LICENSING OPPORTUNITY: ACHIEVING OUT-OF-THE-BOX FINE-GRAINED ACCESS CONTROL IN DATABASES BY ENFORCING AND EMBEDDING NEXT GENERATION ACCESS CONTROL (M-NGAC) RIGHT IN DATABASES

DESCRIPTION

Problem

SQL databases traditionally lack a robust fine-grained (cell level) access control system. While some newer vendor solutions have emerged in recent years, none offer a comprehensive, globally adopted approach to address this issue. In current software practices, access control is often implemented in the middle or front-end tiers, which is inefficient because data security should ideally be enforced where the data resides. Access control should be applied directly at the database level to ensure protection, regardless of how the data is accessed.

Invention

m-NGAC brings a global solution for RDBMSs by enabling automatic installation of Next Generation Access Control (NGAC) directly into the database, offering out-of-the-box fine-grained database access control. NGAC facilitates building and storing Access control policies, which will be then accessed and enforced by m-NGAC for every incoming SQL query that reads or modifies data. Whether it is a client software or a SQL editor, no data can be accessed bypassing policy.

BENEFITS

Commercial Application

Out-of-the-box access control provides several significant benefits for commercial applications:

- Reduced Development Effort: Developers no longer need to implement access control at the software level, significantly saving time and reducing costs for organizations.
- Enhanced Data Security: Data is fully secured at the database level, ensuring that even database administrators (DBAs) using SQL editors have controlled, policy-driven access.
- Centralized Policy Enforcement: With centralized enforcement of access control policies, multiple software applications can share the same data while maintaining consistent access control.

Competitive Advantage

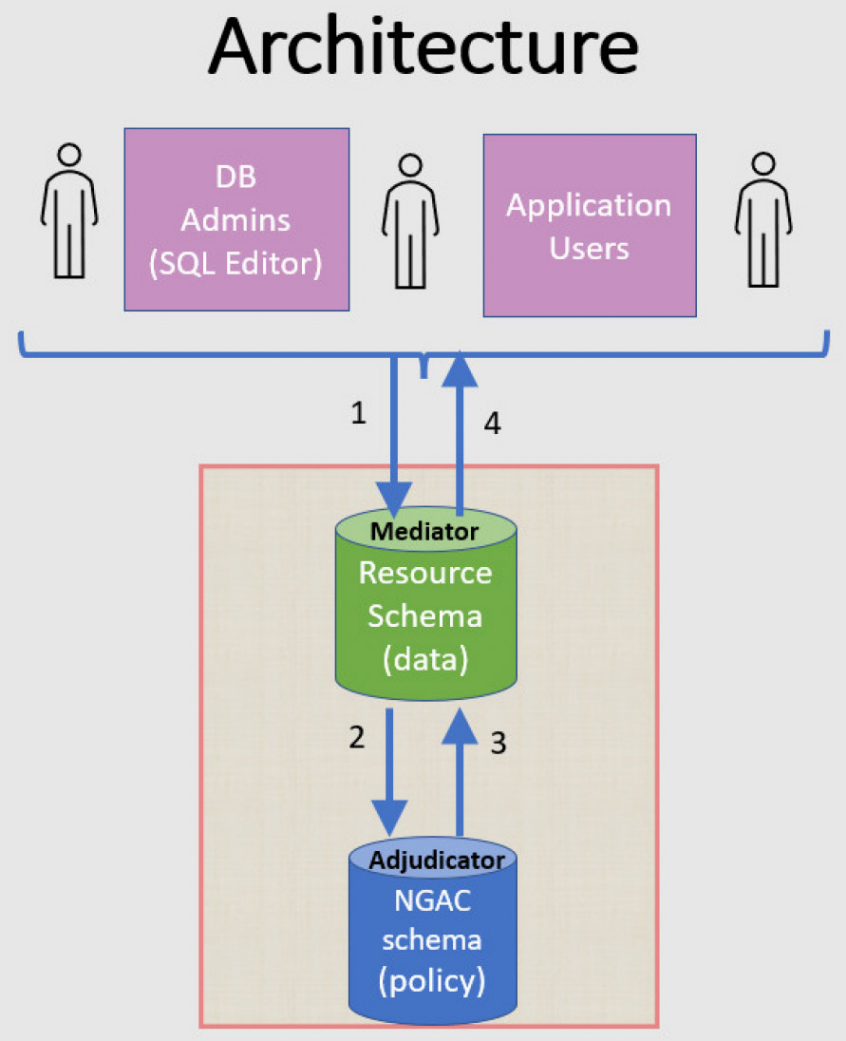
1. The NGAC-aware database provides fine-grained access control directly, ensuring secure data retrieval.
2. Access control at the application level becomes unnecessary, simplifying development.
3. Centralized enforcement of access control policies enhances consistency and security.
4. Even database administrators (DBAs) using SQL editors will have controlled, policy-driven access.

Contact: licensing@nist.gov

NIST TECHNOLOGY PARTNERSHIPS OFFICE

NIST Technology Partnerships Office
National Institute of Standards and Technology
100 Bureau Drive, Gaithersburg, MD 20899-2200

LICENSING OPPORTUNITY:
ACHIEVING OUT-OF-THE-BOX FINE-GRAINED ACCESS CONTROL IN DATABASES BY ENFORCING AND EMBEDDING NEXT GENERATION ACCESS CONTROL (M-NGAC) RIGHT IN DATABASES



Sequence of Calls:

1. The user submits a query.
2. The Mediator contacts the Adjudicator to obtain an access decision.
3. The Adjudicator returns the access decision.
4. The query is executed, returning data filtered based on the access control decision.

Contact: licensing@nist.gov

NIST TECHNOLOGY PARTNERSHIPS OFFICE

NIST Technology Partnerships Office
National Institute of Standards and Technology
100 Bureau Drive, Gaithersburg, MD 20899-2200