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Blockchain-Based PKI: Making Digital Certificate Management More Secure and Efficient

Sukhvinder Singh Bamber[1], Rajeev Kumar Dang[2], Naveen Dogra[3], Mohit Angurala[4]
Assistant Professor, University Institute of Engineering and Technology,
Panjab University SSG Regional Centre, Hoshiarpur, Punjab, India[1,2,3]
Assistant Professor, Department of Computer Science,
Guru Nanak Dev University College, Pathankot, Guru Nanak Dev University, Amritsar, Punjab, India[4]
ss.bamber@pu.ac.in, dang.rajeev@pu.ac.in, naveendogra@pu.ac.in, and mohit.pathankot@gndu.ac.in

Abstract: *Digital certificates are necessary for encrypting and verifying network communications. As a key part of Public Key Infrastructure (PKI), they check the identities of users, devices, and systems, which is important for network security. This paper looks at digital certificates, what they do, and how important they are for keeping data safe and private. It also talks about how Secure Sockets Layer (SSL) and Transport Layer Security (TLS) protocols have changed over time and how digital certificates keep online interactions safe. Certificates are very important for managing identities in India, especially in e-government, where they make it possible to safely log in to public services*

Keywords: Digital Certificate; Network Security; SSL-TLS; E-Government; Block-chain based PKI

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