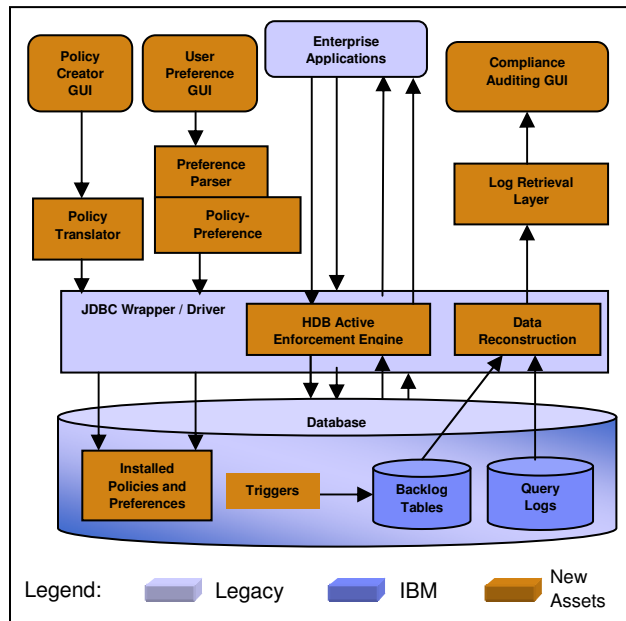


'Hippocratic Database Privacy Enforcement and Compliance Auditing' solution



First of a Kind – Hippocratic Database solution

Overview

Healthcare providers around the world face increased regulatory pressure regarding privacy of Protected Health Information. As greater amounts of data are stored and transmitted electronically, healthcare institutions are seeking sophisticated methods to control the disclosure of Protected Health Information.

Hippocratic Database Technology

- ❑ **Enforces data disclosure policy** to the cell level of the database
- ❑ **Provides detailed audit trails** to verify compliance

Components

1. Active Enforcement Component

Enables the Hippocratic database to reveal only policy compliant data.

1. Provides an interface for service providers to enter policies.
2. Facilitates users to enter their disclosure preferences. Also, does automated negotiation of the same with company's privacy policies.
3. Implements policies at the driver level of the database. This driver encapsulates query parsing, re-writing and enforcement.

2. Compliance Auditing component

Enables verification of compliance with policy.

- Uses Logical logging to elaborate details of data access including person, time, purpose and change details, however, eliminating redundant data.
- Has an audit tool that reconstructs the state of the database at any point of time
- Defers computation till audit time

Value Proposition

Active Enforcement component

- ❑ Ease of integration
- ❑ Easy enforcement after policy modification
- ❑ Database agnostic
- ❑ Disclosure control at cell level
- ❑ Performance improvement when user sets preferences

'Hippocratic Database Privacy Enforcement and Compliance Auditing' solution

Compliance Auditing component

- ❑ Performance advantage over other auditing solutions
- ❑ Security advantage over other auditing solutions
- ❑ Low impact on current operations
- ❑ Enables development of customer insight applications
- ❑ Resistant to predicate-based attacks
- ❑ Reduction in cost

Solution Value Proposition

- ❑ **Enables companies to be accountable for unauthorized Disclosures**
- ❑ **Can be used in any environment with relational /non-relational databases**

Why is this First-Of-A-Kind?

HDB is the FIRST solution in the market to offer ANY of the following features -

- ❑ Does not require the alteration of enterprise applications and database systems
- ❑ Policy Enforcement is done at the database level, as against the traditional application level
- ❑ Uses Logical logging to record exact response given to users
- ❑ Checks for conflicts between company policies and user preferences at system level
- ❑ Improves request processing speed
- ❑ Enforcement of policies down to the cell level of the database
- ❑ Simultaneous enforcement and auditing achieved without significant performance impact

Client Implementations

1. Academic Medical Center, Amsterdam

IBM implemented a framework to leverage sensitive information available in fragmented records. The solution uses *WebSphere Information Integrator, Hippocratic database technology, Data discovery and query builder.*

2. National Health Data Network, India

IBM implemented a standards-based, safe and secure IT backbone that collaborates health institutions in India to facilitate operational, clinical and financial synergies. The solution uses *WebSphere Information Integrator, Hippocratic database technology, Structured Query Language and Grid technology.*

For more information reach IBM Almaden Research -

Tyrone Grandison, Data Disclosure Research Manager, tyroneg@us.ibm.com

Deon Glajchen, Business Development deon@us.ibm.com

Jerry Kiernan, Senior Software Engineer Kiernan@almaden.ibm.com