Software Quality Assurance in Network Security using Cryptographic Techniques

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Abstract : The use of the network communication has imposed serious threats to the security of assets over the network. Network security is getting more prone to active and passive attacks which may result in serious consequences to data integrity, confidentiality and availability. Various cryptographic techniques have been proposed in the past few years to combat with the concerned problem by ensuring quality but in order to have a fully secured network; a framework of new cryptosystem was needed. This paper discusses certain cryptographic techniques which have shown far better improvement in the network security with enhanced quality assurance. The scope of this research paper is to cover the security pitfalls in the current systems and their possible solutions based on the new cryptosystems. The development of new cryptosystem framework has paved a new way to the widespread network communications with enhanced quality in network security.

Keywords : cryptography, network security, encryption, decryption, integrity, confidentiality, security algorithms, elliptic curve cryptography

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