

ABSTRACT

Wireless sensor network (WSN) is a network that consist of several sensor nodes to monitor certain environmental conditions. Each node sensor will communicate with each other and send information to the base station or sink node. Like addressing in the router, the sensor node on WSN also has routing capabilities. One of routing protocol on WSN is AODV which has access to the routing path when request from the souce node to send the message to the destination node. Because the sensor node can be physically activated, increasing the potential for recovery. The wormhole attack is a type of attack where the attacker connects the route on the WSN to the tunnel created between the source and destination nodes. A wormhole attack can trigger another attack on the WSN. Based on conditions susceptible to existing attacks, it is necessary to mitigate wireless sensor networks using the AODV routing protocol with the shutdown system. The shutdown system will turn off the sensor nodes that have been used from the attacker before the information is processed by the system and sent to the user. From the results of tests known that the implementation of the shutdown system occurs energy efficiency consumed in the absence of a decrease in network performance. So, the shutdown system can be one effective solution in mitigating wormhole attacks.

Keywords : Wireless sensor network, wormhole attack, AODV, shutdown system.