Abstract

A network always suffers from some active or passive attacks. These attacks result in data loss or information reveal. In case of Dynamic wireless network there are more chances of such kind of attacks. One of such type of attack is Wormhole Attack. It is a tunnel based attack in which a pair of nodes forms a tunnel with false identification. The wormhole attack causes the delay transfer and information steal over the network. In this paper, we have presented the authentication approach to avoid the wormhole attack over the network. In this system we have provided 2 level of authentication using public key cryptography, one level is between node to base station and other between two mobile stations. Further to reduce the security risk from authorized node, an eligibly test is done, so that most eligible authorized node is choose for communication. In this work the clustered architecture is presented in which an authenticated tunnel is set between source to base station and base station to destination. The system will minimize the packet loss over the network with authenticity.

References

- Ephremides, Wieselthier, J. E. and Baker D. J., "A design concept for reliable
mobile radio networks with frequency hopping signaling,


Index Terms

Computer Science

Security

Keywords

Wormhole Authentication Tunnel wireless cryptography