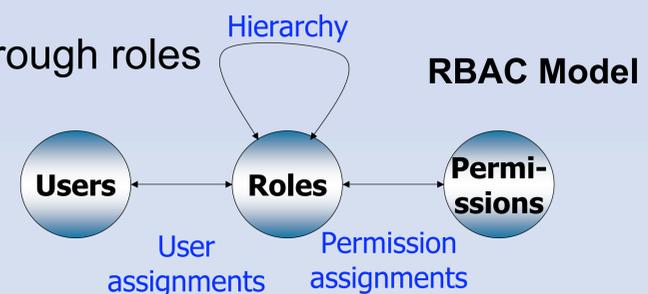


X-GTRBAC: An XML-based Framework for Distributed Access Control

Research Group: Rafae Bhatti, James.B.D.Joshi, Elisa Bertino, Arif Ghafoor

Salient Features

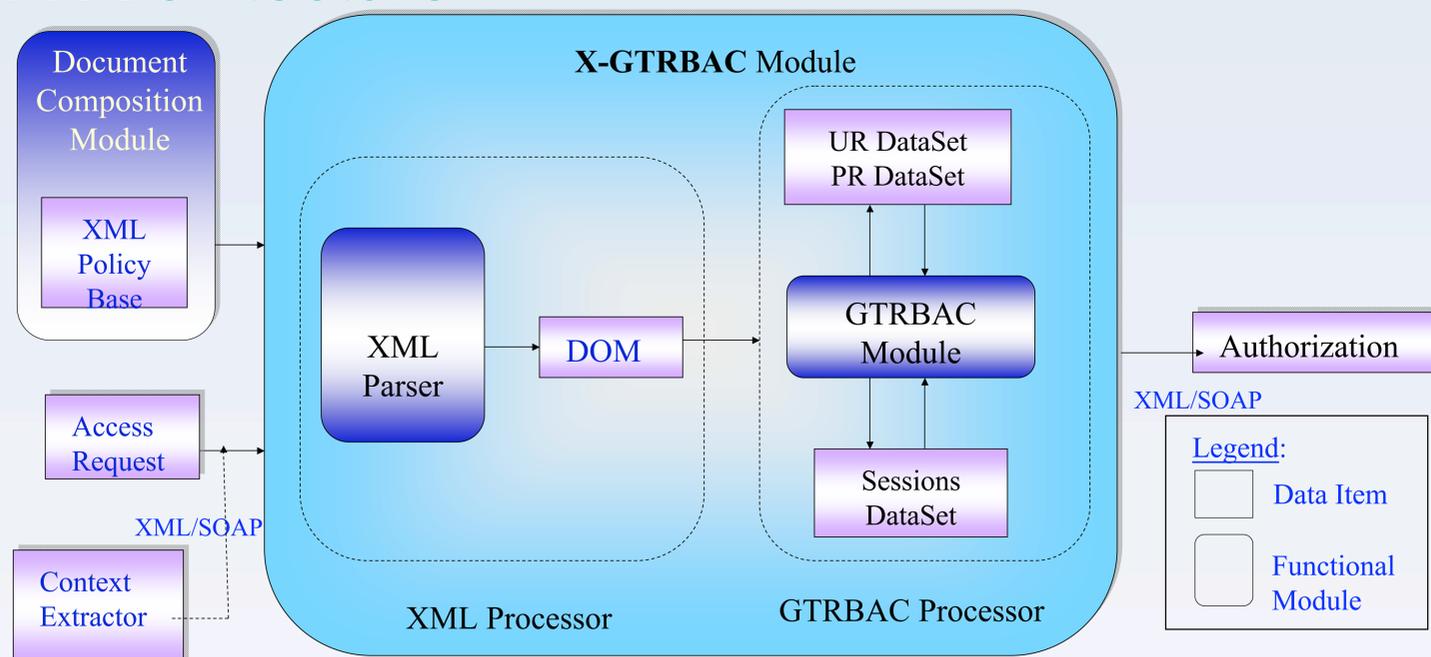
- Managing permissions for large user and resource pools through roles
- Provides fine-grained context-aware access control
- Allows expressing context-based constraints on resource accesses in distributed systems using an XML-based grammar specification (X-Grammar)
- Enables efficient and secure interoperation of heterogeneous domains
- Supports decentralization of policy administration tasks through the X-GTRBAC Admin model



Application Scenarios

- Enterprise Wide Access Control, Context-Awareness in Open Systems
- Automatic time-based constraint enforcement capability in enterprise systems by translating resource dependency graph for enterprise projects into X-Grammar constraints
- Dynamic context-aware access control capability in open systems using the notion of context set and role parameterization; incorporates a generic context evaluation mechanism

System Architecture



- A prototype implementation of X-GTRBACv1.2 version available

Related Publications

- <http://web.ics.purdue.edu/~bhattir/academics/main.htm>