

A SECURE PATH SELECTION METHOD FOR HIGHLY SECURE DATA TRANSMISSION IN WIRELESS SENSOR NETWORKS

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Abstract: WSN is a conveyed arrangement presented to an open situation, which is helpless against malevolent nodes. To discover malevolent nodes among a WSN with mass sensor nodes, this paper presents a vindictive recognition technique dependent on essential and optional way arrangement. A Sensor is a gadget that reacts and identifies some kind of contribution from both the physical or ecological conditions, for example, pressure, heat, light, and so on. Uses of remote sensor systems incorporate home automation, road lighting, military, medicinal services and modern procedure checking. As remote sensor systems are circulated across enormous geological region, these are helpless against different security dangers. This influences the presentation of the remote sensor systems. The effect of security issues will turn out to be progressively basic if the system is utilized for strategic applications like strategic front line. All things considered, arrangement situations, the likelihood of disappointment of nodes is more. Advanced ROSE, a novel strength upgrading calculation for scalefree WSNs, is proposed with different key age calculation. Because of asset imperatives in the sensor nodes, conventional strategies which include enormous overhead calculation and correspondence are not plausible in WSNs. The outcomes shows that the situation with numerous center node (CN) with non-covering network requires less time for malignant node location with better accuracy when contrasted with the situation with single Center Node with framework.

Keywords: Center node, Malicious Node detection, Path Selection, Multiple Key Generation

I. INTRODUCTION

Wireless sensor organize (WSN) is comprised of a gathering of sensor nodes that cooperate in a gathering other to complete an allotted task (for example environmental factors management, target development, and so on.) at that point educates the accumulated information through a wireless medium to a base station or sink node [5].

A WSN is an assortment of low force and ease gadgets that are known as sensor nodes (SN). These SN are

extremely little in size and their capacity utilization and computational force is likewise less. Sensors, microcontrollers, memory gadget, power source, receiving wire are totally coordinated in one SN [4].

This significant component additionally once in a while comes as risky issue during the information transmission, supposing that the malicious nodes is available in the system, this nodes happens an unsettling influence to whole directing procedure [3].

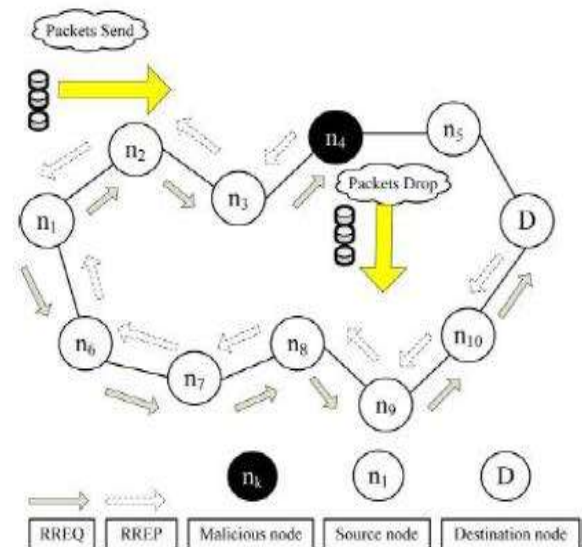


Figure 1: Packet dropping by malicious node n4

In the above figure 1, shows how the malicious nodes are drawn in information parcels in the system by fashioned course reaction. By this bogus RREP the malicious nodes convey the chose information parcels to other uncharacterized goal or bogus goal.

Because of attributes of sensors and WSN, Providing Quality of Service (QoS) is particularly basic and as yet testing issue in information correspondence among the sensors, sink nodes and base stations [1].



STUDY ON EMERGING IMPORTANCE OF CLOUD BASED IOT SCHEME WITH WIRELESS SENSOR NETWORK IN PRECISION AGRICULTURE USING CRYPTOGRAPHIC ALGORITHM

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ABSTRACT

For many mission-critical related wireless sensor network applications such as military and homeland security, user's access restriction is necessary to be enforced by access control mechanisms for different access rights. Public key-based access control schemes are more attractive than symmetric-key based approaches due to high scalability, low memory requirement, easy key-addition/revocation for a new node, and no key pre-distribution requirement. Precision farming is an approach where inputs are utilised in precise amounts to get increased average yields, compared to traditional cultivation techniques. Precision agriculture refers to the precise application of agricultural inputs with respect to soil, weather and crop need in order to improve productivity, quality, and profitability in agriculture. ... It enables farmers to use crop inputs more efficiently including pesticides, fertilizers, tillage and irrigation water

Keywords: Elliptic Curve Cryptography (ECC), public-key cryptography, user access control, energy-efficient, energy harvesting; precision agriculture; wireless communication technology, WSN.

[1] Introduction

The Wireless Sensors Network and the Internet of Things are nowadays commonly used to build decision support systems to solve the problems in the real-world. One of the most important fields having an increasing need of decision support systems is precision agriculture.

The global population is predicted to touch 9.6 billion by 2050 – this poses a big problem for the agriculture industry. Despite combating challenges like extreme weather conditions, rising