SAP Test Data Migration Server: Creating High-Quality Test Systems With a Reduced Set of Data

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SAP AG
Agenda

SAP TDMS Overview

1. Customer Situation and Challenges
2. Solution Approach and Technology
3. Benefits & Use Cases
4. Facts and Figures
5. Questions & Answers
SAP TDMS: Existing Customers
More than 850 Shipments Worldwide
SAP TDMS: Reference Customers

- Unilever
- Holly Corporation
- Astellas
- Petrobras
- Goodrich
- Harley-Davidson
- Mahindra
- EMI
- Linde
- Air Liquide
- Apollo Tyres Ltd.
- Pacific Coast Building Products
- KRAFT
- PEMEX
- Coles
- BR-online
- ExxonMobil
1. Customer Situation and Challenges
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Is Your Company Facing…

- Large and quickly growing SAP systems?
- The need to test and validate in-house developments?
- The challenge to scramble sensitive data?
- Multiple parallel IT projects?
- Demand to simulate new business scenarios?

Consider implementing a solution that helps you to create lean and consistent development, testing, quality assurance, and training environments based on real business data.
## Challenges with Full System Copy

<table>
<thead>
<tr>
<th>CHALLENGES</th>
<th>CONSEQUENCES</th>
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<tbody>
<tr>
<td>Production systems are becoming larger and larger</td>
<td>Administration of large data volume</td>
</tr>
<tr>
<td>After each copy, settings need to be readjusted</td>
<td>Increased storage expenses</td>
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<tr>
<td>Developments need to be stopped (before system rebuild)</td>
<td>Interfaces need to be changed or closed</td>
</tr>
<tr>
<td>New developments can only be tested in Q/A system</td>
<td>Users need to be set up or changed</td>
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<tr>
<td>Data in non production system is completely replaced by production data</td>
<td>Authorizations need to be adjusted</td>
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<tr>
<td>Sensitive data in test systems</td>
<td>Saved objects need to be copied back (→ CATTs)</td>
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<td></td>
<td>Transports need to be closed, released and reimimported</td>
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<tr>
<td></td>
<td>Objects need to be transported to Q/A system, tested, corrected in DEV system,</td>
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<tr>
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<td>and transported again to Q/A, etc.</td>
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<td></td>
<td>Repository Objects loose their transport history when copied from production</td>
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<td>Need to implement complex authorization concept</td>
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</table>
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The Solution

With SAP TDMS you can:

- Reduce data volume
- Simulate production environment
- Automate system refreshes
- Selectively refresh individual clients
- Extract data based on business objects or organizational units/timeslice
- Scramble sensitive data

SAP Test Data Migration Server is a high-speed data extraction tool that populates your development, test, quality assurance, and training systems with SAP business data from your live productive environment.
SAP TDMS for ERP and HCM: The Solution

Available Data Extraction Scenarios ERP

- Shell Creation - Repository and client-indep. data only
- TDMS for ERP Classic:
  - Master and configuration data only
  - Master and configuration data in addition to time slice of transactional data
  - Master and configuration data in addition to time slice of transactional data for specific company code(s)
- TDMS Business Process Library (BPL) - Predefined business objects and process data
- TDMS for HCM
  - PA data only
  - Combination of PA and OM data
  - Expert Mode
Available Data Extraction Scenarios BI

- Shell Creation - Repository and client-independent data only
- Master data and time slice of transactional data

Available Data Extraction Scenarios for CRM

- Shell Creation - Repository and client-independent data only
- TDMS for CRM Classic:
  - Master and configuration data only
  - Master and configuration data in addition to time slice of transactional data
Fast, optimized data transfer
- Proven high-speed data extraction technology (Migration Workbench)
- Table-wise data migration via RFC (Remote Function Call) connections
**Solution Approach**
**TDMS Classic**

### Assumption
- 80 - 90% of the production data is stored in 10 - 20% of client-dependent tables

### Data volume reduction
- In order to reduce the overall volume, only few tables need to be reduced
- All other tables (master and configuration data) are migrated entirely
- Customer-individual tables are transferred entirely or can be reduced via e.g. time criteria
- Some tables are excluded from transfer by default:
  - E.g. change documents, user tables, etc. (customizable)

* Estimate based on project experience

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# Business Process Library

Available Business Contexts

## Master Data:
- Business Partner
- Material
- Vendor
- Customer
- G/L Account
- Fixed Asset
- Functional Location
- Equipment
- Internal Order
- Project
- Article (Retail)
- Insurance Object (FS-CD)
- Contract (FS-CD)
- Loans Contract (CML)
- Asset (CFM)
- User
- Cost Center
- Work Center
- Purchasing Information Record
- Material BOM

## Transaction Data:
- Accounting Document
- Purchase Requisition
- Purchase Order
- Sales Order
- Material Document
- Billing Document
- Invoice Receipt
- Quality Notification
- Maintenance Order
- Allocation Table (Retail)
- FI-CA Document
- Transaction (CFM)
- CO Document

## Process Data:
- Purchase Order
- Sales Order
- Insurance Object (FS-CD)
- Contract (FS-CD)
- Loans Contract
- Contract (IS-U)
- Installation (IS-U)
- Device (IS-U)
- Production Order
- Process Order
- Asset (CFM)
- Bank Account (BCA)
- Business Partner (IS-U)

## Custom Data:
- Empty scenario for custom-specific objects
SAP TDMS – BPL: Accounting Document

Provides selective Accounting Document data with depending objects (including master data)

Main Business Objects:
- Accounting Document
- Vendor
- Customer
- G/L Account
- Open & Balanced Posts
TDMS for HCM
Integrated in TDMS Infrastructure

Transfer of Repository Objects and Client-Independent Tables (Shell Creation)

Transfer of Master Data (non HCM) and Customizing Data (TDMDC, TDTIM or TDTCC)

Transfer of HCM Data (TDMS for HCM)
SAP TDMS for HCM
Architecture – Data Scrambling

Production System

Control System

Test System

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TDMS for HCM
Data Scrambling and Customizing Options

Scrambling:
- Complete scrambling of personnel data
- Content dependencies are taken into account
- Grouping of content absolutely freely possible
- Provision of scrambling templates for 20 countries

Customizing:
- Target number range customizable per user if desired
- Option to exclude specific employees from transfer by flexibly possible via specific criteria
- Option to set maximum number of objects per user
- Option to exclude objects and infotypes of a table from transfer
- Flexible setting which cluster/tables should be taken into account (e.g. customer-specific cluster/tables)
### SAP TDMS for BI and CRM

#### TDMS for BI
- Solution similar to TDMS for ERP solution
- Supports release BI 3.5 and 7.0
- Possible to reuse settings from TDMS for ERP implementation
- Data reduction based on time characteristics
- Eliminates PSA data completely
- Ensures delta load information is not touched, i.e., delta loads still possible
- Significant reduction in InfoCube and ODS data

#### TDMS for CRM
- Solution similar to TDMS for ERP solution
- Supports release CRM 4.0, 5.0 and 6.0
- Shell Creation, time-based reduction and master data scenario available
- Ensures consistency in core business processes such as sales, service, marketing
- Ensures consistency of document flow
- Supports integration scenarios for mobile clients
TDMS CRM ensures consistent migration of data and supports core business processes in the following areas of SAP CRM

-- Marketing
  -- Marketing resource management
  -- Segment and list management
  -- Campaign management
  -- Lead management
  -- Marketing analytics

-- Service
  -- Service order management
  -- Service contract management
  -- Complaints and returns management
  -- In-house and depot repair
  -- Case management
  -- Installed-base management
  -- Warranty management
  -- Resource planning
  -- E-service

-- Interaction Center
  -- Telemarketing
  -- Telesales
  -- Customer service within the interaction center
  -- HR and IT help desk management
  -- Interaction center operations and administration
  -- Interaction center analytics

-- Partner Channel Management
  -- Partner management
  -- Channel marketing
  -- Channel sales
  -- Partner order management
  -- Channel service
  -- Partner and channel analytics

-- Web Channel
  -- E-marketing
  -- E-commerce
  -- E-service
  -- Web channel analytics
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3. **Benefits & Use Cases**
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## Benefits of SAP TDMS

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Reduced Infrastructure Expenditures</strong></td>
<td>Reduce your disk space by decreasing the data volume in your development, test, quality assurance and training systems</td>
</tr>
<tr>
<td><strong>Improved Quality</strong></td>
<td>Improve quality of development and training activities by using business-relevant and up-to-date test data</td>
</tr>
<tr>
<td><strong>Increased Efficiency</strong></td>
<td>Increase development efficiency by reducing the administrative efforts and time required to manage your development and test systems</td>
</tr>
<tr>
<td><strong>Higher Flexibility</strong></td>
<td>Support independent project schedules by selectively refreshing single clients of your development, test and quality assurance systems</td>
</tr>
<tr>
<td><strong>Decision Support</strong></td>
<td>Effectively simulate new business situations in your test environments using up-to-date data before taking critical business decisions</td>
</tr>
<tr>
<td><strong>Outsourcing</strong></td>
<td>Reduce testing expenses by outsourcing those activities to low-cost countries while keeping sensitive data anonymous thus ensuring legal compliance.</td>
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**Bottom Line:** REDUCED COST while INCREASING QUALITY.
Use Cases – General

Typical SAP TDMS Use Cases:

- Create separate TDMS client in development environment
- Create a slim test system with a reduced set of data for upgrade testing purposes
- Business Process Library: quickly populate maintenance systems with small data sets based on business objects
- Allow HCM business users to transfer specific employee data and scramble (anonymize) the data before transfer
- Create multiple TDMS clients with differing data volumes in DEV as master clients to supply test or training systems recurringly, e.g. for resetting purposes
- Create initial master shell and place in transport path to be used as starting point for target system build
“SAP Test Data Migration Server allows us to manage our disk space better and it ensures more effective testing.”

James Summerall
Senior SAP Basis Administrator
Holly Corp.
Customer Experience
Holly Corp. – SAP TDMS Environment

ECC 6.0 Landscape

HED  HEQ  HEP

SAP SOLUTION MANAGER
(SAP TDMS Console)

HSO

HBD  HBQ  HBP

BI 7.0 Landscape
Customer Example – Petrobras

Summary

Reduced system size from 5 TB to 1.3 TB by transferring 1 month of transactional data with TDMS Classic.

Data throughput: Average of 5 GB per process and hour with peaks of 8 GB per process and hour – with 15 processes running in parallel this resulted in data throughput of around 75 GB/hr on average with peaks of 120 GB/hr.

Customer quotes:

“TDMS is a simple to use tool that delivers what it promises.”

“Petrobras was able to create two new systems in its R/3 landscape that highly improved the quality of data which configuration and development teams have available to use in their test process.”

“Petrobras Basis team will use TDMS as an alternative to client copy and homogeneous system copy processes.”
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Facts and Figures

- **System Recommendation**
  - SAP WebAS 6.20, 6.40 or 7.00
  - Minimum 4000 SAPS, 20 GB hard drive

- **Supported Releases**
  - ERP: 4.6C, 4.7, ERP 5.0, ERP 6.0
  - BI: 3.5, 7.0
  - CRM: 4.0, 5.0, 6.0

- **Pricing**
  - Price is dependent on size of production database
  - License covers one PRD system and n non-PRD systems

- **Knowledge Transfer/Training**
  - TDMS10 (offered by SAP Education)

- **Implementation**
  - Implementation Services offered by SAP Consulting

- **Service and Support**
  - SAP Standard and Premium Maintenance
SAP TDMS Services 1/2

SAP TDMS Training Class
- This course will prepare you to implement and configure standard functionality of SAP TDMS
- SAP Education Course TDMS10

SAP TDMS Basic Offering
- Provides overview of SAP TDMS for licensee
- Assists licensee with the initial set-up of SAP TDMS
- Provides knowledge transfer in the use of SAP TDMS to licensee’s SAP TDMS resources
- Provides support for issues that arise for the duration of the project
SAP TDMS Services 2/2

SAP TDMS Proof of Concept / Evaluation Offering
- Remote initial set-up using a landscape provided by customer
- Documentation of set-up

SAP TDMS Set-up & Configuration Consulting
- Provide overview of SAP TDMS for licensee
- Assist licensee with the initial set-up of SAP TDMS
- Implementation of customer-specific requirements such as shell creation, scrambling, and unique data reduction rules
- Provide knowledge transfer in the use of SAP TDMS to licensee’s SAP TDMS resource(s) based on customer-specific requirements
- Provide support for issues that arise for the duration of the project
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Resources & Contact Information

Resources:
- SAP TDMS on sap.com
  - [www.sap.com/tdms](http://www.sap.com/tdms)
- SAP TDMS on SAP Service Marketplace
  - [http://service.sap.com/tdms](http://service.sap.com/tdms)
- SAP TDMS - Consulting Services
  - [http://service.sap.com/slo](http://service.sap.com/slo)

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Thank you