

## Multisignature Schemes for Reinforcing Trust in Cloud Software-As-A-Service Services

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**Abstract :** Software-as-a-service (SaaS) is emerging as a dominant approach to delivering software. It encompasses a range of business, technical opportunities, issue, and challenges. Trustiness in the cloud services regarding the security and the privacy of the delivered data is the most critical issue with the SaaS model. In this paper, we survey the security concerns related to the SaaS model, and we propose the design of a trusted SaaS model that gives users more confidence into SaaS services by leveraging a trust in a neutral source code certifying authority. The proposed design is based on the use of the multisignature mechanism for signing the source code of the application service. In our model, the cloud provider acts as a root of trust by ensuring the integrity of the application service when it was running on its platform. The proposed design prevents insider attacks from tampering with application service before and after it was launched in a cloud provider platform.

**Keywords :** cloud computing, SaaS Platform, TPM, trustiness, code source certification, multi-signature schemes

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