Abstract

The key confront in Mobile Ad hoc Network (MANET) is its dynamic nature, which itself carries security measures. The Mobile Ad hoc Network is multi-hop in nature where nodes are required to perform communication activity for end to end connectivity which is being used for transferring data packets and thereby spending its resources. A selfish node is one that tries to consume the network resources for its own benefit but is unwilling to spend its own resource for others. If such selfish behavior continues among nodes in network, it may be harmful for network by creating disorder. In this paper, Proposed ES-DSR (Enhanced Selfish DSR) is implemented on NS-2 and results shown significant improvement over original DSR in terms of performance evaluation of network. In proposed protocol, as mobility increases, there is significant decrease in communication overhead that is almost about 50% than DSR protocol which is one of the main beneficial point of our proposed protocol and also as speed increases end to end delay is also decreases almost 35% than DSR, Throughput is also increasing but marginally compared to DSR protocol and packet delivery ratio is also increasing due to less no. of connection breakage between nodes. So by experimental results it is found that in dense mobile ad hoc networks where route breakage is frequent and also communication overhead increases in DSR. But, by selfish behavior of some nodes in proposed protocol communication overhead reduces. Because of high density the negative effect of selfish nodes reduces
overheads in ES-DSR and is also indirectly results in saving nodes battery power also. In this paper it has been proved that security attacks are somewhat beneficial to mobile adhoc network.

Referenc

Modeling, Implementation and Performance Analysis of Selfish Behavior in Enhanced Selfish-DSR Routing Protocol of MANET


Index Terms

Computer Science Information Sciences

Keywords

DSR ES-DSR (Enhanced Selfish DSR) Secured Routing Selfish nodes Ad hoc network Security

Selfish behavior