

How to Guide for MDG EAM & AIW MBOM and SAP MDG-M Integration Solutions by Prometheus Group

Applies to

EAM Solutions by Prometheus Group

Summary

This document provides information on integration of MDG EAM & AIW Material BOM and SAP MDG-M integration

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Introduction

This document provides information on integration of MDG EAM & AIW Material BOM and SAP MDG-M integration

Pre-requisites

Customers should ensure that they have Utopia MDG EAM / Utopia Asset Information Workbench (AIW) for Master data Governance process is installed and configured.

Also Ensure that the installation of SAP Master Data Governance for Material (MDG-M) is completed.

Replication Pre-requisites:

Make sure MDG-Material replication configuration is enabled for successful execution of EAM MBOM<->MDG-M integration process.

If the MDG-M object replication is configured with key mapping, then EAM MBOM will only get replicated after successful key mapping for MDG-M between two systems.

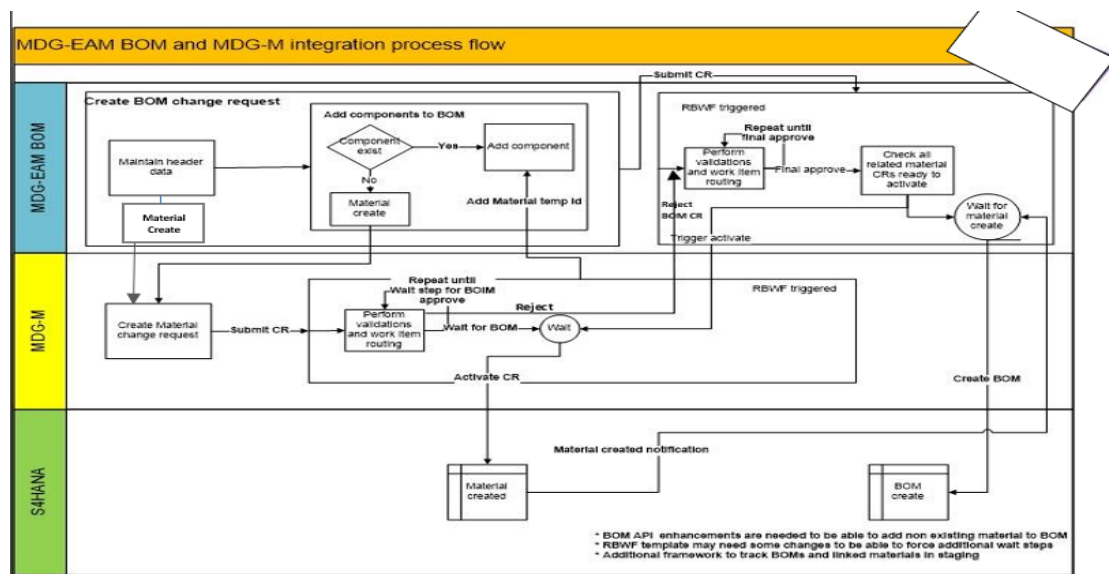
In case of any errors, reprocessing of iDOCs can be done via standard SAP programs/T-codes.

- Utopia MBOM & MDG-M integration supports from below versions and onwards.
 - Utopia MDG 1909 SP01 [Link](#)
- Standard Configuration of SAP MDG-M should be in place. [Link](#)

Configuration steps to enable integration between SAP MDG-M and Utopia EAM & AIW MBOM

- To enable integration between SAP MDG-M and Utopia EAM & AIW MBOM , refer section 4.28 of UGI_EAM_AIW_ConfigurationGuide_S/4H. [Link](#)

MBOM <> MDG-M Integration Process Flow Diagram



Supported Features in MBOM CR

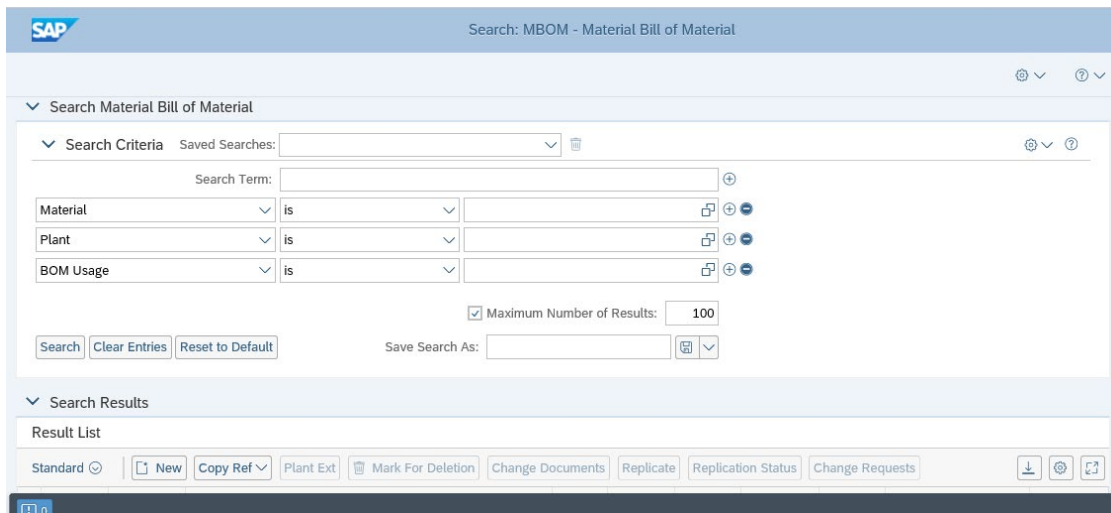
- MBOM <> MDG-M integration enables the below functionalities
 - Create new material CR from MBOM CR
 - Add existing staging materials in MBOM CR
- Create Material CR functionality enabled at Header and Item level
- Add existing staging material CR functionality enabled at Item level only
- Applicable for below process:
 - SOP (Single Object Processing) Create and Change Material BOM
 - AIW Create and Change Material BOM
- Support Sub-Item functionality for staging components
- Support derivations of Purchasing data and Alternative units from MDG-M UI

Workflow Process:

- Material Change request can be Finalized only when the material BOM Change request is approved.
- BOM Change Request can be activated only after all the dependent Material Change Request(s) are Finalized.
- All dependent Material Change Request(s) will get activated first and then BOM Change Request will get activated.

Create Staging Header Material

1. Click on New button to Create a Material BOM Change request and Select the Change request type 'Create Material BOM with Material Create'.

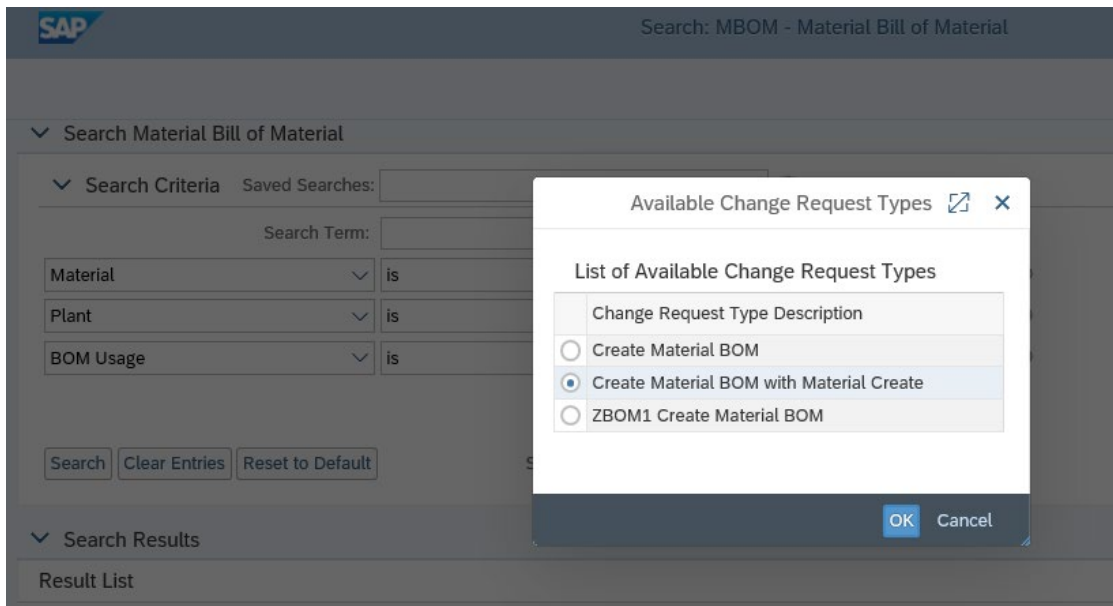


The screenshot shows the SAP MBOM - Material Bill of Material search interface. The top bar includes the SAP logo and the search title. Below the title, there are search criteria fields for Material, Plant, and BOM Usage, each with a dropdown menu and a search button. A 'Maximum Number of Results' field is set to 100. At the bottom, there is a 'Search' button and a 'Save Search As' field. The 'Search Results' section is currently empty, showing a 'Result List' table with various action buttons like 'New', 'Copy Ref', 'Plant Ext', 'Mark For Deletion', 'Change Documents', 'Replicate', 'Replication Status', and 'Change Requests'.

2. Select the MBOM Change Request type configured for MBOM<> MDG-M Integration process.

(Configured in Mapping Table /UGI/MATBOM_CRTY)

Maintenance View: /UGI/V_MBOM_CRTY



The screenshot shows the SAP MBOM Search interface. A modal titled "Available Change Request Types" is open, displaying a list of available change request types. The modal has a close button (X) and an OK button.

Search: MBOM - Material Bill of Material

Search Material Bill of Material

Search Criteria

Saved Searches:

Search Term:

Material is

Plant is

BOM Usage is

Search Clear Entries Reset to Default

Search Results

Result List

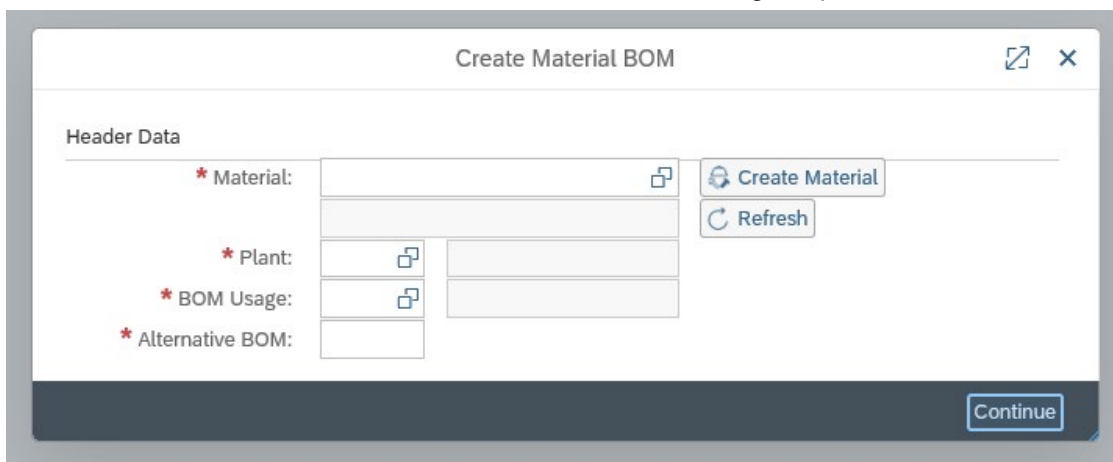
Available Change Request Types

List of Available Change Request Types

Change Request Type Description
<input type="radio"/> Create Material BOM
<input checked="" type="radio"/> Create Material BOM with Material Create
<input type="radio"/> ZBOM1 Create Material BOM

OK Cancel

- Click on Create Material button to create a new material change request.



The screenshot shows the "Create Material BOM" dialog box. It contains a "Header Data" section with fields for Material, Plant, BOM Usage, and Alternative BOM. There are also buttons for "Create Material", "Refresh", and "Continue".

Create Material BOM

Header Data

* Material: [] [] [Create Material]

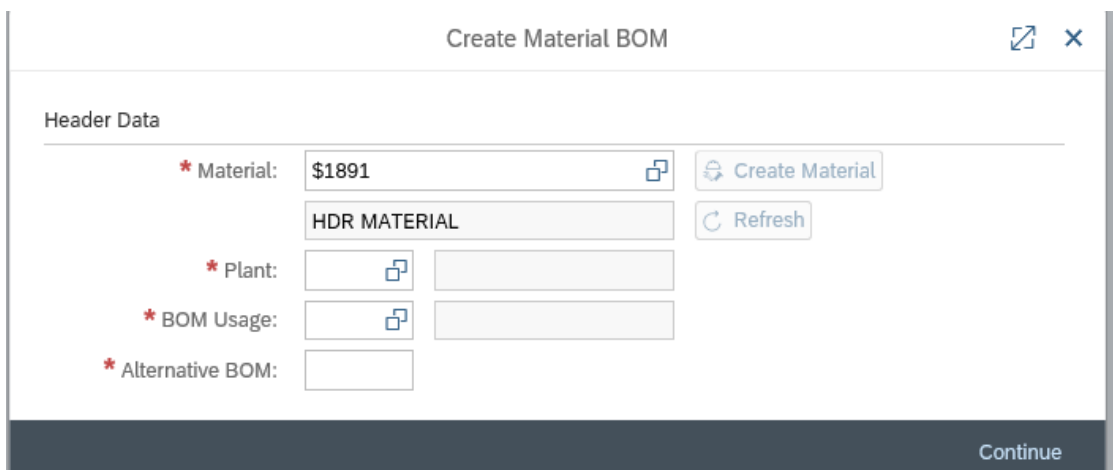
* Plant: [] [] [Refresh]

* BOM Usage: [] []

* Alternative BOM: []

Continue

- Fill all the mandatory fields in the material change request and submit the CR.
- Now Click on Refresh button to fetch the staging material number/description into MBOM Header Material.



The screenshot shows the "Create Material BOM" dialog box with the "Header Data" section filled. The Material field contains "\$1891" and the Plant field contains "HDR MATERIAL". The "Create Material" and "Refresh" buttons are visible.

Create Material BOM

Header Data

* Material: \$1891 [] [Create Material]

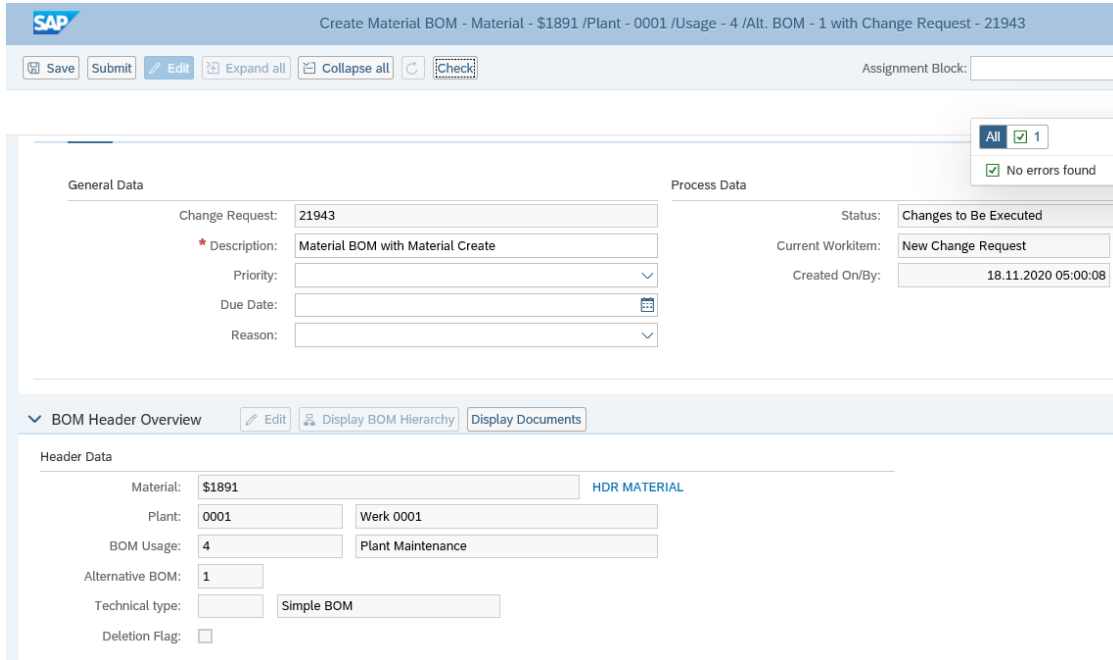
* Plant: HDR MATERIAL [] [Refresh]

* BOM Usage: [] []

* Alternative BOM: []

Continue

- Fill all the mandatory fields: Plant, BOM Usage. Click on Continue.



SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Save Submit Edit Expand all Collapse all Check

Assignment Block:

All 1
No errors found

General Data

Change Request: 21943

* Description: Material BOM with Material Create

Priority:

Due Date:

Reason:

Process Data

Status: Changes to Be Executed

Current Workitem: New Change Request

Created On/By: 18.11.2020 05:00:08

▼ BOM Header Overview Edit Display BOM Hierarchy Display Documents

Header Data

Material: \$1891 HDR MATERIAL

Plant: 0001 Werk 0001

BOM Usage: 4 Plant Maintenance

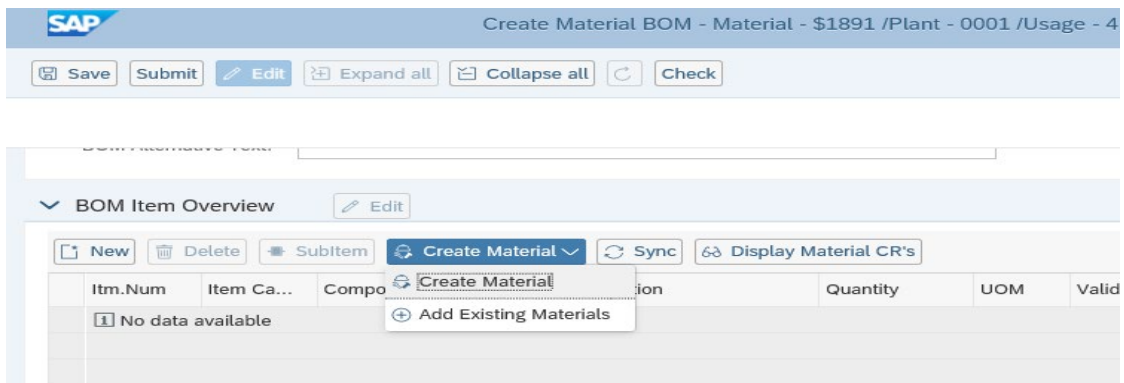
Alternative BOM: 1

Technical type: Simple BOM

Deletion Flag:

Create Staging Item Material

- Click on Create Material button at BOM Item level to create a new material Change request



SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4

Save Submit Edit Expand all Collapse all Check

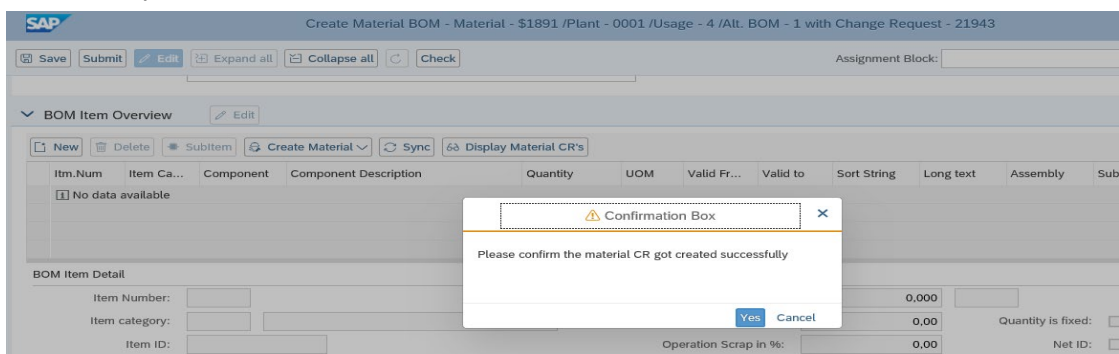
▼ BOM Item Overview Edit

New Delete Subitem Create Material Sync Display Material CR's

Item Num	Item Ca...	Compo	Component Description	Quantity	UOM	Valid
No data available						

Create Material Add Existing Materials

- Fill all the mandatory fields in the material change request and submit the CR.
- Click Yes on the confirmation box to fetch the staging material number/description into MBOM Item Components.



SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Save Submit Edit Expand all Collapse all Check

Assignment Block:

▼ BOM Item Overview Edit

New Delete Subitem Create Material Sync Display Material CR's

Item Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long text	Assembly	Sub
No data available											

BOM Item Detail

Item Number:

Item category:

Item ID:

0.000

0.00

Quantity is fixed:

0.00

Operation Scrap in %:

Net ID:

Confirmation Box

Please confirm the material CR got created successfully

Yes Cancel

4. Fill the mandatory fields in BOM Item: BOM Item Category, Quantity

▼ BOM Item Overview [Edit](#)

[New](#)
[Delete](#)
[Subitem](#)
[Create Material](#)
[Sync](#)
[Display Material CR's](#)

	Itm.Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Lon
	0010	L	\$1892	New Item Component	4,000	EA	18.11.2020	31.12.9999		

5. We can add the active materials (Components) using NEW button in BOM Item Overview.

Add Existing Materials in MBOM Item

1. Click on Add existing material button to add the already existing staging /active materials in the system

SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

[Save](#)
[Submit](#)
[Withdraw Draft](#)
[Edit](#)
[Expand all](#)
[Collapse all](#)
[Check](#)
[Change Documents](#)
Assignment Block:

Additional Data and Material Data

Lab/Office:

Size/dimensions:

BOM and Alternative Text

BOM Description:

BOM Alternative Text:

▼ BOM Item Overview [Edit](#)

[New](#)
[Delete](#)
[Subitem](#)
[Create Material](#)
[Sync](#)
[Display Material CR's](#)

	Itm.Num	Item Ca...	Compo	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long text	Asser
	0010	L	\$1892	Add Existing Materials	4,000	EA	18.11.2020	31.12.9999			

2. Select the materials and click on Add to Material BOM CR button
3. Click on Done

SAP Search: Materials

2 Materials were added successfully to Material BOM Change request

[Display Message Log](#)

Search Term:

Material is
Industry Sector is
Description (medium text) is PUMP

Maximum Number of Results: 100

[Search](#)
[Clear Entries](#)
[Reset to Default](#)
Save Search As:

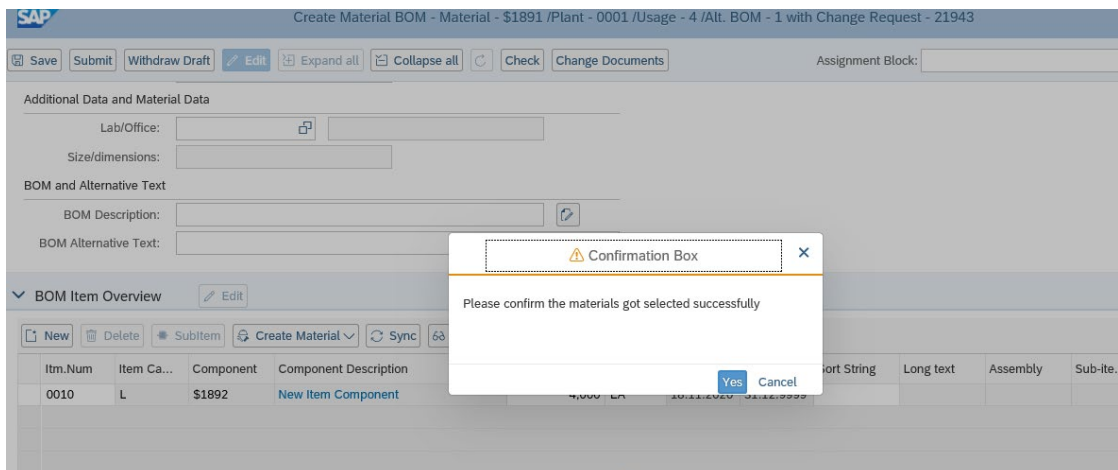
Result List: 56 materials found

Standard [Add to Material BOM CR](#)

	P.	Material	Description	Material Type	Base UoM	Material Group	Product Hierarchy	Search Rank
<input type="checkbox"/>		SSB_U92	<Description not available>	HALB	EA	02		67,43
<input type="checkbox"/>		SSB_U98	<Description not available>	HALB	EA	02		67,43
<input type="checkbox"/>		\$133	pump	ERSA	EA	01		100,00
<input type="checkbox"/>		\$143	pump	ERSA	EA	01		100,00
<input checked="" type="checkbox"/>		\$152	pump	ERSA	EA	01		100,00
<input checked="" type="checkbox"/>		\$169	pump	ERSA	EA	01		100,00

[Done](#)

- Click Yes on the confirmation box to add the staging material number/description into MBOM Item Components



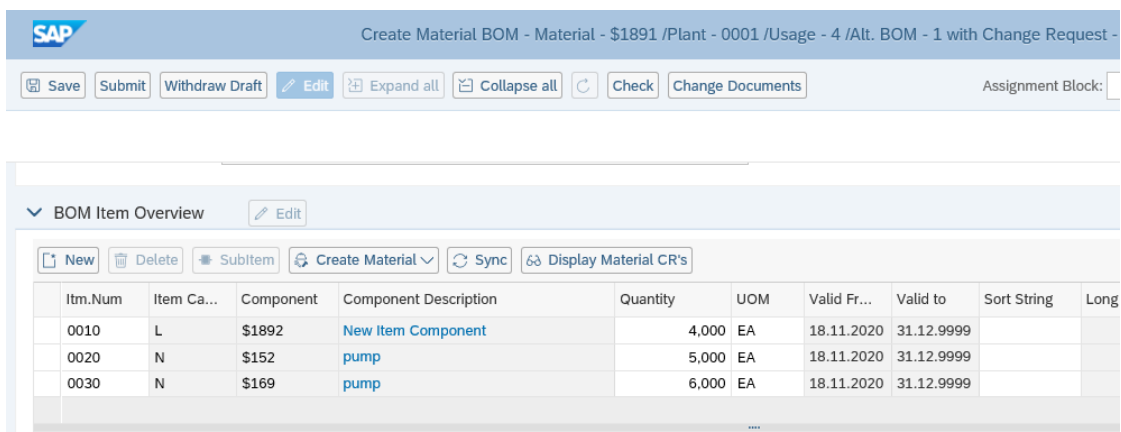
SAP Screenshot: Confirmation Box

Confirmation Box: Please confirm the materials got selected successfully

Buttons: Yes, Cancel

Background: SAP Screenshot showing 'Create Material BOM' interface with 'BOM Item Overview' table.

Item Num	Item Ca...	Component	Component Description
0010	L	\$1892	New Item Component

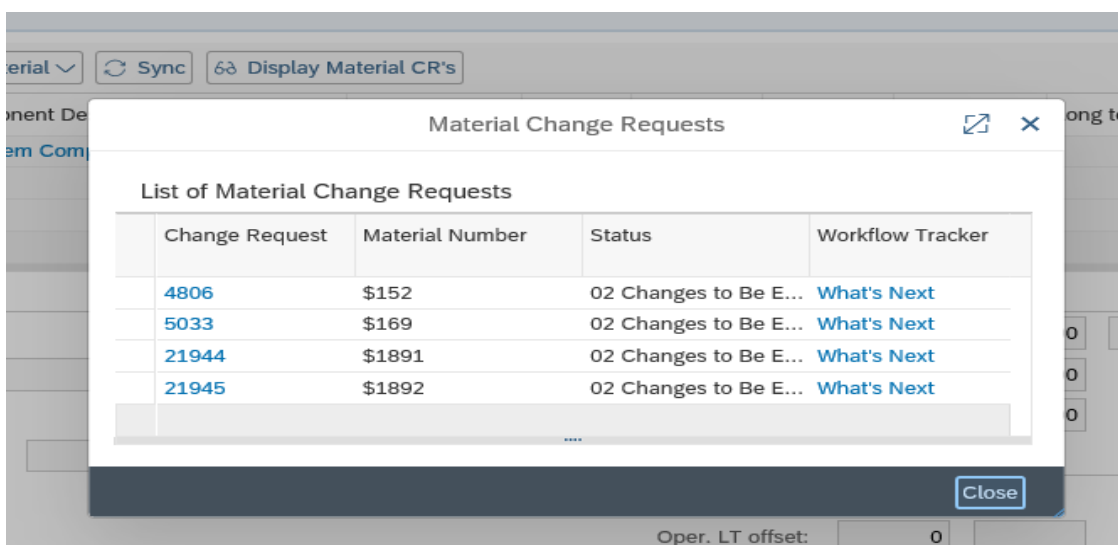


SAP Screenshot: BOM Item Overview

Buttons: New, Delete, Subitem, Create Material, Sync, Display Material CR's

Item Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long
0010	L	\$1892	New Item Component	4,000	EA	18.11.2020	31.12.9999		
0020	N	\$152	pump	5,000	EA	18.11.2020	31.12.9999		
0030	N	\$169	pump	6,000	EA	18.11.2020	31.12.9999		

- Click on Display Material CR's button to see the Material Cr's and their corresponding workflow tracker. Submit the MBOM change request.



SAP Screenshot: Material Change Requests

Buttons: Sync, Display Material CR's

Material Change Requests

List of Material Change Requests

Change Request	Material Number	Status	Workflow Tracker
4806	\$152	02 Changes to Be E...	What's Next
5033	\$169	02 Changes to Be E...	What's Next
21944	\$1891	02 Changes to Be E...	What's Next
21945	\$1892	02 Changes to Be E...	What's Next

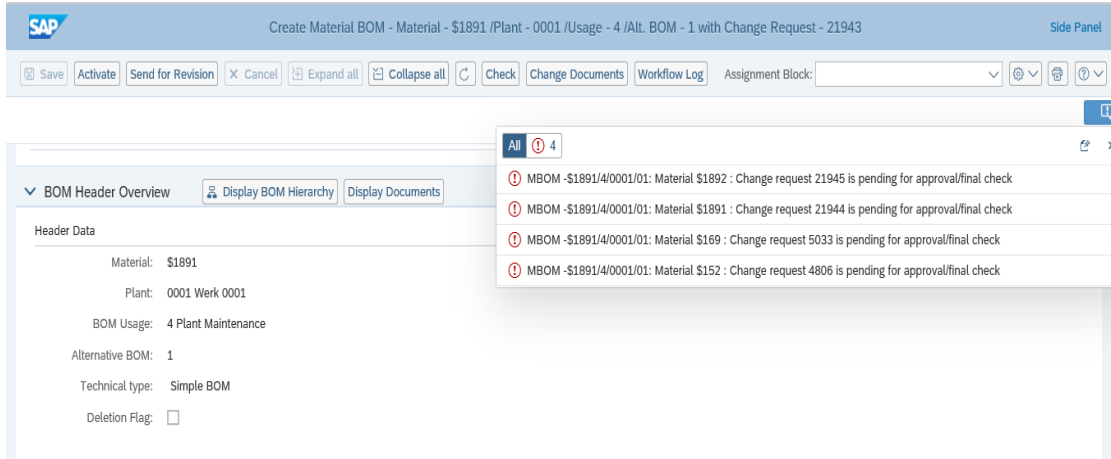
Buttons: Close

Oper. LT offset: 0

6. Note: If the staging material does not exist in the MBOM Header Plant, then you can maintain the plant in material CR.
7. Click on Sync button to refresh the staging material data in MBOM change request.

Approval Process

1. Approve the Material BOM change request.
2. Before activating the Material BOM change request, all the dependant staging material change requests should be approved/finalized.



SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Buttons: Save, Activate, Send for Revision, Cancel, Expand all, Collapse all, Check, Change Documents, Workflow Log, Assignment Block: [dropdown]

BOM Header Overview | Display BOM Hierarchy | Display Documents

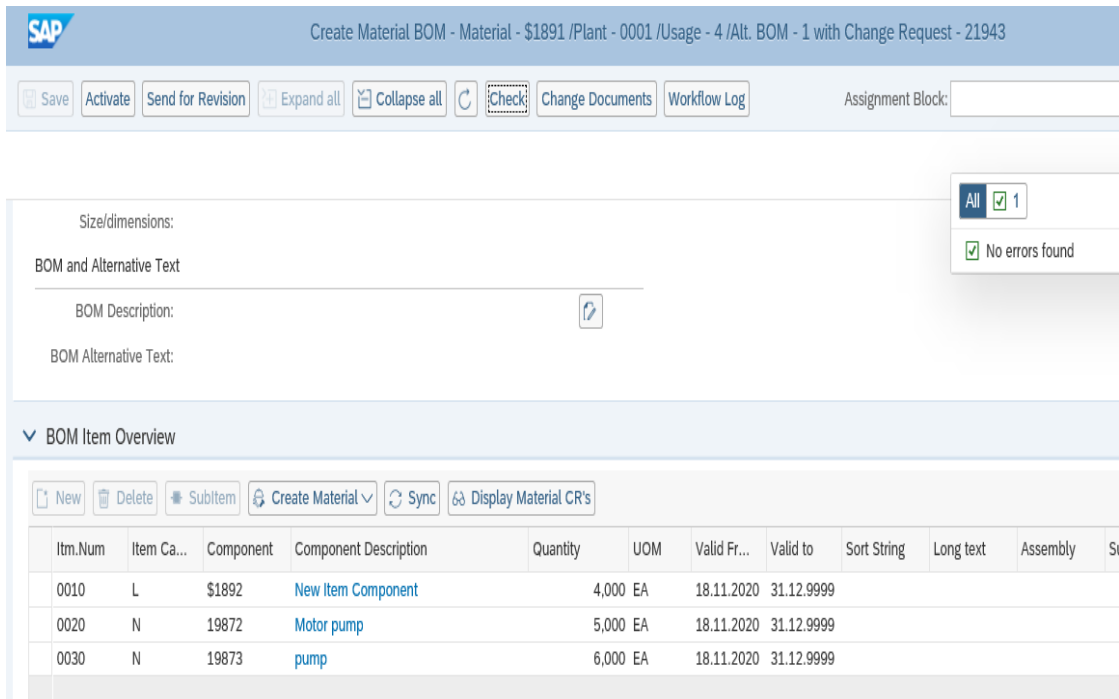
Header Data

Material: \$1891
 Plant: 0001 Werk 0001
 BOM Usage: 4 Plant Maintenance
 Alternative BOM: 1
 Technical type: Simple BOM
 Deletion Flag: ☐

Alerts (4):

- MBOM -\$1891/4/0001/01: Material \$1892 : Change request 21945 is pending for approval/final check
- MBOM -\$1891/4/0001/01: Material \$1891 : Change request 21944 is pending for approval/final check
- MBOM -\$1891/4/0001/01: Material \$169 : Change request 5033 is pending for approval/final check
- MBOM -\$1891/4/0001/01: Material \$152 : Change request 4806 is pending for approval/final check

3. Now Approve/Finalize all the Staging Material Change requests
 - Note: If the material change request type is of type MAT01, then you can activate the material change request.
4. The Active material number gets reflected into the Material BOM CR automatically. If not, you can use Sync button to replace the staging component with active material number.
5. Now Activate the Material BOM Change request



SAP Create Material BOM - Material - \$1891 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Buttons: Save, Activate, Send for Revision, Expand all, Collapse all, Check, Change Documents, Workflow Log, Assignment Block: [dropdown]

Size/dimensions:
 BOM and Alternative Text
 BOM Description: [text field]
 BOM Alternative Text: [text field]

BOM Item Overview

Buttons: New, Delete, Subitem, Create Material, Sync, Display Material CR's

Item Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long text	Assembly	St
0010	L	\$1892	New Item Component	4,000	EA	18.11.2020	31.12.9999				
0020	N	19872	Motor pump	5,000	EA	18.11.2020	31.12.9999				
0030	N	19873	pump	6,000	EA	18.11.2020	31.12.9999				

Alerts (1): No errors found

6. All the Material Change requests are Final Check Approved, and the Material BOM Change Request is also Final Check Approved as shown below.

SAP Create Material BOM - Material - 19874 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Save Expand all Collapse all Validation Log Change Documents Workflow Log Assignment Block:

Change Request: 21943 Status: Final Check Approved
 Description: Material BOM with Material Create Current Workitem:
 Priority: Created On/By: 18.11.2020 05:00:08
 Due Date: Changed On/By: 18.11.2020 06:23:57
 Reason: Finalized On/By: 18.11.2020 06:23:58

▼ BOM Header Overview Display BOM Hierarchy Display Documents

Header Data

Material: 19874 HDR MATERIAL
 Plant: 0001 Werk 0001
 BOM Usage: 4 Plant Maintenance
 Alternative BOM: 1
 Technical type: Simple BOM
 Bill of Material: 00000349
 Deletion Flag: ☐

Quantity Data

Base quantity: 1,000 EA

SAP Create Material BOM - Material - 19874 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 21943

Save Expand all Collapse all Validation Log Change Documents Workflow Log Assignment Block:

▼ BOM Item Overview

New Delete SubItem Create Material Sync Display Material CR's

Item Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long text
0010	L	19875	New Item Component	4,000	EA	18.11.2020	31.12.9999		
0020	N	19872	Motor pump	5,000	EA	18.11.2020	31.12.9999		
0030	N	19873	pump	6,000	EA	18.11.2020	31.12.9999		

Material Change Requests

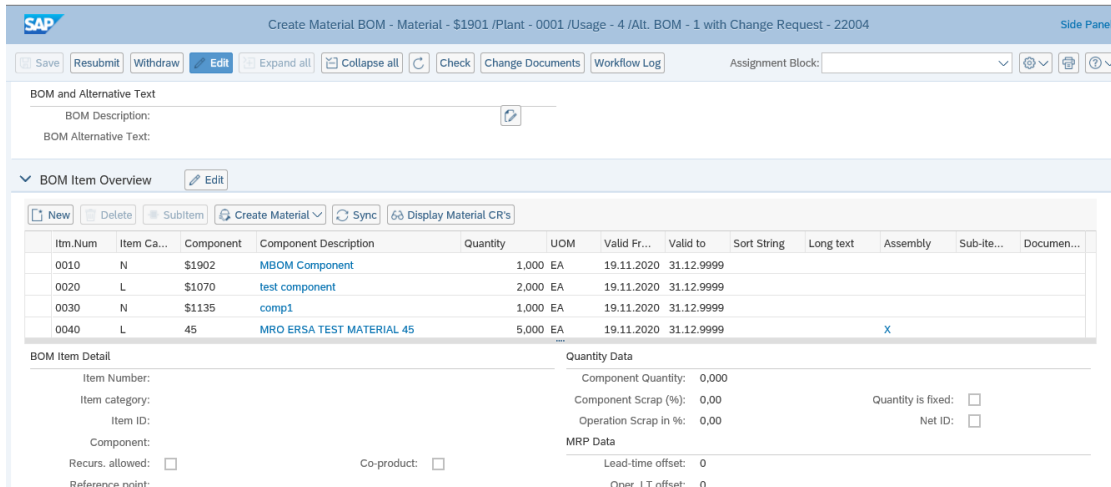
List of Material Change Requests

Change Request	Material Number	Status	Workflow Tracker
4806	19872	05 Final Check App...	What's Next
5033	19873	05 Final Check App...	What's Next
21944	19874	05 Final Check App...	What's Next
21945	19875	05 Final Check App...	What's Next

Close

Rejection Scenario

1. Click on withdraw button in Material BOM Change request and enter the Note



SAP Create Material BOM - Material - \$1901 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 22004

Buttons: Save, Resubmit, Withdraw, Edit, Expand all, Collapse all, Check, Change Documents, Workflow Log

Assignment Block: [Dropdown]

BOM and Alternative Text

BOM Description: [Text Field]

BOM Alternative Text: [Text Field]

BOM Item Overview [Edit]

Buttons: New, Delete, Subitem, Create Material, Sync, Display Material CR's

Item Num	Item Ca...	Component	Component Description	Quantity	UOM	Valid Fr...	Valid to	Sort String	Long text	Assembly	Sub-It...	Documen...
0010	N	\$1902	MBOM Component	1,000	EA	19.11.2020	31.12.9999					
0020	L	\$1070	test component	2,000	EA	19.11.2020	31.12.9999					
0030	N	\$1135	comp1	1,000	EA	19.11.2020	31.12.9999					
0040	L	45	MRO ERSA TEST MATERIAL 45	5,000	EA	19.11.2020	31.12.9999			X		

BOM Item Detail

Item Number: [Text Field]

Item category: [Text Field]

Item ID: [Text Field]

Component: [Text Field]

Recurs. allowed: ☐ Co-product: ☐

Reference point: [Text Field]

Quantity Data

Component Quantity: 0,00

Component Scrap (%): 0,00

Operation Scrap in %: 0,00

Quantity is fixed: ☐

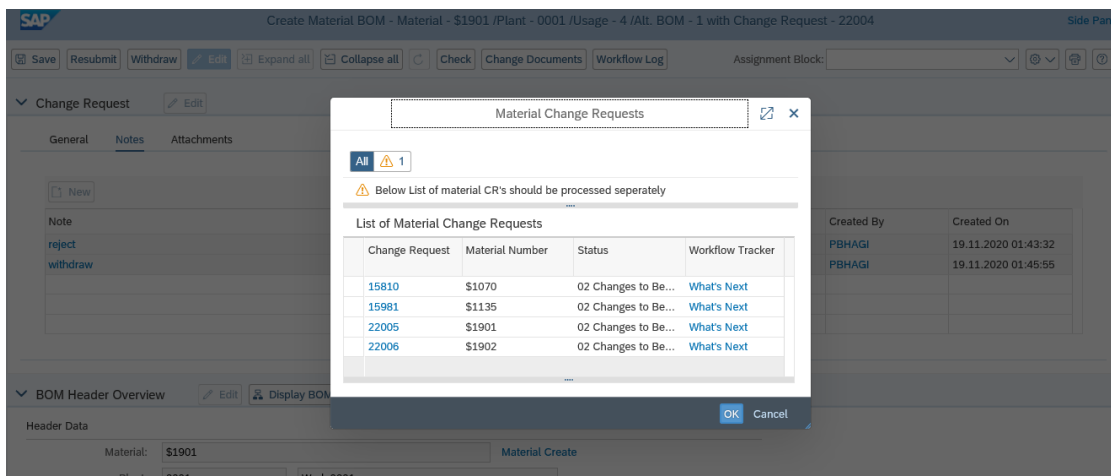
Net ID: ☐

MRP Data

Lead-time offset: 0

Oper. LT offset: 0

2. A popup is displayed with all the staging material change requests and a message that they should be processed separately.
3. If we Click on OK, Material BOM Change request will be rejected (Final Check Rejected)
4. If we Click on Cancel, Material BOM Change request will not be rejected.



SAP Create Material BOM - Material - \$1901 /Plant - 0001 /Usage - 4 /Alt. BOM - 1 with Change Request - 22004

Buttons: Save, Resubmit, Withdraw, Edit, Expand all, Collapse all, Check, Change Documents, Workflow Log

Assignment Block: [Dropdown]

Change Request [Edit]

General Notes Attachments

New

Note

reject

withdraw

BOM Header Overview [Edit] [Display BOM]

Header Data

Material: \$1901 Material Create

Plant: 0001 Work 0001

Material Change Requests

All 1

Below List of material CR's should be processed separately

List of Material Change Requests

Change Request	Material Number	Status	Workflow Tracker
15810	\$1070	02 Changes to Be...	What's Next
15981	\$1135	02 Changes to Be...	What's Next
22005	\$1901	02 Changes to Be...	What's Next
22006	\$1902	02 Changes to Be...	What's Next

OK Cancel

Created By: PBHAGI Created On: 19.11.2020 01:43:32

Created By: PBHAGI Created On: 19.11.2020 01:45:55

Restrictions

- Doesn't support "Adding Existing Staging Materials as MBOM Header Material" during MDG-M <> MBOM Integration process.
- Doesn't support "Create Material Option at Header Level" during Copy Create MBOM process and "Multiple Object Processing (MOP) Change request" for MBOM.