Preparation of Wireless Networks and Security; Challenges in Efficient Accession of Encrypted Data in Healthcare

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Abstract : Background: Wireless sensor network is encompassed of diversified tools of information technology, which is widely applied in a range of domains, including military surveillance, weather forecasting, and earthquake forecasting. Strengthened grounds are always developed for wireless sensor networks, which usually emerges security issues during professional application. Thus, essential technological tools are necessary to be assessed for secure aggregation of data. Moreover, such practices have to be incorporated in the healthcare practices that shall be serving in the best of the mutual interest Objective: Aggregation of encrypted data has been assessed through homomorphic stream cipher to assure its effectiveness along with providing the optimum solutions to the field of healthcare. Methods: An experimental design has been incorporated, which utilized newly developed cipher along with CPU-constrained devices. Modular additions have also been employed to evaluate the nature of aggregated data. The processes of homomorphic stream cipher have been highlighted through different sensors and modular additions. Results: Homomorphic stream cipher has been recognized as simple and secure process, which has allowed efficient aggregation of encrypted data. In addition, the application has led its way to the improvisation of the healthcare practices. Statistical values can be easily computed through the aggregation on the basis of selected cipher. Sensed data in accordance with variance, mean, and standard deviation has also been computed through the selected tool. Conclusion: It can be concluded that homomorphic stream cipher can be an ideal tool for appropriate aggregation of data. Alongside, it shall also provide the best solutions to the healthcare sector.

Keywords : aggregation, cipher, homomorphic stream, encryption

Conference Title : ICCNSS 2016 : International Conference on Computer Networks and Systems Security

Conference Location : London, United Kingdom

Conference Dates : August 25-26, 2016