



All companies wrestle with the challenges of creating, refreshing, and maintaining nonproductive environments for development and testing: inefficiency and increasing costs. SAP® Test Data Migration Server software can help by enabling you to create and refresh nonproductive systems with data sets reduced by nearly 70%. Better control over the data gives you more efficient and more consistent nonproductive systems, and that in turn reduces costs and increases the quality of development work.

SAP Technical Brief
SAP Test Data Migration Server

MANAGING NONPRODUCTIVE SYSTEMS WITH SAP® TEST DATA MIGRATION SERVER

Optimize Your Development and Q&A Systems

With IT infrastructures growing in size, all companies must confront the constant challenge of creating and updating the nonproductive systems that are used for development, Q&A, training, or sandbox purposes. Many companies operate two to four nonproductive environments for each live system, so they must deal with a range of logistical, technical, and management issues, including the daunting costs of providing disk space and maintenance for large system landscapes.

To be useful, a nonproductive environment must closely approximate the related productive environment and be populated with accurate, consistent data. If, for example, a training software package does not correctly cover a business scenario, any employee training done using this software is less effective. On the other hand, a development system that accurately represents the related live environment helps you to minimize programming incompatibilities early in the development process, saving both time and money.

Due to the limitations of available tools, most companies simply create a complete copy of the productive system, including the entire data repository and all administrative settings whether or not this information is required for testing purposes. This method duplicates the productive environment, so it's both time-consuming and expensive in terms of infrastructure resources. Moreover, developers can't refresh this environment by simply recopying relevant data from the live system because all ongoing development projects would be affected. And problems also arise when managing clients: making a complete

copy of a single productive system that serves multiple clients limits individual client control in the development environment and makes coordination between multiple clients difficult.

Copying systems also leads to escalating costs because of the general tendency of system landscapes to continually grow, increasing all associated expenses. You need a stable, dependable solution for creating and refreshing nonproductive systems with a consistent extract of business data from the related live environment. And you need to leave the administrative data and repository of the test system unchanged, while including all – and only – the necessary associated data.

A Smaller, Easier-to-Use Test Environment

SAP® Test Data Migration Server software provides an answer to this problematic and expensive dilemma. With it, you can create small, easy-to-use test environments with consistent, relevant extracts of business data, minimizing infrastructure and maintenance expenses and maximizing the effectiveness and accuracy of your nonproductive systems. You can:

- Reduce infrastructure expenditures by greatly reducing the volume of data in the test environment – by nearly 70%
- Improve the quality of software developments by improving the quality of the test data
- Increase development efficiency by enabling software developers to conduct testing earlier in the process and with consistent, accurate data
- Refresh test environment data only, without affecting repository and administrative data
- Refresh data for single clients in environments with multiple clients

Exactly the Data You Need

An examination of productive mySAP™ ERP systems reveals that 80% to 90% of a system's total data is contained in just 10% to 20% of existing database tables. Typically, these database tables contain transaction information.

To reduce the test data set to an efficient and acceptable level, the ideal approach is to focus on the large database tables that store most of your important business data. However, data sets can't be randomly or arbitrarily reduced in size, or relevant data is sure to be lost, rendering your test landscape inefficient or even useless. SAP Test Data Migration Server uses rules to create an extract of your data that is approximately 30% the size of the complete data set, but that contains exactly the data that is necessary to keep the business objects and processes consistent.

For example, under the software's time-restriction rule, only data objects from a specific, limited time period are transferred to the nonproductive system, considerably reducing the size of your test data set. However, in delimiting the test data, it is essential that all the necessary information be included, even if some of that data is outside the time-frame restriction. To address this, SAP Test Data Migration Server, configured and implemented on a mySAP ERP system, includes rules that logically link data, ensuring that all of your relevant information is transferred and that the consistency of the involved business processes and data is maintained.

How the Process Works

Creating a nonproductive system with SAP Test Data Migration Server involves copying all relevant repository objects, along with client-independent customizing settings and a reduced client-dependent data set. When refreshing a previously created nonproductive system, repository objects and client-independent customizing settings already exist. Old test data is deleted, and your new test data is then selected and transferred.

The software transfers data using a stable, time-tested, and proven migration technology called the migration workbench. The migration workbench connects a sending system with a receiving connection via remote function calls. The migration workbench runs on mySAP ERP and serves as a connector between the live and test environments, controlling the flow of business objects during data migration. Data migration follows four steps:

1. Define the sender structure (productive environment) and the receiver structure (nonproductive environment) by specifying the relevant data tables and their hierarchical relationships. At this point in the process, no relationships between the two structures have been established. The migration workbench reads and saves all field information for all selected tables.
2. Define the relationship between the live and test landscapes, linking the data tables and setting up rules that allow you to control how the full set of data is reduced to create the much smaller, more manageable and efficient set of test data.
3. Automatically generate the code that executes the data migration using the migration workbench.
4. Perform the migration. The migration workbench reads and converts the data and writes it into the receiver structure, the nonproductive system.

Making It Happen with the Help of the System Landscape Optimization Group

The System Landscape Optimization group of SAP Consulting can help get you started with SAP Test Data Migration Server. Services include installation and configuration of your test environment, assistance with your initial data migration run, and valuable training that helps you reap the benefits of the software in the future.

Reduced Costs and Increased Efficiency

With SAP Test Data Migration Server – and optional training and services provided by SAP – your company can enjoy the following benefits that increase efficiency and reduce cost in your IT department:

- **Decrease infrastructure and maintenance expenses** by reducing the hardware and disk space needed for nonproductive systems with a test data set that can be 30% of the size of the complete productive data set
- **Improve development quality** by improving the quality, reliability, and consistency of test data used in nonproductive landscapes and by allowing developers to perform testing more easily and earlier in the process
- **Provide increased control over the development process** with SAP training that enables your IT department to refresh and create new nonproductive systems in the future and exercise more control over the operation of your test environments

For More Information

To find out more about how SAP can help you with creating and maintaining nonproductive system landscapes, call your SAP representative today or visit us online at www.service.sap.com/customdev.

www.sap.com/contactsap

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