Abstract

A Mobile Ad-hoc Network (MANET) is a dynamic wireless network that can be formulated without the need for any pre-existing infrastructure in which each node can act as a router. One of the main challenges of MANET is the design of robust routing protocol that adapt to the frequent and randomly changing network topology. Several attacks are possible in the available routing protocols such as Wormhole attack, black hole attack, byzantine attack, etc. Among these attacks black hole attack is of major concern in AODV, is one of the popular routing protocols for MANET. In this study, analyzed the use of AOMDV (Ad-hoc On-demand Multipath Distance Vector) and improved the security of MANET against the black hole attack. The main
objective is to provide security against the Black hole attack. Finally compared and evaluated the performance of On-demand routing protocols Ad-hoc On-demand Distance Vector (AODV) routing protocol, which is unipath and Ad-hoc On-demand Multipath Distance Vector (AOMDV) routing protocol. When compared to the existing AODV protocol, AOMDV has better packet delivery ratio and comparatively low average end-to-end delay. The number of packets dropped in the AOMDV against the black hole attack is very low. Thus the proposed technique which uses AOMDV is proved to be better against black hole attacks.

References

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Index Terms

Computer Science Wireless Networks

Keywords
Black Hole Gray Hole Warm Hole Attack Manet Active Attack Passive Attack