TDM
Test Data Management Solution
Introduction

Test data management (TDM) is highly critical during the testing lifecycle when the required data sets are needed to test application under development or enhancement. In this method we can satisfy the test data requirements of test teams by including high-quality data with right volume and required format.

Tech Mahindra’s ‘Test Data Management Solution’ focusses towards automated data provisioning mechanism through data sub-setting, data masking, and synthetic data generation capabilities. It allows testers to store, share, and reuse datasets to improve their efficiency in testing life cycle.

Why Do We Need TDM

In today’s world, many organizations are facing challenge to get right data to test applications with exact patterns of production data. Testers frequently spend 50-75% of their time looking for test data or creating test data. TDM requires database centric knowledge and the ability to comprehend the solution data model. To address all these challenges a centralized TDM solution is required so that any team who require test data can instantly raise data request and get quality data in quick time.
This Test Data Management solution is based on an efficient process with good understanding of data requirements and coupled with quality features relevant to common challenges. Below are some key benefits -

- Quick turnaround time in getting realistic, quality data
- Automated test data provisioning in multiple environments
- Enhances quality of test conditions
- Synthetic data creation to test new applications
- Increased test coverage and reduction in data storage cost
- Centralized test data repository for easy to handle data requests
- Efficiently creation of large volume data
- Compliance with regulatory and data governance policies to ensure zero data breaches
- Improve product quality and higher return on investment
Testing teams face many challenges related to test data, which often lead to delays in project delivery, increased cost, poor software quality, or a combination of the three. Some common challenges are listed below:

- Compliance and security issue with Sensitive data (PII/PHI)
- Full size database copies take up too much space and increases cost.
- Additional time for data set up/management instead of actual testing
- Inaccurate/difficult to access data negatively impacts testing
- Lack of current data in test and dev increases risk and lowers quality
- Data unavailability for greenfield implementation
- Inaccessibility of source data to QA teams
- Timely data reversions and Identification of data anomalies
- Data corruption due to multiple teams use same data
- Longer time for data availability in non-production environment
- Production dump unsuitable for new business scenarios
The right test data management solution accelerates time to value for business-critical applications and builds relationships and efficiencies across the organization.

Our TDM solution offers a centralized test data warehouse which provides data in different formats with all data combinations and in multiple environments.

It also allows testers to store, share, and reuse datasets to improve their efficiency in testing with control over the data, files, rules and policies.
Features

- Intelligent Data Discovery/Profiling capability
- Test Data linkage to requirements and coverage analysis
- Data cloning, production sub-sets, data masking, virtual and Synthetic data generation capabilities
- Integrated with test design and automation tools for continuous testing and delivery
- Self-service portal to create, find and reserve test data sets
- E2E data provisioning service for periodic/ad-hoc data refresh in multiple environments
- Centralized Test Data warehouse to manage, enhance and support the function
- Well-defined policies and procedure to manage test data.

Architecture

Client Case Studies

A large Marine Customer – Successfully implemented TDM solution for automated identification of sensitive data and masking along with data referentially intact data provisioning services.

Leading financial service company - Implemented intelligent masking solution with synthetic data creation in multiple environment to cater on demand data need of multiple QA teams.
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