Patent Search

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Abstract:

[1] Our Invention "A Matrices Enabled Innovative Technique for Network Devices using IoT" areas Network devices, also known as networking hardware, are physical c allow hardware on a computer network to communicate and interact with one another. For example Repeater, Hub, Bridge, Switch, Routers, Gateway, Brouter, and N number of devices on the Internet exceeded the number of people on the Internet in 2008, and is estimated to reach 50 billion in 2020. A wide-ranging Internet of Th ecosystem is emerging to support the process of connecting real-world objects like buildings, roads, household appliances, and human bodies to the Internet via sen microprocessor chips that record and transmit data such as sound waves, temperature, movement, and other variables. One of the biggest drivers of the IOT is the ir number of low-cost sensors available for many different kinds of functionality. Some of the standard sensors include movement (via accelerometer), sound, light, elec potential (via potentiometer), temperature, moisture, location (via GPS), heart rate and heart rate variability, and GSR (galvanic skin response or skin conductivity). Otl include ECG/EKG (electrocardiography to record the electrical activity of the heart), EMG (electromyography to measure the electrical activity of muscles), EEG (electroencephalography to read electrical activity along the scalp), and PPG (photoplethysmography to measure blood flow volume).

Complete Specification

Description:[14] The number of keys to be stored in node's memory is very small since a node stores at most only the pairwise keys of its direct neighbors with the g key.The approach offers a negligeable communication overhead. In other words, no much communication is required during key establishment phase because the generated in a distributed manner.

[15]Low computation cost because no complex operation is required to establish secret keys so the computation of symmetric keys betwen two neighbors is efficie proposed approach is flexible since it allows the addition of new devices to the network after the deployment phase.

[16]The security goals such as secrecy, integrity and authentication are guaranteed. The proposed scheme is resistant to several types of attacks such as eavesdrop compromising, sybil, forward, backward and replay attacks.

[17]The secret keys are established in a distributed manner. Therefore, it avoids a central entity that could be a point of failure or weakness.

[18]The invented scheme allows gateway and constrained nodes belonging to the same group to communicate securely by using one group key.

[19]The security analysis and performance evaluation show that the proposed scheme can protect user's data privacy and saves energy which is suitable for the res limited network

, Claims:1. Our Invention "A Matrices Enabled Innovative Technique for Network Devices using IoT" lightweight key management scheme for Iot networks that is b matrix, which is not only flexible, scalable and resilient to many types of attacks, but also can considerably reduce the amount of information to be exchanged and processed at constrained nodes side without ignoring the storage overhead.

2. According to claim1# the invention is to our Invention to objective metrics collected from multi-sensor IOT platforms such as wearable electronics and home

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