

Addressing GDPR Data Protection and Compliance at Ministry of Finance of a European Country

Protecting Personally Identifiable Information (PII)

BENEFITS DELIVERED

Met demanding state and EU data protection and compliance requirements including GDPR

Enabled rapid implementation without costly customizations

Delivered “plug and play” compliance reporting and analyses

Provided additional operational costs savings and efficiencies

Integrated and certified with Oracle Exadata and SAP BusinessObjects

Summary

The Ministry of Economics and Finance of a large European country selected Teleran’s Data Visibility and Protection software solution to fulfill their data protection and compliance mandates for a 9000 user data warehouse deployed on Oracle Exadata. Teleran’s solution enabled the Ministry to quickly and cost effectively address challenging European Union (EU) and state mandated data privacy regulations and prepare to comply with the EU General Data Privacy Regulation (GDPR) mandates in 2018. Teleran’s solution met the Ministry’s key requirement to provide an integrated view on each user’s access to sensitive data across both applications and the databases. Teleran’s solution also delivered operational cost savings that reduced the overall expense of maintaining their applications on the Exadata system.

Background

The Ministry of Economics and Finance of a major European country is responsible for economic, financial and budget policy, planning public investment, and managing public expenditure, revenue policies and the tax system. Because of the sensitivity of citizens’ data it collects and handles, the Ministry is required by state and EU compliance regulations as well as upcoming GDPR mandates to audit and control access to sensitive personally identifiable information (PII) and how it is used. Given its broad array of responsibilities and functions, identifying, tracking and managing the use of so much sensitive data is a daunting task.

The Ministry initially focused attention on large and widely used systems and databases that contain sensitive data. One of the critical systems the Ministry started with is a budgeting and planning data warehouse deployed on Oracle Exadata and used by many departments across the entire organization. The data warehouse supports over 9000 users who generate over 7 million queries per day. The primary set of applications accessing the data warehouse were developed using SAP BusinessObjects, a business intelligence reporting tool.

Challenges

To address their compliance mandates, the Ministry needed to capture and report on each and every transaction or query against sensitive data contained in the data warehouse. In addition they needed to identify and report on any compliance policy violations when an unauthorized user accessed sensitive data. These are also key requirements of the upcoming GDPR mandates that the Ministry will need to make sure they comply with.

KEY FEATURES

Monitors user, application, sensitive data usage activity

Fully parses SQL queries, correlates to user, report, semantic layer, and data use

Unobtrusive, network-based architecture adds no overhead to database

Alerts staff in real-time to suspicious/inappropriate behavior

Comprehensive data compliance reporting

Prevents unauthorized access to PII

Stream-lined installation and administration processes

The name and user ID of each employee who was accessing sensitive data was also required. Tracking actual user activity was especially important, because employees frequently moved between departments and they needed to better monitor and manage sensitive data access rights as these moves occurred. However, the Ministry determined that standard database monitors could not correlate each database query with the actual user because the BusinessObjects application employed database connection pooling and generic proxy Oracle database ID's. This architecture masked the actual user identity to any solutions monitoring at the database and rendered standard "in the database" monitoring tools useless for the Ministry's compliance requirements.

The Ministry's compliance challenge was further complicated by the fact that the required audit information needed to reflect both the sensitive data accessed as well as detailed audit information about the transactions within the SAP BusinessObjects reporting application in addition to the actual end-user identification. The auditing needed to encompass the name of the specific BusinessObjects report, within a specified Universe (the BusinessObjects data dictionary or semantic layer), the actual SQL query which generated the report, and importantly, the actual data the query returned to the identified user.

The Ministry also wanted a solution that came with pre-written reports and analyses that could meet their needs without any significant effort or cost to develop a customized reporting solution. This included reports and analyses that identified sensitive data access policies. The reporting solution needed to be "out-of-the-box" ready. The Ministry also needed an alerting function that would communicate exceptions and violations to the appropriate staff and could integrate with existing compliance workflow and procedures.

In addition, because the Ministry had made significant investments in their Exadata system, they required that the compliance solution be fully Exadata-certified by Oracle. They needed to ensure that any solution would be guaranteed to operate efficiently with the Exadata environment without impacting operations, performance or throughput. Finally, due to limited staff resources, and their immediate compliance requirements, the Ministry could not

afford a complex and lengthy implementation cycle. They also needed to minimize ongoing administration costs.

The Solution

The Ministry selected Teleran's software solution to address requirements for data compliance auditing, reporting and analysis. Teleran's Data Visibility and Protection offering comprehensively addressed all their requirements. Teleran's auditing and monitoring product, iSight™, captures and records 100% of the transactions in and out of the Exadata system. iSight uses an unobtrusive network-based architecture that puts no overhead on the database and is certified by Oracle, earning the designation as "Exadata-Ready" through extensive testing and benchmarking at the Oracle certification lab. Other solutions considered were not certified by Oracle.

The Ministry considered native database logging tools available from Oracle, but determined that they consumed database resources, thus slowing application performance. They also were aware that the native tools capture only timed snapshots of activity, and therefore do not provide a complete audit of all transaction activity without placing inordinate overhead on Exadata. In addition, these tools lacked effective reporting and analysis capabilities.

Teleran's Identity Persistence™ feature met the Ministry's requirement to correlate each transaction with a specific user name and ID, despite the fact that the BusinessObjects application server masked the user ID to the database. This capability was a critical requirement and one that was not available from other vendors without significant system integration, development, and testing costs.

Teleran's integration with BusinessObjects met the key Ministry requirement to deliver a combined BusinessObjects and Oracle auditing solution. Teleran's integration delivers a complete audit of each transaction from the specific Business Object authorized user, to the BusinessObjects report and Universe name, to the fully parsed SQL query, and the actual sensitive database objects accessed by queries. Other vendors did not provide this deep integration with BusinessObjects or other analytical software tools.

iSight Analytics™, Teleran's reporting and analysis solution, provided auditing reports that met the Ministry's compliance requirements right out of the box. iSight Analytics also delivered the alerting facility that provides the Ministry with immediate information on any suspicious or inappropriate access to sensitive data. Other auditing tools did not provide the comprehensive reporting and required an expensive effort to write customized reports that would have added to the project cost and time-line.

The Ministry was also influenced in their decision to select Teleran because of Teleran's real-time policy management solution, iGuard™, that prevents inappropriate or non-compliant database queries from reaching the database. iGuard delivers over 70 granular and easy to apply data protection policies that the Ministry will implement in the next phase of their compliance project to specifically address GDPR data protection requirements throughout the Ministry.

Because of Teleran's simple network architecture, certified Exadata integration, and streamlined implementation process, the Ministry was able to get the Teleran system up and running and delivering audit reports in just two days. The ease of installation helped meet the Ministry's tight project time frame and minimized their staff's time and effort.

Finally, the Ministry was excited to discover additional benefits that Teleran provided to improve the operational efficiencies and service of their Exadata data warehouse. Teleran's reporting and analysis identifies dormant data, that is data that is never or infrequently used that can be archived or retired to reduce data handling, processing and storage costs.

The Teleran system also highlights inefficient and wasteful user and application behaviors that enable the Ministry to improve performance and system efficiency to the end users. In addition, the Teleran monitoring identifies improvements to Exadata node balancing and query processing efficiencies that expand overall Exadata capacity, improve performance, and reduce ongoing staff support costs. These benefits are of significant value to the Ministry as Exadata upgrades are costly, typically in the range of €100,000-€200,000.

The Benefits Delivered

Teleran's Data Visibility and Protection solution provided the following benefits and advantages to the Ministry.

- Captured 100% of the needed compliance audit information to address current and upcoming GDPR mandates
- Combined actual user ID, with application activity, and PII data usage
- Integrated seamlessly with Exadata, certified by Oracle
- Provided comprehensive audit reporting out-of-the-box to meet current and upcoming compliance mandates
- Enabled a quick implementation process without costly customizations
- Delivered operational efficiencies including lower staff support costs, system resource savings, and improved performance

For more information on Teleran's Data Visibility and Protection Solution visit www.teleran.com or call +1.973.439.1820, ext. 203.