

ABSTRACT: We propose a middleware for automated implementation of security protocols for Web services. The proposed middleware consists of two main layers: the communication layer and the service layer. The communication layer is built on the SOAP layer and ensures the implementation of security and service protocols. The service layer provides the discovery of services and the authorization of client applications. In order to provide automated access to the platform services we propose a novel specification of security protocols, consisting of a sequential component, implemented as a WSDL-S specification, and an ontology component, implemented as an OWL specification. Specifications are generated using a set of rules, where information related to the implementation of properties such as cryptographic algorithms or key sizes, are provided by the user. The applicability of the proposed middleware is validated by implementing a video surveillance system.