DATA SHEET

CA Test Data Manager for the Mainframe

At a Glance

Quality data is critical to the testing and delivery of valuable software and many organizations rely on the performance and reliability of their mainframe to store the data they collect. However, provisioning full-sized copies of this data to non-production environments is too slow and costly, risking exposing sensitive data and often leaves testers without the data they need.

CA Test Data Manager is a robust tool which uses native engines and operations to perform secure and reliable test data engineering tasks on the mainframe. Data can be quickly profiled, masked and subsetted and can be provisioned in minutes from a central repository, or synthetic data can be created to cover every possible test.

Key Benefits/Results

- **Improve quality.** Provide testers with the data they need to detect and repair defects earlier and at a lower cost.
- **Reduce hardware costs.** Reduce infrastructure costs by up to $50,000 per database with data subsetting.
- **Avoid bottlenecks.** Fulfill data requests 50 percent faster with automated data mining and provisioning.
- **Maintain compliance.** Provision rich data with all the characteristics of production but none of the sensitive content.

Key Features

- **Data subsetting.** Create meaningful data subsets in hours, not days, using native mainframe utilities.
- **Data masking.** Mask millions of rows of data in minutes, using high performance masking engines.
- **Synthetic data generation.** Create the smallest set of data needed to cover every test, injected into multiple systems at once.
- **Test Data Warehouse.** Store data sets as reusable assets in a central repository, and provision it to multiple test teams on demand.
- **Virtualization.** Create virtual services and messages to cover the full range of scenarios, or mask them in-flight, for secure virtualization of unavailable legacy or mainframe components.

Business Challenges

Quality data is central for rigorous testing and many organizations rely on the mainframe to store the vast data they collect. However, provisioning full-sized copies of this data to non-production environments is not viable. It is too slow, incurs prohibitive infrastructure costs and increases the risk of a data breach.

In-house methods. Masking and copying mainframe data to test environments is slow and complex and this is made by worse in-house methods. Data is often copied to another environment first, but this is a time-consuming process that increases the chance of a data breach and often requires investment in additional tools.

Misunderstood data. Complex data structures are usually poorly documented, making it hard to find the data needed for testing or to retain referential integrity when masking and subsetting.

Risk of non-compliance. It is difficult to know exactly where sensitive data exists across mainframe systems and often some is inadvertently exposed to non-production environments. This risks reputational damage and fines averaging millions of dollars if a breach occurs.

Testing bottlenecks. Testers have to manually find the data sets they need amongst the large copies of production data and often have to wait for it to be provisioned by a central team. As a result, the average tester can spend 50 percent of their time waiting for data, searching for it or creating it by hand where none exists.

Quality of data. Production data typically covers just 10 to 20 percent of possible tests and does not contain the outliers, future scenarios or negative results needed for rigorous testing.

Infrastructure costs. Testers and developers usually only require small data sets to fulfill certain criteria, but organizations still invest heavily to maintain multiple copies of large production data.

Solution Overview

CA Test Data Manager provides a robust, flexible framework for managing test data on mainframe and distributed platforms. The reliability of the mainframe can be leveraged, without investment in multiple tools, using a single UI and repository to define test data engineering tasks. These are executed on the mainframe runtime environment using native batch operations and engines for secure and effective test data management on the mainframe.

Data profiling helps understand even the most complex relationships in existing data, building an accurate model based on metadata in mainframe catalogues or by parsing copybooks for platforms where no metadata exists. This includes referential information not otherwise available from mainframe sources so that referential integrity can be maintained even with minimal documentation.

Accurate data profiling will locate sensitive records enterprise-wide, with native masking engines capable of masking millions of rows of data in minutes. Small, referentially intact data subsets can further be extracted, maintaining compliance while avoiding prohibitive infrastructure costs.

Sophisticated coverage analysis will identify where no data exists for testing, using synthetic data generation to create the smallest set of data with 100 percent coverage. This includes outliers, unexpected results and future scenarios so that testers are provided with all the data they need for rigorous testing.

Data is stored as reusable assets in a central warehouse and is matched to the exact tests it can run. The data can be requested and received in minutes from a web-based portal and is cloned as it is provisioned, eliminating data constraints and providing the on demand access to data needed to deliver fully tested software on time, and within budget.

Previously defined rules and data models are also stored centrally, avoiding repeated effort and maximizing the value of work done.

Related Products/Solutions

CA Test Case Optimizer. A complete requirements definition, test case design and automation toolkit allows users to define a model of every test case needed to fully test a system, automatically finding or generating the data and virtual assets needed to execute them.

CA Service Virtualization. Using realistic virtual data from CA Test Data Manager, CA Service Virtualization will simulate constrained or unavailable mainframe or legacy systems for increased end-to-end efficiency.

Critical Differentiators

An enterprise-wide solution. Test data management is driven by a single UI and repository, while referentially intact data can be fed into numerous mainframes and distributed systems at once.

Native test data management. The use of native batch operations enables secure and reliable test data engineering on the mainframe.

Sophisticated coverage analysis. Data coverage can be accurately measured, with any missing data needed for rigorous testing can be easily identified.

Covered subsets. The ability to create rich subsets which retain all the test attributes of the original data.

Parallel testing and development. Cloning fully versioned, re-usable data sets from the Test Data Warehouse allows teams to work on multiple versions and releases in parallel.

Versatile data generation. A comprehensive list of combinable SQL functions, seed tables, default and system variables means that synthetic data can be tailored to suit test cases and requirements.

Built for reusability. Data is stored centrally as reusable assets, along with previously defined rules and data models, for the reusability of test data engineering tasks.

Customer Success

A multinational bank improved test data quality and efficiency by 60 percent within three months of adopting CA Test Data Manager.

A financial services organization reduced data creation time from 20 hours per transaction to two to three hours.

A large insurance company masked over 750 million rows of complex data in less than eight minutes.

A large UK bank efficiently provided de-identified data to globally distributed testers during a large data migration project

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