Evaluation performance of worm-hole attack using proposed AODV in MANET

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Abstract

A Mobile Ad hoc Network (MANET) is a collection of self-configuring nodes which uses the wireless link between communicating devices (mobile devices) to form an arbitrary topology without infrastructure. Dynamic topological changes caused by high node mobility make routing and securing communication challenging. Thus, the MANET is vulnerable to attacks due to their dynamic, lack of both distributed infrastructure and centralized authority. This study proposes an improved Ad Hoc On-Demand Distance Vector (AODV) where two packets are introduced, Hello_src and Src_reply, to mitigate the wormhole attack. Wormhole attack impact is analyzed with the proposed AODV Routing protocol. Parameters like end to end delay, throughput, and cache replies number evaluated performance.