



# Leading insurance companies implement consistent test data management and data masking techniques to protect privacy

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**Customer:**

Large Insurance Companies

**Industry:**

[Insurance](#)

**Deployment country:**

United States

**Solution:**

Integrated Data Management, Managing Business Infrastructure, Information On Demand, Leveraging Information, Security

## Overview

IBM® Optim™ enterprise data management solutions include proven test data management and data privacy capabilities that enable organizations to create realistic, “right-sized” test databases, while applying masking techniques that protect privacy and produce valid test results.

**Business need:**

Support security and data confidentiality initiatives to comply with industry regulations, like the GLBA and HIPAA, that require de-identifying data to safeguard privacy. Ensure the integrity of application development and testing environments by providing contextually accurate, but fictionalized data for valid testing.

**Solution:**

IBM® Optim™ Data Privacy Solution IBM® Optim™ Test Data Management Solution

**Benefits:**

Protected data privacy by implementing a consistent, repeatable methodology to de-identify sensitive information and prevent data breaches in non-production environments. Supported initiatives for compliance with GLBA and HIPAA by using a variety of techniques for de-identifying sensitive data to mitigate risks and costly penalties.

## Case Study

## **Overview**

### **Challenges**

Support security and data confidentiality initiatives to comply with industry regulations, like the GLBA and HIPAA, that require de-identifying data to safeguard privacy. Ensure the integrity of application development and testing environments by providing contextually accurate, but fictionalized data for valid testing.

### **Why IBM?**

IBM® Optim™ enterprise data management solutions include proven test data management and data privacy capabilities that enable organizations to create realistic, “right-sized” test databases, while applying masking techniques that protect privacy and produce valid test results.

### **Solutions**

IBM® Optim™ Data Privacy Solution

IBM® Optim™ Test Data Management Solution

### **Benefits**

Protected data privacy by implementing a consistent, repeatable methodology to de-identify sensitive information and prevent data breaches in non-production environments. Supported initiatives for compliance with GLBA and HIPAA by using a variety of techniques for de-identifying sensitive data to mitigate risks and costly penalties.

### **Business focus on privacy leads to success**

Access to private data is part of doing business in every industry. Companies from insurance and financial services to healthcare and telecommunications collect information to support daily business activities, provide superior customer service and generate revenue. However, while most companies use this data for legitimate purposes, the recent rise in security breaches and well-publicized privacy violations suggests that some organizations are not doing enough to protect confidential customer information.

To improve corporate governance, many organizations are proactively looking for effective solutions to manage private data more securely. Specifically, in the insurance industry, companies are implementing sophisticated measures to protect production application environments. However, many companies simply overlook protecting privacy in the non-production (development, testing and training) environments. Effective application testing requires realistic test data, which means that developers and testers need more access to data, not less; yet, these environments are often more vulnerable to privacy breaches. So how can you provide access and still protect privacy?

The following stories describe how three forward-thinking insurance companies implemented IBM Optim Test Data Management and Data Privacy solutions to improve application testing processes and protect data privacy. In the spirit of privacy, these companies are not seeking recognition for their diligent efforts to secure sensitive information and have asked to remain anonymous.

## **Auto insurer closes the gap on protecting privacy**

For a US-based [auto insurance company](#), protecting privacy in its production environment was well established. However, its testing environment was complex. Several application testing groups were assigned individual sets of data cloned from production databases. Sensitive information, such as Social Security numbers, had not been cleansed, so personally identifiable data remained in the testing environment, introducing operational risk into the application development process.

An analysis performed by the insurance company and its corporate parent revealed a gap between the methods used to protect privacy in production versus the lack of protective measures in the non-production environments. Before improvements could be addressed, the company assembled a cross-functional team to identify the specific requirements of an effective privacy strategy.

The privacy protection gap spanned several application development and testing groups. All were invited to participate in the requirements gathering process. Additionally, the development organization managed numerous, large application databases, including IBM DB2®, Oracle®, IBM Informix®, IBM IMS™ and IBM VSAM®. They needed a solution that could manage the many complex relationships among these disparate databases.

From a technical perspective, the IT group wanted to implement a consistent test data management methodology, enabling each application group to protect sensitive information. From a business perspective, the data protection strategy had to minimize the incidence and potential impact of a data breach stemming from the testing environment. Risk avoidance was a high priority because even one occurrence could jeopardize customer loyalty the company had worked so hard to build.

Initially, the IT group considered developing an in-house masking solution to cleanse the data for testing purposes. However, because of the complexities within and across the application and database environments, they decided to search for a vendor offering that could meet their requirements. IBM and another vendor were invited to demonstrate solutions.

With emphasis on delivering the desired data masking capabilities, Optim offered a variety of flexible methods for de-identifying sensitive data and retaining the data integrity to support accurate testing results. The IT group specifically wanted subsetting capabilities to create and refresh “right-sized,” federated application testing environments. Optim’s proven subsetting capabilities easily supported these requirements. The company also awarded high marks to IBM for its responsive customer service.

In the final analysis, the total cost of ownership for Optim was less than the cost of developing an internal solution. Optim was the only solution to provide a consistent, repeatable methodology for de-identifying sensitive data across applications, databases and platforms. Additionally, based on avoiding the potential risk and financial impact of privacy breaches, the projected return on investment was significant.

## **Underwriter expands privacy protection**

Like many of its competitors, this multi-billion dollar insurance provider was challenged to comply with security and data confidentiality initiatives required by industry regulations, like the Gramm-

Leach-Bliley Act (GLBA) in the US and others around the world. Under GLBA, organizations must implement policies to protect information from foreseeable threats in security and data integrity. Failing to comply by the deadline would merit heavy fines in excess of 100,000 dollars per violation.

As a current client, this proactive company was already familiar with Optim's proven test data management capabilities. When faced with the need to protect personal information, Optim provided capabilities for masking sensitive information in the DB2 application environment. However, because critical data was also managed in VSAM and IMS legacy environments, they needed to extract related test data from multiple databases to create federated test environments. The IT objective was to mitigate the risk factor in all its testing environments by extending data privacy capabilities across applications and platforms.

Expanding its license agreement to purchase Optim for enterprise use provided the capabilities needed to apply a variety of data masking techniques for legacy applications. Because Optim delivers a consistent technology for both the mainframe and open systems environments, the transition and time to implement was minimal.

In addition to maintaining referential integrity and handling data compatibility issues, Optim provided federated data access to satisfy specific requirements for creating test data from DB2 relational and VSAM or IMS non-relational databases. Optim's subsetting and transformation capabilities were straightforward. They could easily extract and de-identify test data across platforms and database environments to prevent private information from being exposed during application testing.

Implementing Optim enabled the company to support initiatives for compliance with GLBA, as well as the Health Insurance Portability and Accountability Act (HIPAA). Optim's consistent methodology for de-identifying test data has also enabled the company to move development and testing resources off-shore without the risk of violating privacy legislation across international boundaries. Return on investment is measured as a combination of improved testing processes, mitigated risk, lower development and testing costs and improved methods for protecting privacy in the testing environment.

### **Health insurer safeguards patient health information**

Companies in healthcare and related industries are highly vulnerable to data theft and privacy breaches. Regulators have long focused on the healthcare segment because of the confidential nature of medical information. For one nationwide health insurance provider, the main drivers for implementing a data privacy strategy were to safeguard patient data and to avoid costly penalties for non-compliance.

HIPAA addresses the need to secure and protect patient information and requires that organizations adopt privacy procedures to guard "protected health information" against theft or misuse. Compliance requirements for this insurance provider focused on protecting confidential patient information in the more vulnerable application testing environments.

The company relies on several large applications for managing health insurance policies, patient records and financials to support daily business activities. The information collected in these

applications is managed across DB2, VSAM, IMS and Oracle databases. These applications are upgraded and enhanced on a regular basis, which means that testing is ongoing.

Before adopting Optim, the company created test environments for these applications by cloning entire production databases. This practice exposed significant amounts of patient information to application developers and testers. Cloning also required more disk capacity and ultimately increased the time required to create and refresh test databases and conduct application testing. Data masking capabilities would allow them to protect patient privacy and preserve the referential integrity of the test data across environments. Subsetting capabilities would allow them to create smaller, more realistic test databases.

After evaluating several vendor solutions without success, the company contacted IBM. Optim's data masking and propagation techniques were demonstrated against the patient information management application, which contained over 300 tables, with many self-referencing and cyclical relationships. Proven subsetting capabilities made it possible to quickly create "right-sized" test environments to support targeted testing scenarios. Optim's data transformation features allowed for masking and propagating de-identified patient data accurately throughout the application testing environment.

By implementing Optim, this insurance provider has been able to support its HIPAA compliance initiatives for data privacy and support its business initiatives for improving application testing processes. Subsetting has reduced capacity requirements in the testing environments for a substantial cost savings. They have already started implementing Optim as a complete enterprise solution to provide consistent test data management capabilities across their other testing environments.

### **Best practices for protecting privacy**

Worldwide, stringent data privacy laws mandate that organizations protect personal data from misuse. Although most companies have established security measures in the application production environments, the development, testing and training environments are often the most vulnerable. To address this challenge, de-identifying data is a recognized best practice for providing realistic test data that also protects privacy. IBM Optim offers comprehensive and proven test data management capabilities for de-identifying test data to meet these requirements.

### **About IBM Optim**

IBM® Optim™ enterprise data management solutions focus on critical business issues, such as data growth management, data privacy compliance, test data management, e-discovery, application upgrades, migrations and retirements. Optim aligns application data management with business objectives to help optimize performance, mitigate risk and control costs, while delivering capabilities that scale across enterprise applications, databases and platforms. Today, Optim helps companies across industries worldwide capitalize on the business value of their enterprise applications and databases, with the power to manage enterprise application data through every stage of its lifecycle.

### **For more information**

To learn more about IBM Optim enterprise data management solutions, contact your IBM sales representative or visit: [www.optimsolution.com](http://www.optimsolution.com).

# Products and services used

IBM products and services that were used in this case study.

## Software:

IBM Optim Data Privacy Solution, IBM Optim Test Data Management Solution, [IMS](#), DB2 Data Servers, [Informix Dynamic Server](#)

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