

XDM™

TEST DATA MANAGEMENT



XDM automates your test data management. It supplies developers and test groups with well-adapted and ready-to-use test case data, and provides Quality Assurance with bulk data for extensive regression, performance and acceptance tests. Masking of PII-relevant data is integrated and it can generate synthetic data as well. It frees up your staff from manual work, and makes for a more reliable and timely provisioning of test data. It intelligently handles all the challenges typically associated with providing test data, such as managing structural differences, applying an efficient method to provide the data, embedding additional data into existing test beds, and allowing simple refresh and reset to start conditions. XDM comes with a browser interface that allows it to be easy controlled from anywhere.

Features

- *Test Data Management automated*
- *Self-service data order and supply*
- *Supports common relational DBMS'*
- *Uniform Data Masking / Encryption cross-platform options*
- *Total support of versioning*
- *Cloud enabled*

Test Case Data for Developers

XDM enables developers and testers to select, to modify - if required, and to carefully embed data into their test beds. XDM is based on tasks. In order to create a task, the selection rules (source), the modification rules - if necessary, and embedding rules (target) are specified. At runtime, the rules are evaluated and applied. Whether certain contracts, customers or other business objects are requested, a 'start condition' such as 'contracts with specific properties', as a SQL-select, is sufficient to invoke XDM to extract the data rows from all associated tables. XDM's embedding rules are especially helpful and timesaving because, typically, there is already data in the test system. Depending on the test intention this data will be replaced, supplemented, or updated. XDM is able to provide immediate useable test data using the embedding rules for parent and child tables. XDM tasks are autonomous; they can be executed under the control of any scheduler, including XDM's own scheduler. A task reacts in a flexible way to the conditions

in source and destination. Additionally, the task can be controlled by execution parameters: other source, other select PARMs, different destination, etc. XDM's Flow Control ensures best performance through multi-threading and enables task bundling.

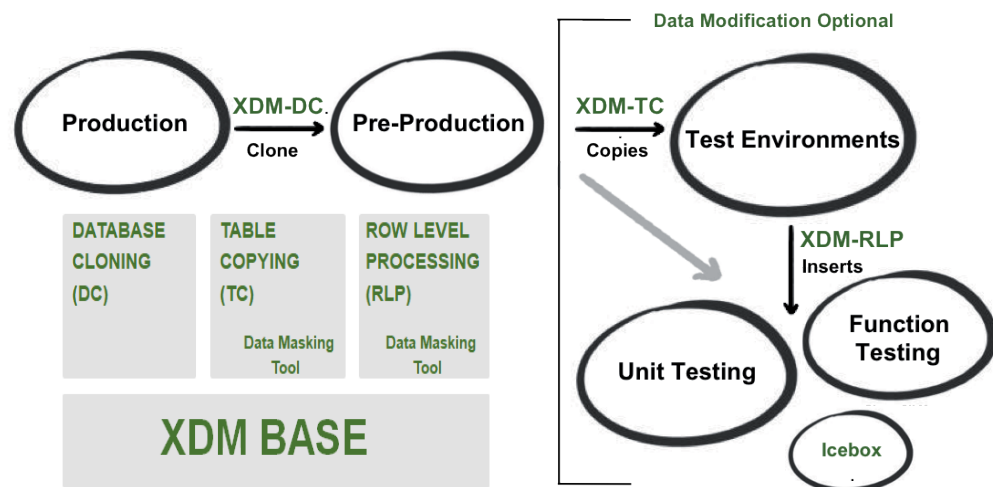
XDM's REST-API allows for seamless integration, for example, with test tools. They can initiate XDM, and XDM can make use of any available outside service.

Detect & Mask PII

PII analysts can use XDM's intelligent search function to locate personal data. The search function identifies columns that contain PII that masking can then be applied to. XDM comes with dozens of easy to use masking algorithms. These functions replace PII with fictitious yet valid equivalents for first and last names, addresses, e-mail addresses, social security numbers, credit card numbers, bank information, driver's license numbers, and more. These fictitious values appear realistic and pass validity checks because XDM's Masking Tool uses hashing algorithms to generate numeric values or keys of lookup tables. This masking process is repeatable, so the same input value will result in the same masked value every time. There is no randomness. All this benefits testers because tests need to run repeatedly and with the same preconditions. The Masking Tool can mask data in-place as well as during a data transfer. But best of all, with XDM you can consistently mask data



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company-wide across all applications, whether it is Oracle, Db2, IMS, VSAM, LUW, MS SQL server, PostgreSQL, SAP, etc.

Freeze and Restore Test Data

It's a good practice to save test data before a test runs. XDM comes with a feature called Icebox to automate this. Icebox allows you to save data objects from a test system, either all objects or some of them, and to bring them back later. The objects can be restored in the same system or any other system. The Icebox takes care of both DDL and data. It is another automation feature to increase efficiency. Data should be backed up before changes are made to it. Today you are working on fixing an error in the current release; tomorrow you will work on the new version. No problem with Icebox you're able to change test data structures and test data with a single command.



Browser-Based Test Data Management

XDM users, developers and QA people, install nothing locally, so no updates or upgrades are required. The browser interface is available everywhere all the time. If they have authorization, it allows them complete control and monitoring of test data procurement; users can create tasks, accept tasks, order, receive and embed data, document the process, etc. Developers and testers order their test case data at their domain-specific portal. Verified tasks are available for selection in the portal. The developer or tester selects a task, and can change parameters if desired. That's it. If the users don't find a suitable task, they can create a new one if they have authorization. The order can be immediately checked and executed or handed over to the scheduler for later. This is how we continue to drive automation.

Agile Integration

XDM comes with a REST API that allows your development tools or test software to access XDM and initiate the test data provisioning process. Conversely, XDM can use your existing REST-enabled services.

Mass Data for Release and Acceptance Tests

Programming requires test case data, in other words, a number of selected business objects. Acceptance tests require mass data, usually production-like data. Because at the end of the development cycle, we want to be



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sure that the new version of an application can process all the production data correctly. In other words, we are dealing with two vastly different scenarios. We cannot extract and load bulk data line by line. It takes too long, and is too expensive. For this reason, XDM deploys other procedures tailored to each respective platform. It always opts for the most efficient procedure. To set-up a XDM TC task is very easy. All you have to do is to specify the source and destination systems and to select the schema or tables to be copied.

XDM TC is able to mask PII the same way as the RLP process does. It enables you to provide masked bulk data that can serve as a source for test case data.

XDM Supports:

Linux, Unix, Windows, Mainframe

*Oracle, MS SQL Server, Db2 LUW
PostgreSQL, Db2 z/OS, IMS, VSAM, etc.*

Benefits

- *Agile test data supply*
- *Touch of a button, self-service data*
- *Better collaboration & communication*
- *Supports modern software development*
- *Protect PII & enhance data security*
- *Reduced costs*
- *Improved data delivery & timelines*

Icebox

The ability to freeze test data and make it available later in any target system is also a great advantage when handling mass data. You can save it before tests begin to allow for easy resets. Icebox backups are also useful in case you need to go back one or more generations. Just a few clicks, allow you to prepare a test bed for an older release. In short, Icebox provides versioning for test data.



Decouple Test & Development from Production

XDM DC provides a fast, efficient, robust, scheduler-driven, and cost-effective way to duplicate data, i.e. to clone complete databases. This further improves your production safety since testers and developers no longer access production. A regularly renewed clone of the production system will be the base of test and development work moving forward.

Contact Us For More Information

We offer a free 30-day trial evaluation as well as a private web demo. Learn more about XDM with its components at: **www.ESAIGroup.com**

