

2197392 - Resolve findings of core ERP MM-IM S/4HANA pre checks

Version	24	Type	SAP Note
Language	English	Master Language	English
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Release Status	Released for Customer	Released On	09.03.2018
Component	MM-IM-GF (Basic Functions)		

Please find the original document at <https://launchpad.support.sap.com/#/notes/2197392>

Symptom

You executed the MM-IM prechecks to verify what needs to be done to install SAP S/4HANA and got a list of messages to work with.

Other Terms

S4TC, S/4 transition, S4HANA, CL_S4_CHECKS_MM_IM

Reason and Prerequisites

During the migration, the content of the current database tables is transferred into the simplified data model and requires a certain level of data consistency in the current database tables which got simplified. SAP S/4HANA uses a simplified data model which may require special adjustments of customer development or modifications besides the usual SPAU or SPDD transactions. You have customer enhancements in the area of inventory management or material valuation (component MM-IM) which were built for SAP ERP 6.0.

Solution

The simplified data model replaces several stock tables with the new MATDOC table and makes quantity aggregate fields obsolete in master data tables (e.g. MARC). Tables with those adjustments will be called "simplified stock tables" in this document and comprise the following table names: MKPF, MSEG, MARC, MARD, MCHB, MKOL, MSKA, MSPR, MSKU, MSLB, MSSA, MSSL, MSSQ, MARCH, MARDH, MCHBH, MKOLH, MSKAH, MSKUH, MSLBH, MSPRH, MSSAH and MSSQH. On newer SAP ERP releases it furthermore comprises the stock-in-transit tables: MSTB, MSTE, MSTQ, MSTBH, MSTEH and MSTQH. The tables MARC, MARD, MCHB, MKOL, MSKA, MSKU, MSLB and MSPR are called "hybrid" tables because the master data parts of those tables remain but the transactional parts are deprecated and are calculated on the fly using the new MATDOC table.

The remaining tables MKPF, MSEG, MSSA, MSSL, MSSQ, MARCH, MARDH, MCHBH, MKOLH, MSKAH, MSKUH, MSLBH, MSPRH, MSSAH, MSSQH, MSTB, MSTE, MSTQ, MSTBH, MSTEH and MSTQH are called "replaced aggregation or document tables".

In the area of Material Valuation, the following tables have been "simplified": EBEW, EBEWH, MBEW, MBEWH, OBEW, OBEWH, QBEW and QBEWH.

How to find the relevant information

Consider you have an error message like: Check ID 'ALL_MATNR_IN_MARA' (Application component MM-IM) , return code '8' Check info:MANDT:123, MATNR MY_MATNR of the table MARDH does not exist in the table MARA - See note :2197392

Now take the Check ID "ALL_MATNR_IN_MARA" and search for it in this note. You will then find the chapter dedicated to this specific Check ID.

Proceed like this for all error messages that are reported from the precheck.

Data consistency

Material Number (MATNR) must exist in simplified MM-IM tables

Check ID: ALL_MATNR_IN_MARA

All simplified stock tables (except MKPF) have a field MATNR. Each distinct MATNR entry must have a corresponding entry in table MARA which contains all materials.

This error might come up if material documents are differently archived than the material master data. In this case, it is recommended to archive those material documents for which the material master does no longer exist in MARA using the archiving object MM_MATBEL.

If this error is reported for history tables like MARDH you might consider executing report MBARCHHIST to delete orphaned entries (entries that only exist in the history table but not in the corresponding non-history table).

BUKRS values of MSEG must exist in T001

Check ID: BUKRS_IN_MSEG

Table MSEG contains a field BUKRS for which a corresponding entry must exist in table T001 for each BUKRS value of MSEG.

It is recommended to archive the simplified table entries that caused the conflict in case the referenced company code is no longer valid in the system.

BUKRS values of MSEG must match those in T001K

Check ID: MSEG_VS_T001K_BUKRS

Table MSEG contains the fields BUKRS and WERKS. For the WERKS field, there must be an entry in T001W and based on the BWKEY field an entry must exist in T001K. The WERKS+BUKRS combination in those two tables must match the combination of the MSEG entries. If they do not match, the company - plant assignments had changed in the past.

It is recommended to archive the MSEG table entries that caused the conflict.

WERKS to BUKRS foreign key chain

The foreign key chain is checked for this field / table combination:

For each distinct value of WERKS in each of the simplified stock tables (except MKPF and MSEG), there must be a corresponding entry in table T001W. (Check ID: ALL_WERKS_IN_T001W)

For each of those entries in T001W, there must be an entry in table T001K based on the BWKEY. (Check ID: ALL_BWKEY_IN_T001K)

For each of those entries in T001K, there must be an entry in MARV based on the BUKRS. (Check ID: ALL_BUKRS_IN_MARV)

For all of those entries in T001K, there must be an entry in T001 based on the BUKRS. (Check ID: ALL_BUKRS_IN_T001)

If this error occurred, the archiving might not have been completed correctly. It is recommended to archive the remaining simplified stock table entries that caused the conflict.

Periods must be valid

Check ID: MONTH_YEAR_PERIOD

Simplified stock tables with fields LFGJA and LFMON must not have initial period values to avoid migration errors. No posting date can be determined for the last day of an initial period. For table MARC, MARD or MCHB (new with note [2271461](#) and version 10 of precheck implementation note 2194618) and initial stock values, no errors will show up as they can be ignored during migration. If there are any other instances with such an inconsistency you need to check how they could be corrected. There is no general guidance how this can be achieved.

Check ID: PERIOD_CHECK

This check validates any LFGJA and LFMON fields with its corresponding PERIV field against tables T009 and T009B. If this error occurred, check why the period is not maintained in table T009B or if this is an inconsistent entry in any of the checked MM-IM database tables.

For releases up to (and including) 1610, you can run this check manually with report

MMIM_S4_PRECHECK_RESULT to get also the tablename for which the error occurs. From release 1709 onwards, the report MMIM_S4_PRECHECK_RESULT is no longer required.

MKPF and MSEG consistency**Check ID: ALL_MKPF_EXIST**

All entries in table MSEG must refer to a single entry in table MKPF. This check will find any MSEG entries without a corresponding MKPF header entry.

Such entries will not be converted to the new data model! So check in advance whether the entries are still needed or not. If they are needed, correct the inconsistency.

Check ID: ALL_MKPF_WITH_MSEG

All entries in table MKPF shall have at least one entry in table MSEG to reflect a material movement. This check will find any MKPF entries without a corresponding MSEG item entry.

Such entries will not be converted to the new data model! So check in advance whether the entries are still needed or not. If they are needed, correct the inconsistency.

Check ID: NO_MKPF_POSTING_DATE

All material documents are posted on a certain date. If that date does not exist, it is an inconsistency that needs to be corrected. If you find such inconsistencies it might be helpful to create an incident on MM-IM-GF-INC to analyze this in detail.

Check ID: BWART_IN_MSEG

All material documents must have a valid stock movement type. If a stock movement type used in the material document item does not exist in T156, it is an inconsistency that needs to be corrected: Either the material document that use such stock movement types have to be archived before the conversion or you need to re-create the missing stock movement type.

Quantity aggregation consistency**Check ID: QTY_AGGR_CHECK**

Quantities between certain pair of dependant tables need to be aggregated correctly. This check will find discrepancies between these paired tables.

These pairs of tables are: MSLB/MSSL, MSCD/MSCS, MSFD/MSFS, MSID/MSIS and MSRD/MSRS

In case errors occur, they can be analyzed further with transaction MB5K. Alternatively, if the erroneous records are old and they are not needed any more, they can be archived.

Valuation consistency**Check ID: KALNR_CHECK**

Precondition: Split valuation is configured for the material (and company code). In addition the valuation by sales order or project (KZBWS = M) or by supplier (XOBEW =X) is active.

The check lists inconsistent stock quantities comparing two tables: First table (e.g. MSSL) keeps the quantity on an aggregated level across valuation types (BWTAR). The second table (e.g. MSLB) keeps the quantities per valuation type (BWTAR). Both tables must match. Also the periods of relevant history tables are checked. For each inconsistent data record, the check result displays the names of the aggregated stock table, the name of the detailed stock table, and the key fields. All these errors can be analyzed further with transaction MB5K (see note [34440](#)). Alternatively, if the erroneous records are old and they are not needed any more, they can be archived.

Check ID: KALNR_VAL_STOCK

This check ensures that the relevant valuation data exists for all stock tables (like MARC, MARD, ...). The errors always show the name of the stock table followed by the key fields of the inconsistent entry and the name of the valuation table (like MBEW) where the corresponding entry is missing.

All these errors can be analyzed further with transaction MB5K (see note [34440](#)). Alternatively, if the erroneous stock table records are old and they are not needed any more, they can be archived. Also the valuation settings (WERTU in material type definition, or KZBWS in project/sales order) can be changed. To do this, all stock has to be posted out temporarily, then the settings are changed and finally the stock is posted back in.

Remark: this error also occurs for material master records with valuation relevant material type where the accounting view is missing. In case such materials have never been used for goods movements, this inconsistency was never discovered. The problem is simply fixed by creating the missing accounting view or by deleting unused master data records.

Check ID: KALNR_VAL_DOC

This check ensures that the relevant valuation data exists for all material document items. The errors always show the name of the material document item table (MSEG) followed by the key fields of the inconsistent entry and the name of the valuation table (like MBEW) where the corresponding entry is missing.

If the erroneous records are old and they are not needed any more, they can be archived.

Customer enhancements or modifications

Views on simplified tables

Check ID: VIEW_ON_REDIRECT

There shall be no customer views on any of the simplified tables. If there are any findings, see note [2206980](#) on how to adjust views on simplified stock tables or note [2217299](#) for material valuation tables.

View-appends on redirected views

Check ID: APPEND_ON_REDIRECTED_VIEW

There shall be no appends on any of the redirected views delivered by SAP as appends are technically not supported on redirected views. If there are any findings, see note [2206980](#) on how to adjust view appends on redirected tables or note [2217299](#) for material valuation tables.

Append-field conflicts of MKPF and MSEG

Check ID: APPEND_DUPL

If there are appends on MKPF and MSEG which both have fields with identical names, this will cause a naming conflict as both tables are migrated into one denormalized target table. If the field contains identical content at MKPF and MSEG, there is nothing which needs to be done. If the field contains different content, an unspecified state will exist in the target table! For such conflicts see note [2206980](#) on how to solve append-field conflicts of MKPF and MSEG.

Append-fields on replaced aggregation tables

Check ID: APPEND_ON_FULLY_REPLACED_TAB

Appends of aggregation tables which have been replaced by on the fly aggregations cannot be migrated into MATDOC because of the different cardinality.

Appends on table MKPF and MSEG can be migrated to table MATDOC.

If there are any findings, see note [2206980](#) on how to adjust appends on replaced aggregation tables or note [2217299](#) for material valuation tables.

Append-fields on hybrid tables

Check ID: APPEND_ON_PARTIALLY_REPLACED_TAB

See note [2217299](#) on how to migrate appends on material valuation tables using the extension mechanisms of CDS views.

Check ID: APPEND_BETWEEN_SAP_FIELDS
Append fields which are not at the end of a table structure but between SAP fields cannot be migrated using the extension mechanisms of CDS views.
See note [2206980](#) on how to resolve such issues on hybrid tables or note [2217299](#) for material valuation tables.

Potential aggregates and hybrid tables

Check ID: QUANTITY_IN_APPEND
The precheck will return warnings for quantity fields on hybrid tables as potential aggregate fields. Double-check whether this is an aggregate or a master data field. If the append fields are master data fields, there is nothing which needs to be done.
Any transactional fields in master data tables need to be reworked depending on the scenario they were used for. SAP cannot give a guidance on how this shall be done.
You may also check note [2206980](#) on how to adjust appends on hybrid tables or note [2217299](#) for material valuation tables.

Customizing including CI_COBL

Check ID: CODING_BLOCK_CUSTOMIZING
This warning is only relevant if you are targeting S/4HANA version 1511 SP00! For all later service packs and releases, this check is obsolete.
See note [2206980](#) and [2242679](#).

Other customizing includes

Check ID: CUSTOM_INCLUDE
If this warning is issued for MKPF or MSEG, add the include to the corresponding include structure of table MATDOC i.e. NSDM_S_HEADER and NSDM_S_ITEM respectively (for details, please refer to note [2206980](#) section 1.1)
If this warning is issued for a replaced aggregation table, there is nothing you can do about this similarly to check id: APPEND_ON_FULLY_REPLACED_TAB.

Customizing

Active LIS and active Late Lock strategy

Check ID: LIS_CUSTOMIZING_CHECK
See note [2319579](#)

Other Components

Component	Description
MM-IM-GF-MIG	Migration to the new material document data model

This document refers to

SAP Note/KBA	Title
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2539490	S4TC Correction for 2503309 - Enhancement for Pre-check (new framework): wrong quantity aggregation
2523644	S4TC Correction for 2503309 - Precheck enhancement: Check that movement types used by material documents exist
2319579	S4TWL - Performance optimizations within Material Document Processing - lock behavior and stock underrun protection
2271461	S/4HANA MM-IM migration: MCHB with initial LFGJA LFMON
2242679	Redirect inconsistency - Proxy Substitution
2217299	Inventory Valuation (part of Materials Management - Inventory Management) : Change of data model in S/4HANA 1511
2206980	Material Inventory Management: change of data model in S/4HANA

This document is referenced by

SAP Note/KBA	Title
2206980	Material Inventory Managment: change of data model in S/4HANA
2539490	S4TC Correction for 2503309 - Enhancement for Pre-check (new framework): wrong quantity aggregation
2523644	S4TC Correction for 2503309 - Precheck enhancement: Check that movement types used by material documents exist
2217299	Inventory Valuation (part of Materials Management - Inventory Management) : Change of data model in S/4HANA 1511
2236753	S/4HANA MM-IM migration: error, post-processing and info messages
2289266	S/4HANA MM-IM Migration: MARCH No exception if MATNR not found in MARA
2271461	S/4HANA MM-IM migration: MCHB with initial LFGJA LFMON
2197379	Resolve findings of DIMP specific MM-IM S/4HANA pre checks