

Lecture Notes in Networks and Systems 419

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↳ IBICA 2021: Innovations in Bio-Inspired Computing and Applications pp 160–169 | [Cite as](#)

# An Analysis of Multipath TCP for Improving Network Performance

[Virendra Dani](#) , [Sneha Nagar](#) & [Vishal Pawar](#)

Conference paper | [First Online: 22 February 2022](#)

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## Abstract

MP-TCP (Multipath-Transmission Control Protocol) has the potential to greatly improve application performance by employing several routes. Multipath TCP was intended to be a backwards-compatible alternative to TCP. Accordingly, it exposes the normal socket API to applications that can't manage how the different routes are used. This is a crucial attribute for various functions that are uninformed of the multipath behavior of the network. This, in contrast, is a restriction on application that may advantage from particular information in order to employ numerous paths in a way that best suits their requirements. As a result, hosts are frequently associated by several paths, yet TCP only

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## iWAD: An Improved Wormhole Attack Detection System for Wireless Sensor Network

Virendra Dani , Radha Bhonde & Ayesha Mandloi

Conference paper | [First Online: 27 March 2022](#)

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### Abstract

The fast advancement of communication technologies prompted a pour of interest in wireless networks research. Application-specific networks made up of a huge amount of sensor nodes are known as wireless sensor networks. Due to the lack of a predefined network structure, they are open to a variety of attacks. WSNs are made up of several types of sensor nodes, and they can be subjected to a variety of network layer attacks. There is most devastating routing attacks for wireless sensor network is the Wormhole Attack. In a wormhole attack, the attacker node attracts data packet as it is being transferred from one base station to another. A wormhole attack creates a virtual channel between two or more nodes in a network. Two or more nodes can send data packets across the virtual tunnel. Based on two-phase computation, this study suggested iWAD: An improved Wormhole Attack Detection System for Wireless Sensor Network. To detect susceptible nodes in network, two separate network parameters, transmission time and node buffer length, are considered. The proposed iWAD method is implemented using network simulation 2, which modifies an existing routing protocol called AODV. On the basis of resulting parameter i.e. E-to-E network delay, PDR, and throughput, the implementation result reveals that iWAD is adoptable and increases network performance.

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