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| Test Script  SAP S/4HANA - 18-09-20 | public |
| Handling Unit Management (4MM\_DE) |

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# Purpose

A handling unit is a physical unit consisting of packaging materials (load carriers/packing material) and the goods contained on/in it. A handling unit is always a combination of products and packaging materials. All the information contained in the product items, for example, about batches, are retained in the handling units and always available.

In this scope item, packaging in delivery is set up. It only includes the steps for packaging and therefore always needs a standard process scope item to work with.

This document provides a detailed procedure for testing this scope item after solution activation, reflecting the predefined scope of the solution. Each process step, report, or item is covered in its own section, providing the system interactions (test steps) in a table view. Steps that are not in scope of the process but are needed for testing are marked accordingly. Project-specific steps must be added.

# Prerequisites

This section summarizes all the prerequisites for conducting the test in terms of systems, users, master data, organizational data, other test data and business conditions.

## System Access

|  |  |
| --- | --- |
| System | Details |
| System | Accessible via SAP Fiori launchpad. Your system administrator provides you with the URL to access the various apps assigned to your role. |

## Roles

Assign the following business roles to your individual test users. Alternatively, if available, you can create business roles using the following spaces with pages and predefined apps for the SAP Fiori launchpad and assign the business roles to your individual test users.

Note These roles or spaces are examples provided by SAP. You can use them as templates to create your own roles or spaces.

For more information about business roles, refer to Assigning business roles to a user in the [Administration Guide to Implementation of SAP S/4HANA with SAP Best Practices](https://help.sap.com/viewer/S4HANA2020_AdminGuide) .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name (Role) | ID (Role) | Description (Space) | ID (Space) | Log On |
| Shipping Specialist | SAP\_BR\_SHIPPING\_SPECIALIST | Shipping | SAP\_BR\_SHIPPING\_SPECIALIST |  |
| Warehouse Clerk | SAP\_BR\_WAREHOUSE\_CLERK | Inventory Processing | SAP\_BR\_WAREHOUSE\_CLERK |  |
| Master Data Specialist - Business Partner Data | SAP\_BR\_BUPA\_MASTER\_SPECIALIST | Business Partner | SAP\_BR\_BUPA\_MASTER\_SPECIALIST |  |
| Master Data Specialist - Handling Unit Data | SAP\_BR\_HU\_MASTER\_SPECIALIST | Master Data | SAP\_BR\_HU\_MASTER\_SPECIALIST |  |
| Master Data Specialist - Product Data | SAP\_BR\_PRODMASTER\_SPECIALIST | Product | SAP\_BR\_PRODMASTER\_SPECIALIST |  |

## Master Data, Organizational Data, and Other Data

The organizational structure and master data of your company has been created in your system during activation. The organizational structure reflects the structure of your company. The master data represents materials, customers, and vendors, for example, depending on the operational focus of your company.

Use your own master data or the provided sample data to go through the test procedure.

|  |  |  |  |
| --- | --- | --- | --- |
| Data | Sample Value | Details | Comments |
| Material | TG11 | Trading Good for Reg. Trading (MRP planning) | See Business Conditions and Preliminary Steps sections. |
| Material | TG12 | Trading Good for Reg. Trading (reorder point planning) | See Business Conditions and Preliminary Steps sections. |
| Material | TG21 | Trad.Good 21,Reorder Point,Batch-FIFO | Only use if you have activated the building block Batch Management (BLG) (BLH)(BLJ) (BLP).  See Business Conditions and Preliminary Steps sections. |
| Material | TG22 | Trad.Good 22,Reorder Point,Batch-ExpD | Only use if you have activated the building block Batch Management (BLG) (BLH)(BLJ) (BLP).  See Business Conditions and Preliminary Steps sections. |
| Sold-To Party | 10100003  10100009 | Customer domestic 03  Domestic DE Customer 9 | You can test the scope item using another domestic customer.  10100009 is for customer material record and POD (Proof-of-Delivery). |
| Ship-To Party | 10100003  10100009 | Customer domestic 03  Domestic DE Customer 9 |  |
| Payer | 10100003  10100009 | Customer domestic 03  Domestic DE Customer 9 |  |
| Plant | 1010 | Plant 1 DE |  |
| Storage Location | 101A | Std. storage 1 |  |
| Shipping Point | 1010 | Shipping Point 1010 |  |
| Sales Organization | 1010 | Dom. Sales Org |  |
| Distribution Channel | 10 | Direct Sales |  |
| Division | 00 | Product Division 00 |  |

For more information on creating master data objects, see the following [Master Data Scripts (MDS)](https://support.sap.com/content/dam/SAAP/Sol_Pack/BP_OP_ENTPR/BP_OP_ENTPR_S4HANA2020_7_Master_Data_EN_XX.htm) :

Table 1: Master Data Script Reference

|  |  |
| --- | --- |
| Master Data ID | Description |
| BNF | Create Product Master of Type "Trading Good" |
| BND | Create Customer Master |
| 3Y1 | Create Product Master of Type "Packaging" |

## Business Conditions

Before this scope item can be tested, the following business condition must be met.

|  |  |
| --- | --- |
| Scope Item | Comment |
| J45 - Procurement of Direct Materials | To run through this scope item, the materials must be available in stock. If you use trading goods (HAWA) you can either:   * Run through the Procurement of Direct Materials process * Or create stock using the SAP Fiori Launchpad tile Post Goods Movement (for details see Preliminary Steps section). |
| BD9 - Sell from Stock | Go through Sell from Stock. |
| 1MI - Delivery Processing without Order Reference | Go through Delivery Processing without Order Reference. |

## Preliminary Steps

### Create Packaging Material

Purpose

This process step shows you how to create sample packaging material.

Packaging materials are intended to enclose or hold together the materials that are to be packed. That means, the material that is to be packed can be packed into or onto the packaging material.

Procedure

For detailed operations of creating packaging material, please refer to Master Data Script – Create Product Master of Type "Packaging" (3Y1): <https://support.sap.com/content/dam/SAAP/Sol_Pack/Library/General/1I5_S4CLD1908_EN_XX.htm>.

### Manage Packing Instruction

#### Create Packing Instruction

Purpose

In this step, you create a Packing Instruction.

A packing instruction serves as a template for the creation of a handling unit. In a packing instruction, you define the materials and packaging materials to be packed in a handling unit.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Comments |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Master Data Specialist - Handling Unit Data. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Packing Instruction - Master Data (POP1). | The Create Packing Instruction: Initial screen displays. |  |
| 3 | Create Packing Instruction | To create a new Packing Instruction, choose Continue or press Enter.  If you want to create packing instruction from reference packing instruction, choose a reference packing instruction and press Enter. |  |  |
| 4 | Maintain the description of Packing Instruction | Enter the short text field for the description of Packing Instruction. |  |  |
| 5 | Enter Packaging Material | Enter the package material number created in the last section in field Component of item 10.  The Item category P of item 10 means packaging materials. The first line is mandatory for every packing instruction because every packing instruction needs at least 1 packaging material. |  |  |
| 6 | Maintain material and targe quantity | In item 20, make the following entries:  Item category: M Material  Component: Material number to be packed, for example, TG11  Targe quantity: Quantity |  |  |
| 7 | Enter Check Profile | In Admin.data Tab, enter 01 in the Check Profile field.  01 is the pre-delivered SAP Standard Profile. |  |  |
| 8 | Save | Choose Save.  Make a note of the packing instruction number: \_\_\_\_\_. | A packing instruction is created. |  |

#### Create Packing Instruction Determination

Purpose

In this step, you create Packing Instruction Determination Records.

This function enables the system to find a packing instruction by specific characteristics. The condition technique is applied for this. You define a packing instruction that refers to specific characteristics, such as material and ship-to-party.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Comments |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Master Data Specialist - Handling Unit Data. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Create Determination Record - Packing Instruction (POF1). | The Pkg Instruction - Create Determination Recs: Initial Screen displays. |  |
| 3 | Enter Determination Type | On the Pkg Instruction - Create Determination Recs: Initial Screen, make the following entries, and choose Enter:  Determination Type: For example, SHIP |  |  |
| 4 | Choose a key combination | In the key combination window, choose a key combination, and Select Choose.  For example, choose Material/Ship-to-Party. |  |  |
| 5 | Enter the Packing Instruction Determination | On the Create Ship. pack. inst: Fast Entry screen, enter the follow entries:  Material: TG11  Ship-to-pt: 10100003  Packing instruction: <The Packing instruction number noted in the last section>. |  |  |
| 6 | Save | Choose Save. | Packing instruction Determination is created. |  |

### Create Delivery

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Purpose

In this activity, you create the delivery.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Comments |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Shipping Specialist . |  |  |
| 2 | Access the App | Open Create Outbound Delivery - Without Order Reference (VL01NO). | The Create Outbound Delivery Without Order Reference screen displays. |  |
| 3 | Enter Key Data for Outbound Delivery Creation | On the Create Outbound Delivery Without Order Reference screen, make the following entries, and choose Enter:   * Shipping Point: 1010 * Delivery Type: LO * Sales Organization: 1010 * Distribution Channel: 10 * Division: 00 |  |  |
| 4 | Enter Delivery Details | On the Delivery without Reference Create: Overview screen, make the following entries:   * Ship-to Party: 10100003 * Planned GI: <Planned goods movement date>, for example, <Today's Date> * Material Number: <Material number> * Deliv. Quantity: Quantity , For example, 1 PC   Note If any warning pop up comes, please ignore it. |  |  |
| 5 | Save Document | Choose Save Document.  Make a note of the delivery number: \_\_\_\_\_\_\_\_\_\_. | An outbound delivery is created. |  |

# Overview Table

This scope item consists of several process steps that are listed in the following table:

If your system administrator has enabled spaces and pages on the SAP Fiori launchpad, the homepage will only contain the essential apps for performing the typical tasks of a business role.

You can find all other apps not included on the homepage using the search bar.

If you want to personalize the homepage and include the hidden apps, navigate to your user profile and choose Settings > App Finder .

|  |  |  |  |
| --- | --- | --- | --- |
| Process Step | Business Role | App / Transaction | Expected Results |
| [Execute Manual Packing](#unique_12) [page ] 13 | Shipping Specialist | Change Outbound Delivery (VL02N) | Packing for an outbound delivery is completed. |
| [Execute Automatic Packing](#unique_13) [page ] 15 | Shipping Specialist | Change Outbound Delivery (VL02N) |  |

# Test Procedures

This section describes procedures for each process step that belongs to this scope item.

## Packing

### Execute Manual Packing

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Purpose

You can execute packing for delivery items right in a outbound delivery.

To proceed with packing, make sure you go through chapters under Preliminary Steps and already have a outbound delivery created. You can also refer to standard processes in Sell from Stock (BD9) or Delivery Processing without Order Reference (1MI) about detailed instructions regarding creation of outbound delivery.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Comments |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Shipping Specialist. |  |  |
| 2 | Access the App | Open Change Outbound Delivery (VL02N). | The Change Outbound Delivery screen displays. |  |
| 3 | Enter the Outbound Delivery Number | On the Change Outbound Delivery screen, enter the outbound delivery number and choose Enter. |  |  |
| 4 | Choose Packing | In the header section, choose Pack. |  |  |
| 5 | Select Packaging Materials | In the All Existing Hus (Available for Packing) section of the screen, enter a Packaging Material and choose Enter. A Handling Unit No. will be automatically generated. Select both line items of Material and Handling Unit, then choose Pack.  Note There are also alternative options for packing:  New HU If Full: If you want to pack items completely, but do not know in advance how many handling units you require.  New HU per x Hus: If you want to pack a specific constant number of handling units into a higher-level handling unit.  New HU per Partial Quantity of Material: If you are packing a delivery item completely, but want to distribute the quantity in equal amounts over several handling units. |  |  |
| 5 | Maintain Packed Quantities | In Ttl Content tab, you can maintain the Packed Quantity for each Handling Unit. |  |  |
| 6 | Check General Overview | Choose General Overview in the header section to have a visualized hierarchy of all handling units. |  |  |
| 7 | Save Your Outbound Delivery | Choose Save to save Packing results and your outbound delivery. | Packing results together with the outbound delivery is saved. |  |

### Execute Automatic Packing

Test Administration

Customer project: Fill in the project-specific parts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case ID | <X.XX> | Tester Name |  | Testing Date | Enter a test date. |
| Business Role(s) |  | | | | |
| Responsibility | <State the Service Provider, Customer or Joint Service Provider and Customer> | | | Duration | Enter a duration. |

Purpose

You can execute automatic packing for delivery items right in a outbound delivery.

Automatic packing allows you to use packing instructions to create handling units automatically in outbound deliveries. The system automatically determines the packing instructions for the materials to be packed and then the material is packed according to the packing instructions that were found.

Note To proceed with packing, make sure you go through chapters under Preliminary Steps and already have an outbound delivery created. You can also refer to standard processes in Sell from Stock (BD9) or Delivery Processing without Order Reference (1MI) about detailed instructions regarding creation of outbound delivery.

Procedure

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Step # | Test Step Name | Instruction | Expected Result | Comments |
| 1 | Log On | Log on to the SAP Fiori launchpad as a Shipping Specialist. | The SAP Fiori launchpad displays. |  |
| 2 | Access the App | Open Change Outbound Delivery (VL02N). | The Change Outbound Delivery screen displays. |  |
| 3 | Enter the Outbound Delivery Number | On the Change Outbound Delivery screen, enter the outbound delivery number and choose Enter. |  |  |
| 4 | Choose Packing | In the header section, choose Pack. |  |  |
| 5 | Choose Automatic Packing | On the Processing of Handling Units for Outbound Delivery screen, choose Automatic Packing. | Handling units were created automatically based on the packing instruction that was determined according to the Packing Instruction Determination you maintained in the preliminary steps. |  |
| 6 | Check General Overview | Choose General Overview in the header section to have a visualized hierarchy of all handling units. |  |  |
| 7 | Check the Handling Units | On the Gerneral Overview screen, choose (+) of the each Handling Unit to expand the line items.  Check the material and quantity packed in each Handling Unit which were created according to the packing instruction in the section Create Packing Instruction. |  |  |
| 8 | Save Your Outbound Delivery | Choose Save to save Packing results and your outbound delivery. | Packing results together with the outbound delivery is saved. |  |

# Appendix

## Process Integration

The process to be tested in this test script is part of a chain of integrated processes.

### Succeeding Processes

After completing the activities in this test script, you can continue testing the following business processes:

|  |  |
| --- | --- |
| Scope Item | Comment |
| BD9 - Sell from Stock | Go through steps after chapter Handling Unit Management (Optional) in BD9 - Sell from Stock |
| 1MI - Delivery Processing without Order Reference | Go through steps after chapter Execute Packing (Optional) in 1MI - Delivery Processing without Order Reference. |

Typographic Conventions

|  |  |
| --- | --- |
| Type Style | Description |
| Example | Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.  Textual cross-references to other documents. |
| Example | Emphasized words or expressions. |
| EXAMPLE | Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE. |
| Example | Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools. |
| Example | Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation. |
| <Example> | Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system. |
| EXAMPLE | Keys on the keyboard, for example, F2 or ENTER. |

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