

An Novel Network Framework to Enable Secured and Energy Route Path Discovery and Maintenance

K. Selvakumar

Abstract--- Mobile Adhoc Network Environment is an infrastructure less network with limited resource where the security aware energy constrained routing is most difficult task. It is required to ensure the secured routing in the MANET environment for the increased user satisfaction level. In the existing system, routing is done only based on the energy constrain where the path that can lead to routing with less energy and link cost would be selected. The main goal of proposed system is to implement the network environment that is more flexible and secured for the network users. The proposed network framework namely Security and Energy aware Reliable Routing technique (SER-RT) can enable secured and energy constrained route establishment and route maintenance process. In the proposed, identity based encryption can be applied on the data packets before

transmitting it into the other nodes. Thus the attackers cannot guess the original value. To increase the complexity of the cryptosystem, encrypted data can be divided into multiple chunks which will then be forwarded in different paths. And n/k -threshold scheme is introduced to enable the users to retrieve the original meaning of the contents if they have k keys among the total n keys. The overall evaluation of the proposed research method is done in the NS2 simulation environment from which it is proved that the proposed research technique can lead to provide optimal outcome than the existing research techniques in terms of improved security level.

Keywords--- Security, Routing, Energy Consumption, Data Packet Loss, User Satisfaction Level, Threshold Chunks, Cryptosystem.