

TELERAN BI/DW COMPLIANCE AUDITING
a white paper



Comprehensive Compliance Auditing and Controls for BI/DW Environments

**Combining Application and Data Usage Auditing
with Granular Compliance Policy Access Controls**

Auditing & Controlling the Entire BI/DW Environment

Protecting Users, Applications & Information

Ensuring Compliance While Enhancing User Experience

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Regulatory Compliance Driving Auditing and Policy Enforcement

Federal financial reporting transparency regulations such as SOX and Basel II, and personal health records and financial data privacy regulations such as HIPAA and PCI have placed new demands on companies. These regulations require among other things that organizations apply appropriate controls to protect and document the integrity and security of their access and use of sensitive data. The bottom-line: policies controlling access to, and use of applications and the underlying databases must be strictly enforced and an audit trail of who has accessed the information must be maintained.

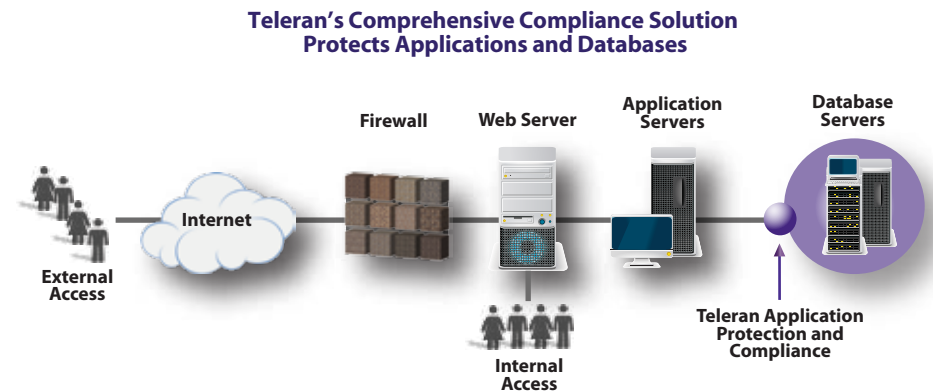
Protecting Users, Applications and Data

While organizations have made significant investments in firewalls and intrusion detection systems to protect their network perimeters, these systems have proven they can not prevent authorized system users from accessing data inappropriately. In fact, most cases of data theft and misuse are committed by authorized insiders. Over the last three years many high profile data incidents have been reported in the press. As more data is centralized in larger databases accessed by a growing numbers of people and applications, the risk of data misuse is increasing.

A more effective approach focused on user access and use of the data itself is needed. Amit Yoran, the former cyber security czar for the U.S. Department of Homeland Defense bolsters this view, "tighter controls are needed for achieving data integrity and compliance. This can most effectively be accomplished by monitoring and controlling authenticated user behavior at the unique user, application and database levels."

Patented Process Continuously Audits and Controls Who Is Looking at Your Data

Telaran's enterprise compliance solution for business-critical applications provides a centralized compliance platform for enforcing business policy as well as for auditing, monitoring and reporting. Residing on the network between SQL generating applications such as Business Intelligence (BI), CRM and Web applications and the underlying databases, Telaran's patented software solution continuously watches and controls how the data is accessed and used by whom, in what business context, and by what application. Telaran's policy enforcement product blocks inappropriate data requests before the database is even reached.



Modeling the Application Environment - Users, Applications, Databases

The Telaran System interrogates system tables of the databases and applications to which it is auditing and managing access. This modeling process enables Telaran's products to maintain an up-to-date understanding of all users, applications and database objects. With leading BI applications, the Telaran System's also models application semantic layers, report names and associated SQL statements.

iSight™ Audits, Analyzes and Reports on Business Use of Information

iSight continuously audits, analyzes and reports on user, application and database activity for compliance and risk management. Integrated with leading BI tools, iSight tracks application user, semantic layer activity, report names and SQL query activity and combines that with data usage activity to provide comprehensive visibility and management of the entire BI application environment. iSight captures information on query activity from all other SQL generating applications as well, ensuring that organizations have complete visibility on all access to the data.

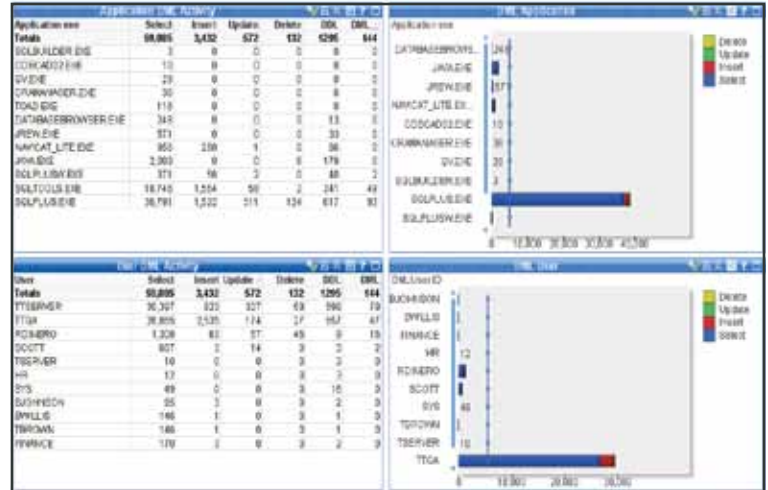
Compliance Reporting and Analysis for Non-Technical Staff

iSight provides policy monitoring, risk analysis and compliance reporting that is designed to be used by non-technical roles including auditors, application managers and compliance staff. It also alerts risk and compliance staff to inappropriate or suspicious activities and identifies those activities that can be prevented with Teleran's compliance policy enforcement product, iGuard.

iGuard™ Query Policy Management Automatically Protects and Guides

iGuard is a query policy action engine that provides policies or rules to enforce data access compliance. It automatically protects the application and database environments from inappropriate or unauthorized reports and queries that violate compliance policies. Using a patented real-time policy engine, iGuard screens information requests from applications before they reach the database, blocks those that do not conform to established compliance policies, and instantly issues expert system-based messages that warn information requesters of their attempted policy violations and guide them in the appropriate use of the data and application.

iGuard's data access policies are automatically adapted to the unique application and database user, application and database environment by the modeling process described above. This ensures the accuracy and consistency of active iGuard control policies and minimizes administrative overhead.



iSight Compliance Report Displaying Data Manipulation by Applications and Application Users

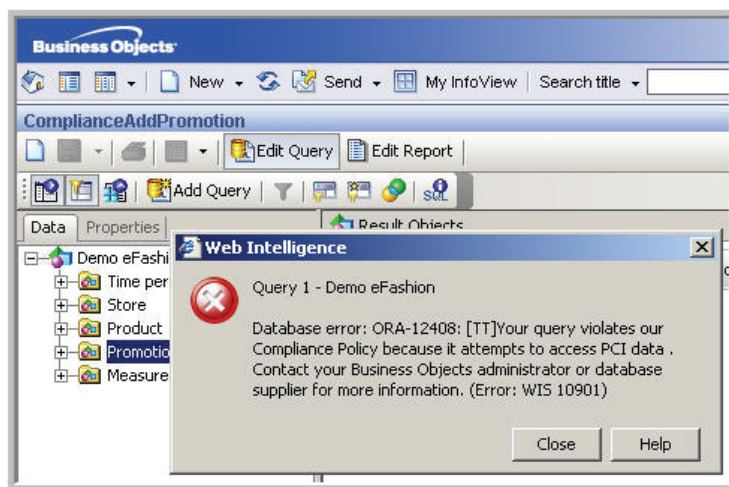
Identity Persistence™ Guarantees Visibility and Control of BI Application Users

Tracking and managing usage by actual information requester ID, whether it is the application, operating system, or database user ID is critical for risk and compliance management. Most application servers today log into the database with a single "generic" database user ID. This effectively masks the true identity of the application user to the database and renders database level auditing and access controls ineffective. With Teleran's ID Persistence feature, iSight can associate the application or single sign-on user with the complete database transaction. Identity Persistence also enables iGuard policies to be applied by application user, business unit or role for effective and granular policy enforcement.

Delivering Business Productivity, Performance and Efficiency

Teleran's software solution additionally delivers unique capabilities designed to improve business user productivity, enhance application performance and deliver significant operational savings and return on investment. Providing a comprehensive view of the entire application environment, iSight directs performance tuning of reports, SQL queries, and databases. iGuard also prevents long-running and inefficient SQL queries from reaching databases, protecting the performance of high priority applications from less efficient tools and rogue queries. iGuard business productivity and performance policies operate in conjunction with iGuard messaging that guides users in real-time to more efficiently and productively work with their applications and data.

Sample iGuard Compliance Message Integrated With a Sample BI Tool



Teleran's solution provides critical business performance and productivity benefits, while reducing support staff and system resource costs. Combining compliance capabilities with these operational benefits and cost savings offers a powerful business solution that returns value to the business while protecting key business assets.

Teleran Customer Successes

The following Teleran customer success stories highlight the benefits organizations have achieved from licensing and deploying Teleran software products. Teleran’s unique combination of protection, performance improvements and operational cost savings delivers measurable returns and material business benefits.

“Teleran uniquely fills a critical gap in compliance, security and operations performance management: bridging application and database security, auditing and access controls. Its operational performance improvement capabilities quickly generate real operational savings, giving Senior Information Technology and Business Executives the financial justification and protection benefits they need in these times of tight budgets and increasing risks.”

Ken Tyminski
Former Chief Information Security Officer
Prudential Financial



GE Money: PCI Compliancy

GE Money needed to ensure that its consumer credit card data warehouse was in compliance with the Payment Card Industry (PCI) Data Security Standard that required auditing and securing the use of personal financial data. This critical application was also incurring database performance problems, violating customer service level agreements and impairing productivity of 600 credit analysts world-wide.

GE licensed Teleran software to address both their compliance and database performance issues. By implementing Teleran iSight and iGuard, GE met their PCI audit and control requirements and saved over \$800,000 in compliance costs versus developing an in-house solution as they had originally planned. To address their performance issues, GE deployed iGuard policies to better control resource wasting SAS queries and unpredictable ad hoc analyses. iSight auditing was used to tune the database model based on actual usage patterns. In addition, iSight ensured that applications were synchronized with on-going changes at the database. With Teleran, GE data warehouse performance improved by 25%, enabling GE to meet service levels required by customers and employees.

“At GE Money, Teleran products enabled the company to satisfy PCI compliance demands and allowed us to increase system capacity and performance by 25%. As a result, GE Money is planning on rolling out Teleran products enterprise-wide. Teleran provided GE Money several advantages over competitive products in the market. These included:

- *Supporting multiple database technologies on multiple server platforms, enabling enterprise deployment*
- *Capturing more data about the users, queries, applications, databases*
- *Offering active usage policy management*
- *Providing a non-intrusive architecture that did not consume database system resources*
- *Delivering integrated analytics and reporting, requiring no report development”*

William Klancko
IT Leader
GE Corporate

Mayo Clinic: Complying with HIPAA

Mayo Clinic needed to comply with the federally mandated Patient Health Information (PHI) Act and Health Insurance Portability and Accountability Act (HIPAA) regulations for an application that will be used by 2000 physicians. These privacy regulations required that access to patient information needed to be audited and explicitly controlled. In particular, because their BI applications used generic database user IDs, they could not correlate the application user with actual database access. After reviewing compliance solutions, Mayo Clinic selected Teleran.

The Teleran solution provided auditing and business usage policy controls that enabled Mayo Clinic to protect sensitive patient information by actual user. Without this user specific control, they could not have met the HIPAA requirements. The Teleran system also delivered operational efficiencies that reduced their costs and improved system performance. Mayo Clinic has stated that they intend to extend Teleran use to other applications throughout their system of clinics.



“Teleran is the only vendor that provided us with a common security enforcement and auditing framework across all data retrieval applications and databases. The reasons we chose Teleran were that it delivered:

- *Detailed security at database row and column level*
- *Data masking for sensitive patient health information*
- *Individual user tracking independent of the applications used*
- *Both compliance and operational efficiencies”*

Tom Fisk
Security Director
Mayo Clinic

Teleran's Key Features and Benefits

- Integration with applications and databases enables protection of the entire application environment from the users to the database
- Modeling of the Entire Business Application Environment delivers intelligent controls and comprehensive auditing across all applications, users, and database activity
- Integrated Auditing and Usage Policy Controls uniquely track and protect in a single software solution
- Patented Real-time Policy Enforcement Engine enables flexible controls automatically adapted to each unique business environment
- Automated Alerting communicates real-time warnings and guidance to users who attempt to violate business usage policies
- Identity Persistence maintains understanding of who the BI application user is throughout transaction even when generic database user IDs are employed
- Network-based Architecture installs quickly and requires no performance degrading "in-the-database" agents, traces or monitors

Leading Organizations Rely on Teleran for Compliance Auditing and Enforcement

Teleran delivers a comprehensive data auditing and compliance policy enforcement solution. Organizations such as the Allstate, Bristol-Myers Squibb, GE, MetLife, the US Army, Wachovia, and many others have deployed Teleran's solution for comprehensive regulatory compliance policy auditing and enforcement as well as increasing operational efficiencies and savings.

Teleran Technologies is the leading provider of software for ensuring the performance, compliance, and cost efficiency of user-driven, dynamic application environments. These include business intelligence (BI) data warehouses, CRM, Web-based and cloud applications. Through end-to-end knowledge of the application environment - users, queries, applications and databases - Teleran software aligns IT processes with business needs, improving compliance, reducing costs and enhancing business performance and productivity.

Founded in 1996, Teleran pioneered the concept of usage monitoring and management for data warehouses and analytic applications with its patented "policy action engine" and management process. Today the company provides solutions for many of the world's leading companies, including Allstate, Bristol-Myers Squibb, GE, Mayo Clinic, Merrill Lynch, MetLife, Pixar, US Army, Vanguard and Wells Fargo.

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