عنوان مقاله:

Optimization of AODV and SAODV Routing Protocols in Wireless sensor Networks- Simulation with ns-2

محل انتشار:

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خلاصه مقاله:

The combination of peer to peer wireless links and access points create a backhaul infrastructure called a wireless mesh network (WMN), this backhaul infrastructure works with the nodes in the same network using a common set of routing/forwarding protocols. The access points or routers form a mesh of self-configuring, self-healing links among themselves. The nodes in the WMNs operate in a wireless medium and could be stationary or mobile. This creates interesting parallels between Mobile Ad-hoc Networks (MANET) and WMN. In both the cases the nodes are mobile and communicate directly with each other. In fact WMN can be viewed as MANETs co-existing with other infrastructure to provide wide-scale coverage. The IEEE 11.288s ESS (Extended Service Set) Mesh Networking Task Group is working on creating a standard for WMNs, the routing protocol that they are considering is based on AODV (Ad-Hoc On Demand distance Vector), which has been researched extensively with MANETs. AODV does not provide any security features but it has a secure counterpart SAODV (Secure AODV), which provides security features like integrity and authentication. This project aims to compare and contrast SAODV and AODV by utilizing the NS-.(Optimized Network Engineering Tool) simulation application, to evaluate how SAODV could possibly apply for securing WMN routing messages. A new model for SAODV has been derived from the AODV model in NS-.. Performance is evaluated on the basis of the fraction of packets delivered, the end-to-end delay and routing load for a given traffic and mobility scenario. It is observed that SAODV has comparable results for end-to-end delay and route discovery time with the added security feature.

کلمات کلیدی:

AODV, Mesh Networks, NS-2, SAODV

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