Abstract

Security is the main concern in Mobile Ad Hoc Networks (MANETs). There are numerous malicious activities performed on single as well as multi-layer of the MANET. Unlike specific layer attacks, the multi-layer attacks are intelligent, since they can coordinate the misbehaving activities in various layers and launch further sophisticated attacks. Most of the research works have focused only on the specific layer attacks. However, there is little progress in providing secure communication against multi-layer attacks. The security against impersonation attack is difficult and to provide the multi-layer protection becomes crucial. To meet the security requirements, several security algorithms have been proposed. However, solutions to the
impersonation attack are still incomplete. The routing behavior analysis is insufficient to provide multi-layer protection against impersonation attack, and thus the cryptographic mechanism is widely used for providing authentication and preventing impersonation in MANET. This work conducts a survey on network attacks and conventional security solutions with its advantages and limitations. Finally, this work explores the complexities of symmetric, asymmetric, and group key management.

References

Survey of Cryptography Techniques against Impersonation Attacks in MANET

- Chien, H.-Y., And Lin, R.-Y., "Improved Id-Based Security Framework For Ad Hoc
Survey of Cryptography Techniques against Impersonation Attacks in MANET


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