

论文

一种改进的AODV安全路由协议

刘书明, 刘建伟, 毛剑

北京航空航天大学电子信息工程学院, 北京 100191

摘要:

针对Ad Hoc网络的黑洞攻击问题,基于AODV协议提出一种采用“逆向逐节点验证”的解决方案.本方案使用控制报文和数据报文检查网络中是否存在黑洞节点,确定黑洞节点的位置并进行排除.中间节点也对可疑节点进行验证,将黑洞攻击危害降到最低.与现有其他方案的比较表明,改进的方案在有效抵御针对Ad Hoc网络黑洞攻击的同时,具有更低的网络开销和网络延迟.

关键词: Ad Hoc网络 安全路由 AODV协议 黑洞攻击

An improved AODV secure route protocol

LIU Shu-Ming, LIU Jian-Wei, MAO Jian

School of Electronic and Information Engineering, Beijing University of Aeronautics and Astronautics, Beijing 100191, China

Abstract:

A new scheme for preventing the "black hole attack" is proposed. It tests the destination node and verifies the node in the reverse direction using control messages and data messages. Nodes check and locate the black hole and remove it from the net. The intermediate nodes also verify the dubious node to minimize the damage caused by the black hole attack. Our scheme can effectively prevent the "black hole attack" and has low network overhead and transmission delay compared to the existing schemes.

Keywords: Ad Hoc network secure route AODV protocol black hole attack

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通讯作者:

作者简介:

作者Email: buaalsm@foxmail.com

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