

Analysis of Network Performance Using Aspect of Quantum Cryptography

Authors : Nisarg A. Patel, Hiren B. Patel

Abstract : Quantum cryptography is described as a point-to-point secure key generation technology that has emerged in recent times in providing absolute security. Researchers have started studying new innovative approaches to exploit the security of Quantum Key Distribution (QKD) for a large-scale communication system. A number of approaches and models for utilization of QKD for secure communication have been developed. The uncertainty principle in quantum mechanics created a new paradigm for QKD. One of the approaches for use of QKD involved network fashioned security. The main goal was point-to-point Quantum network that exploited QKD technology for end-to-end network security via high speed QKD. Other approaches and models equipped with QKD in network fashion are introduced in the literature as. A different approach that this paper deals with is using QKD in existing protocols, which are widely used on the Internet to enhance security with main objective of unconditional security. Our work is towards the analysis of the QKD in Mobile ad-hoc network (MANET).

Keywords : cryptography, networking, quantum, encryption and decryption

Conference Title : ICSPCN 2019 : International Conference on Signal Processing, Communications and Networking

Conference Location : New York, United States

Conference Dates : October 08-09, 2019