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RESEARCH ARTICLE



THE DOORWAY OF SECURE DATA SHARING SCHEME FOR CONFEDERACY CLOUDS

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Abstract: *Cloud computing allows users to view computing in a new direction, as it uses the existing technologies to provide better IT services at low-cost. To offer high QOS to customers according SLA, cloud services broker or cloud service provider uses individual cloud providers that work collaboratively to form a federation of clouds. It is required in applications like Real-time online interactive applications, weather research and forecasting etc., in which the data and applications are complex and distributed. In these applications secret data should be shared, so secure data sharing mechanism is required in Federated clouds to reduce the risk of data intrusion, the loss of service availability and to ensure data integrity. So In this paper we have proposed zero knowledge data sharing scheme where Trusted Cloud Authority (TCA) will control federated clouds for data sharing where the secret to be exchanged for computation is encrypted and retrieved by individual cloud at the end. Our scheme is based on the difficulty of solving the Discrete Logarithm problem (DLOG) in a finite abelian group of large prime order which is NP-Hard. So our proposed scheme provides data integrity in transit, data availability when one of host providers are not available during the computation.*

Keywords: *Cloud computing, Federated clouds, Secure Data sharing, SMC, WRF, Encrypted secret, primitive polynomial, primitive number*

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