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Secured Cloud Computing Model for gGovernance: A Case Study in Ratnanagar Municipality, Nepal

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Abstract

Secured cloud computing model simply refers "a cloud application, based on decentralized cryptography technique". Good Governance uses the ICTs for promotion of its services to the public with great efficiency by cost, time and integrity. This study aims to develop a cloud based software model that ensures the accountability, fairness, responsiveness and transparency in its services. It mainly focuses on decision-making process by participatory approach through consensus, responsiveness, inclusive for accepting the rules of law.

The applied data collection method is total field survey among 18399 households of 16 wards in Ratnanagar Municipality of Nepal using questionnaires and investigates how secured cloud model support risk communication and risk-informed decision-making in safety critical real-time system. This study uses nine major independent attributes as transparency, accountability, rule of law, responsiveness, inclusiveness, effectiveness, efficiency and sustainability where good governance is dependent attribute. Out of nine independent attributes, this study only focused on risk mitigation. The outcome of this study will help to make new policy for the federal government of Nepal.

MS Excel and SPSS are software for data entry and processing. Impact based forecasting (IbF) is used on predicting the potential impacts of natural disasters. This study used the likelihood tools for predicting the flood level and its consequence leads to risk. For validation of this research findings past 10 years data set used and model was trained. This research found 2735 people from 547 households are directly affected by the flood. Out of 250 villages, 47 found in most risk zone. School tole, Bachhauli, Dorngi, Shivalaya, Hattisar, Sauraha Gaidachowk, Odraha Hattichowh of ward no 2 and 13 found most effected by flood. Risk level is minimaxed by 82.34% by the outcome of **s**tudy implemented by local government in association with National Disaster Risk Reduction and Management Authority.

Keywords: *cryptography, good governance, impact based forecasting, risk visualization, safety critical real-time system, risk-informed decision-making*