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VITALITY OF VAMPIRE ATTACKS IN WIRELESS AD-HOC SENSOR NETWORKS

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ABSTRACT

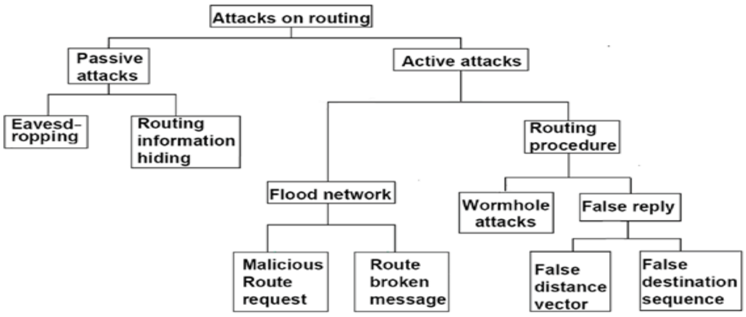
Wireless sensor networks are special category of Ad-hoc networks that are use to provide a wireless communication .the Ad-hoc low-power wireless networks are one type networks. Each node participates in routing by forwarding packets , but in this network all devices have equal status in the network. This networks research direction in sensing and pervasive computing. The security mostly on denial of communication at the routing or medium access control levels. This paper explains about the depletion attacks. The depletion attacks at the routing protocol layer, which totally disables networks by quickly draining nodes' battery power. The vampire attacks are the one kind of attacks in network security .this attacks not specify any protocols .the vampire attacks not easy to detect but easy to carry .this vampire attacks mostly on the messages , this attacks can target source but rather rely on the properties of many popular classes of routing protocols.

Keywords – wireless network ,Ad-hoc sensor network ,vampire attacks, denial of communication ,cloud

I. INTRODUCTION

A wireless senor network (WSN) contains one base station and a number of wireless sensors. Ad-hoc wireless sensors is very popular application in now -a –days. the major thing behind the ad-hoc networking is multi-hop-replaying messages are send from the source to destination through intermediate nodes.The multi-hop wireless network used for communication between two end nodes is carried out through a number of intermediate nodes. This is used the message one point to another point.

WSN is functioning very crucial to people and organization because less tolerable. so that's why this networks are use malicious condition.The Ad-hoc networks are particularly vulnerable to denial of service (DOS) attacks.Whenever send the data from one node to another node, so the message pass source to destination while passing messages some attacks are available in ad-hoc wireless sensor networks.The most attack is vampire attack. Vampire attack is mostly on message.This attacks are not easy to detect and not easy to carry.

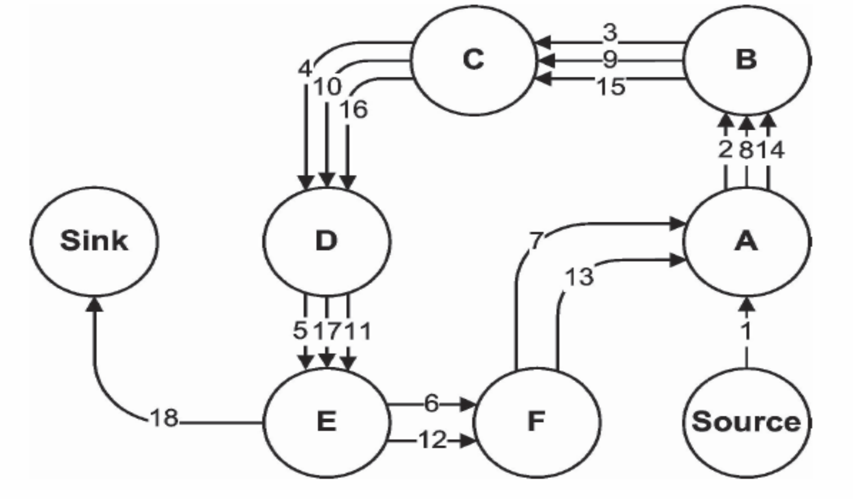


II. VAMPIRE ATTACKS

These attacks are mainly target on source routing .in vampire attacks two major things

a). Carousel Attack

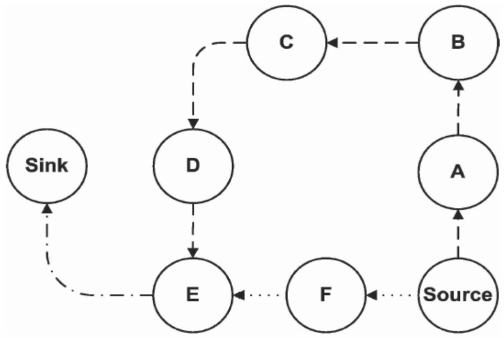
it using for adversary composes packets with purposely introduced routing loops send packets in circles .target source routing protocols by exploiting limited verification of message header at forwarding nodes allowing a single packet to repeatedly the sane set of nodes



(a) An honest route would exit the loop immediately from node E to Sink, but a malicious packet makes its way around the loop twice more before exiting.

b). Stretch Attacks

to construct artificially long routes the packet process every node in the network .so the increase the packet path length .the packet processed number of times in the network .so the count along the shortest path between source packet to destination packet.



(b) Honest route is dotted while malicious route is dashed. The last link to the sink is shared.

III. MITIGATION METHOD

mitigation method used in vampire attacks .the carousel attacks can be prevented forwared packets nodes nodes for checking for source route for logics prevented the extra added packets .the packets transfer from source destination .suppose node A send x packet node B receive the same x packet .if the extra packet will transfer the process detected he extra packet .the packets from source to destination

IV. CONCLUSION

Whenever we find out the vampire attacks the permanently disable wireless sensor networks by depleting the nodes and battery power this attacks are not depended on one protocol it effects number of protocols we showed number of proof-of-concept attacks .we eliminates the vampire attacks by using encrypt data .only data pass authorized user only.

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