Today, majority of people living in urban areas, Smart city concept become necessary. Smart city refer to the development of communication technologies (ICT), internet of thing (IOT) and provide solution to secure communication in cities. These services provide cities more efficient, confidential and reliable. Internet of network, connecting humans via cellular system, computers via objects or broadband connections and sensor connected via low cost data link. Sensing and communication techniques like wireless sensor network provide services such as monitoring and controlling the living environments. Wireless sensor network used to agriculture monitoring, water distribution, traffic monitoring, military surveillance, health monitoring etc. A wireless sensor network is a wireless network designed by sensor nodes that are spatially distributed and keep track of the physical environmental conditions. Wireless sensor network integrated with IOT and connected globally. This integration brings new threats, such as exposure of sensor node to attacks. In this context, authentication, confidentiality and secure key distribution must be place to end to end secure communication. Security achievement in wireless sensor network and prevention of compromising of node from attacker are important aspect of wireless.
sensor network. Wireless sensor network security system based on symmetric encryption. The main issues in these approaches are establishment of symmetric keys. Key pre-distribution in network refers, key distribution perform in sensor nodes before deployment of network. In this paper, we propose a new key pre-distribution scheme based on random pre-distribution. Comparative analysis demonstrates that proposed approach provide high security and reduce compromised node ratio.

References


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**Index Terms**

- Computer Science
- Wireless
Keywords

Smartcity, keymanagement, WSN, random key pre-distribution, security issues