Capgemini

ABAP Part III

Lesson 02: LSMW

Lesson Objectives

After completing this lesson, participants will be able to -

- Use LSMW Data Transfer

LSMW - Introduction

- Legacy System Migration Workbench
- An R/3-based tool that supports when transferring data from non-SAP systems ("Legacy Systems") to SAP systems once or periodically
- The tool supports conversion of data of the legacy system in a convenient way.
- The data can then be imported into the SAP system via batch input, direct input, BAPIs or IDocs.
- The LSM Workbench provides a recording function that allows generating a “data migration object” in an entry or changing transaction

Basic Principles of the LSMW

- The LSM Workbench was developed on the basis of the R/2-R/3 Migration Workbench
- LSMW was developed on the following principles
  - Most of the functions should reside in the SAP system. No collection of individual programs on different platforms.
  - The quality and consistence of the data imported into the SAP system should be more important than speed and performance of data migration.
  - Existing knowledge and coding should be used.
  - The developed "mapping" and rules should be reusable and thus be used repeatedly in projects.

Advantages of LSMW

- It is a part of the SAP system and thus independent of individual platforms
- A variety of technical possibilities of data conversion:
- Data consistency due to standard import techniques
- Generation of the conversion program on the basis of defined rules
- Clear interactive process guide
- Interface for data in spreadsheet format
- Creation of data migration objects on the basis of recorded transactions

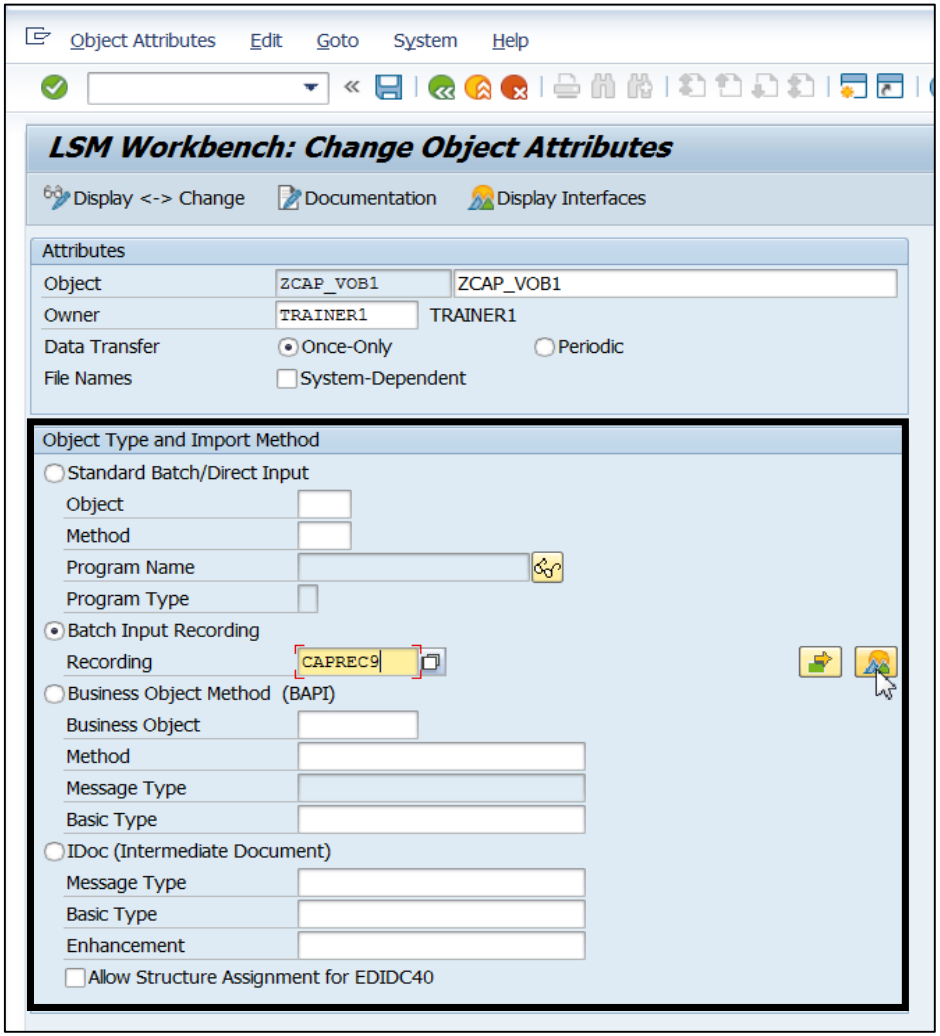
LSMW Import Methods

IDOC’s

BAPI’s

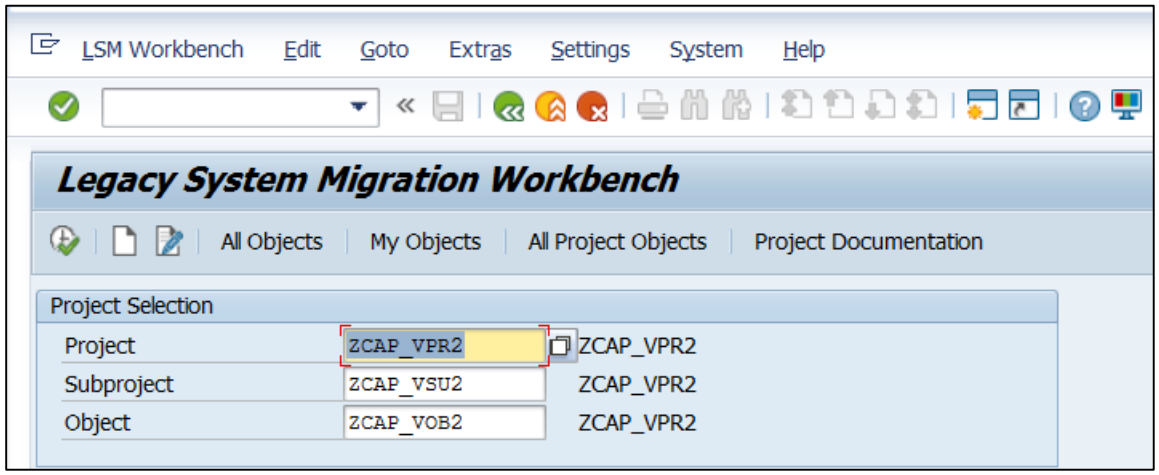
Standard/Direct Input

Batch Input



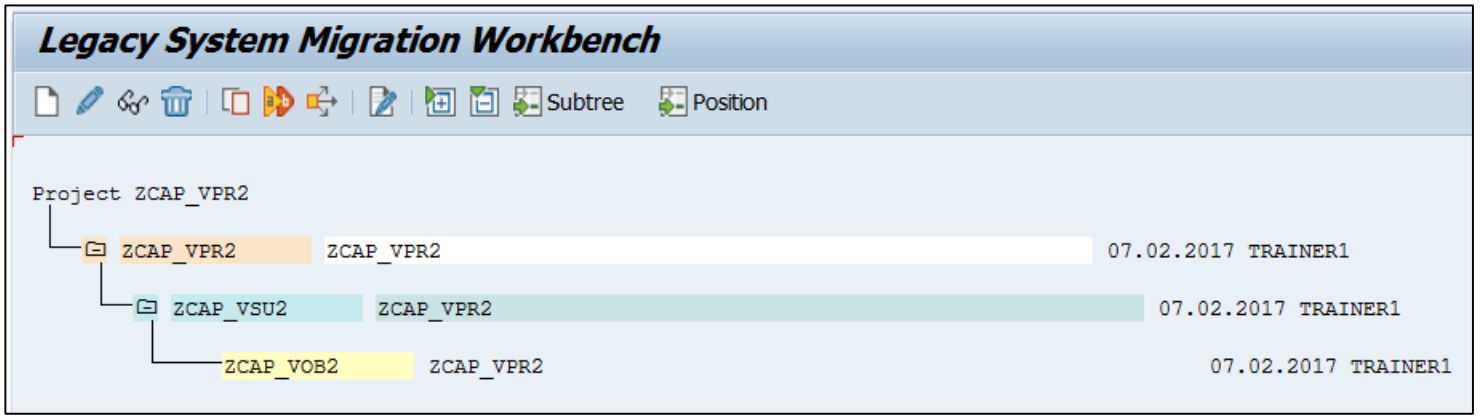
Steps involved in LSMW

- Start Transaction Code LSMW



LSMW - Procedure

- Project
  - An ID to name the data transfer project
- Sub Project
  - An ID used as a further structuring attribute
- Object
  - An ID to name the business object



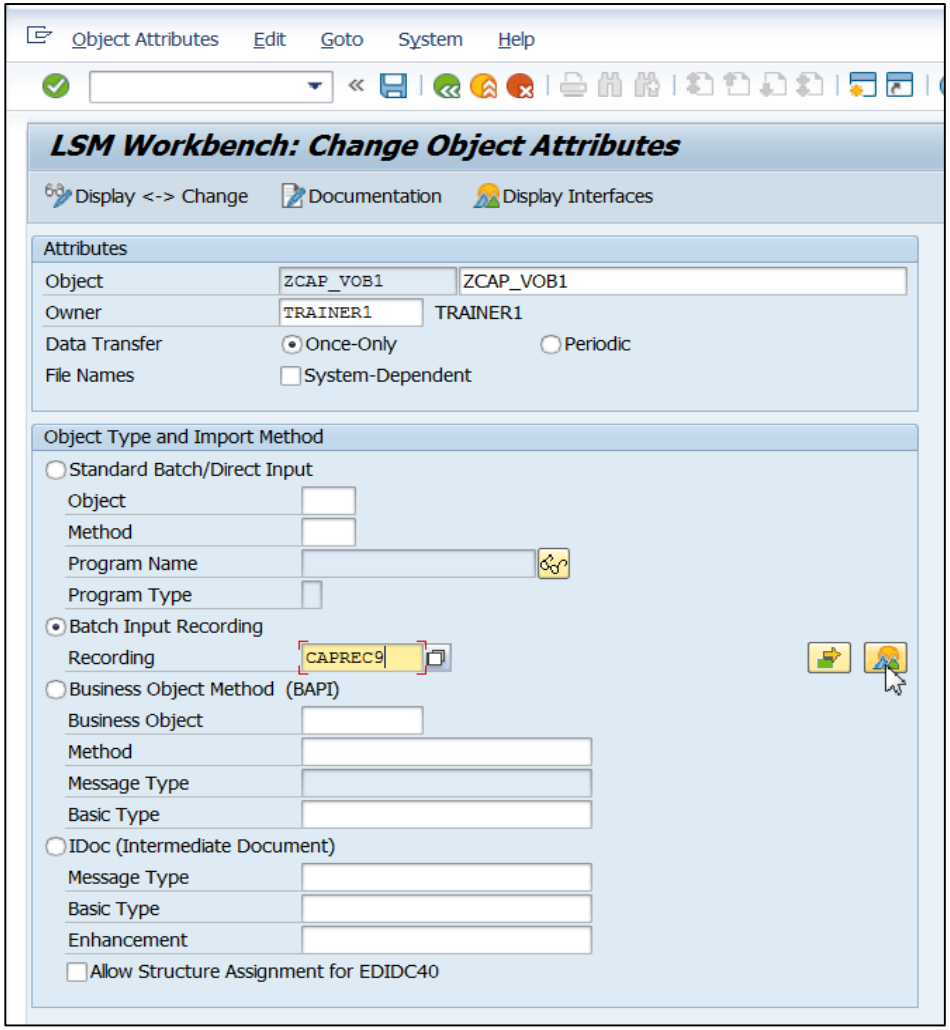
LSMW – Procedure (Contd.).

- Upon creating the project, subproject and Objects, execute and the process steps appear as follows:

	Process Step
1	Define Object Attributes
2	Define Source Structures
3	Define Source Fields
4	Define Structure Relations
5	Define Field Mapping and Conversion Rules
6	Define Fixed Values, Translations, User-Defined Routines
7	Specify Files
8	Assign Files
9	Read Data
10	Display Read Data
11	Convert Data
12	Display Converted Data
13	Start Direct Input Program

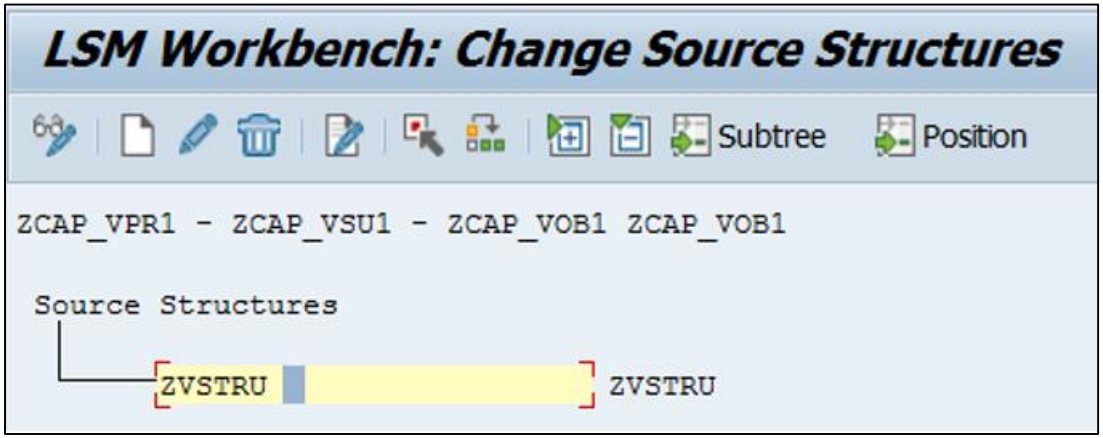
Define Object Attributes

The object type and import technique are selected



Define Source Structure

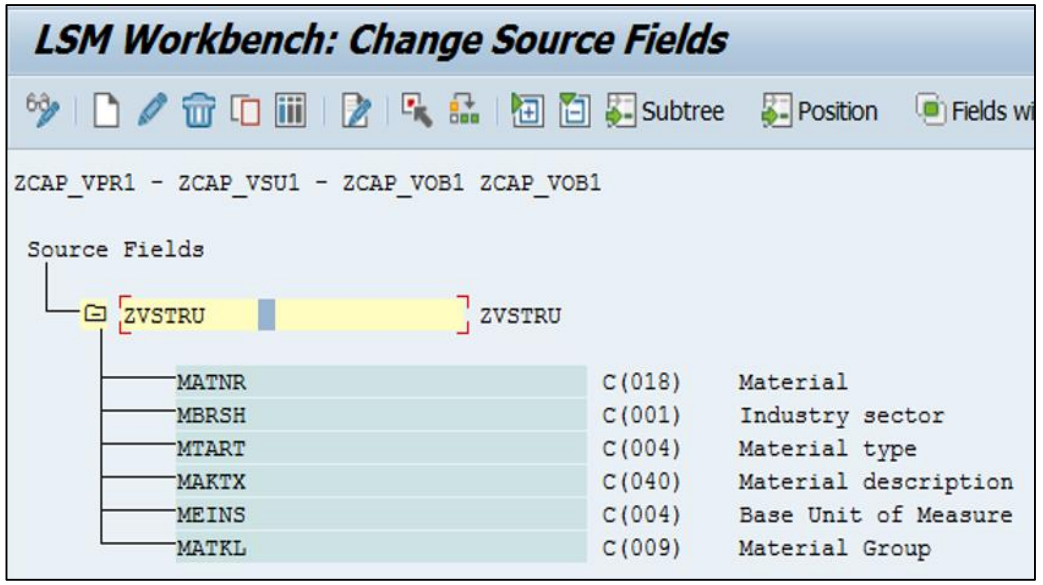
Define the structures of the object with name, description.



Define Source Fields

In the step ‘Maintain Source Fields’, fields are created and maintained for the source structure defined in the preceding step

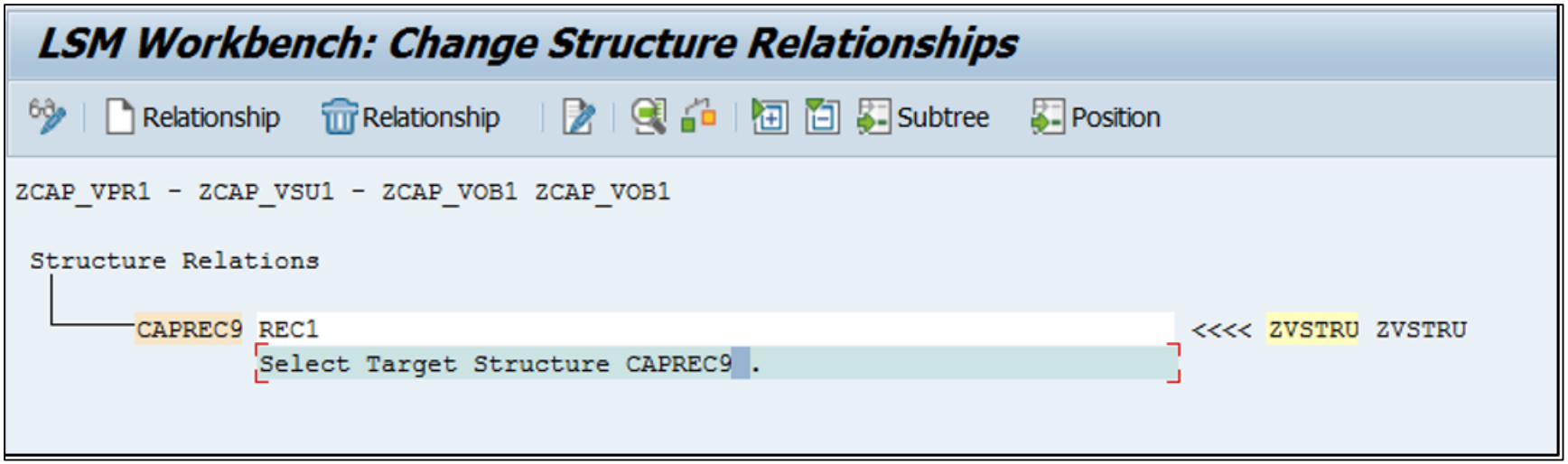
Use source fieldnames with the same names as the target fieldnames as much as possible, because it allows you to use the ‘auto-field mapping’ function in step ‘Maintain field mapping and conversion rules’.



Define Structure Relationships

The structural relationships define the relationships between source and target structures.

Since there is only one source and target, the relationship is maintained



Maintain Field Mapping and Conversion Rules

Assign source fields to target fields and define how the field contents will be converted.

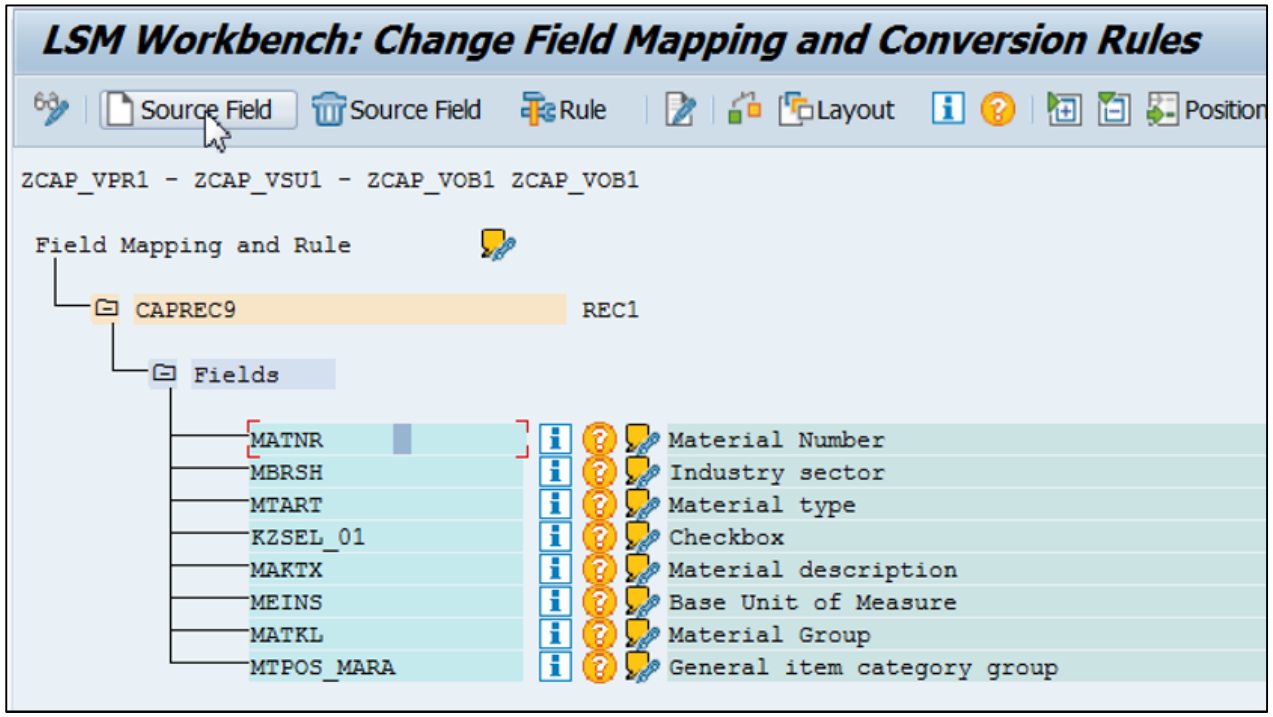
In the step ‘Maintain Field Mapping and Conversion Rules’, you assign source fields to target fields and define how the field contents will be converted

All fields of target structure, which you selected in the previous step, will be displayed.

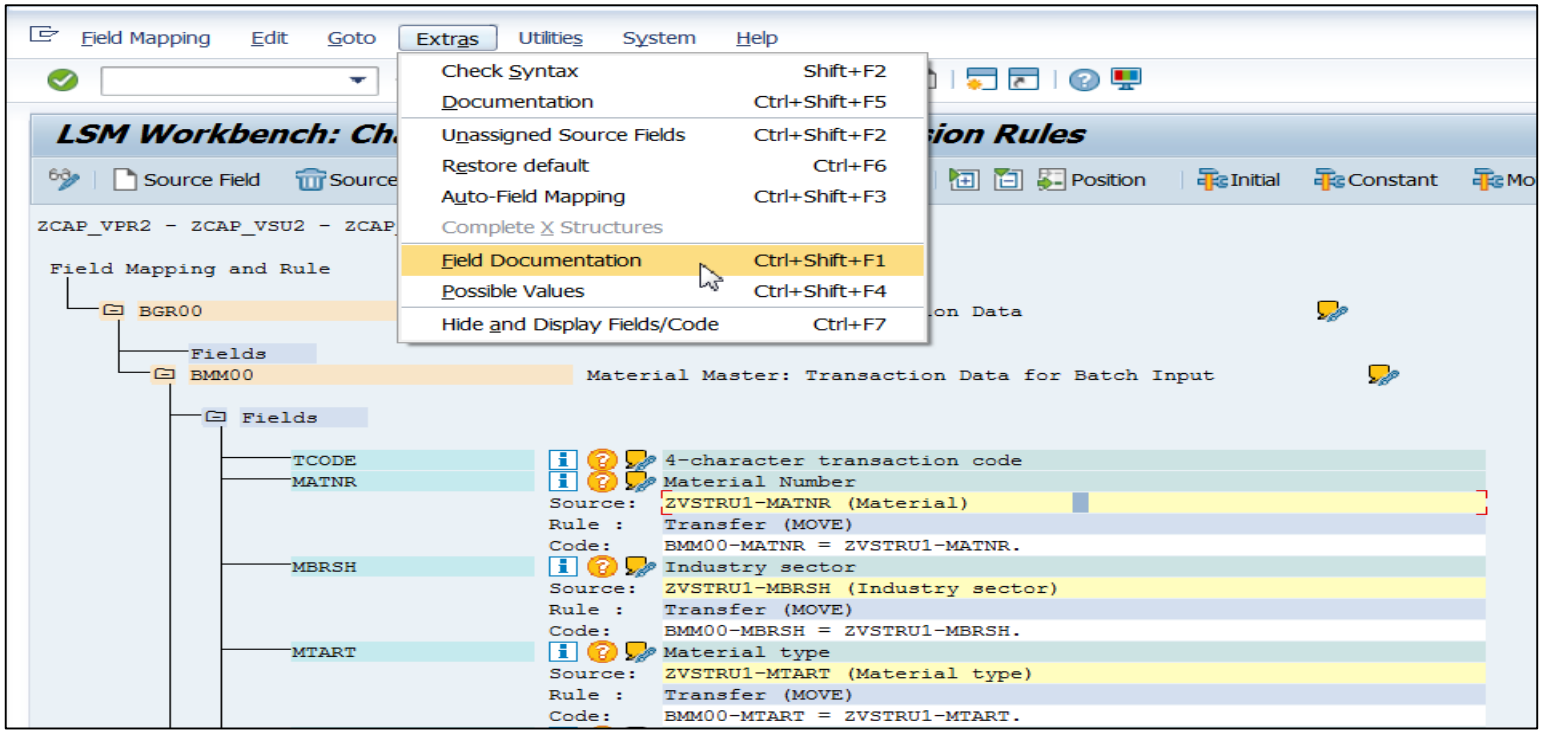
Maintain Field Mapping and Conversion Rules

To assign a source field, position the cursor on a target field in the tree structure and select Assign source field

This displays a list of all available source fields for selection. You can assign the fields by double-clicking on them as well

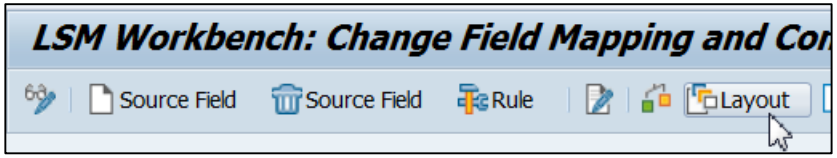


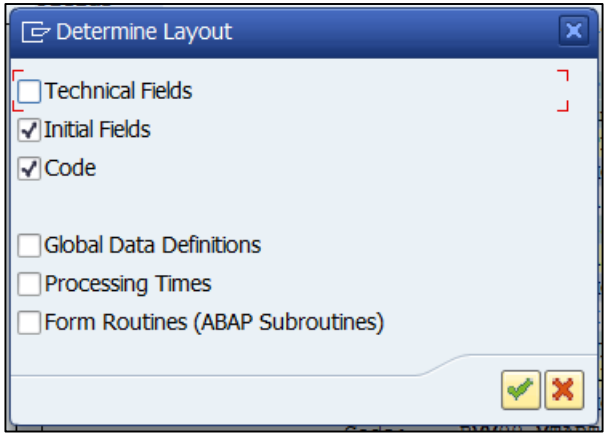
Maintain Field Mapping and Conversion Rules



Maintain Field Mapping and Conversion Rules

Layout determination





Maintain Fixed Values, Translations and User-written Routines

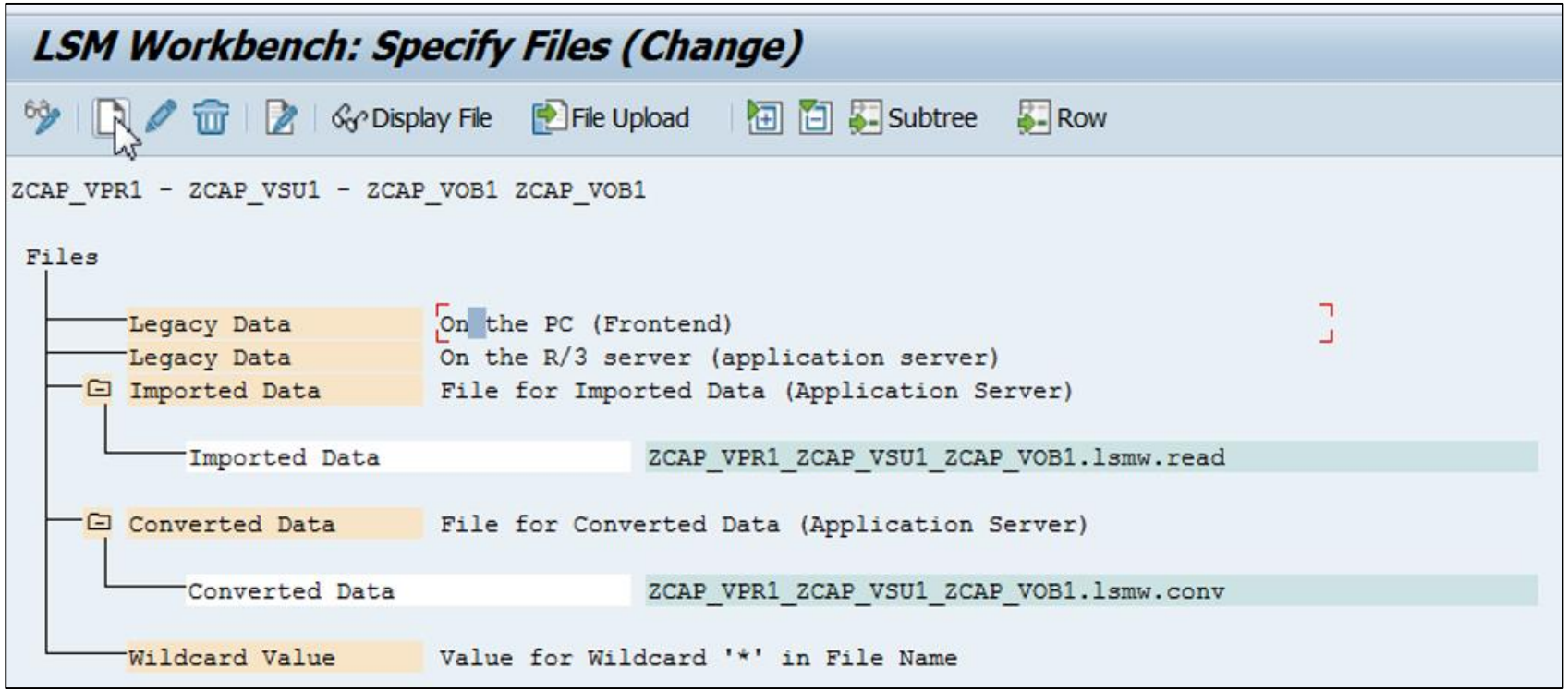
Fixed value: Here you can specify length, type, flag for lowercase/uppercase and value in addition to the description.

Translation values: Here you specify the value table to be used during translation. The values can be uploaded from a PC file.

Process the reusable rules of a project

Specify Files

This step describes all files to be used in the following steps:



Assign Files

Assign defined files to the source structures

Read Data

Can display all or a part of the read data in table form .

To process all data belonging to an object, click on Execute.

To migrate a part of the data only, limit the number of data to be migrated in field "General selection parameters". Make the selection in field "Transaction number" from "... to ...". Multiple selection is possible.

In addition, two check boxes are offered:

- Amount field: Amount fields are converted into calculation format (with decimal point).
- Date field: Date fields are converted into internal format (YYYYMMDD).

Display Read Data

Display all or a part of the read data in table form.

Clicking on a line displays all information for this line in a clear way.

Change display allows to select either a one-line or multi-line view.

Display color palette displays the colors for the individual hierarchy levels.

Convert Data

With regard to operation, this work step essentially corresponds to work step "Read Data".

If data selection is not to be made, confirm the process by clicking on Execute. Otherwise, make the selection in field "Transaction number" from "...to...". Here, multiple selection of transaction numbers is possible as well.

If one or several source fields are marked as selection parameters when defining the source fields, these fields are also offered as selection parameters.

Display Converted Data

Display Converted Data

- The display the data that is converted.

Generate Batch Input Session

The standard batch input program belonging to the object is directly called.

The name of the file with the converted data is already proposed.

The batch input sessions to be generated are named after the LSMW object.

LSMW – Procedure

Run Batch Input Session

- The program goes to SAP standard transaction SM35.
- Follow the procedure to run the session (which is already discussed in the Session method)

Import Data with Direct Input

- Depending on the object type, either the standard direct input program belonging to the object is called or select a direct input program or a direct input transaction.

Start Direct Input Session

- Depending on the object type, either the standard direct input program belonging to the object is called or a direct input program can be selected or a direct input transaction.

Demo: LSMW

Demo: Direct Input Method

Summary

In this lesson, you have learnt:

- How to Use LSMW Data Transfer

Review Question

Question 1: In the specify file step of LSMW, files can only be selected from the Application Server.

- True/False

Question 2: In Standard/Direct Input method of LSMW all fields of a transaction are always available for reprocessing.