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Study: Morning

Secure routing protocol for MANET

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Abstract

Designing secure routing protocols for Mobile Ad Hoc Networks (MANETs) is vital due to their dynamic and decentralized nature. This abstract introduces key secure routing protocols: AODV-SE and DSR-SE, both enhancing AODV and DSR with features like digital signatures and node authentication. SEAD, a proactive protocol, ensures security through public key cryptography and secure acknowledgment. ZHLS employs a hybrid approach, combining proactive and reactive elements in a hierarchical structure, facilitating efficiency in large MANETs. SPROUT, a position-based protocol, enhances routing through trust-based mechanisms and secure location verification. These protocols address MANET challenges, offering solutions such as on-demand route establishment, efficient route maintenance, hierarchical routing, and resistance against various attacks, ultimately ensuring reliable communication in dynamic ad hoc networks.