

Master Guide



SAP™ Test Data Migration Server (SAP TDMS) Release 3.0

For
SAP® R/3 Release 4.6C
SAP® R/3 Enterprise Release 4.70
mySAP ERP 2004
SAP ERP 6.0

Material Number 50081947

Document Version 2.7 – June 2009



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You can find this documentation at the following Internet address:
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Typographic Conventions

Type Style	Represents
Example Text	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.
	Cross-references to other documentation
Example text	Emphasized words or phrases in body text, titles of graphics and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

History of Changes

The Master Guide is regularly updated in *SAP Service Marketplace* at service.sap.com/instguides.



Make sure you have the latest version of the Master Guide by checking *SAP Service Marketplace* immediately before starting the installation.

The following table provides an overview of the most important changes that were made in the latest versions.

Master Guide Version	Description of changes
1.00 for 2005 version of SAP TDMS (October 2005)	First version of the document
2.0 for 2006 version of SAP TDMS (October 2006)	Includes description of new features and changes for 2006 version of SAP TDMS
2.1 for 2006 version of SAP TDMS (November 2006)	Minor corrections and additions to version 2.0
2.2 for 2006 version of SAP TDMS (May 2007)	New template; general restructuring and update; update of process type list, more detailed description of new features in 2006 version of SAP TDMS
2.3 for 2006 version of SAP TDMS (September 2007)	Update for new scenarios (process types) and minor corrections
2.4 for Release 3.0 of SAP TDMS (November 2007)	Additional information about shell creation and scrambling; minor corrections
2.5 for Release 3.0 of SAP TDMS (March 2008) 2.5 for Release 3.0 of SAP TDMS (March 2008)	Description of new process types; minor corrections
2.6 for Release 3.0 of SAP TDMS (August 2008)	Description of new process types; minor corrections
2.7 for Release 3.0 of SAP TDMS (June 2009)	Update of list of important SAP Notes



As of February 1, 2008, the name of the current release of SAP Test Data Migration Server (TDMS) will be changed from SAP TDMS 2006 to SAP TDMS 3.0 to comply with the current naming conventions at SAP. This change concerns only the name of the product. It does **not** imply any changes in the functionality for SAP TDMS.

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1 Getting Started

1.1 About this Document

Purpose

This master guide provides a central starting point for the technical implementation, configuration and use of SAP Test Data Migration Server (SAP TDMS) by explaining the actions required during the above mentioned processes and referring to the relevant other documentation materials. It can be useful for everyone who currently works with SAP TDMS or wants to prepare for working with SAP TDMS.

Constraints

This master guide provides an **overview** of SAP TDMS, explains the related general concepts and processes and contains references to other useful materials. To be able to actually work with SAP TDMS, it is not sufficient to read this master guide. Rather, you need the relevant documentation for your user category as described in chapter 7 of this master guide.

1.2 Related Information

1.2.1 Planning Information

For more information about general planning topics not covered in this guide, see the following content on SAP Service Marketplace:

Content	Location on SAP Service Marketplace
Latest versions of installation and upgrade guides	service.sap.com/instguides
General information about SAP Test Data Migration Server	service.sap.com/customdev-tdms
SAP Solution Support Enablement Package	service.sap.com/sep
Released platforms and technology-related topics such as maintenance strategies and language support	service.sap.com/platforms To access the Platform Availability Matrix directly, enter service.sap.com/pam .
Network security (general)	service.sap.com/securityguide
High Availability	service.sap.com/ha
Performance	service.sap.com/performance
Information about Support Package Stacks, latest software versions and patch level requirements	service.sap.com/sp-stacks
Information about Unicode technology	service.sap.com/unicode@sap

1.2.2 Further Useful Links

The following table lists further useful links on SAP Service Marketplace:

Content	Location on SAP Service Marketplace
Information about creating error messages	service.sap.com/messages
SAP Notes search	service.sap.com/notes
SAP Software Distribution Center (software download and ordering of software)	service.sap.com/swdc
SAP Online Knowledge Products (OKPs) – role-specific Learning Maps	service.sap.com/rkt

1.3 Important SAP Notes

Read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation and operation of SAP TDMS.

Make sure that you have the up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at service.sap.com/notes.

SAP Note Number	Title	Description
SAP Note 970531	Installation and delta upgrade of DMIS 2006_1	Installation of the DMIS add-on is a requirement for installation and use of SAP TDMS. This SAP Note describes the installation procedure
SAP Note 970532	Installation of DMIS Content 2006_1	SAP TDMS is shipped in the DMIS_CNT add-on. This SAP Note describes the installation procedure for DMIS_CNT
SAP Note 1094395	Installation of DMIS_EXT 2007_1	The add-on called DMIS_EXT contains additional process types (reduction scenarios) for SAP TDMS. This SAP Note describes the installation procedure for DMIS_EXT
SAP Note 1152897	Installation of DMIS_BSC 2008_1	The add-on called DMIS_BSC contains the available process types (reduction scenarios) for SAP BW and CRM systems. This SAP Note describes the installation procedure for DMIS_BSC
SAP Note 970534	Upgrade to R/3 470,ECC 500,ECC 600 with DMIS 2006_1	This SAP Note explains what you should keep in mind regarding the DMIS add-on when doing a system upgrade
SAP Note 970539	Upgrade to R/3 470,ECC 500,ECC 600 with DMIS_CNT 2006_1	This SAP Note explains what you should keep in mind regarding the DMIS_CNT add-on when doing a

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		system upgrade
SAP Note 1152898	Upgrade to R/3 470,ECC 500,ECC 600 mit DMIS_BSC	This SAP Note explains what you should keep in mind regarding the DMIS_BSC add-on when doing a system upgrade
SAP Note 890797	SAP TDMS - required and recommended system settings	This SAP Notes contains information about suitable system settings for SAP TDMS in different constellations (for example for different database types)
SAP Note 894307	TDMS: Tips, tricks, general problems, error tracing	This SAP Notes contains a list of known issues and solution as well as tips and tricks
SAP Note 1003051	Collective Note for SAP TDMS 3.0	This SAP Note lists the most important SAP Notes for SAP TDMS; it does not claim to be comprehensive → if you are looking for the answer to a more specific question, do an additional Notes search for “SAP TDMS” and a key word related to your question
SAP Note 916763	TDMS performance “composite SAP note”	This SAP Note lists known performance issues for SAP TDSMS and provides information about how to analyze and resolve these issues.
SAP Note 994106	Release limitations TDMS 3.0	This SAP Note informs you about any existing limitations of usage of certain parts of TDMS in certain system environments.
SAP Note 1228855	Installation DMIS_HR 2008_1	The add-on called DMIS_HR contains the available process types (reduction scenarios) for SAP HR systems. This SAP Note describes the installation procedure for DMIS_HR
SAP Note 1159279	Objects that are transferred with TDMS	This SAP Note gives some background information about the application areas whose data is not (or only partially) transferred by SAP TDMS.
SAP Note 1249737	Corrupt data after TDMS transfer	This SAP Note describes issues related to the system landscape for SAP TDMS. In particular, it tells you what to keep in mind with regard to Unicode and MDMC.

2 Overview

2.1 General Concept

SAP Test Data Migration Server (SAP TDMS) is used for creating and refreshing **non-production systems** (test systems, training systems, quality assurance systems, development systems) with a reduced dataset. Note that it is **not** meant to be used for creating production systems.

SAP TDMS operates at client level, that is, the selected data from a client in the sender system is copied to a client in an existing system (non-production system).

The rationale behind SAP TDMS is as follows: Approximately 80 % of the data volume of a typical database is contained in less than 10 % of the tables. The biggest tables are normally transaction data tables. This means that small non-production systems for different purposes can be created by including only those parts of the data that are needed for the given purpose.

In its current standard configuration, SAP TDMS covers the following requirements:

- **Shell Creation:** Creation of a system shell, that is, an SAP system that contains only cross-client data and the required client-specific user and address data, but no other client-dependent data.
Shell creation is currently available for SAP ERP systems with SAP release 4.6C (TDSH4), for SAP ERP systems with a release level higher than 4.6 C (TDSH6), for SAP BW 3.5 (TDSHB) and for SAP CRM 4.0 (TDSHC).
For more information about the availability of this process type for different database and release combinations, see SAP Note 994106.
- Create a non-production system that contains only **master data and customizing**, but no transaction data.
This option is currently available for SAP ERP systems (TDMDC) and for SAP CRM 4.0 (TDCMC).
- Create a non-production system using **time-based reduction**. The resulting non-production system contains master data and customizing plus application data starting from a defined cut-off date (from-date).
This option is currently available for SAP ERP systems (TDTIM), for SAP BW 3.5 (TDBTM) and for SAP CRM 4.0 (TDCTM).
- Create a non-production system by combining **time-based reduction and reduction by company code**: The resulting non-production system contains the data for one or more company codes from a defined cut-off date (from-date) onwards.
This option is currently available for SAP ERP systems (TDTCC).
- **Delete all client-dependent data from a client in a non-production system**
The functions contained in this package are the same as the ones used in other packages (for example TDTIM) to delete the client-dependent data from the receiver system in preparation to the data transfer.
This option is currently available for SAP ERP systems (TDDEL).
- Extract data based on a **business process library**: You can select master data, business processes and business transactions whose data you want to copy from a pre-defined list.
This option is currently available for SAP ERP systems (TDBP1).
- Transfer of **personnel administration data** from SAP ERP Human Capital Management (SAP ERP HCM) (TDHC1)
This option is currently available for SAP® R/3 Enterprise Release 4.70, mySAP ERP 2004 and SAP ERP 6.0.

2.1 General Concept

- Transfer of **organizational and personnel administration data** from SAP ERP HCM (TDHC2)
This option is currently available for SAP® R/3 Enterprise Release 4.70, mySAP ERP 2004 and SAP ERP 6.0.
- Transfer of **mass organizational and personnel administration data** from SAP ERP HCM (TDHC3)
This option is currently available for SAP® R/3 Enterprise Release 4.70, mySAP ERP 2004 and SAP ERP 6.0.

In technical contexts, the individual options are also referred to as **process types**. When you create a package in preparation to a SAP TDMS run, you choose the required process type from a list.

Other reduction scenarios are also possible. These additional scenario variants can be developed by SAP or by selected partners of SAP who use a special development environment for SAP TDMS (TDMS workbench). For information about additional reduction scenarios that are available on request as well as about additional options in this area, contact SAP.

It is also possible to apply **scrambling rules** during the data transfer to ensure that sensitive data (like customers' personal data or confidential financial information) is made anonymous and is not accessible to users of the non-production system. Scrambling rules may be either field-related (referring to a single field) or event-related (referring to two or more fields which are related). For field-related rules, assignment at domain level or at field level is possible.

Note that SAP TDMS does not come with any ready-made scrambling rules. It only provides the development environment (TDMS workbench) in which suitably qualified developers can create the required rules and include them in TDMS packages. More detailed information about how to do data scrambling with SAP TDMS is provided in the solution operation guide.



With regard to the fact that human capital management data is particularly sensitive, the process types for SAP ERP HCM come with their own scrambling functionality. To access it, run transaction CNV_TDMS_HCM_SCRAM in the sender system. You can find the documentation for this functionality by choosing the pushbutton *Documentation* on the entry screen for this transaction.

For all reduction scenarios except shell creation and client deletion, an initial setup is required when a non-production system is created for the first time in a given system constellation or when any substantial changes to the original configuration need to be made. Once this has been done, you can refresh the non-production system at any time following a simplified procedure.

2.2 User Categories

The following categories of users have been defined for SAP TDMS:

- **Consultant:** Has the required knowledge and experience to implement SAP TDMS at a customer site:
 - Has experience with SAP basis technology
 - Has attended training for SAP TDMS offered by SAP
 - Experience with SAP applications is helpful if reduction of application data during the transfer is planned
- **Operator:** Is responsible for the refresh of non-production systems in an existing SAP TDMS environment:
 - Has experience in SAP system administration
 - Has been instructed about how to work with SAP TDMS by a TDMS consultant
- **Developer:** Has the required expertise to develop additional functionality in the context of SAP TDMS, such as scrambling rules or reduction rules:
 - Has attended training for SAP TDMS offered by SAP
 - Has practical experience in working with SAP TDMS
 - Has a clear and detailed understanding of how SAP TDMS works
 - Has a clear understanding of the relevant standard applications and the related tables and fields for the given development tasks
 - Has programming knowledge (ABAP)



Different types of documentation are available for the different user categories described above. Chapter 6 provides a definition of each documentation type and the respective target audience.

2.3 System Landscape

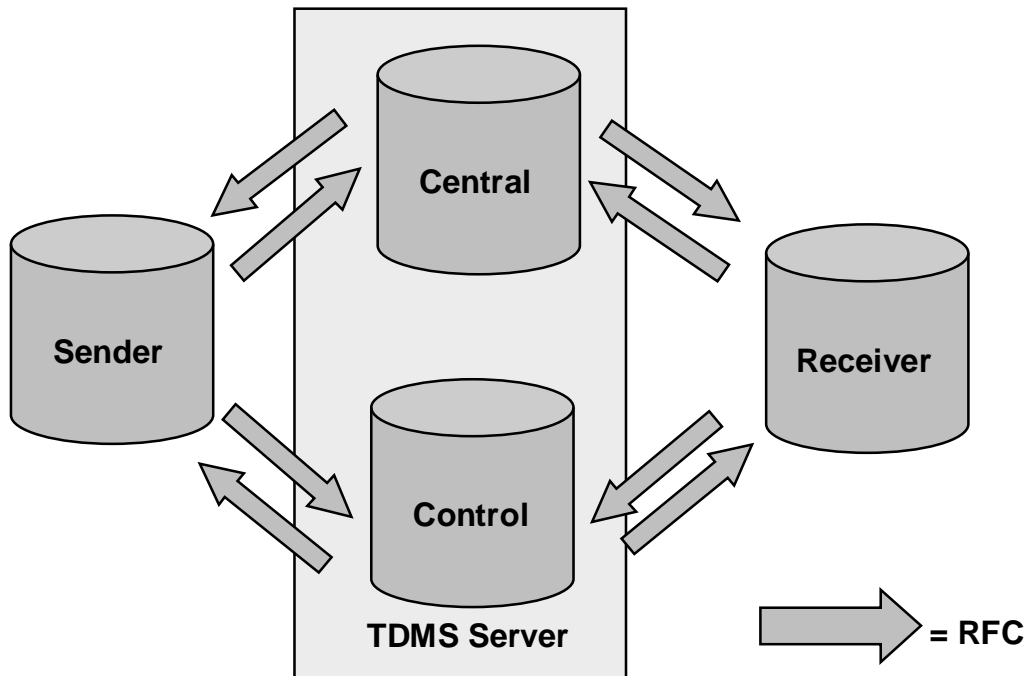
The system infrastructure for a data transfer using SAP TDMS requires the following system roles:

- A **sender system** (client) from which the data supply for the non-production system is taken
Usually the production system is used as the sender system. However there are other options as well. For more details, see the solution operation guide.
- The **TDMS server**, which includes:
 - A **central system** (client) on which the settings and customizing for the setup of the non-production system are stored
 - A **control system** (client) from which almost all activities for SAP TDMS are triggered and monitored

Any of the systems – except the receiver system – can be used as the control system. However we strongly recommend that you implement the TDMS server separately. More details about which types of SAP systems can be used as the central system and control system for SAP TDMS are provided in the solution operation guide.

2.3 System Landscape

- A **receiver system** (client) (the non-production system to be filled)
This may be either a system shell or a full copy of the production system. For more details, see the solution operation guide.



If you want to use the process type *Business process library*, you additionally need direct RFC connections between the sender system and the receiver system (both directions).

The systems should meet the following technical requirements:

- SAP system with WebAS 6.20, 6.40 or 7.00 and SAP ABA
The sender and receiver may also be
 - SAP ERP 4.6C
 - SAP BW 3.5
 - SAP BI 7.0 (as of Support Package 09 for SAP TDMS)
 - SAP CRM 4.0
 - SAP CRM 5.0 systems (as of Support Package 09 for SAP TDMS)
 - SAP CRM 6.0 systems (as of Support Package 10 for SAP TDMS)
- 4,000 SAPS (\cong 4 CPUs, 4 GB RAM)
- Required disk space: min. 20 GB

Regarding the patch level, there are **no** specific requirements for TDMS.

The sender system and the receiver system must be on the same release level – 4.6C, 4.7, ECC5.0 or ECC6.0. The TDMS software must be installed on **all** systems that are part of the given TDMS landscape.

2.4 Specific Features of SAP TDMS

The systems are linked by RFC connections. For more information about how to configure these connections, see the related activity documentation and the solution operation guide.

You can manage more than one sender – receiver combination using a single central system and control system. To facilitate this, SAP TDMS has different levels at which settings can be made:

- **Project:** A compilation of one or more subprojects (which are related from a technical or content point of view); a project may, for example, correspond to a given system landscape.
- **Subproject:** A combination of a sender client, a receiver client, and the RFC connection between them.
- **Package:** An instance of a transfer. That is, you create a new package every time you do an initial setup or refresh for a given combination of sender system and receiver system.

With regard to the fact that SAP TDMS works at client level, a separate subproject needs to be set up for every client whose data is going to be transferred to a non-production environment by means of SAP TDMS.

2.4 Specific Features of SAP TDMS

SAP TDMS includes the following specific features that help you to carry out your TDMS activities conveniently and efficiently.

2.4.1 Migration Server Overview

When you have installed the SAP TDMS software in the system that will be used as the TDMS server, start transaction **CNV_MBT_TDMS** to access the migration server overview.

You use this overview screen to carry out all tasks that are not related to an individual transfer (or “package”). For example, you can create a project, subproject or package and register users.

The overview screen shows all existing projects, subprojects and packages for the given TDMS server. You can access all items listed there if you have the required authorizations and registrations. (For details on the authorization and registration concepts, see section 2.4.3).

2.4.2 Process Monitor

When you have created a new instance of a migration (**package**), the process monitor for this package is displayed. It contains a list of the activities to be executed in this project (process tree) as well as the status information you need for monitoring purposes, and provides access to all existing activity execution logs for your package.

For each activity in the migration process, there is documentation that tells you why this particular step is necessary, and how to proceed. To read the documentation, select the required activity and choose *Display text*.

For most of the activities, there is also an executable function. Depending on the nature of the related step, this function will either start a program (or sequence of programs) in the background or call a selection screen in which you make the required entries. To execute the function, select the required activity and choose *Execute*.

The list of activities will look differently depending on whether you are creating or refreshing a non-production system. (The process tree for a refresh is considerably shorter.)

2.4 Specific Features of SAP TDMS

The process monitor has a **standard view** and an **extended view**. In the standard view, steps that do not require user interaction (but simply start a program in the background) are bundled into collective execution steps, while the extended view has a separate step for each program that is started in the course of a TDMS project.



Because it is important that the steps are executed in the pre-defined order, we recommend that you work with the standard view and only switch to the extended view if one of the programs in a collective execution step terminates and you want to find out about the reason.

Like an Implementation Guide (IMG), the migration process has different phases. You cannot execute a function in a phase until all activities in the previous phases are completed.

Specific troubleshooting information is available for programs that may terminate or end with errors under certain circumstances. To find out about troubleshooting information for an activity, place the cursor on the activity and choose *Troubleshooting*. If troubleshooting information is available for this activity, additional activities for troubleshooting functions and related documentation are then automatically displayed in the process tree.

2.4.3 User Roles and Registration Functions

SAP TDMS has its own user roles: **Lead**, **user** and **guest**. Depending on the role users are assigned, they have certain authorizations and can execute different tasks in a project. The definitions of the roles are shipped together with the SAP TDMS software.

In addition, SAP TDMS has its own registration mechanisms for the different levels of project organization.

For more details about user roles and registration functions, see the security guide for SAP TDMS.

3 Preparations for Using SAP TDMS

3.1 Getting the Software

Having bought the SAP TDMS software, you can download it from SAP's Software Distribution Center (<http://service.sap.com/swdc>).

3.2 Choosing the Required Process Type (TDMS Scenario)

Before you actually start working with the SAP TDMS software, you need to consider the pros and cons of the different available process types (reduction scenarios) in relation to your specific requirements, and to opt for one of them.

First of all, figure out what exactly you want to do with the non-production system you are about to create. If, for example, the system will be used as a test system, what tests will be going on in this system? Will you need data for testing a specific business process? Do you plan volume testing, and what data volume do you need for the testing to be representative?

Based on the information about the future use of your non-production system, you can decide if it is sufficient for your non-production system to contain only master data and application data, or if a certain amount of application data is required as well.

If the answer to this question is that you do need application data, the current version of SAP TDMS offers you two options – time-based reduction or time-based reduction plus reduction by company code. (Consider also the information about these options provided in the introduction to chapter 2 of this master guide.)

With any time-based approach, it is important that you give some thought to the definition of the optimal from-date. There is a trade-off between completeness of the data and system size:

If you choose a from-date that lies very far in the past, even the data for very long-running business transactions will be transferred completely; however this also means that the receiver system will not be much smaller than the sender system (as it contains almost the same dataset).

On the other hand if you choose a very recent "from-date", the resulting non-production system will be comparatively small, but you run a risk of having a lot of incomplete business transactions in the receiver system.

The following considerations may help you to choose the best "from date":

- Which are the most important business transactions in your company? How long do they typically take?
- Does the non-production system have to include data for business transactions that take place only at certain times of the year or not very often?
- Do you have a fixed upper limit for the possible size of the non-production system?

The migration process tree also offers some functions that help you to finalize your selection of the optimal "from-date". For example, you can check if a given date coincides with the beginning of a posting period for the relevant organizational units.

If you choose to transfer only the data for one or more company codes, the main question is which company code(s) you should select. We recommend that you choose a company code that does not contain too much data, but whose data is representative for your company's business processes.

3.3 Checking out Required Standard Technologies

We assume that you are familiar with the following standard methods that are used in connection with SAP TDMS:

- System Copy
- Remote Function Call (RFC)

The specific requirements in these areas with regard to SAP TDMS are explained in the SAP TDMS documentation. If, however, you want to learn more about any of these methods in general, have a look at the related topics in SAP Library.

3.4 Preparing the System Landscape

3.4.1 Setting up the TDMS Server

The standard way of setting up the TDMS server is to install the TDMS software in an empty SAP system. Alternatively, an existing system (e. g. SAP Solution Manager System) may be used.

SAP Notes 970531 and 970532 describe the installation procedure and provide additional information with regard to the installation of SAP TDMS.

3.4.2 Setting up the Receiver System

With SAP TDMS, you transfer the required parts of the client-dependent data from the sender system to the receiver system. For this to work properly, it is very important that the receiver system has the same data dictionary (DDIC) and cross-client customizing as the sender system. You have the following options for setting up the receiver system:

- If you have a suitable test system (or other recent copy of the production system) at hand, you can use this system – provided that its DDIC and cross-client customizing are the same as in the sender system. Install the TDMS software and use the deletion functions that come with SAP TDMS to get rid of obsolete client-dependent data.
- You can make a full copy of the production system, install the SAP TDMS software, and then delete all data except the DDIC and the cross-client information from this system copy. The required functions for doing the deletion come with SAP TDMS and are accessible from the process tree. Then you do a data reorganization to free up the disk space.
- You can create a system shell using one of the related process types that come with SAP TDMS: By combining steps from the standard system copy process with the reduction logic provided by SAP TDMS, this package makes it possible to copy only the data needed for a system shell – rather than first copying the complete client and then deleting the data that is not needed in the system shell.

With SAP TDMS, you can either use an existing client as the receiver client, or create a new client to be used as the receiver client. If you want to use a new client, set it up by means of the client copy tool, profile SAP_UCSV (client-dependent customizing, users, authorization profiles and variants). This is necessary because data related to users and variants is not transferred from the sender system to the receiver system, but this data is needed for working with the new client.

3.4.3 Setting up the Sender System

Generally speaking, the sender system must be an SAP system (ERP, BW or CRM) that contains the data to be transferred and can be connected with the TDMS server and the receiver system by means of RFC (remote function call).

The sender system must be available from the very start of a TDMS project, and the SAP TDMS software must be installed in it as described in SAP Notes 970531 and 970532.

3.4.4 Setting up the RFC Connections

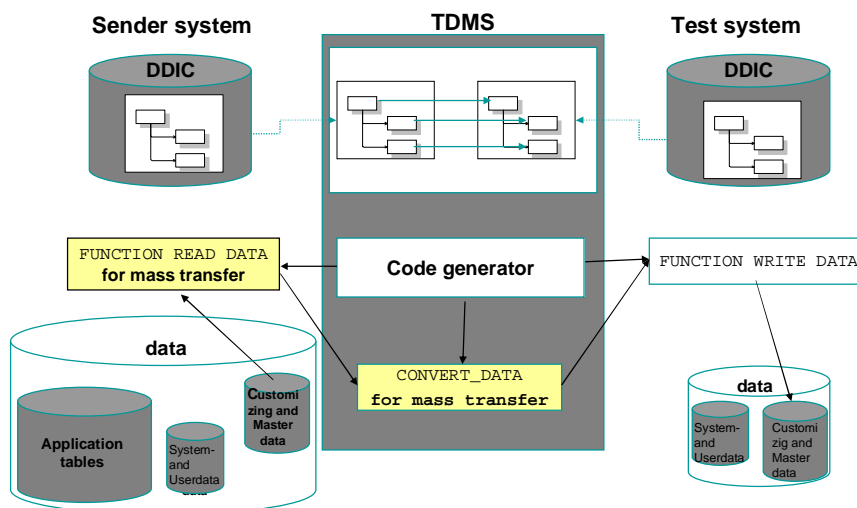
All participating systems in a subproject must be linked by RFC connections. More information about what you should consider when setting up these connections is provided in the solution operation guide.

4 Setting Up a Non-Production System

When you have installed the software in all participating systems as described in the relevant SAP Notes (listed in section 1.3 of this document) and made the preparations described above, you can set up your first project in the TDMS server: Start transaction **CNV_MBT_TDMS** to go to the overview screen and make the required entries for getting started with SAP TDMS (such as defining a project, subproject and package). When you have completed all preparations, you can start executing the activities for your package in the process monitor.

4.1 Master Data & Customizing

The drawing provides an overview of the data transfer process for the process types in which only master data and customizing data is transferred to the receiver system. For a short explanation of the phases in this process, see the following sections.



The general process flow as described in this master guide is the same irrespective of whether the sender and receiver are ERP, BW or CRM systems. However individual activities in the process monitor may be different for the different system combinations. You can find the required detailed information in the documentation that comes with these activities.

4.1.1 Package Settings

In this phase, you make some technical settings. For example, you ensure that tables containing user-related data will not be transferred to the receiver system. In addition, you can define scrambling rules and assign them to the migration package to ensure that sensitive data gets scrambled before it is transferred to the non-production system.

4.1.2 Analysis of the Sender System

In this phase, you classify the tables in the sender system to ensure that only tables containing master data and customizing information will be transferred. SAP standard tables are classified automatically by the SAP TDMS software. Customer-specific tables are also classified automatically if they contain the required information. Any remaining tables must be classified manually to ensure that they are handled correctly during the transfer.

4.1.3 Preparations in the Receiver System

To prepare the receiver system, you need to remove all client-dependent data. In this phase, you make the necessary preparations and then delete the client-specific data from the receiver system.

4.1.4 Data Transfer

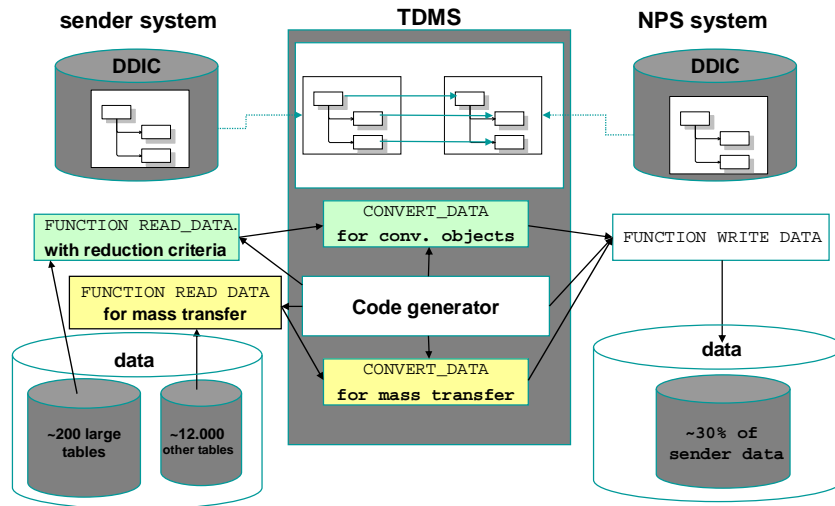
In this phase, the actual data transfer (migration) takes place.

4.1.5 Postprocessing Tasks

Finally, some postprocessing is required. For example, number ranges and table buffers in the receiver system must be reset.

4.2 Time-Based Reduction

The drawing provides an overview of the data transfer process for the time-based reduction in the context of SAP TDMS. For a short explanation of the phases in this process, see the following sections.



The general process flow as described in this master guide is the same irrespective of whether the sender and receiver are ERP, BW or CRM systems. However individual activities in the process monitor may be different for the different system combinations. You can find the required detailed information in the documentation that comes with these activities.



You can re-use some of the settings from an existing ERP package when setting up a new BW package.

4.2.1 Package Settings

In this phase, you make some technical settings. Thus, you ensure that tables containing user-related data will not be transferred to the receiver system.

4.2.2 System Analysis

In this phase, you decide which tables need to be transferred in reduced form to get a non-production system that is as small as possible, but contains all data you require. In addition, you define the rules for the data reduction (selection groups). Finally, you confirm your settings so that they become effective for the data transfer.



If you use a process type for time-based reduction plus reduction by company code, you specify the relevant company codes in an additional activity in this

phase. Apart from that, the procedure is exactly the same as for the default time-based scenario.

4.2.3 Preparations in the Receiver System

To make the receiver system ready for the data transfer, you need to remove all client-dependent data. In this phase, you make the necessary preparations and start the functions that delete the client-specific data from the receiver system.

4.2.4 Data Transfer

In this phase, you make a final size check for the tables to ensure that no significant changes have taken place while your SAP TDMS project was going on, and then start the actual data transfer.

4.2.5 Postprocessing Tasks

Finally, some postprocessing is required. Thus, number ranges and table buffers in the receiver system must be reset.

4.3 Extract Data for Business Processes or Business Objects

4.3.1 Define RFC Destinations

In this phase, you define the RFC connections between the participating SAP systems.

4.3.2 Setup Phase

In this phase, you define the objects you want to copy and the related settings. In addition, you collect the required information about the tables in the sender system by running the table crawler.

You can simulate a data transfer based on the settings you made to see if the results meet your requirements.

4.3.3 Deletion Phase

In this optional phase, you can delete existing data from the tables in the receiver client that will be filled with fresh data from the sender system during the transfer.

4.3.4 Extraction Phase

In this phase, you copy the selected data from the sender system to the receiver system.

You can choose if you want an extraction run with direct import via RFC (which is the default setting) or if you would rather like to store the data for an export run in flat files in the file system and later import the data from these flat files to the receiver system in an import run.

4.4 Human Capital Management

With SAP TDMS, you can transfer data from an HCM production system or a QA system to a non-production system. You can choose if you want to transfer data from Personnel Administration (PA) only or from Personnel Administration and Personnel Development (PA and PD).

You can alter the source data in order to be unrecognizable in the receiver system ("scrambling"). You can also transfer data selectively. In particular you can exclude sensitive data (such as data relating to income) from the transfer.

4.4.1 Technical Settings

In this phase, you define the RFC connections and make the required technical information available to the systems.

4.1.2 Configuration and Selection

In this phase, you define the set of data you want to transfer to the non-production system as well as the details of the data transfer. For example, you specify how you want to handle customer-specific tables.

4.1.3 Data Transfer

In this phase, the actual data transfer (migration) takes place.

5 Refreshing a Non-Production System Using SAP TDMS

As long as the DDIC and cross-client information in the sender system do not change, all you have to do to refresh the non-production system is to create and execute a new refresh package. If, however, any changes have taken place, you need to ensure consistency between the receiver system and the sender system by importing the relevant transports to the receiver system.

The procedure for refreshing a non-production system using SAP TDMS is quite similar to the one for the setup. However with regard to the fact that most of the settings have already been made, the refresh consists of fewer steps than the setup and does not require specific consultant knowledge.

6 Setting up a System Shell

A system shell is an SAP system that contains only cross-client data and the required client-specific user and address data (client 000), but virtually no other client-dependent data. From a technical perspective, it contains only the basis tables and the table structures of the other tables (which can then be filled in a SAP TDMS run). Consequently, system shells are mainly meant to be used as receiver systems for TDMS runs. Depending on your specific requirements, it may also be possible for you to use a system shell as a development system.

SAP TDMS provides a process for creating a system shell. The process combines the standard system copy functionality (homogenous system copy with R3Load) with the reduction logic included in SAP TDMS. The shell creation logic checks which tables can be excluded for the copy process. Only structures (not data) are downloaded for these tables.

We recommend that you create a system shell rather than a standard system copy if the system you want to copy contains a lot of application data, because in these cases the amount of data to be exported will be much smaller than for a system copy, and the export and import will take less time.



Shell creation is currently available for SAP ERP systems with SAP release 4.6C (TDSH4), for SAP ERP systems with a release level higher than 4.6 C (TDSH6), for SAP BW 3.5 (TDSHB) and for SAP CRM 4.0 (TDSHC).

6.1 Prerequisites

- You are familiar with the process for creating a homogeneous system copy with R3Load.
- You have the system copy guide for the relevant database and system release at hand.
- All requirements and prerequisites described in the system copy guide for the relevant SAP release and database system are fulfilled.

6.2 Preparations

A detailed description of preparations and things you can do to make the system shell creation faster and easier is given in the solution operation guide for SAP TDMS.

6.3 Process

The following description gives you a first **overview** of the activities for creating a system shell. More details are provided in the documentation for the individual activities in the process tree. Make sure to consider the information provided in the activity documentation as well as in the relevant system copy guide before actually executing an activity for system shell creation.

1. You create a TDMS package for system shell creation.
2. You plan and prepare the system copy process as described in the relevant system copy guide.
3. You make the preparations for the export step. In particular, you create structure files (r3ldctl) and configure the shell creation environment. Structure files / ddl<db>.tpl will be modified (based on R3 version).
4. You export the relevant data from the sender system using sapinst / export monitor.

5. You make the preparations for the import step. In particular, you provide the system copy tool with the required information about table and database sizes.
6. You import the relevant data to the receiver system (future system shell) as described in the system copy guide.
7. You carry out the postprocessing tasks as described in the activity documentation and in the system copy guide. In particular, you do a client copy of client 000.

7 Available Documentation for SAP TDMS

Apart from this master guide, different documentation types at different levels of detail are available. Some of them are specific for SAP TDMS, while others are of general importance and useful as background information. The following paragraphs give an overview of all documentation types that may be relevant in the context of SAP TDMS.

Terminology

SAPterm is SAP's terminology database. It contains SAP-specific vocabulary in over 30 languages, as well as many definitions and glossary entries in English and German.

Target group: Relevant for all target groups

Security Guide

A collective security guide is available for the SAP NetWeaver technologies like SAP Web Application Server (SAP Web AS). This document contains general guidelines and suggestions about system security. In addition, there is a separate Security Guide for TDMS-specific security issues, which is available for download under <http://service.sap.com/security>.

Target group:

- Consultants
- Security specialists
- Operators

SAP Library

- Planned for SAP TDMS -

The SAP Library is a collection of function- and process-oriented documentation for SAP components.

For technical reasons, the SAP Library documentation for SAP TDMS will not be made available in the SAP Help Portal (<http://help.sap.com>). However you may still want to visit the help portal as well to learn more about related topics, for example about RFC connections.

Target group:

- Consultants
- (Operators)

Activity Documentation

All configuration activities as well as the subsequent tasks during a system setup or refresh are shown in the process monitor for each SAP TDMS package.

Documentation is available for each activity. To read the documentation, select the required activity and choose *Display Text*.

Target group:

- Consultants
- Operators (for refresh)

Information Texts

Some activities have a maintenance view. When working with a maintenance view, you can learn more about the options you have there by choosing the information button for this view. The overview screens also have an information button. Choose it to learn more about the different functions you can access from the given overview screen.

Target group:

- Consultants
- Operators (for refresh)

Solution Operation Guide

The Solution Operation Guide provides additional information for operating an SAP solution. It contains tips and tricks as well as help with questions that are relevant in some, but not all projects.

The solution operation guide for SAP TDMS is made available for download under <http://service.sap.com/instguides>.

Target group:

- Operators
- System administrators
- Consultants

Installation Information

There is no separate installation guide for SAP TDMS because all required information for installing SAP TDMS is provided in the relevant SAP Notes (see chapter 1.3 for a list of these Notes).