Trust Management for an Authentication System in Ubiquitous Computing

Authors : Malika Yaici, Anis Oussayah, Mohamed Ahmed Takerrabet

Abstract : Security of context-aware ubiquitous systems is paramount, and authentication plays an important aspect in cloud computing and ubiquitous computing. Trust management has been identified as vital component for establishing and maintaining successful relational exchanges between trading partners in cloud and ubiquitous systems. Establishing trust is the way to build good relationship with both client and provider which positive activates will increase trust level, otherwise destroy trust immediately. We propose a new context-aware authentication system using a trust management system between client and server, and between servers, a trust which induces partnership, thus to a close cooperation between these servers. We defined the rules (algorithms), as well as the formulas to manage and calculate the trusting degrees depending on context, in order to uniquely authenticate a user, thus a single sign-on, and to provide him better services.

Keywords : ubiquitous computing, authentication, context-awareness, trust management

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