Utilize LSMW in 14 steps

Introduction of LSMW

We have often encountered challenges in migrating the mass upload of master records in SAP. Today I will try to explain how to overcome such an

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issue by using SAP standard tools. LSMW (Legacy System Migration Workbench) is a software-based SAP tool for single or periodic data transfers from non-SAP to SAP (as well as with restrictions from SAP to SAP systems). We will also go over step-by-step instructions for using LSMW to update the customer. Master records.

SAP LSMW offers an effective data migration tool designed to make moving large amounts of data from old systems to SAP easier, quickly, accurately, and without disruption or time loss. By automating the process of data migration, businesses can reduce time, and costs and enhance integration.

Its core functions are: importing legacy data from PC spreadsheet tables or sequential files.LSMW can be used across the SAP Module such as SAP SD, SAP MM.

What Exactly Is LSMW?

The Legacy System Migration Workbench (LSMW) is a tool that allows data to be transferred from other systems to SAP.SAP provides LSMW as a standard tool. The most typical application for LSMW is data migration.

As an example, suppose a company is using SAP and needs to migrate data from its legacy system. The organization can use LSMW to automate the data migration procedure.

What is data migration?

The data from the legacy system must be transferred to the non-SAP system to implement the SAP R/3 system. It is also necessary to regularly move the data from the Trading Legacy system to the R/3 system (interfacing).

At the end of the R/3 implementation, data migration comes into play, where all master data and transactional data need to be transferred into the newly configured SAP system. The first configuration should be completed and moved to production, then we to begin with the data migration activity. In this phase, we will move all master data to the SAP system before the system is operational for the user.

Data migration is a very significant step for any successful SAP implementation. The migration of data is approximately 20% to 40% of total implementation costs.

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There are two tools we often use to migrate data

- BDC (Batch Data Communication)
- LSMW (Legacy System Migration Workbench)

Today we will be focusing only on LSMW. Let's get started

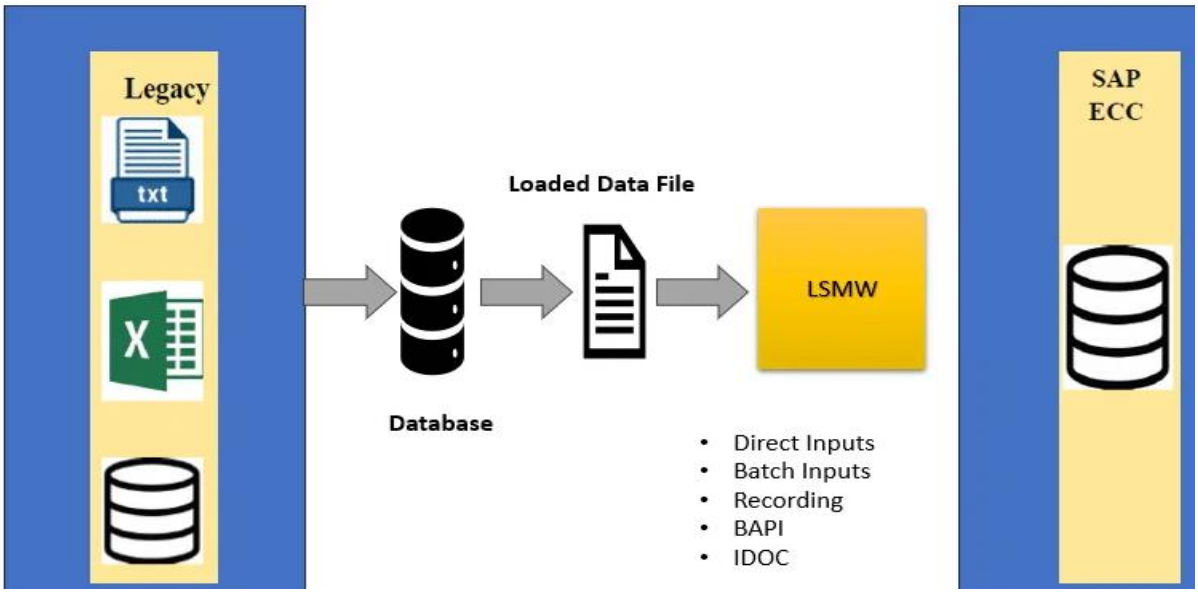
What is the LSMW? | What does LSMW mean in sap?

LSMW full form is Legacy System Migration Workbench. The LSMW Workbench is an R/3-based tool that allows us to transfer data once or regularly from non-SAP systems to R/3.It's a very simple & easy tool that makes mass data migration in a few simple steps. Data imports into R/3 should be of better quality and consistency than data immigration speed and performance.

How does LSMW work in sap?

The LSMW main functions are:

- **Import data** (legacy data in MS Excel or text-format sequential file)
- **Conversion of data** (from the source format to the target format)
- **Import the data** into the application R/3 database



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To assist with the SAP LSMW data migration, we've listed all the critical steps in the following:

Project Prep

Before beginning any data transfer project, preparation and planning are essential. This is the time to establish project goals, identify the sources of data and mapping fields, and select the migration strategy. Setting clear objectives, laying the base for success in migration, and ensuring a smooth and efficient experience during the migration process will be in the future.

Recording

The recording process LSMW documents data exchange processes by recording every operation that occurs within the system that was previously in use. The recorded data is used as a blueprint for future migration runs, and any discrepancies must be inspected for accuracy before moving on.

Mapping and Conversion

LSMW uses mapping and transformation tools to connect data fields from old software and SAP systems. It also performs any conversions necessary to match the needs of the company. Attention to detail is essential for precise mapping and avoids mistakes in the migration process.

Import Data

In this stage, LSMW will import the transformed data into the SAP system and then validate it by examining its consistency and conducting validations to identify any inconsistencies or discrepancies that are discovered. After carefully analyzing the import results, businesses can pinpoint problems with the data quickly.

Post-Processing

Once the data has been imported, further steps should be taken to complete the migration. This could include additional validations, data reconciliation, and confirming its accuracy within the SAP system. Complete post-processing is essential to ensure a successful migration and a seamless transition to new systems.

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Advantages of LSMW

- The advantage of LSMW imports to be used in each case is defined by the business object as well as the availability of standard input programs.
- It can automate the data migration procedure, which saves a substantial amount of time and work.
- It is a flexible solution that can be used to migrate a variety of data types, including master data and purchase papers.
- R/3 is integrated, making it independent of individual platforms.
- Consistency of the data by standard methods used for import
    - Batch Inputs
    - Direct Inputs
    - BAPI (Business Application Programming Interfaces)
    - IDOC(Intermediate Documents)
- Existing skills and coding should be utilized.

Types of LSMW in SAP | Understanding LSMW Object Types

The LSMW tool offers four different upload options. let's understand the advantages & disadvantages

Batch Input:

- **Advantages:** Easy to modify, all fields are accessible, and reprocessing is quick.
- **Disadvantages:** Relatively slow; to use new screens or tabs, a new recording must be created; not easily available for enjoying transactions; differences in foreground and background processing can occur depending on user settings.

Standard/Direct Input

- **Advantages:** well-proven method, quick loading, and simple processing.
- Disadvantages: There are no enjoy transactions, and transactions are not always completed with all input fields.

BAPI's

- **Advantages:** quick to load, simple to process, and logical interface for functional/end users focused on business processes. Contrary to common opinion, there is a range of drawbacks to using this form.

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- Disadvantages: Not all transaction input fields are always completed

IDOCs

- **Advantages**: Fast loading, simple processing, and low programming for standard IDOCs
- Disadvantages: Knowledge of IDOC processing is needed, and making changes to a previously generated IDOC can be time-consuming.

What is the difference between BDC & LSMW?

- Direct input, BAPI, Idoc, and batch input recording are some of the data migration techniques offered by LSMW, whereas on the other hand, BDC primarily employs batch input sessions and the CALL TRANSACTION process.
- There is a limit to the number of records that can be submitted in a single BDC session (999 records). In LSMW, there is no such restriction.
- LSMW is more concerned with setup, while BDC is more concerned with programming.

How many steps are there in LSMW?

LSMW contains 14 essential steps in addition to project/subproject/object creation and recording.

What are the steps to create a new LSMW in SAP | How do you use LSMW?

Here's an example of how to use the LSMW conversion method in SAP. Since LSMW is an extra transaction, it is not available in the regular SAP menu. Enter the **transaction code** **LSMW**.

In this example, We will create customer master records using LSMW

Creating a Project in LSMW

Every conversion activity is organized into projects, subprojects, and objects. Here we need to define Projects, subprojects, & Objects

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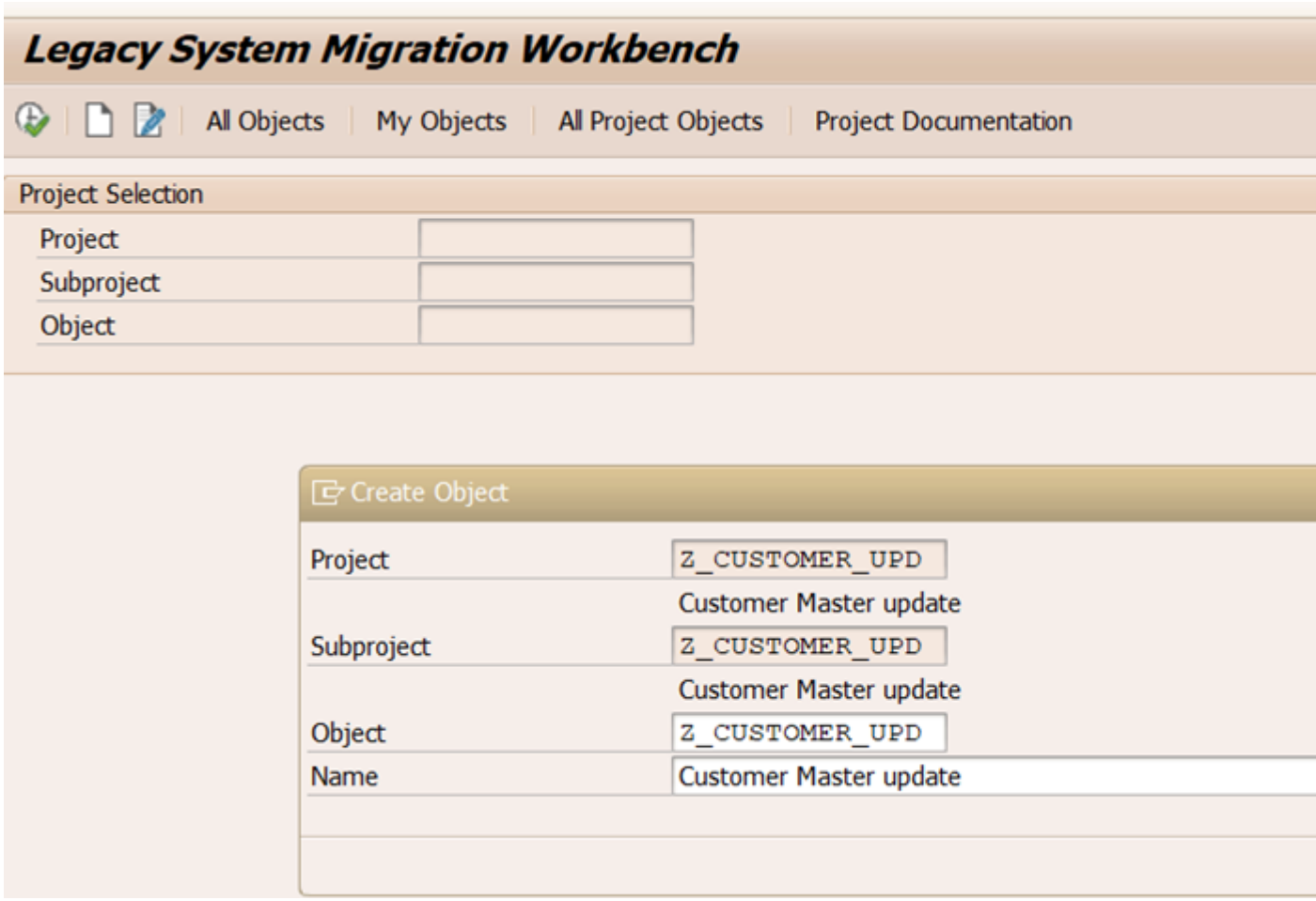

Legacy System Migration Workbench

The main screen of LSMW offers wizard-like step-by-step activities. We must complete these steps in order to complete our data conversion. The cursor is automatically moved to the next step after each step is completed.

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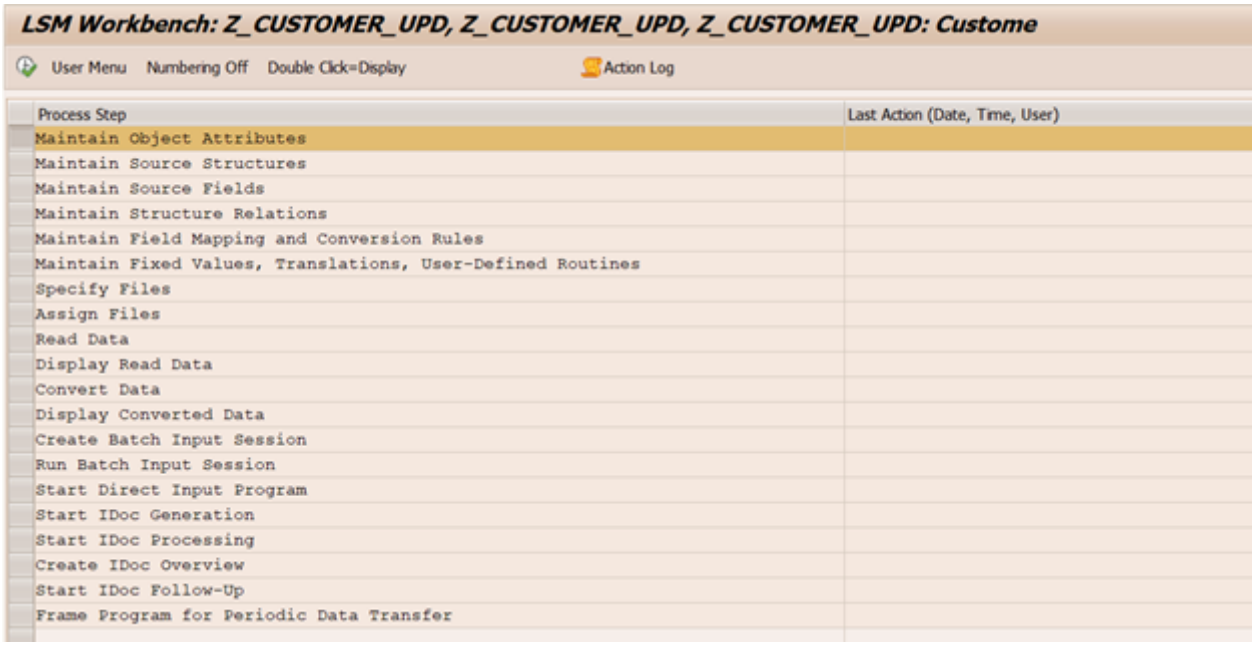

how to create LSMW in sap with screenshots

Step 1: Maintain Object Attributes

In this example, We will create a new customer in SAP; hence, we will be updating the customer master records with transactions in this case (XD01). To record the R/3 transaction, select the radio button Batch Input Recording, as we are going to use simple recording methods, and press the recording summary icon. Enter XD01 REC as the recording name, Customer Master Create Recording as the summary, and XD01 as the transaction code.

Alternatively, we may use other methods

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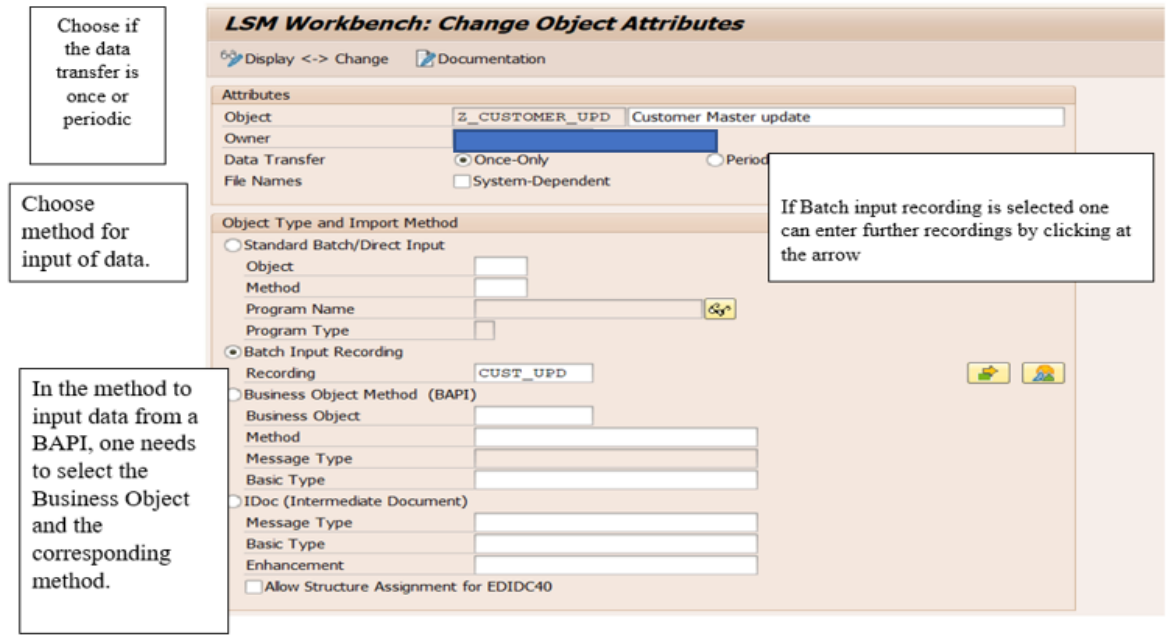
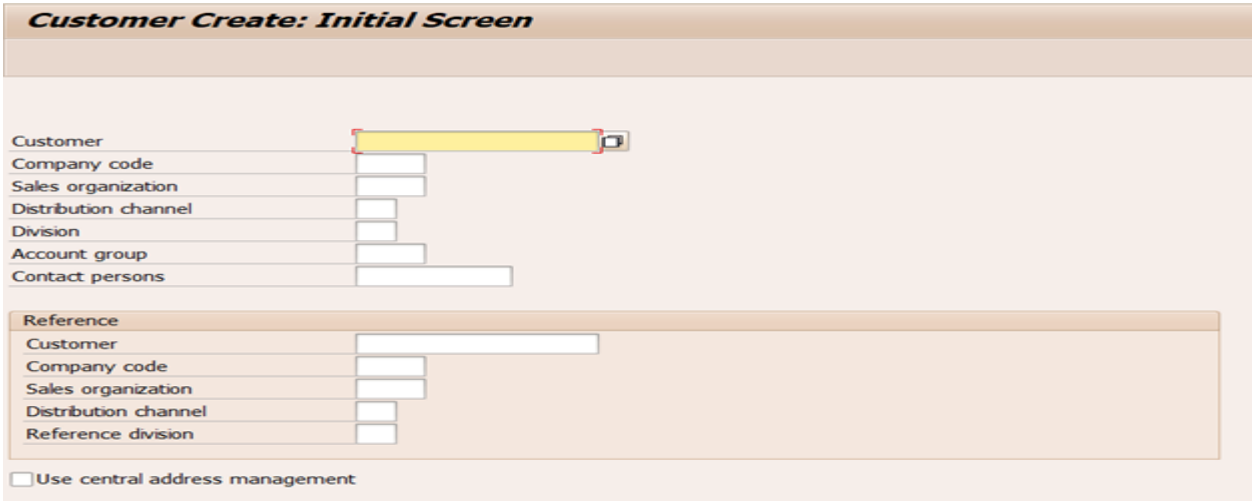
LSMW methods in sap



The system calls XD01 to Create customer change transactions, as shown below

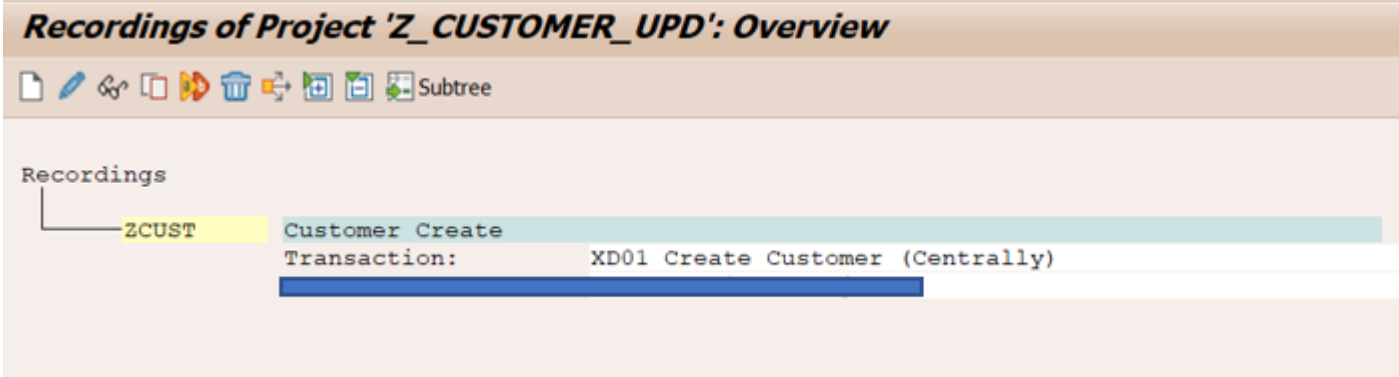


Customer Master Initials screen

Specify mandatory key fields for custom creation. In this case, we have specified the account group, name salutation, customer name, & search term for creating a customer master. Once the recording is completed, R/3 logs the flow of screens and fields and saves information. Default values are set when the transaction is recorded.

Utilize LSMW in 14 steps

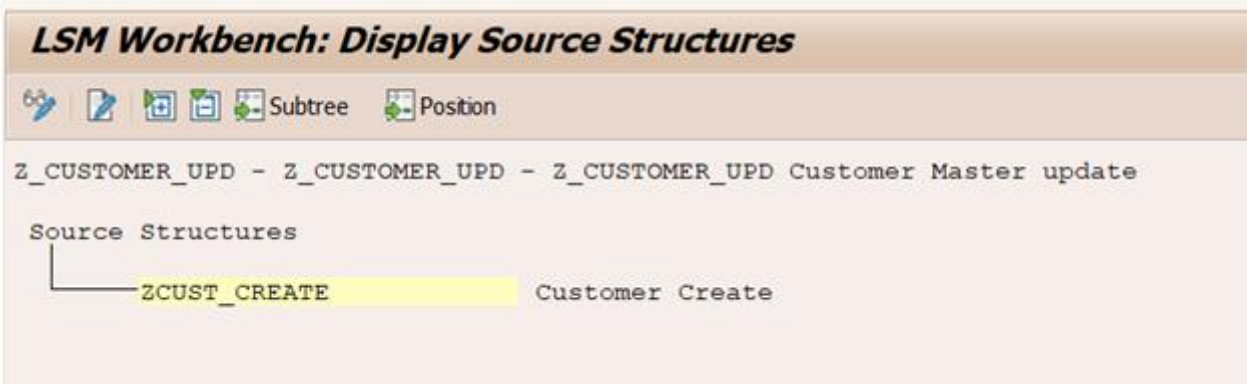
Note that field names are stored in a technical format by the transaction recording process. The system displays technical names by pressing the F1 key on each screen and then pressing the F9 key. Then you can substitute descriptive names for technical names.



LSMW Transaction recording overview

Step 2. Maintain Source Structures

Give the source structure a name and description



LSMW Maintain Source Structures

Step 3. Maintain Source Fields

In this step, the fields in the source structure must be listed. The easiest way to enter field names, types, and lengths for each field is by clicking on the 'Maintenance Table' icon

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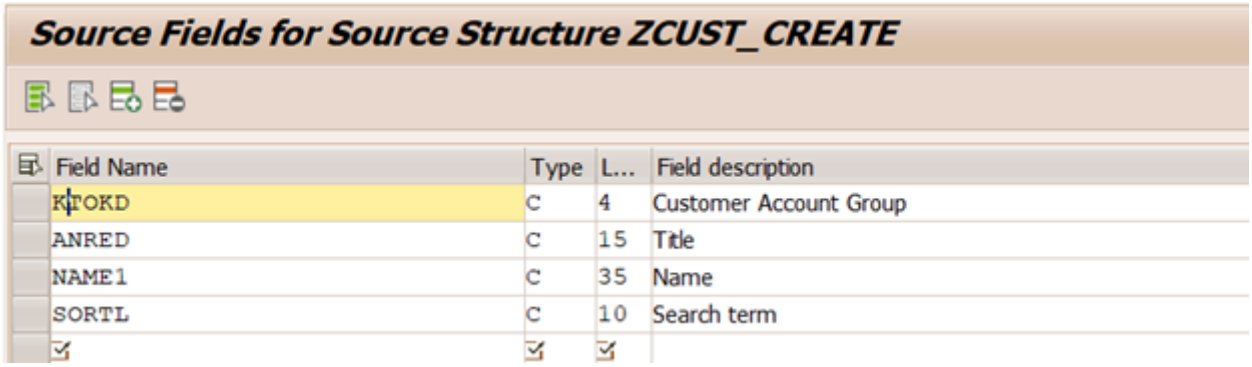


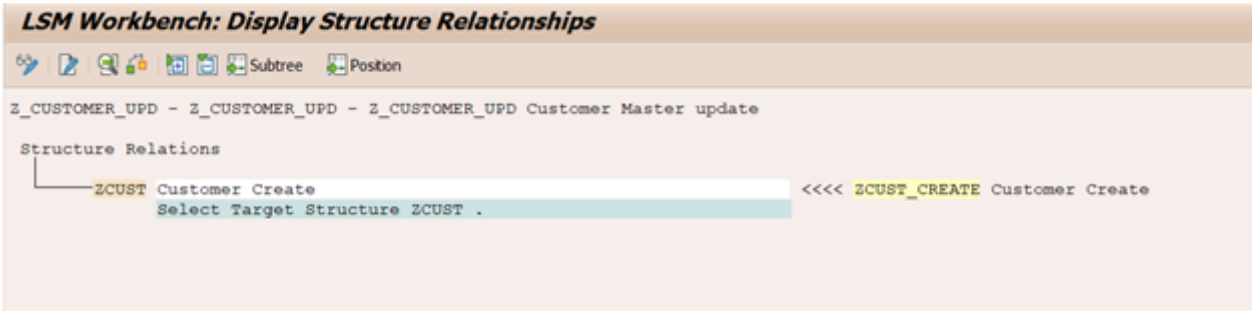
Field Name	Type	L...	Field description
KTOKD	C	4	Customer Account Group
ANRED	C	15	Title
NAME1	C	35	Name
SORTL	C	10	Search term

LSMW Maintain Source Fields

Use field names with the same names as the target field names, since in step 5 ‘Maintain field mapping and conversion rules,’ you can use the function ‘auto-field mapping.

Step 4: Maintain Structure Relations

Execute a ‘Structure Relations Maintain’ step. . The relationship automatically defaults, because there is only one Source/Target structure.



LSMW Maintain Structure Relations

Step 5: Maintain fields mapping and conversion rules

Use the auto field mapping to Maintain field mapping & conversion rules.

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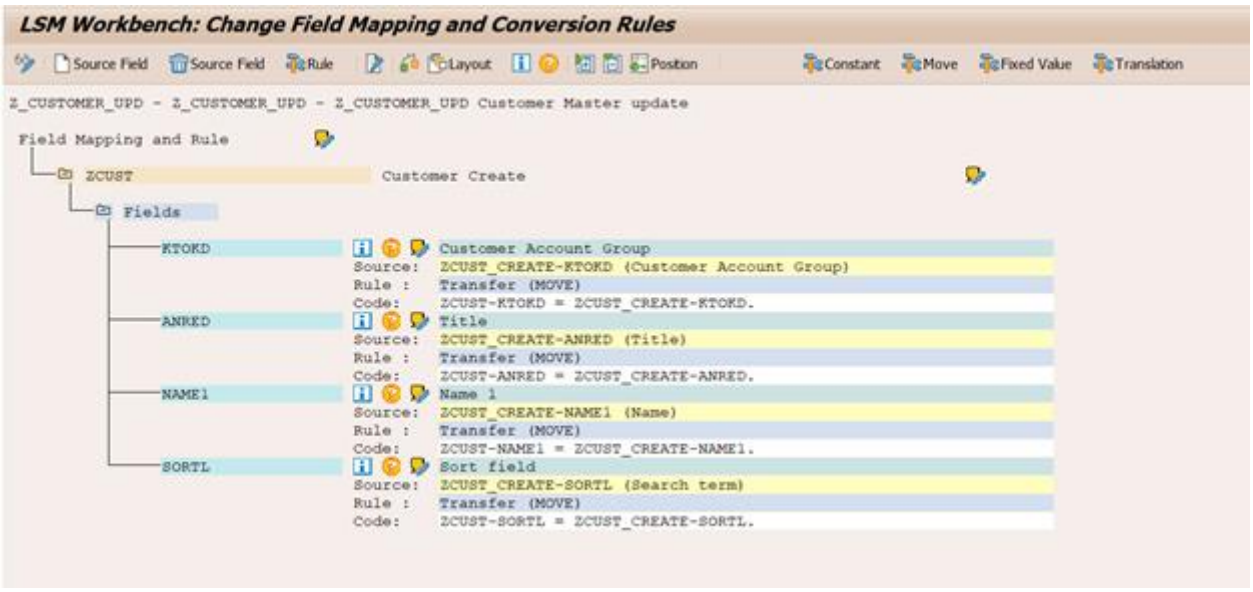
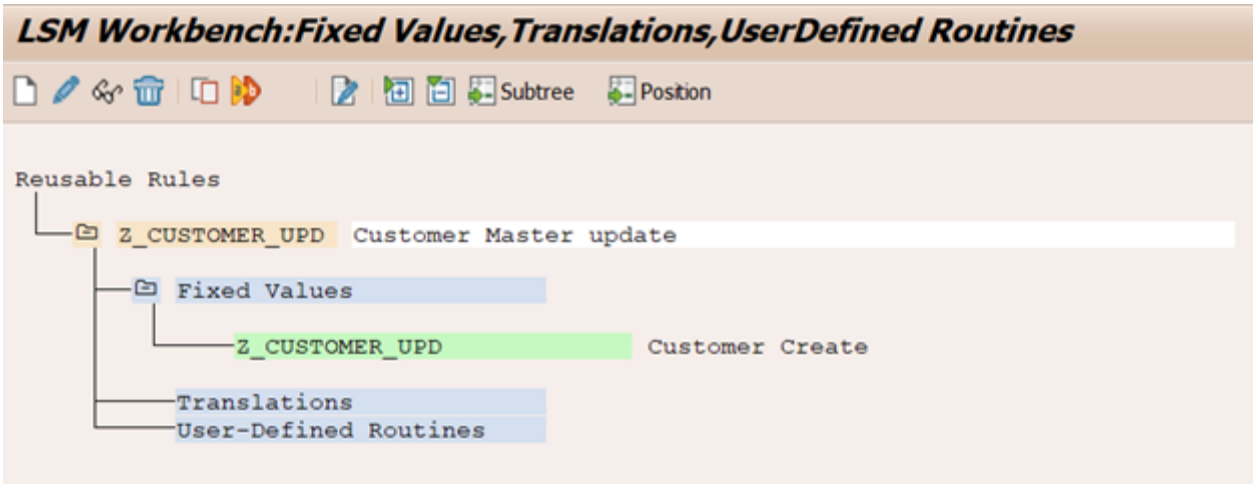


LSMW Maintain field mapping and conversion rules

Step 6: Maintain fixed values, translations, and User-defined routines for LSMW

We can also reuse user-defined routines and reusable translations that can be used for transformation tasks. This step is not necessary in this case.



LSMW Maintain fixed values, translations, user-defined routines

Step 7: Specify the local files

We need to specify how the input file is layout in this step. The input file has field names in the first row. It's available as C:\Users \test\1.txt on my pc (local disc).

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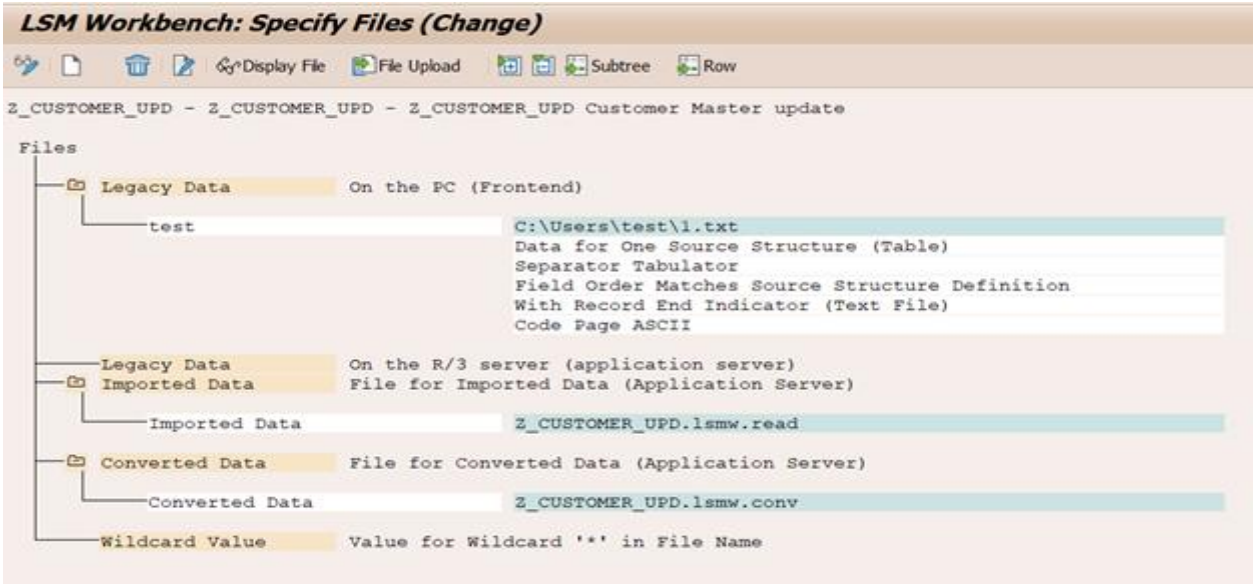
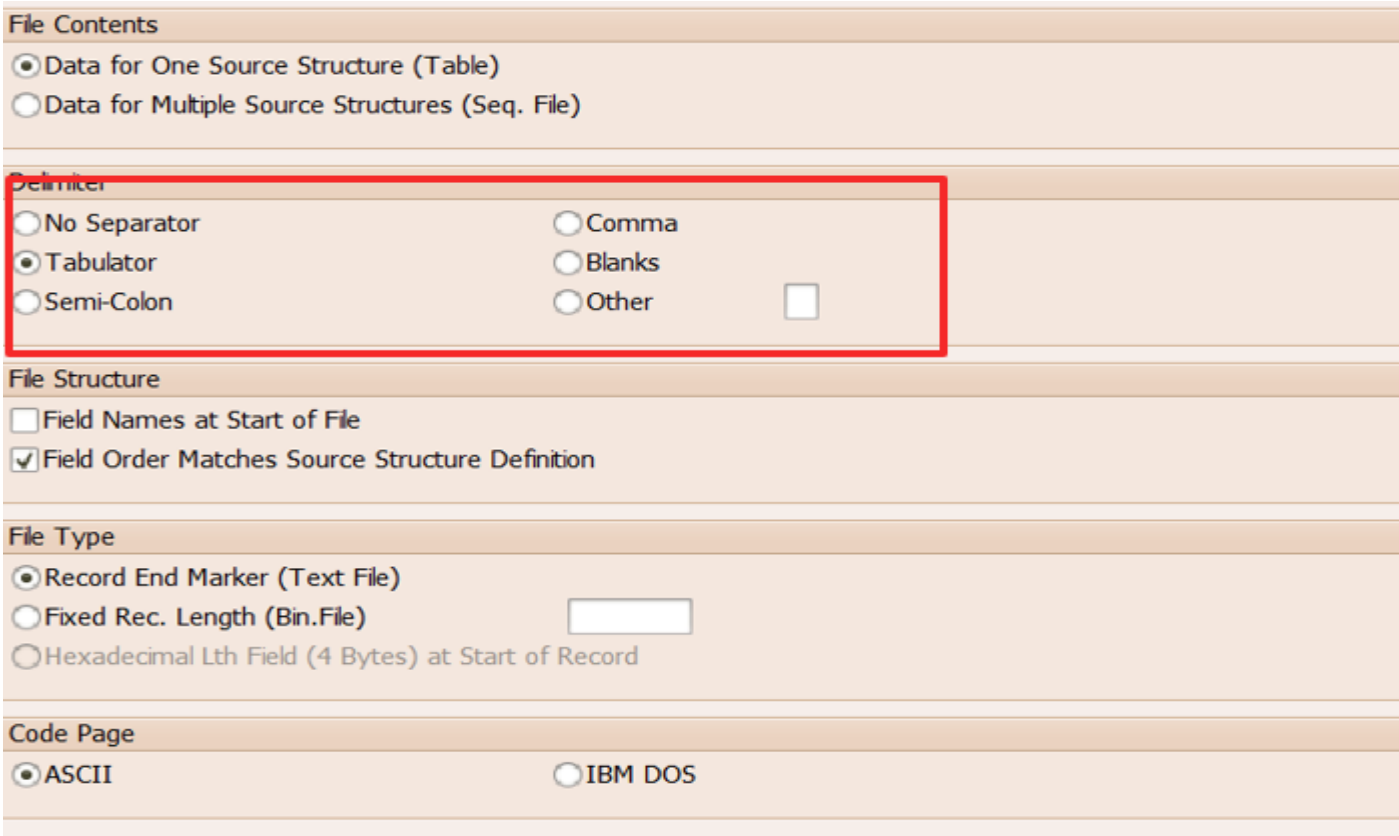


LSMW Specify the local files

Here we have specified Tab-delimited file format



LSMW data format

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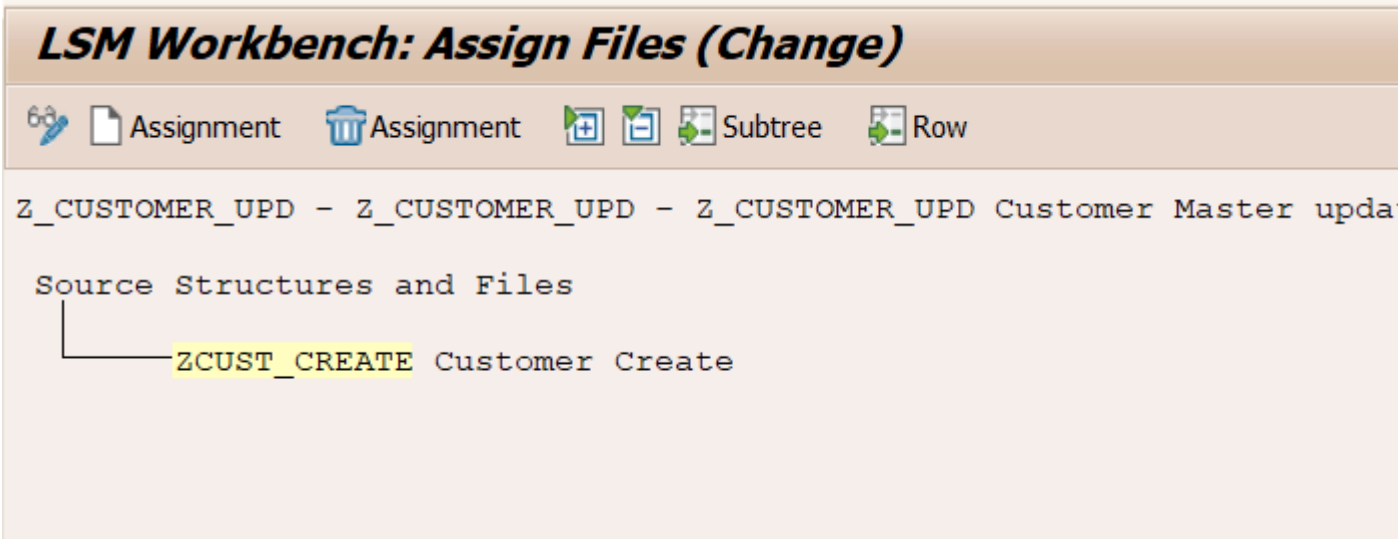
Step 8: Assign files

Perform the Assign Files step as below, and the system defaults to the source structure by the filename automatically.



LSMW Assign files

Step 9: Read Data

In this step,LSMW reads the data from the source file (from the local PC drive).read and converts selected rows into internal format data values.

LSMW Read data

Step 10: Display read data

It is an optional step. If necessary, the field contents for the read data rows can be reviewed.

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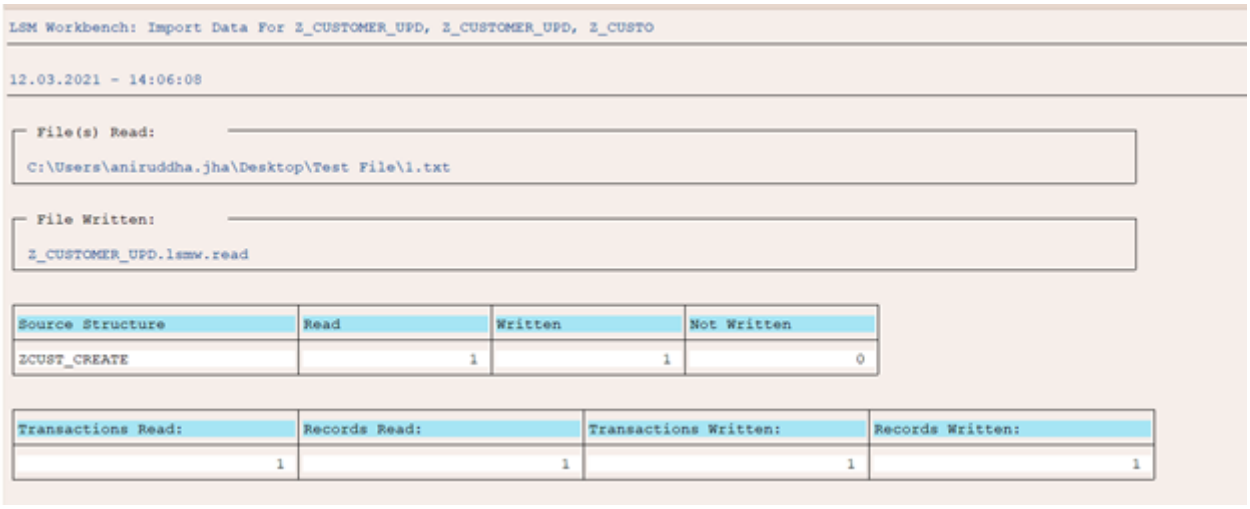
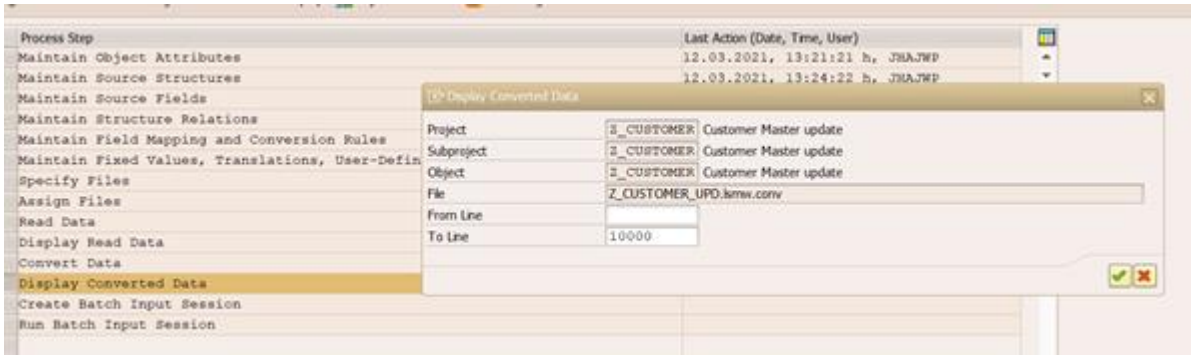


LSMW Display read data

Step 11: Convert data

This is the step by which the source data (in source format) is actually converted into a target format. The source fields are mapped to the target areas on the basis of the conversion rules defined.



LSMW Convert data

Step 12: Display Converted data

This is another optional step to see how the source data is transformed into an internal SAP format

Step 13: Create batch input session

We can create a batch session to process updates when the source data is converted to an internal format.

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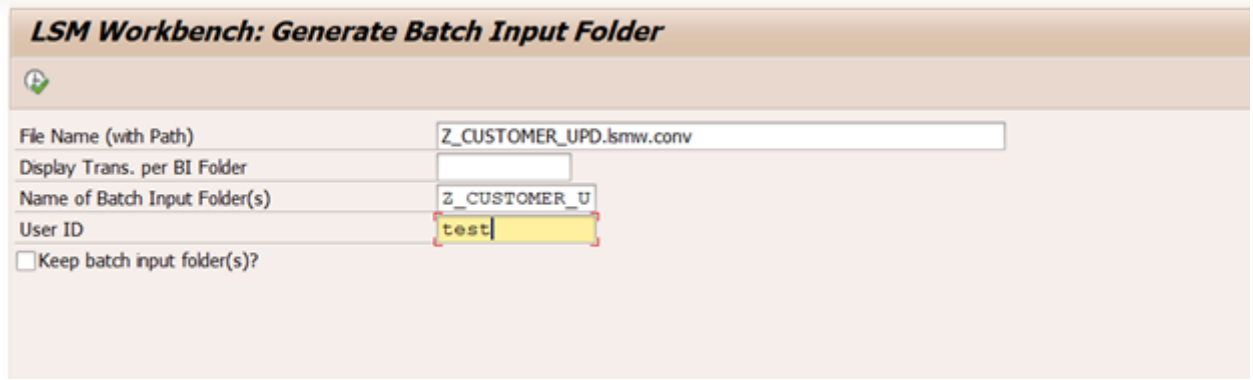
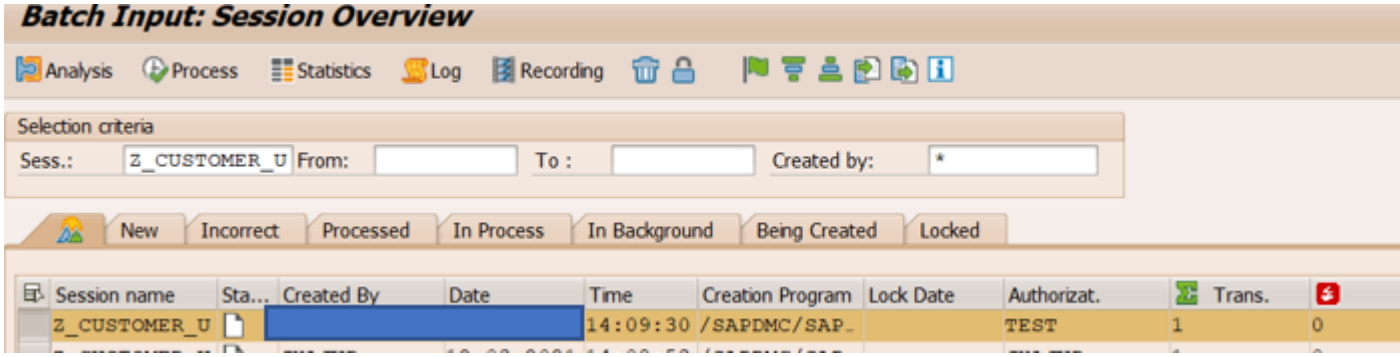


LSMW Create batch input session

Step 14: Run Batch Input Session

Run batch input session allows us to execute the BDC session. A standard SM35 transaction for BDC session management is the performance of a batch input session. The client master logs are updated on the system once you have successfully completed the batch entry session. By viewing the client master's records, you can confirm this (XD01).



LSMW Run Batch Input Session

Now it is recommended to validate your changes in the SAP system before you perform mass data uploads. Alternatively, you may use LSMW in your quality system. If everything working correctly, then use the same LSMW in your Production system

How do you import and export LSMW in SAP?

It's very easy to move LSMW from one server to any other server using the export and import functions of any project or object. Choose the objects you want to export or import. The system automatically downloads the mapping rule in a text file by clicking on the Export Project.

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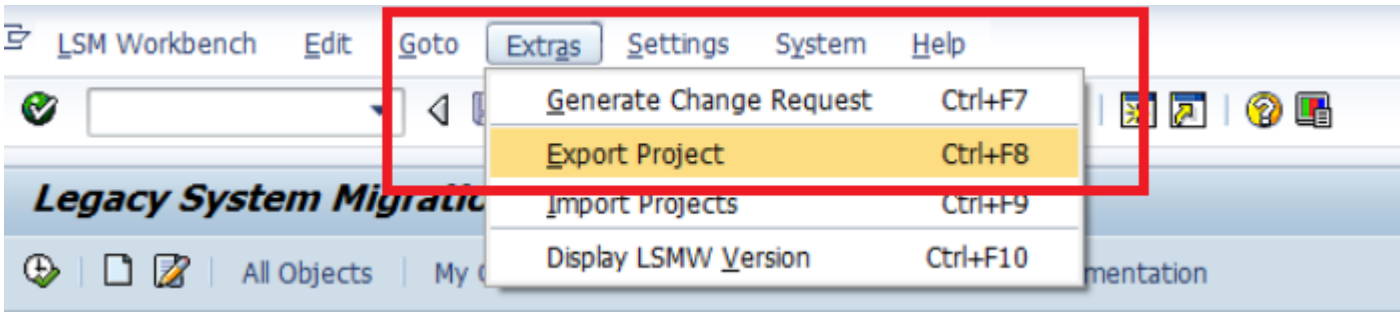
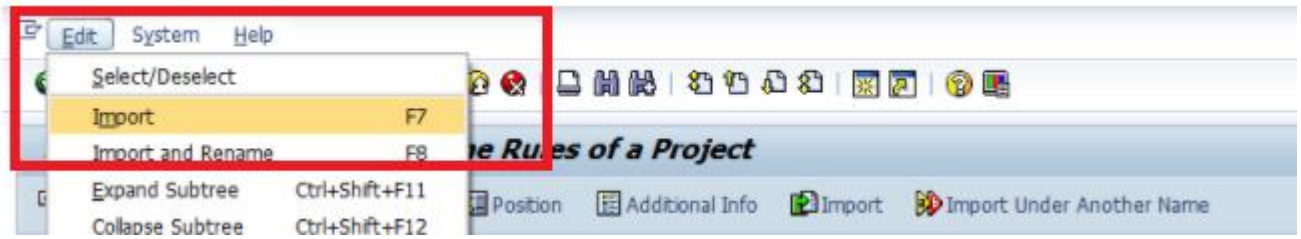


Export LSMW in SAP

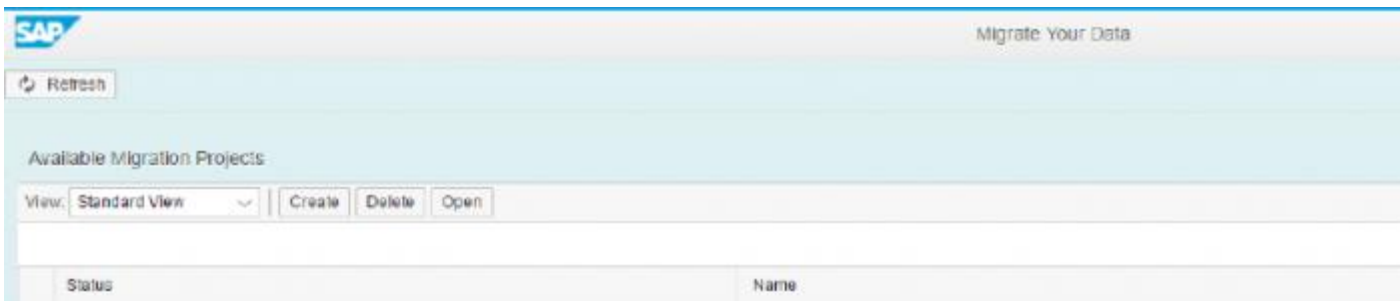
Similarly, In the target server, you need to upload the existing project or object mapping rule using the import functionality



Import LSMW in SAP

Is it possible to use LSMW in S/4 Hana?

In S/4 HANA SAP provides predefined migration objects you can use. Migration is done with LTMC – the tool (Legacy Transfer Migration Cockpit). The SAP S/4 HANA migration cockpit can be accessed through LTMC transactions.



Legacy Transfer Migration Cockpit

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Utilize LSMW in 14 steps

Hope this article helps you explore how to leverage LSMW, or data migration tools. The Legacy System Migration Workbench (LSMW), also known as the Legacy System Migration Workbench, is a vital tool for SAP DATABASE maintenance and data migration.

Conclusion

The SAP LSMW tool is critical for guaranteeing efficient data transfer into SAP systems. You may leverage the full power of LSMW and make your data transfer processes more successful and error-free by following the best practices and concepts mentioned in this thorough article. Understanding SAP LSMW is a critical first step toward maintaining data integrity and consistency in your SAP

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