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

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• **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**