

# 基于 AODV 改进的战术互联网移动子网路由协议

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摘 要: 为了适应战术互联网移动子网网络拓扑变化快、链路易断裂、可能存在单向链路、负载不均衡等特点,对传统 AODV 协议进行改进.在选路时考虑链路的稳定性和节点的负载,在 RREQ 报文加入前向节点列表防止单向链路,节点选取两条最优路径作为主备路由,设计了一种适合战场环境的 MSAODV(Mobile subnet based AODV) 路由协议,并进行了仿真对比.OPNET 软件仿真结果表明,MSAODV 路由协议能够提高战术互联网移动子网的网络性能.

关键词: 战术互联网; 路由协议; 按需距离矢量路由协议; OPNET 仿真

## Modified Routing Protocols Based on AODV for

### Mobile Subnet in Tactical Internet

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Abstract: In order to adapt to the fast change of the network topology, easy link fracture, the unidirectional link and the load imbalance in tactical Internet mobile subnet, the traditional AODV protocol is improved. Stability of link and load of nodes considered in routing choose, the forward nodes list to be added to RREQ message to avoid unidirectional links and main and backup routes stored by the source node, the MSAODV (Mobile Subnet based on AODV) routing protocol has been designed for battlefield environment. OPNET simulation results show that the MSAODV protocol can improve tactical internet performance.

Key words: tactical Internet; routing protocol; AODV; OPNET

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