

# *Building Trust Management Model for Cloud Computing*

**Aya Salama A. Saleh, Essam M. Ramzy Hamed**

*College of Computer and Information Technology,  
College of Management and Technology*

*Arab Academy for Science, Technology and Maritime Transport  
swazuz@gmail.com, dodessamisr@gmail.com*

**Mohamed Hashem**

*College of Computer and Information Sciences*

*Ain Shams University  
mhashem100@yahoo.com*

*Abstract—* Trust has been a hotspot for adopting cloud computing. This paper proposes a hybrid model to build, evaluate and expose trust. It uses different techniques like sliding window technique to reach optimum processes for trust value delivery. Trust value is evaluated through integrated mechanisms from literature. Moreover, measuring trust included evaluating SLA violations side to side with consumer customized measures for validating trust. We also added caching module to ensure optimization of querying trusted services. Moreover, we added a module for service registry and novel personalized modules for tracking both cloud providers and cloud consumers behaviors. Furthermore, we present a comparison between recent literature research trust models and our model. It discusses trust criteria for building and evaluating trust. Also, we substitute different techniques against known security attacks. Finally, we provide a simulation for evaluating proposed techniques for building trust.

*Keywords—* Cloud Computing, Trust Management, Uncertainty, Trust Evaluation, Trust Exposure, sliding window technique