



## IBM Optim Test Data Management Solution

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### Highlights

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- **Apply subsetting capabilities to create referentially intact, “right-sized” test databases**
- **Create targeted test scenarios to force error and boundary conditions**
- **Automate test result comparisons to identify hidden errors**
- **Easily refresh and maintain “production-like” test environments**
- **Shorten iterative testing cycles and accelerate time to market**

### How can you deliver reliable applications at a lower cost?

Your organization depends on business-critical applications to drive results. But it is a challenge to stay within tight budgets, while striving to speed the deployment of new applications, upgrades and enhancements. Creating realistic and consistent application development and testing environments is the first step in delivering reliable applications, enhancements and upgrades. However, cloning large production databases for testing purposes increases the time needed to run test cases. In addition, cloned data may not support the specific error and boundary conditions required for effective testing. Special test cases may be required before testing can begin. Lastly, manually validating test results is often time consuming and error prone. With so much test data to manage, costs can quickly

spiral. Testing cycles are extended. Maintenance burdens increase. Rolling out new features requires much more of your organization’s time and resources.

Your ultimate goal is to deliver reliable application functionality to support operational best practices, stay competitive and generate revenue. So how can you support rapid application deployment and reduce costs, without sacrificing quality?

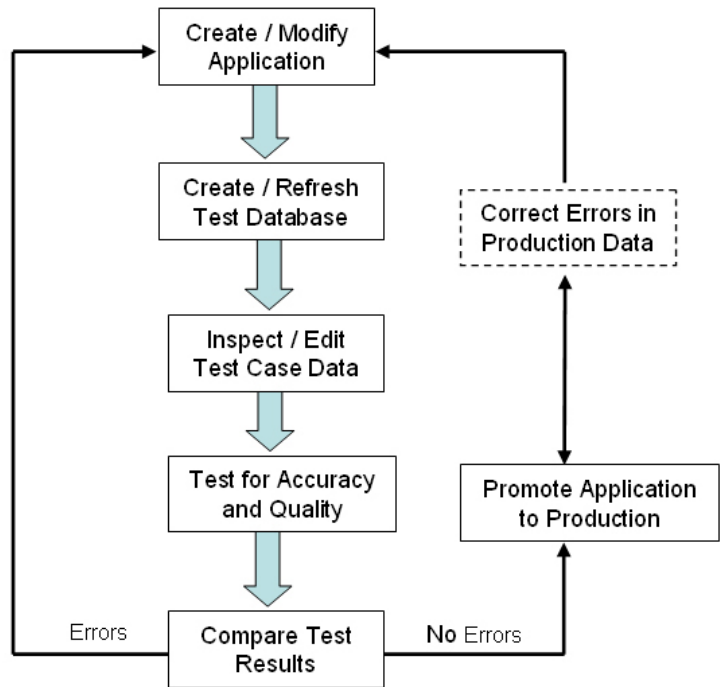
The IBM® Optim™ Test Data Management Solution offers proven technology to optimize and automate processes that create and manage data in non-production (testing, development and training) environments. Developers and quality assurance testers can create realistic, “right-sized” test databases, create targeted test scenarios, protect privacy and compare “before” and “after” test results with speed and accuracy.

Optim's capabilities for creating and managing test data enable sites to save valuable processing time, ensure consistency and reduce costs throughout the application lifecycle.

**Creating production-like environments for application testing**

In contrast to cloning large production databases, a more effective alternative is to implement test data management and subsetting capabilities that minimize storage requirements, while expanding test coverage. It is much faster to test with smaller, realistic subsets that accurately reflect the production data, without adding overhead to the testing process.

Optim provides the capabilities to create referentially intact subsets of application data needed for testing. Optim's Relationship Engine™ represents a unique, proven technology that identifies, navigates and intelligently processes data relationships and extracts precise subsets of related data, no matter how complex the data model. Subsetting capabilities allow you to accurately capture realistic application test data and reduce capacity requirements for multiple testing environments. Optim also provides capabilities for capturing related data among multiple integrated applications and databases.



*IBM Optim improves every stage of the application testing process.*

This "federated" extract capability makes it easy to create production-like environments that accurately reflect your end-to-end business processes.

Using Optim to define subsetting selection criteria is as easy as selecting the tables, relationships and other functional criteria needed to cover a specific test case. Optim supports data relationships defined in the database, as well as those enforced through the application logic. Once subsetting selection criteria are defined, Optim's

processing capabilities identify and extract the precise subsets of data. Insert and load options allow you to populate or refresh test databases efficiently and accurately, with no impact on production. You can also save the processing specifications and results in files that can be shared, easily modified and reused.

For example, it is easy to populate a test environment with referentially intact customer and order information for a specific business unit, fiscal year,

or equivalent criteria chosen by the business user. To quickly refresh the test environment, you can insert or load baseline data. Alternatively, you can extract new records from production to expand test coverage or obtain data for a unique test case. You can create consistent development, testing or training environments by extracting a standard set of sample data and resetting the baseline after each session.

Test data management and subsetting capabilities help control the size of development and testing environments. Eliminating excess data volume reduces storage requirements and trims costs. You can create any number of “right-sized” development, test and training databases to satisfy specific requirements, improving both coverage and accuracy. Streamlined test databases are easier to manage and maintain, so you can speed iterative testing cycles and shorten the time necessary to deploy new application functionality.

### **Protecting privacy in development, testing and training environments**

Optim also offers a variety of methods for masking test data to protect privacy and support regulatory compliance initiatives. Unique table and column mapping capabilities help you map specific target test data. Sites can

leverage context-aware data masking routines to de-identify key data elements across your applications. Optim captures and accurately processes application data elements so that the masked data does not violate application logic and produces valid results.

You can combine test data management capabilities with comprehensive data masking capabilities available in the IBM® Optim™ Data Privacy Solution. This solution includes built-in lookup tables and prepackaged routines that support transforming complex data elements, such as Social Security numbers, credit card numbers and e-mail addresses. You can also incorporate site-specific data transformation routines, integrating the processing logic from multiple related applications and databases.

### **Force error conditions**

Another way to optimize your testing environment is to create targeted test scenarios. Optim includes comprehensive relational editing capabilities that not only simplify the tasks necessary to create this special data, but also make it easy to browse data and resolve application errors. A simplistic, one-dimensional view of your test data is insufficient. Optim provides capabilities for browsing and editing data in its relational or business

context across multiple tables, which offers a better way to envision the data relationships and structure of the application data model.

Practical and intuitive commands simplify relational editing and ensure data integrity. You can easily edit test data to trigger error or boundary conditions and to verify exception handling during testing. For example, if diagnostic codes are four digits, and range in value from 0001 to 1000, then a forced value of 2000 would trigger an error in the context of the application test. A powerful undo capability allows you to reverse an unlimited number of editing changes. A sophisticated audit facility tracks changes and saves details for review by authorized users.

### **Automate data comparisons and analyze results**

The ability to analyze and validate test results is critical for ensuring application quality. The database size and complexity significantly increase the effort involved in examining test results. After a test run, Optim analyzes the “before” and “after” images of the test data, automatically detects any differences and presents the results in a concise report. You can browse comparison results in a highlighted display for easy analysis – saving countless hours.

Optim improves all phases of application testing. An intuitive, online interface and full-function browse utility eliminate time-consuming and error-prone table-by-table comparisons. Optim not only identifies the expected database changes, but also uncovers differences that might otherwise go undetected. Those application defects that are hidden or difficult to trace can be identified quickly and resolved at a fraction of the cost. Compare specifications can be saved, reused and shared to improve consistency and productivity.

### **Implement Optim and speed time to value**

To help you realize immediate benefits from implementing Optim, IBM's experienced Software Lab Services staff and certified delivery partners provide hands-on technical training, knowledge transfer and real-world examples. You define your business objectives and processes related to enterprise application data, and then quickly apply Optim processes and technology.

Optim provides a central data management solution that scales to meet enterprise needs. In addition to supporting your custom and packaged applications, Optim is the only solution to provide a consistent test data management approach across the leading ERP and CRM applications:

Oracle® E-Business Suite, PeopleSoft® Enterprise, JD Edwards® EnterpriseOne, Siebel® CRM and Amdocs® CRM. And it supports all major enterprise databases and operating systems: IBM DB2®, Oracle®, Sybase®, Microsoft® SQL Server®, IBM Informix®, IBM IMS™, IBM VSAM®, Microsoft Windows®, UNIX®, Linux® and IBM z/OS®.

### **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).



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