

24. LOCATION PRESERVING BASED ROUTING TECHNIQUE TO COMBAT THE PACKET DROPPING ATTACKS IN MANETS

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Mobile ad hoc networks (MANETs) have tremendous advantages over regular wireless networks. In MANETs, nodes usually cooperate and forward each other's packets in order to enable out of range communication. However, in hostile environments, some nodes may do so, either for saving their own resources or for intentionally disrupting their regular communications. This type of misbehavior is generally referred to as packet dropping attack or black hole attack, which is considered as one of the most destructive attacks that leads to the network collapse. In this paper, we propose a Location preserving scheme using Dynamic Source Routing Technique (PANEL – ABDSR). The special network characteristics, such as limited battery power and mobility, make the prevention techniques based on cryptographic primitives that are ineffective to cope with such attack. Rather, a more proactive method is required to ensure the safety of the forwarding function by staying off malicious nodes from being involved in routing paths. Once such scheme fails, some economic-based approaches can be adopted to alleviate the attack consequences by motivating the nodes cooperation. As a backup, detection and reaction schemes remain as the final defense line to identify the misbehaving nodes and punish them. Here, we experiment the proposed system with throughput and end to end to delay to challenge the state of approaches for constructing an in-depth defense against such a complicated attack.

Keywords— Location Preserving, DSR Routing, MANET, DDOS Attack, Eaves dropping Attack, packet dropping and PANEL.

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