

S/4 HANA migration cockpit comes with preconfigured content and mapping for each migration object. For all major functional areas like product, customer, bank, profit centre, cost centre, plant, GL, etc. migration objects are predefined and their sequence and dependency is also defined. So, what is the process of migrating custom data into SAP S/4HANA? This blog addresses the issue of migrating data in custom tables. A new migration object has to be created or changes to an already existing migration object need to be made. Migration object modeler is the application that is used when custom data has to be migrated into SAP S/4 HANA system.

Note: SAP S/4HANA Migration Object Modeler is only relevant for the on-premise edition of SAP S/4HANA.

Transaction LTMOM can be used to access SAP S/4HANA Migration Object Modeler (MOM).

There are 2 ways of migrating custom data using MOM:

1. Creating a new migration object
2. Changing already existing migration object

This blog covers Option 1 only.

Steps of creating new migration object

1. Create Project: Creating a project in migration cockpit is 1st step for migrating data in S/4HANA system. Run transaction LTMC and create one project.
2. Create a new migration object: Run transaction LTMOM for creating new migration object. Create a new migration object in LTMOM.
3. Create a new function module: Go to transaction SE80 and create one custom function module. Define import and export parameters for FM. This FM would decide template for the new migration object.
4. Define source structure: In this step, define the new structure and its fields as per custom data requirement. This structure would work as source structure in the migration process.
5. Define Target structure: After defining source structure define the new target structure and its fields.
6. Structure mapping: In this step, map source structure to the new custom function module and then map source structure to target structure.
7. Field mapping: After mapping between source and target structure, define mapping between every field of source structure to a field of the target structure.
8. Define Rules: In this step, define rules for every field like constant value, condition on which value should be filled, etc.
9. Generate Runtime object: After completing all the above steps, generate runtime object of new migration object.

After completing the above steps, a new migration object can be seen in the LTMC transaction under the project that was created in Step 1.

Example: Migrate data from a custom table to S/4 HANA system

The custom table 'ZCUSTINS' below that stores customer number and their policy id needs to be migrated to SAP S/4 HANA. To do this, a new migration object is created in MOM.

Following is the structure of a custom table.

Transparent Table **ZCUSTINS** Active

Short Description test customer policy

Attributes Delivery and Maintenance Fields Input Help/Check Currency/Quantity Fields

Field	Key	In...	Data element	Data Type	Length	Decl...	Short Description
MANDI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MANDI	CLNT	3	0	Client
CUSTOMER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	KUNNR	CHAR	10	0	Customer Number
POLICYID	<input type="checkbox"/>	<input type="checkbox"/>		CHAR	10	0	policy id

1. Create one project 'ZNS4_DATA_MOM' in LTMC.

Migration Project Details Edit

Name: zns4_Data_mom Status: ■ Started

Data Source: File Mass Transfer ID: 007

Default View: On-premise - Enterprise Management scope

Migration Objects Notifications Settings

Filter: All Open Activate Deactivate

Status	Status Text	Name	Documentation	Dependent
<input type="checkbox"/>	Inactive	Accounts payable (Vendor) open item	Show	Cost center
<input type="checkbox"/>	Inactive	Accounts receivable (Customer) open item	Show	Customer

2. Create one function module 'Z_FM_CUST_INS' with the following import and export parameters:

Function module **Z_FM_CUST_INS** Active

Attributes Import Export Changing Tables Exceptions Source code

Parameter Name	Typi...	Associated Type	Default value	Op...	Pa...	Short text
IV_DOCNO	TYPE	SWO_COMMIT		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Call to COMMIT WORK

Function module **Z_FM_CUST_INS** Active

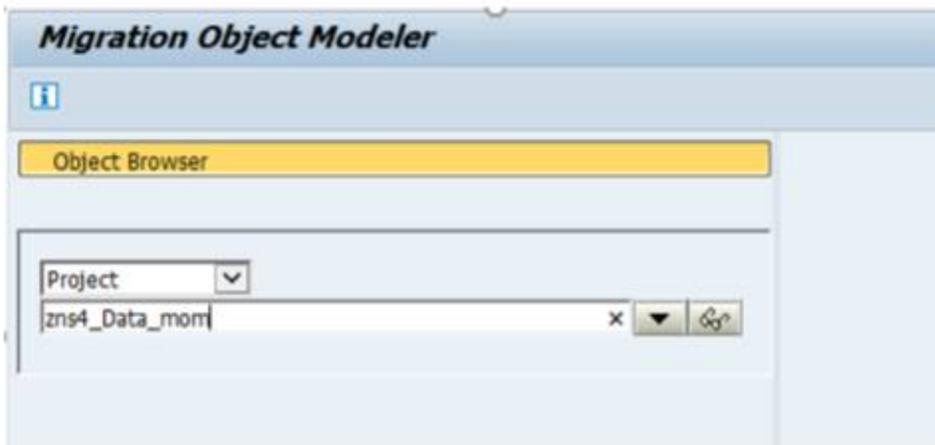
Attributes Import Export Changing Tables Exceptions Source code

Parameter Name	Typing	Associated Type	Optional	Short text
IT_CUSTINS	LIKE	ZCUSTINS	<input type="checkbox"/>	test customer policy
IT_RETURN	LIKE	BAPIRET2	<input type="checkbox"/>	Return Parameter

IV_DOCNO is a parameter which will ensure that FM would call when simulation will start in LTMC transaction.

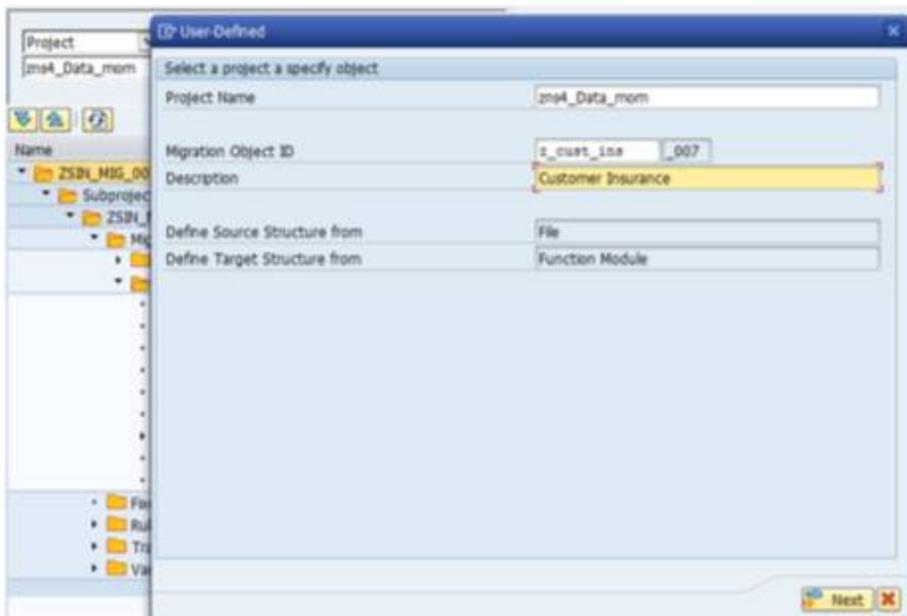
IT_CUSTINS is a table in which data will come into the function module. IT_RETURN table would be used to pass error, success or warning messages.

3. Run transaction LTMOM and select our project ZNS4_DATA_MOM

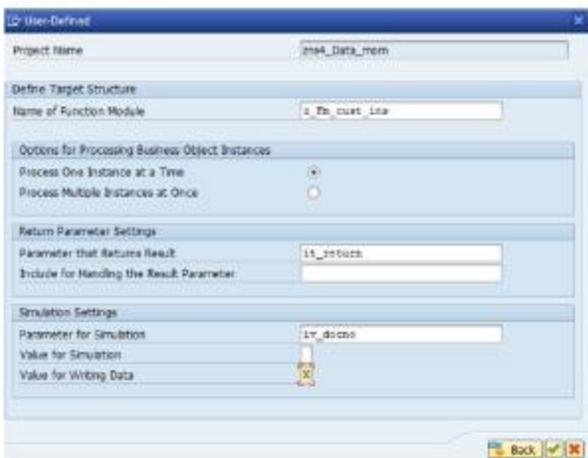


4. Create a new migration object. Use the below path:
Go to menu ->migration object->create migration object->user defined.

The following pop up window will come. Give a name and description of a new migration object:



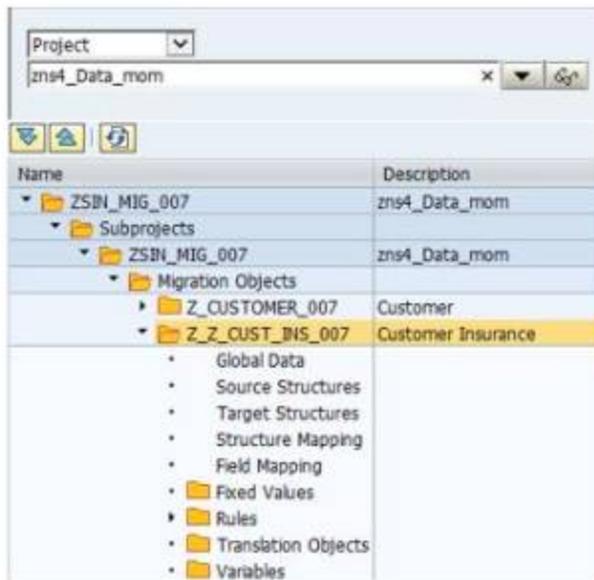
5. After clicking on the next button it will ask for function module information:



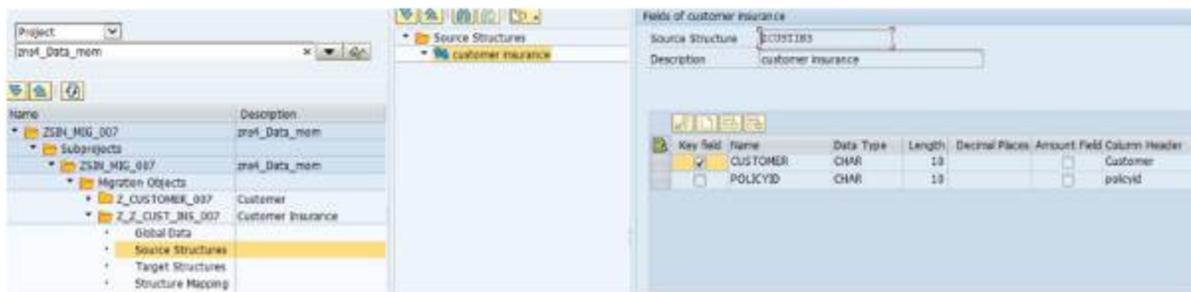
Give FM name, success and error message would be passed

IT_RETURN table, IV_DOCNO is used as a simulation parameter.

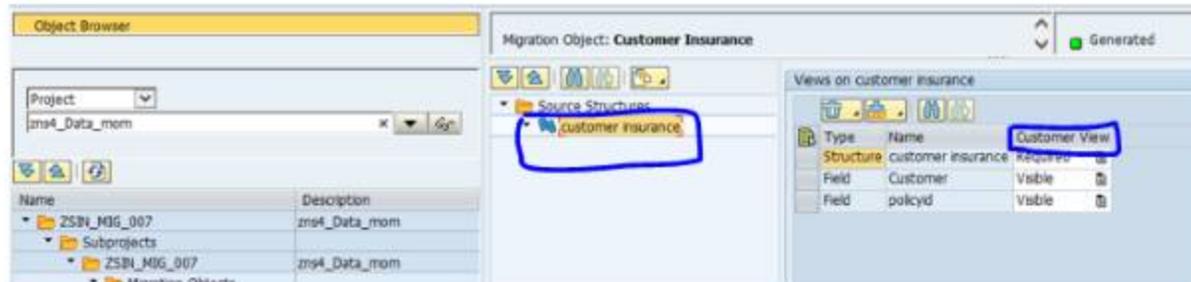
6. New migration object Z_CUST_INS_007 has created successfully.



7. Double click on source structure, it will open a new window on left. Define new structure and its fields as follows.



8. Above structure would create a template for migration cockpit. Some fields can be made mandatory or disabled by making some changes in customer view of this structure. Right click on structure name and select 'display view'. Below view is Customer view.

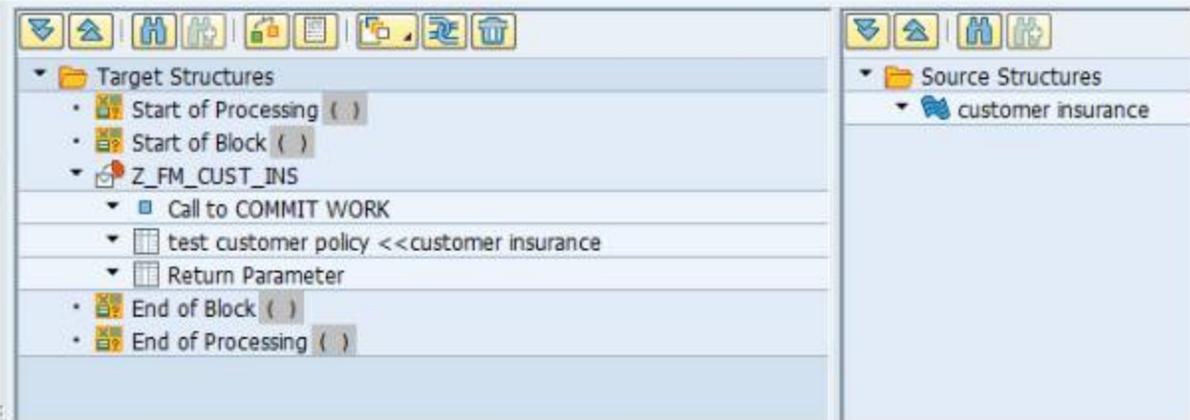


All the fields for this structure need to be filled in the source template.

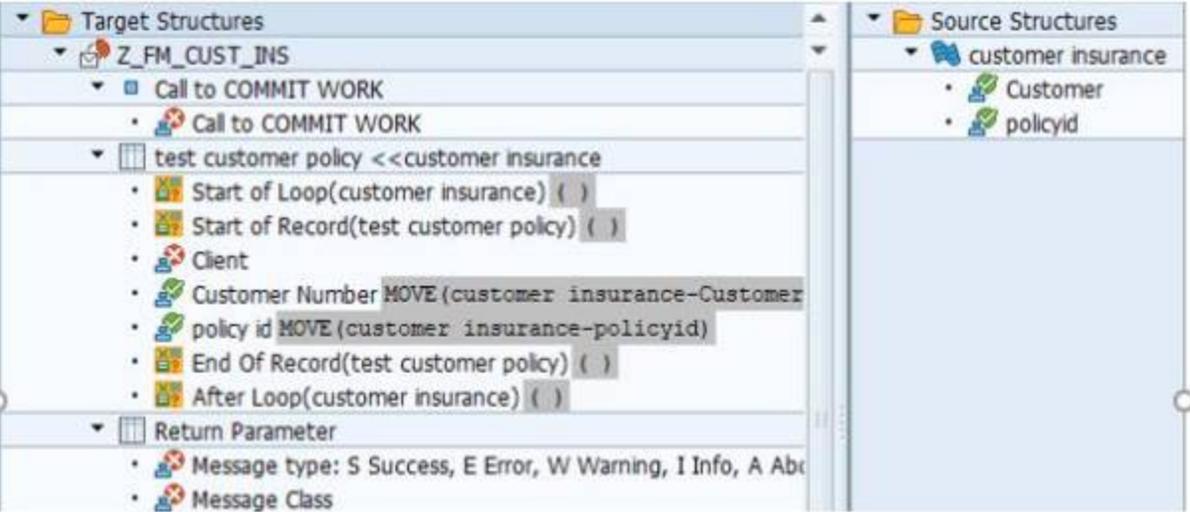
9. Double click on target structure. Either we can define fields for target structure one by one or we can get all fields of target structure from FM 'Z_FM_CUST_INS' (which we defined earlier for custom migration object) by synchronization. For synchronization use below the path

Go to -> menu->migration object->synchronize structure.

10. Now go to structure mapping. Assign source structure to function module first and then assign source structure to target structure. Mapping can be done by dragging from left to right.

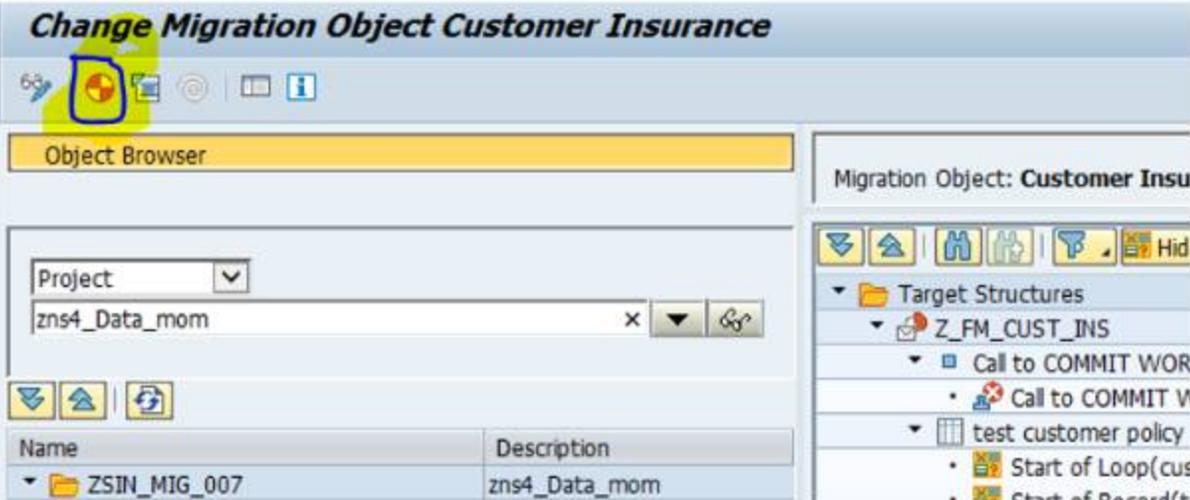


11. Now go to field mapping and assign fields of source structure to target structure by dragging and dropping from left to right.



Assign customer from source structure to customer number and policy id to policy ID.

12. Create a run time object by clicking on the following highlighted button:



13. Run transaction LTMC and select project ZNS4_DATA_MOM. You can see the new custom migration project below.

Name: Status:
Data Source: File Mass Transfer ID:
Default View:

Migration Objects Notifications Settings

Open Activate Deactivate

Status Text	Name	Documentat
Inactive	Characteristic	Show
Inactive	Class	Show
Inactive	Cost center	Show
Started	Customer	Show
Inactive	Customer - extend existing record by new org levels	Show
Started	Customer Insurance	
Inactive	Equipment	Show

Above is the default view 'On-premise- Enterprise Management scope'. The newly created custom migration object needs to be edited. Click on the edit button and select the custom view option.

Migration Project Details

Name:
Data Source: File
Default View:

14. Now select custom migration object 'customer insurance' and download its template for filling customer insurance data into the input file.

The Downloaded template has below 2 fields (Which were defined in source structure of custom migration object)

- Customer
- Policy

Fill customer number and policy id into the downloaded file. Below is a screenshot of the downloaded file after filling data into it.

CUSTOMER	POLICY
0000000014	0000001001

15. Upload file and start transfer.
16. Go to table ZCUSTINS and check entry created.

Data Browser: Table ZCUSTINS Select Entries 2

Table: ZCUSTINS
 Displayed Fields: 3 of 3 Fixed Columns: [2] List Width 0250

	Client	Customer	policy id
<input type="checkbox"/>	100	0000000014	0000001001
<input type="checkbox"/>	100	0000001001	0000000011

We have uploaded custom data into SAP S/4HANA system successfully with the help of MOM.

Migration object modeler is an application to migrate custom data into s/4HANA system by creating or changing migration object as per custom requirement. It is an assistant application for LTMC. Data uploading can only be done via migration cockpit.

In the next blog, we will discuss how to change existing migration object with the help of MOM.

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