



**RESEARCH ARTICLE**

# **An Analysis for Black Hole Attack in AODV Protocol and Its Solution**

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***Abstract— Security is an essential requirement in mobile ad hoc networks to provide protected communication between mobile nodes. MANETs are vulnerable to various attacks; black hole is one of the possible attacks. Black hole is a type of routing attack where a malicious node advertise itself as having the shortest path to all nodes in the environment by sending fake route reply.***

***We attempt to focus on analysing and improving the security of one of the popular routing protocol for MANETS viz. the Ad hoc On Demand Distance Vector (AODV) routing protocol. Our focus specifically, is on ensuring the security against the Black hole Attacks. We propose modifications to the AODV protocol and justify the solution with appropriate implementation.***

***Key Terms: - MANETs; AODV; Black Hole Attack; RREQ; RREP***

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