X-FEDERATE: A Policy Engineering Framework for Federated Access Management in Open Systems

Rafae Bhatti, Elisa Bertino, Arif Ghafoor

(URL=http://shay.ecn.purdue.edu/~iisrl/ccgtrbac.html)

An XML-based policy engineering framework designed for specification and enforcement of federated access management policies in open systems.

Two profiles of the framework have been designed to integrate it with complementary protocols for federated identity and policy-based management in Web-based services, namely SAML and WS-Policy.

Comparison to state of the art

Current approach
- Identity-based authentication
- Weak authorization mechanisms
- Lack of integrated authentication and authorization support

New approach
- Attribute-based authentication
- More expressive authorizations
- Integrated approach to authentication and authorization using standards-based specification

X-GTRBAC Policy Specification Language

An XML-based language that builds on an advanced form of the NIST Role Based Access Control (RBAC) standard. It allows specification of temporal and non-temporal constraints on various RBAC operations through an elaborate constraint specification formalism. It has been applied in various environments, such as Web services and multi-domain enterprises.