Deauthentication/Disassociation Attack: Implementation and Security in Wireless Mesh Networks

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Abstract

Wireless Mesh Networks have emerged as a widely deployed, new paradigm with improved performance and reliability. Mesh Networks offer ubiquitous network connectivity along with better flexibility and adaptability features. Despite of these benefits, Wireless Mesh Networks are vulnerable to attacks due to the absence of trusted central authority and the unprotected nature of the management frames. This security breach leads to the spoofing of legitimate
client’s information. Thus facilitating the launch of dos attacks on the behalf of the legitimate identity holders. The influence of DOS attacks is highly intense, because complete network resources have been consumed by the attacker after launch of the attack. Consequently, it leads to deterioration of network performance thus halting the communication. Therefore, security is a major concern that needs to be dealt with to alleviate the effect of these attacks. So that the deterioration and disruption caused by these attacks to the network performance has been thwarted. In this paper we have implemented the dos attacks on the real wireless mesh test bed and analyzed their impact on the network performance and proposed a security algorithm for the detection of these attacks.

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Index Terms

Computer Science Wireless

Key words

Management frames MAC address Threshold value

Detection of dos attacks