

TestBench

Intelligent Database Management & Verification

Overview

What is Test Bench:

A solution that uniquely addresses the validation of all database effects during a test and the creation of cut-down, representative test data to reduce test times and data footprints

Features:

- Manages the test environment
- Provides intelligent data extraction
- Manages test data & integrated database validation
- Verifies & validates application data
- Supports error recovery & repeatable testing with an undo capability
- Supports IBM I (DB2), Oracle, Microsoft SQL and Oracle databases

Benefits:

- Enables data privacy to meet regulations
- Protects against test data corruption
- Saves time in error recovery
- Offers top to bottom quality assurance

The Challenge

A study carried out by the Ponemon Institute, “The Insecurity of Test Data: The Unseen Crisis” showed 62 percent of companies were using live customer data to test applications and 49 percent shared this data with outsourced testers, with no way of knowing if it was ever compromised. Your databases are key corporate assets and their accuracy must be verified as part of any test.

There are those who argue that verifying software quality by using live data is a necessity as it gives more accurate results. However, using customer, employee, or other confidential data straight from production for testing or developing applications violates data privacy laws and regulations and makes that data a soft target for attacks. An organization’s data should not be exposed like this. In addition to security violations, it is also important to ensure the integrity and validity of your data and be happy in the knowledge that your entire application quality process is underpinned by accurate and legal test data.

The Solution

TestBench is our solution that uniquely addresses the creation of cut down, representative test data to reduce test times. It also supports the protection of the test data, through rollback, scrambling and masking, enabling immediate re-use and ensuring that no breaches of data confidentiality are made.

Extract Test Data Intelligently

- TestBench delivers an efficient and reusable way of creating and extracting data subsets from your live database with full referential integrity, making building cut-down test environments a fast and reliable process.
- TestBench can create a completely new instance of a database or refresh an existing database.
- The ‘Master’ module allows an extraction to occur on the server where it is licensed but, with the addition of a ‘Remote’ module, data can be extracted from another database server. Typically, the ‘Remote’ license would be for a Production or High-Availability server while the ‘Master’ license would be for the test environment.

“The test automation industry’s lack of attention to test data is startling when you consider that data is at least as important as functional behavior for most information systems. No other vendor has both the extent of functionality for managing test data, coupled with integration into test planning and test execution activities”

Michael Azoff – Ovum



- The 'Data Extraction' component leverages the defined database structure to build a representative 'data model' to which the user can apply their extraction criteria.
- Users can create a test data environment that is significantly smaller than production but contains all the data scenarios required for test execution.

Transform Your Data to Comply with Privacy Regulations

- TestBench overcomes any data privacy issues using obfuscation techniques such as data scrambling and masking, which make the data anonymous.
- The 'Data Transformation' component provides three primary methods of data scrambling:
 - a) 'Vertical' scrambling – The 'mixing' of current data within a table. Useful for scrambling Names and Addresses
 - b) Sequential Value scrambling – The replacement of data with appropriate data with sequential values.
 - c) Random Value Scrambling – The replacement of data with appropriate data with random values.
- The risk of exposure or costly legal penalty and embarrassment is now negated.

Protect Your Test Environment

- Good test data is an asset and needs to be protected and managed. If it becomes corrupted it impacts testing and may hide errors.
- TestBench's unique 'Environment Protection' component provides the functionality to allow checkpoints and rollbacks to be used within the data environment.
- This powerful utility greatly reduces the frequency of database refreshes and ensures that a test, or series of tests, can be repeated with the exact same data as the previous execution.

Validate Your Database During Testing

- The integrity of the database is key in most significant business applications, and it is also one of the hardest aspects to check.
- The 'Database Effects' component extends the scope of a test execution by providing details of what happened in the database as the result of executing a test.
- This component is also tightly integrated with Original Software's visual-layer testing solutions, TestDrive-Assist and TestDrive. This means that for any test execution, whether manual or automated, the database effects will form part of the results of the test execution.
- 'Database Effects' also provides Data Rules. These rules allow the definition of how the database should be updated as the result of a test execution and any deviation from these will be flagged for investigation.

Compare Your Results

- TestBench allows users to perform a comparison between two test runs.
- The 'Table Compare' component highlights differences between a current test run and a "Baseline" run to show how program changes have affected the results.
- This feature is particularly useful for comparing test executions over two data environments.
- Exclusions can be defined for the comparisons, so that elements such as data and time stamps do not raise 'false-positive' comparison differences.

The Bottom Line

Essential to the development and testing effort is the need to formulate a coherent and effective test data environment and management strategy. The strategy includes requirements for the creation of test data, obfuscation of sensitive information and data protection for refresh and rollback with a minimum effort. TestBench provides all these capabilities and extends the scope of the testing effort by providing information on all the database updates that occur as part of a manual or automated test execution.