Abstract

The usage and applicability of Information and Communication Technology (ICT) is increased from the past three decades. Monitoring quality-of-Service (QoS) pertaining to networks is a major challenge for the researchers and academicians. Bandwidth, Latency, Jitter, Loss of data and security are some of the important parameters related to the network QoS. Especially security plays an important role regarding data confidentiality in wired or wireless networks is concerned. Particularly, there is a need to strengthen the authentication process in Wireless Local Area Network (WLAN). This paper introduces a novel Double Chaotic Bio-cryptic Security aware Packet Scheduling (DCBSPS) algorithm to improve WLAN’s authentication mechanism. DCBSPS algorithm comprises different security levels in association with chaos based cryptic biometrics like face, fingerprint, Iris, and thumb print. In addition, DCBSPS algorithms take the advantages of Chaotic Bio-cryptic Security aware Packet Scheduling (CBSPS) and Chaotic Multilevel Remote Sensing Data encryption (CMRSDE) algorithms to improve the Quality-of-Authentication in WLAN. The experimental results of DCBSPS were compared with the chaotic and non-chaotic, based procedures like CBSPS and Multi-merged Bio-cryptic
Security aware Packet-scheduling (MMBSPS). The obtained results exhibits, DCBSPS algorithm performs better than the rest in terms of reliability, security level, guarantee ratio and Overall Performance.

References

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Index Terms

Computer Science  Wireless

Keywords