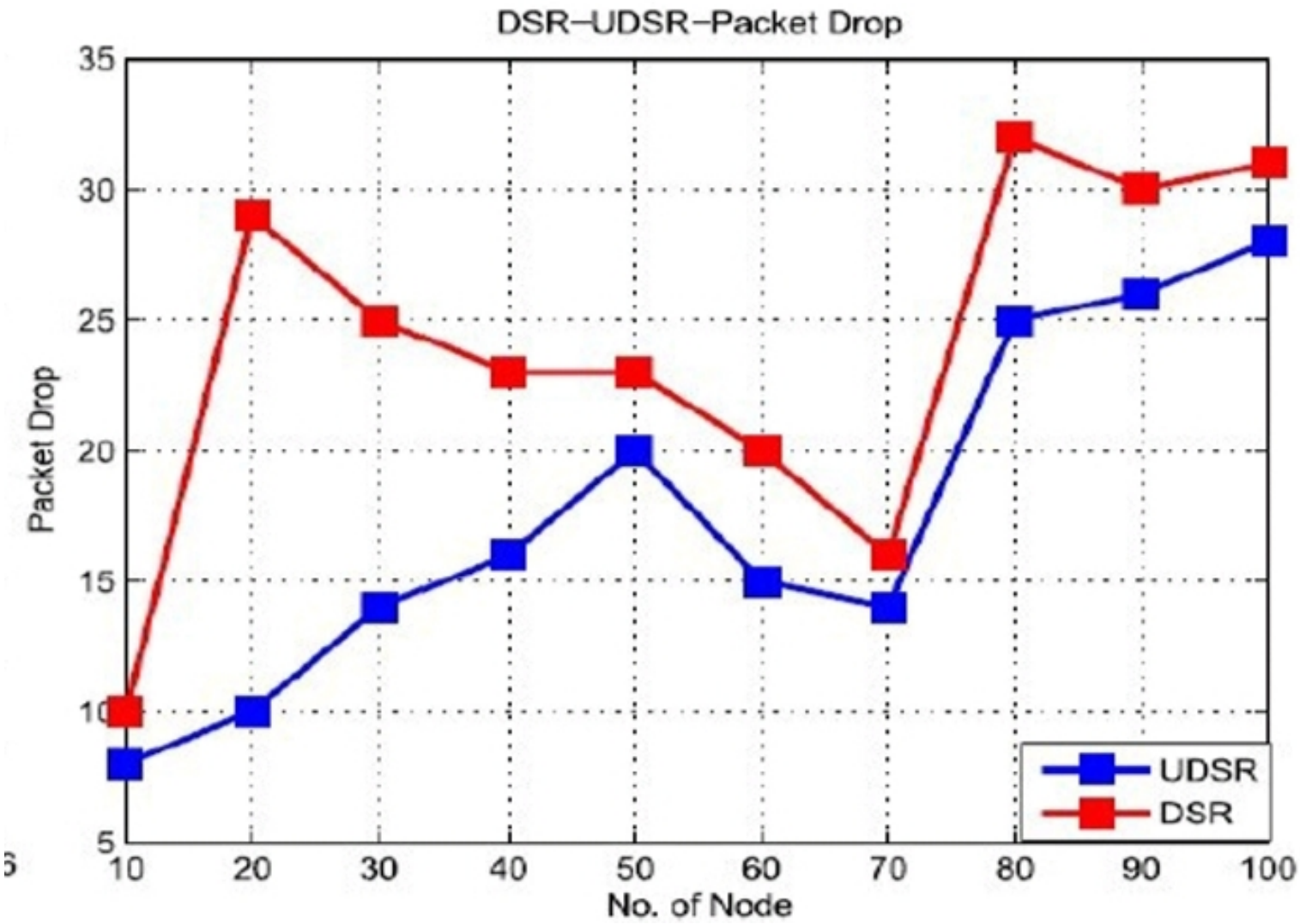
Algorithm 1. AddRoute

1. Node adds a route from RPLY or from data packet.
2. If node is destination then it stores the source node and sets data packet (DP) to 0 as route is not used.
3. If it is not intermediate node then it check cache .
    1. If route exist then cache table entry is carried out by DP to 0 creates Reply Record in which neighbour should learn downstream link.
    2. If route exist then it adds entry to Replay Record field.
4. If source route exist in cache then DP is 1.
5. If route doesn't exist then it is destination node and DP is 1.
6. If route doesn't exist then node is intermediate node and increments DP by 1.
7. If not having full path then it creates cache table entry and sets DP to 1.

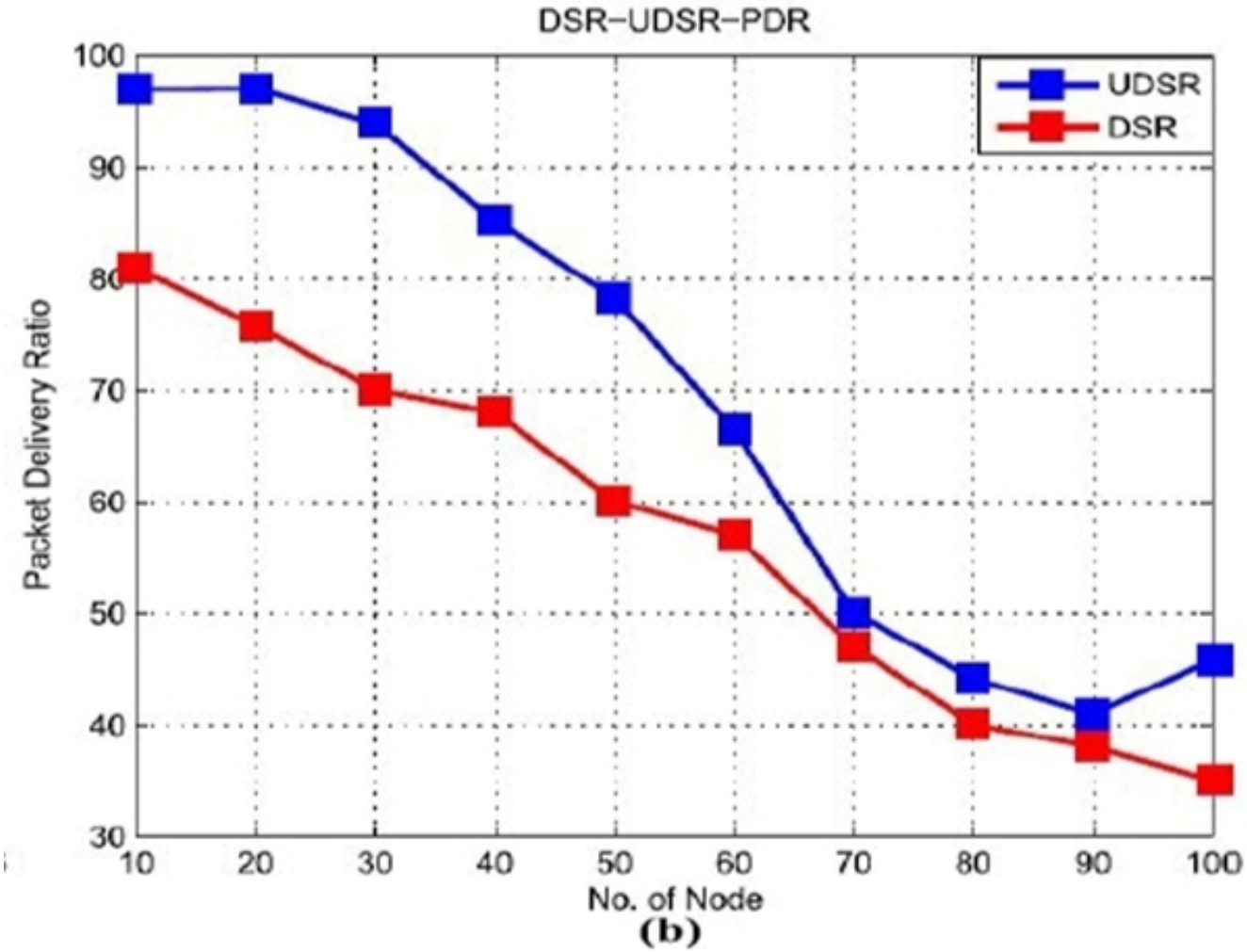
Algorithm 2: FindRoute

1. Cache is null.
2. For each entry path is store in cache table.
3. If node finds route then adds entry to Replay Record, including neighbours to which ROUTE REPLAY is send.
4. If node is source node and finds route then DP is incremented by 1.
5. If find route is sub route then add entry in cache table and DP is incremented by 1.
6. If data packet is salvage then not included in cache table .

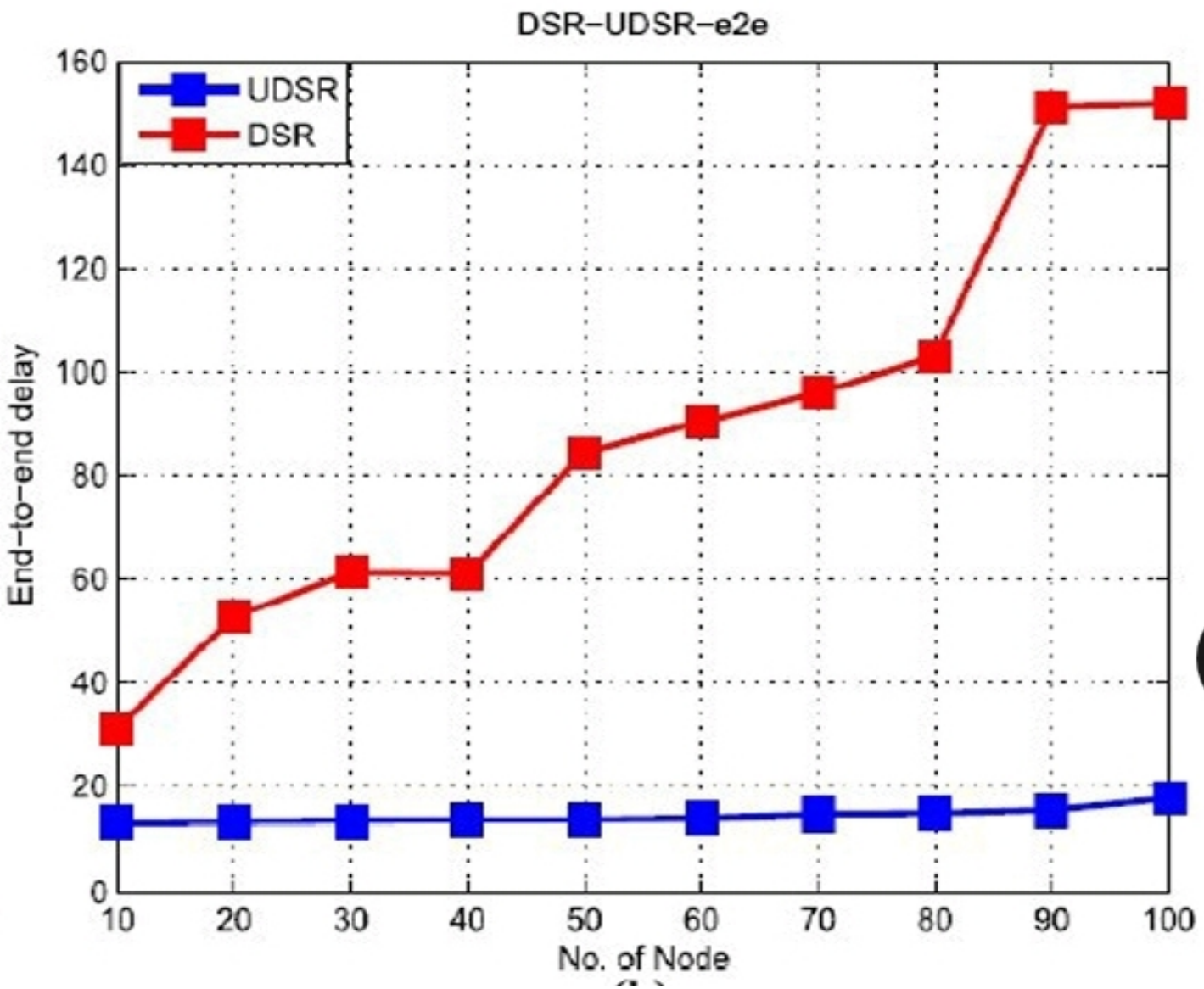
Expected output after the modification : Packet drop ratio



Expected output : Packet delivery ratio



Expected output : End-to-end delay



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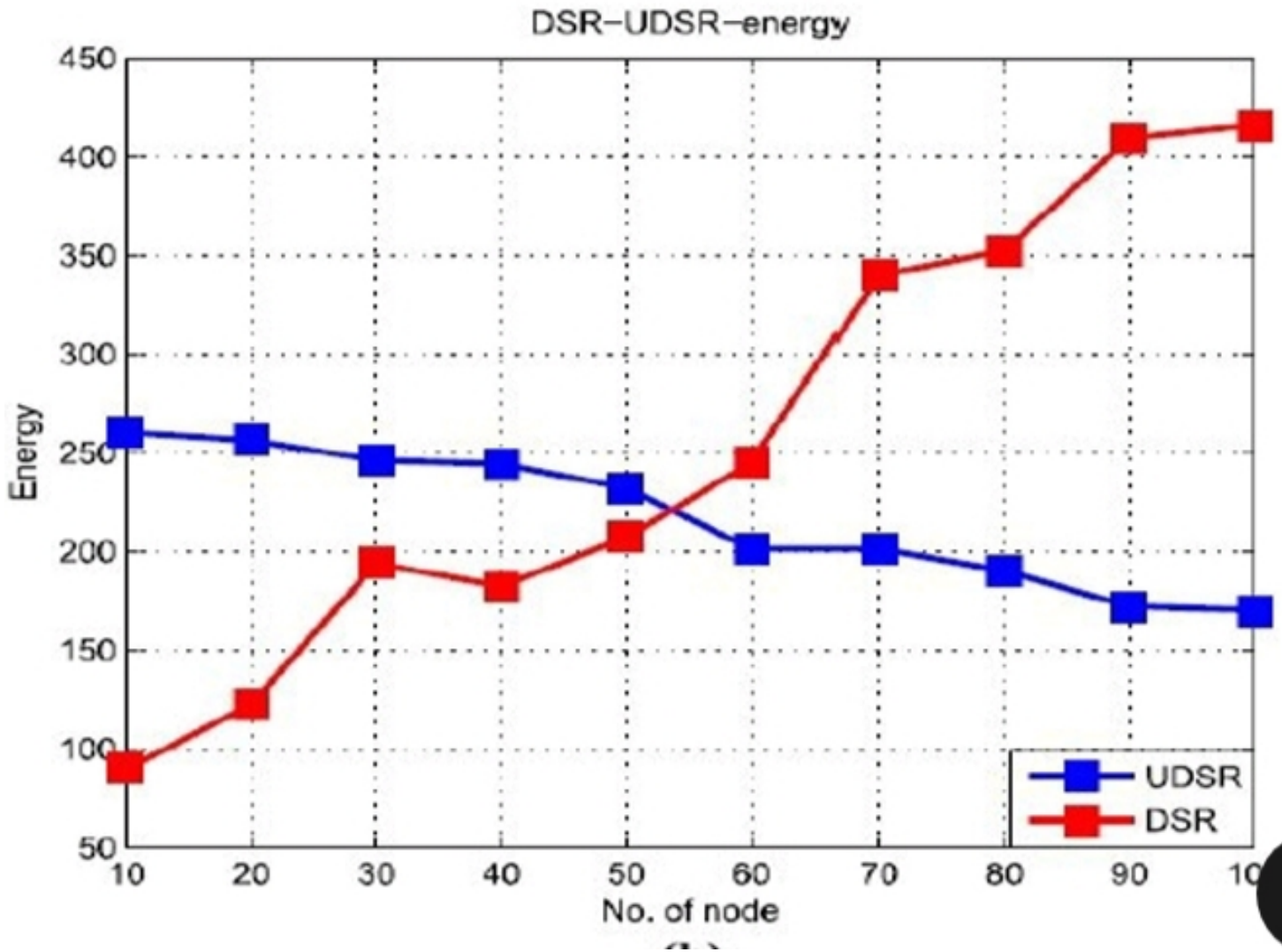
Expected output : Energy consumption



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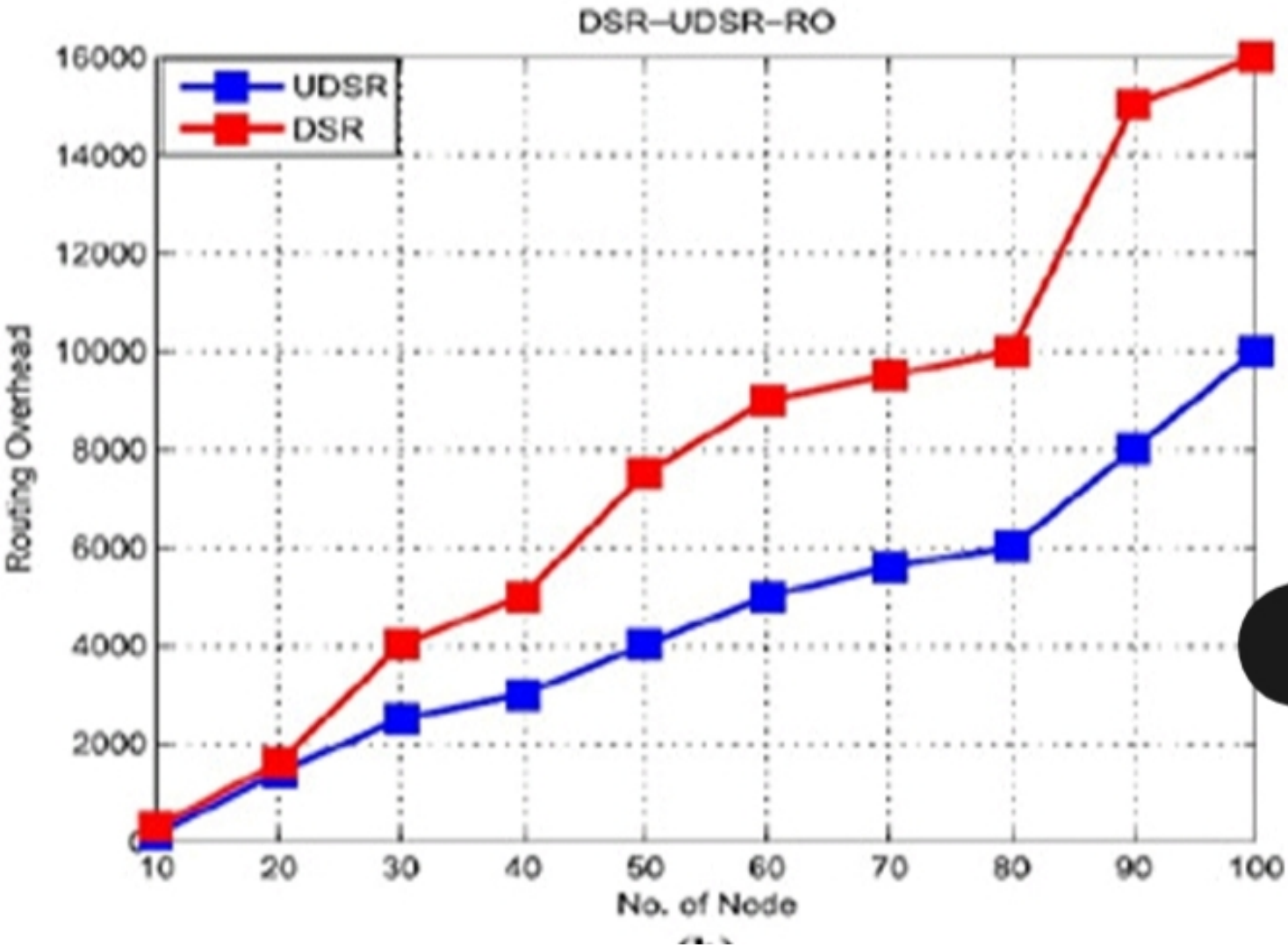
Expected output : Network throughput



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THANK YOU