

Migration Guide



SAP EWM 9.0



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Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax
	Tip

Contents

SAP - Important Disclaimers	3
1 Introduction	7
1.1 Migration Process Overview	7
1.2 Migration Objects with Tool Support	8
1.3 Out of Scope	10
2 General Process Changes between LE-WM and EWM	10
2.1 Goods Receipt Process	10
2.2 Goods Issue Process	11
2.3 Internal Warehouse Processes	12
2.4 Cross-Process Functions	12
2.5 Master Data	18
2.6 Interfaces to External Systems	19
3 System Setup	23
4 Organizational Structure	24
4.1 Warehouse Number	24
4.2 Storage Type Including Storage Type Role	24
4.3 Storage Section	24
4.4 Storage Bin Type	25
4.5 Picking Area	25
4.6 Doors	25
4.7 Staging Areas	25
5 Customizing Settings for Product Master	26
6 Define Handling Unit Management	27
6.1 Packaging Material Types	27
6.2 Defining Warehouse Number Ranges for Handling Units and Storage Units	27
6.3 Storage Unit Management	28
6.4 Storage Unit Types	28
7 Storage Bin Migration	29
7.1 Storage Bin Blocking Reasons and Blocking Status	29
7.2 Storage Bin Migration Tool	29
7.3 Create Additional Storage Bins in EWM	30
7.4 Assign Storage Bins to Activity Area	30
7.5 Storage Bin Sorting	30
7.6 Storage Bin Structure for Creating Storage Bins	30
7.7 Customer-Specific Fields	30
8 Putaway and Stock Removal	31
8.1 Putaway Strategies for Each Storage Type	31
8.2 Stock Removal Strategies for Each Storage Type	33
8.3 Other Strategies	35
8.4 Warehouse Order and Warehouse Task Processing	37
9 Material Master Migration	38
9.1 Distribute Material Master Data to EWM Using CIF	38
9.2 Tool for Migration of Warehouse Number- and Storage Type-Specific Material Master Data	38

9.3	Tool for Migration of Palletization Data	39
9.4	Tool for Migration of the Warehouse Management UoM	40
10	Transactional Data Migration	41
10.1	Purchase Orders	41
10.2	Deliveries	41
10.3	Open Transfer Requirements	41
10.4	Open Transfer Orders	41
10.5	Physical Inventory Documents	41
10.6	Quality Inspection (QM)	41
10.7	Open VAS Orders	41
10.8	Stock in Transit	41
11	Stock Migration	42
11.1	Adapt Storage Locations	42
11.2	Map LE-WM Storage Location to EWM	43
11.3	Change ERP Distribution Model to Communicate to EWM	44
11.4	Tool for Stock Migration	44
12	Physical Inventory Completeness Migration	46
12.1	Overview	46
12.2	Prerequisites	46
12.3	How to Migrate	46
12.4	Delete Inventory Completeness Data	46

1 Introduction

This document is intended for customers and consultants who plan to migrate from SAP ERP LE-WM to SCM EWM. The existing warehouse solution should be taken over into the new SCM EWM landscape. There are differences between these two solutions. This document at hand helps to tackle these differences. This starts with identifying them. Furthermore, this document helps with tool support and manual steps. Because the migration guide is tightly coupled with the guide *Integration of SAP ERP with SAP EWM* (see SAP Solution Manager), this sums up to steps of three different categories:

1. Steps mentioned in the Integration Guide
2. Steps supported by migration tools
3. Mandatory manual steps

Even with the migration tools in place, the migration as such always includes manual steps and verification. We recommend that you set up a migration project for this purpose. This project should include process validation in EWM. On one hand this might be due to changed processes in EWM. On the other hand, the wider process support of EWM could also better reflect real warehouse processes. Thus, part of the migration project could deal with new process modeling possibilities available in EWM. As a consequence, with the implementation of EWM new functionalities of SCM EWM could be used which are not available in LE-WM. This can also be separated into different project phases. First, the data is migrated to EWM with the known processes. Later on, the broader functionality of EWM is introduced for the warehouse processes.

The migration guide and the tools mentioned later on are intended for SAP ERP release 4.6c and higher.

We recommend that you familiarize yourself with the migration guide as the first step of a migration project. You should also read the Integration Guide. This guide notes where migration projects have to pay special attention.

SAP offers some SAP Solution Manager documentation with details of the process of migrating from SAP ERP to SAP Extended Warehouse Management. See Solution Manager documentation for Extended Warehouse Management under Migration of SAP ERP WM to SAP EWM.

SAP also offers an SAP rapid deployment solution (RDS) for migrating warehouse management from SAP ERP to SAP Extended Warehouse Management, which represents the best practice for migrating from LE-WM to EWM. See <https://service.sap.com/solutionpackages> → *Supply Chain and Procurement* → *SAP EWM Migration*.

1.1 Migration Process Overview

The following list gives an overview of the steps to be executed and their sequence for a migration project from LE-WM to EWM:

1. Read the Integration Guide. This guide mentions steps that have to be handled differently for migration projects. Then you have to consult the corresponding chapter of this document.
 2. Activate the business function *SCM_EWM_USAB_IMPL_1: EWM, Usability and Implementation 1* in EWM.
 3. Implement the SAP Note 1523108 *LE-WM and EWM; Prerequisite for Migration and Integration* in LE-WM.
 4. Implement the SAP Note 1563906 *LE-WM and EWM; Migration and Integration; Integer fields* in LE-WM.
 5. Create an RFC user in LE-WM, to be used for data exchange of migration tools. This user should be used for the RFC connections used by the migration tools.
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6. Create a user in EWM for execution migration tools. This is an optional step to provide visibility of objects (such as storage bins and warehouse documents) created during migration.
7. Create users in EWM for execution of warehouse processes. Also consider users of mobile devices. Also consider necessary authorizations for different kinds of users. As a starting point, see the roles described in SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Roles for Extended Warehouse Management (EWM)*.
8. Create organizational data such as warehouse number and storage types. To follow the best practice procedure described in the RDS, use the Implementation Tool for Warehouse Integration, which allows you to create basic organizational data by using a wizard. The warehouse layout elements, such as storage types, storage sections, bin types and so on, can be taken over from LE-WM by using the warehouse layout migration tool.
9. Create Customizing settings reflecting your warehouse processes. You either create the processes from scratch or take them over from LE-WM. For the second option, you can use the Cross-Process Settings Migration tool.
10. Create Customizing settings related to the product master.
11. Create additional storage bins in EWM (such as staging areas).
12. Distribute the material master data to EWM using core interface (CIF).
13. Migrate warehouse number (plant) and storage type-specific material master data using the migration tool.
14. Migrate warehouse unit of measure (UoM) and palletization data using the migration tool.
15. Close all open documents (including transfer orders and deliveries).
16. Migrate storage bins using the migration tool (including GR zone and GI zone) as physical inventory (PI) data is part of the storage bin data.
17. Replicate the production supply area from LE-WM to EWM using the transaction code `/SCWM/PSA_REPLICATE`.
18. Download LE-WM stock using the migration tool.
19. Download PI completeness data using the migration tool.
20. Change Customizing to adapt storage locations.
21. Change Customizing for the LE-WM distribution model to communicate with EWM.
22. Upload stock using the migration tool.
23. Upload PI completeness data using the migration tool.

Follow the steps in exactly the order in which they are presented in this document. If you do not carry out the steps in this order, the migration may fail.



Be aware that the necessity to transport Customizing changes through your system landscape is not described in this document. If Customizing changes are needed for the migration of one warehouse number, ensure that the relevant transport requests are imported in the right order and systems.



The RDS documentation or the Solution Manager documentation provides very detailed guides on how to execute every step. It contains additional information on how to use the migration reports and how to verify that the steps were completed successfully.

1.2 Migration Objects with Tool Support

EWM offers tools for migration of the following objects:

- Storage types, storage sections, bin types, picking areas, doors, and staging areas
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- Storage bin data, including storage bin sorting for picking and cross-line stock putaway
- Warehouse number and storage type-specific material master data, including fixed bin assignment, warehouse UoM and palletization data
- Stock data
- PI completeness data
- Queues
- Movement types
- Stock removal strategies, putaway strategies, and replenishment strategies

Details about the individual tools can be found in their respective chapters.

All migration tools contain the following common parts:

- Selection criteria can be provided to limit the data to be transferred from LE-WM.
- The data exchange is based on RFC communication between EWM and LE-WM. The ERP business system is used to identify the LE-WM system to connect to.



We recommend that you use a dedicated RFC connection and a dedicated RFC user. You do this as follows:

1. Create a special RFC user in LE-WM to be used by the migration tools. This user should only have limited authorizations. The authorizations should at least include authorizations for the authorization objects `S_RFC` and `S_TABU_DIS`.
 2. Create a special RFC connection to your LE-WM system, using the user created before.
 3. Check the definition of the business system for your SAP ERP system in Customizing for *Extended Warehouse Management* under *Interfaces -> ERP Integration -> General Settings -> Define Business System*. Make a note of the logical destination for the LE-WM system.
 4. Assign the RFC connection created in step 2 to the logical system from step 3 in Customizing for *Extended Warehouse Management* under *Interfaces -> ERP Integration -> Migration from LE-WM -> Assign RFC Destinations to Logical Systems*.
 5. In the migration tools, specify the business system of your LE-WM system (see step 3).
- The transferred data is displayed on the EWM side.
 - All converted data is stored in intermediate files, which you can edit. The data is either stored on the front end PC or on the application server in logical files.



The existing logical files names do not contain a physical file name. You have to maintain the physical file name for each client in transaction `SF01`.



Pay special attention to your spreadsheet application if you plan to edit data. Sometimes these applications try to interpret cell contents and change the content by doing so. For example, leading zeros can be automatically removed for numbers. This would then not correspond to the EWM organizational data anymore (for example, storage type 0010 compared to storage type 10). Similar changes could occur with date and time fields. As a countermeasure you can set the column data format for such columns to 'text'. You should also ensure that your user's region and language settings regarding date, time and number format fit to the corresponding operating system settings of the PC that is used to edit the intermediate files. Finally, all the involved systems and applications must use the same codepage.

- You can use BAdIs to edit the data after transfer from LE-WM and before storing it in intermediate files. There additional mapping can take place. Additionally, fields can be filled based on customer logic.
This does not apply for the tool to migrate PI completeness, warehouse layout elements, queues and movement types, and strategies.
- The migration process with tool support also has to be tested. Therefore, you can revert the changes executed with the tools. This does not apply for the tool to migrate warehouse layout elements, queues and movement types, and strategies.
- The different possibilities are explained in their respective chapters.

1.3 Out of Scope

Although this document provides details for migration projects and EWM 9.0 contains tools to reduce manual tasks, there are objects which are out of scope from a standard SAP perspective, as follows:

- In general, transactional data is not transferred from LE-WM to EWM. So no documents can be open when the migration starts. For more information, see *Transactional Data Migration*.
- Existing RF transactions are not transferred automatically from LE-WM to EWM.
- System users and the related authorization roles and profiles are not transferred automatically from LE-WM to EWM.
- Due to the broader functionality in EWM, the Customizing differs from LE-WM. For more information, see *General Process Changes between LE-WM and EWM*.
- Customer-specific objects are not transferred.

2 General Process Changes between LE-WM and EWM

In EWM many processes are treated differently to how they are in LE-WM. One reason for this is that there is much more functionality available in EWM. Another reason is that the business objects are harmonized in EWM; for example, storage units (SUs) are replaced by handling units (HUs). This chapter explains what has changed and how to implement the changed processes.

We recommend that you also look at the following sources of information on specific topics needed for your warehouse processes:

- SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm>
- SAP Solution Manager
- SAP Service Marketplace at <http://service.sap.com>
- Your implementation partner

2.1 Goods Receipt Process

2.1.1 Inbound Delivery

From the purchase order, the inbound delivery process covers the notification, the inbound delivery, the goods receipt posting of the ordered goods, and the subsequent putaway.

The inbound delivery notification is a document containing all the relevant logistics data in the inbound delivery process right from the origin of the inbound delivery process (for example, shipping notification, delivery note or purchase order). The inbound delivery notification is created in EWM as a result of the distribution of the LE-WM inbound delivery to EWM.

Information about planning is saved in the inbound delivery, the status is monitored, and all the data collected during the inbound delivery is kept. On creation of the inbound delivery, activities such as the putaway or scheduling are triggered and the data generated by the inbound delivery process is recorded.

2.2 Goods Issue Process

2.2.1 Outbound Delivery

The outbound delivery process covers all shipping activities such as picking, packing, staging and goods issue.

The outbound delivery request is a document containing all the relevant logistics data in the outbound delivery process right from the origin of the outbound delivery process (such as a sales order). The outbound delivery request is created in LE-WM as a result of the distribution of the ERP outbound delivery to LE-WM.

Information about shipping planning is saved in the outbound delivery order, the status of the shipping activities is monitored, and all the data collected during the shipping process is recorded.

The outbound delivery presents the goods to be delivered together to a goods recipient. On creation of the outbound delivery, shipping activities such as picking or shipment scheduling are triggered and the data generated by the shipping processing is recorded.

2.2.2 Wave Management

In EWM you can combine warehouse request items or split items into waves on the basis of criteria such as activity area, route, or product. Waves can be created automatically or manually with the use of existing wave templates.

Wave templates serve as the infrastructure for automatic wave assignment. They enable the same wave attributes to be reused for different warehouse request items that comply with the same conditions.

With waves you can group warehouse request items to control warehouse activities such as picking. These groupings are then processed together in subsequent processes, for example, the transfer of all warehouse request items assigned to a wave at a certain point in time to warehouse task creation. The warehouse tasks created are then forwarded to warehouse order creation.

2.2.3 Production Supply

The purpose of the production supply function is to bring the components required for production to a production supply area (PSA). A PSA is an area in production or in the warehouse. The stocks on the production supply area can be managed in EWM or in LE-WM depending on the organization model used.

A PSA in EWM consists physically of one or several bins. You do not assign a storage bin to a production supply area directly. Instead you define the storage bin in which you want to stage a particular product or product group within a PSA. A bin can be also used for multiple PSAs, so there is a one-to-many relationship between bins and PSAs but a product in a PSA must have a unique bin assignment.

If the stock in a PSA is managed in LE-WM only, you still need to define the PSA in EWM. It is required to find a staging bin for the outbound delivery and it can be printed on delivery or WT papers as the goods have to be moved physically to the PSA even if the PSA is not managed in EWM.

To replicate the PSA from LE-WM to EWM, use the transaction `/SCWM/PSA_REPLICATE`, which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> ERP Integration -> Replicate Production Supply Area (PSA)*.

To make use of production integration in EWM with LE-WM you need SAP ERP 6.0 Enhancement Package 4.

The information is exchanged between the systems using delivery documents. The LE-WM system creates the deliveries, and sends them to the EWM system.

As a basis for the necessary Customizing steps, you can use the BC sets /SCWM/PROD_SUPPLY and /SCWM/DLV_PROD_SUPPLY_FOR_TEST.

2.3 Internal Warehouse Processes

2.3.1 Posting Change Process

A posting change request is a document into which the system copies all relevant logistics data from the initiator of this process for posting change process triggered externally. If you use inventory management (IM) to make posting changes in the LE-WM system, the system first generates a delivery. This delivery is a request for the EWM system to make a transfer posting for the stock involved. The LE-WM system does not create material documents or make any changes in stock at this point. The delivery is transmitted to the EWM system and as a result of this a posting change request is created in EWM.

The posting change is a document containing all the data required for triggering and monitoring the complete posting change process. It is used as a working object in the posting change process.

2.3.2 Internal Stock Transfer

An internal stock transfer is a document containing all the data required for planning and monitoring warehouse-internal product movements. In EWM transportation requests are replaced by internal stock transfers.

2.3.3 Physical Inventory

In EWM you can do a storage bin-specific physical inventory and a product-specific physical inventory. The following physical inventory methods are supported in EWM:

- Ad hoc physical inventory
- Annual physical inventory
- Low stock check
- Putaway physical inventory
- Cycle counting
- Storage bin check

You can assign several inventory methods to an inventory area.

If you are using the migration tool for storage bins, the date of the last physical inventory which is stored in the LE-WM storage bin is automatically transferred to the EWM storage bin.

2.4 Cross-Process Functions

2.4.1 Documents in Delivery Processing

EWM has its own delivery processing area. Delivery processing offers functions for executing goods receipt and goods issue activities, as well as for executing posting changes and internal stock transfers. A delivery document contains all the data required to document and control a business process. Various documents are used in delivery processing to control the processes. Every document provides various actions that are used to control the individual subsequent processes. The execution of the actions depends on the settings in the Post Processing Framework (PPF).

If inventory postings are done in the ERP system, the inventory postings are not directly processed in IM. Instead, whenever a goods movement is created in IM, the system generates inbound or outbound deliveries and passes them on to the EWM system.

2.4.2 Movement Type Determination and Warehouse Process Type Determination

In EWM the warehouse process type is similar to the movement type in LE-WM. The warehouse process type provides the information required by EWM for putaway, stock removals, internal stock transfers, stock postings and in general how to process the warehouse tasks. The determination of the warehouse process type is based on the document type and the item type of the delivery and other special process indicators.

If you want to follow the processes you run on LE-WM as closely as possible with the new warehouse process types, use the migration tool for cross-process settings. See Customizing for *Extended Warehouse Management* under *Interfaces* → *Migration from LE-WM* → *Migrate Cross-Process Settings*.

2.4.3 Cross-Docking

If you are aiming to process products and handling units (HUs) as efficiently as possible, and to minimize unnecessary load transfer activities in the warehouse, then you can use this process in a distribution center or warehouse.

In Customizing you can define how the cross-docking process is to be executed (see *Planned Cross-Docking*). You can also start by using a standard goods receipt process. You only have the system determine the cross-docking relevance after the goods have physically arrived in the warehouse (see *Opportunistic Cross-Docking*).

2.4.3.1 Planned Cross-Docking

In planned cross-docking, you define in Customizing how the cross-docking process is to proceed. The cross-docking relevance is therefore already defined before stock arrives, and before you post the goods receipt or release the outbound delivery. In EWM you can use following process variants of planned cross-docking:

- Transportation cross-docking (TCD)
- Merchandise distribution cross-docking
- Merchandise distribution: recipient-driven flow-through
- Merchandise distribution: product-driven flow-through

2.4.3.2 Opportunistic Cross-Docking

In opportunistic cross-docking, you first work with standard inbound and outbound deliveries and start the standard goods receipt process or goods issue process. You determine the cross-docking relevance after the goods have entered the warehouse or before they leave it. The following process variants exist for determining the cross-docking relevance and additional process steps:

- Push deployment (PD) (service parts planning is required)
- Pick from goods receipt (PFGR) (service parts planning is required)
- EWM-triggered opportunistic cross-docking

2.4.4 Shipping and Receiving

2.4.4.1 Staging Area and Door Determination

Simple staging area determination works similarly to LE-WM from a source storage bin out of the warehouse process type. Staging area and door determination runs automatically in the background when you create or change a delivery (outbound delivery order or inbound delivery) in EWM. In the outbound delivery process, it runs after route determination since the route influences the determination of staging areas and doors. The system needs staging areas, staging area groups, and staging bays for storage control

If you want use same logic for the staging areas in EWM as you did in LE-WM, as much as possible, use the migration tool for warehouse layout settings, which covers staging areas and doors. See

Customizing for *Extended Warehouse Management* under *Interfaces* → *Migration from LE-WM* → *Migrate Warehouse Layout Settings*.

2.4.4.2 Yard Management

In EWM the yard management is part of the shipping and receiving processes. The yard is an enclosed area outside a warehouse where vehicles and transportation units (TUs) are dealt with, waiting to be dealt with, or waiting to be collected by an external carrier.

At a checkpoint you register the arrival of vehicles and TUs in the yard and their departure from it.

Yard movements enable you to move TUs from one yard bin to another inside a yard. Possible types of yard movement are as follows:

- The TU arrives at the checkpoint and is moved to a parking space or to the door.
- You move a TU from a parking space to the door, or from the door to a parking space.
- You move a TU within the yard, from one parking space to another, or from one door to another.

2.4.4.3 ERP SD Route and SCM Route

The route used in the LE-WM system for sales orders, deliveries, and shipment documents is used in combination with an EWM system for rough planning of the shipping procedure. The route determined when creating the outbound delivery is transferred to the EWM system as grouping information. In the EWM system, LE-WM route information can be used to control warehouse-internal processing, such as when planning picking.

SCM, and therefore EWM, has its own route definition. Several processes use the SCM route, such as transportation cross-docking and dangerous goods management. The redetermination of a route in EWM implies that a SCM route is used. If a route is already determined in LE-WM you can specify in Customizing whether the route should be taken or whether a new SCM route should be determined.

In EWM, you can also use a georoute to schedule and plan processes within the warehouse more precisely. If the checkbox *Georoute and Mass ATP* is selected in combined processing for generating deliveries, the georoute is assigned to deliveries in LE-WM that come from stock transport orders. You cannot change the georoutes manually in the LE-WM system. However, the predetermined georoute can be used as a basis for a reassignment in the EWM system.

For outbound deliveries that are created from ERP sales orders, you cannot propose a georoute in the ERP system.

2.4.5 Quality Management

EWM QM uses the Quality Inspection Engine (QIE) functionality to integrate different inspection processes into storage processes. All master data and documents are created as part of the QIE.

You can use EWM QM to automatically or manually check whether delivered or putaway products satisfy your quality criteria. If you want to check products, packaging, or transports, you can perform the following inspections:

- Inspections for the goods receipt process
 - Inspect the entire inbound delivery
 - Inspect the delivered HUs within an RF environment only
 - Count the delivered products
 - Inspect the delivered products for supplier inbound deliveries (can be performed in EWM or externally in LE-WM)

In a stock transfer scenario of an inter- or intra-company network, a returns process can be initiated with execution of a logistical follow-up action (LFU) in EWM which creates a return stock transport order (rSTO) in LE-WM.

- Inspect the delivered products for customer returns
 - Returns with integration to Spare Parts Management processes:

In SAP CRM, you can define parameters that influence the goods receipt and the quality inspection of returns in the warehouse. Following the quality inspection, EWM sends the inspection outcomes to CRM. CRM evaluates the inspection outcomes. You can use this evaluation to trigger logistical follow-up actions, such as stock transfer or scrapping.

- Returns with integration to Advanced Returns Management (ERP) processes:

The end-to-end return process works with and without CRM.

Inspection of return items before goods receipt in EWM (ARM Inspection) is supported. The process starts with the creation of a customer returns order.

If the inspection takes place in EWM the inspection outcome is sent to LE-WM. The corresponding returns delivery is created based on a customer returns order or in a stock transfer scenario based on an rSTO. EWM performs the LFU's putaway or scrapping directly. For all other, most complex LFU's the responsibility for the execution is sent back to LE-WM with the transfer of the inspection outcome.

The posting from customer-owned stock to anonymous valuated stock is supported explicitly by creating a Credit Memo Request (CMR) or implicitly for special LFUs supported.

If the inspected item has been returned to a vendor the material replacement process as follow up is also fully integrated.

- Inspections in the warehouse (can be performed in EWM or externally in ERP)

If, for example, you determine that one piece of a putaway product quantity is damaged, you can trigger a quality inspection manually.

2.4.6 Value-Added Services

You can use a value-added service order (VAS order) to perform value-added services (VAS) in the warehouse through VAS activities, and to document them. Typical VAS activities are assembling products, packing products, labeling, or kitting. Here, both the goods receipt process and the goods issue process in the warehouse change. In an ideal case, you can then use process-oriented storage control to execute interim steps before final putaway or before staging in the goods issue area. In these interim steps, the VAS order defines which product processing must be performed by warehouse employees in the work centers, for example. You can also use a VAS order in the goods issue process to assemble kits for your customers, and to pack them on a customer-specific basis using this VAS order.

The packaging specification uses the packaging specification levels to inform the VAS order about the VAS activities that the warehouse employees have to perform in the warehouse. The delivery tells the VAS order about the exact amount of work to be performed.

You can use the data collected in the VAS order as a calculation basis for billing external and internal service providers, for example.

2.4.7 Task and Resource Management

EWM uses the storage control functionality to create multiple warehouse tasks for one process. In combination with EWM resource management, you can handle complex inbound and outbound processes including execution constraints in EWM. You can use process-oriented and layout-oriented methods for storage control. The goal of storage control is to display your complex putaway, stock removal process steps, and warehouse-internal movements based on your processes or your layout

data. During putaway, stock removal, and warehouse-internal movements, an individual process step can be executed on a single level basis or on a multi-level basis (through intermediate storage types).

EWM uses resource management including queue management and control data to optimize warehouse task processing.

In the RF transactions each warehouse task is processed in two steps. The first step is the confirmation from the source bin to the resource and the second step is the confirmation from the resource to the destination bin.

EWM uses exception handling during warehouse task confirmation to report and trigger follow-up activities in exceptional cases.

2.4.8 Radio Frequency Framework

EWM includes the implementation of an RF framework. It supports the SAP GUI and character-based devices (using SAP Console), as well as browser-based devices (using SAP ITS). With the RF screen manager, you can customize the appearance of RF presentation screens, to ensure that they are consistent with the attributes of the presentation devices being used. Using the RF menu manager, you can define your own menus and menu hierarchy for the RF device transactions. The framework ensures that the business logic is decoupled from the physical presentation of application data on a selected presentation device.

To take the queues you defined in LE-WM over into EWM, use the migration tool for Cross-Process Settings. See Customizing for Extended Warehouse Management under *Interfaces* → *Migration from LE-WM* → *Migrate Cross-Process Settings*.

2.4.9 Resource Management

Resource management in EWM is fully integrated into work execution and inventory management. During movement of stock or HUs with a resource, the stock and HU is booked to the resource. You can use the warehouse management monitor to see at any time where your stock is located. Resource management also contains queue management, similar to queue management in LE-WM but adapted to EWM objects such as activity area.

2.4.10 Rough Workload Estimation

In EWM there are several ways of calculating and analyzing the workload of the different processes in the warehouse.

2.4.10.1 Labor Management

Labor management provides you with functions that help you to plan labor times and resources in your warehouse more effectively, making your warehouse more productive. You use these functions to measure, plan, simulate, and visualize the activities in your warehouse.

You can compare and evaluate the performance of your warehouse employees based on engineered labor standards. After executing planned work, you can compare the planned and actual times, and trigger incentives such as bonus payments using a connected HR system.

2.4.10.2 Goods Receipt Optimization

The process enables you to check existing inbound deliveries in EWM, or create new inbound deliveries in EWM from expected goods receipts. In this way you can begin a goods receipt and carry it out optimally when you do not have a shipment notification or an associated inbound delivery in LE-WM. You check or create inbound deliveries based on the documents brought by the driver, and assign TUs to the inbound deliveries. If you want to get an overview of the planned workload in a goods receipt, you can display and evaluate the goods receipt workload for expected goods receipts. Using this function, you can check the workload for goods receipts for a specific period or time interval (as a warehouse manager, for example) and, if necessary, change planning for the goods receipt process. For instance, you can display the workload that must be completed on the current day, or the workload that is planned for the next day. Based on the planned workload for the next day, you decide, for example, that you will change the door assignment for a goods receipt for the next day.

2.4.10.3 Processing Performance Data (Workload)

In the warehouse management monitor, EWM gives you an overview of the workload of the different steps in the inbound and outbound process. These steps are defined in the process-oriented storage control. You can maintain an individual time for how long the execution will take in each process step.

2.4.11 Warehouse Monitoring

The warehouse management monitor is a central tool for keeping warehouse workers and managers constantly up-to-date on the current situation in the warehouse, and to enable them to initiate appropriate responses accordingly.

The warehouse management monitor also has alert monitoring capabilities, which highlight to warehouse managers actual and potential problematic situations in the warehouse, and provide exception handling tools.

2.4.12 Printing

EWM) uses the Post Processing Framework (PPF) to specify whether something, such as a warehouse order, has to be printed. Within the PPF, EWM calls determination of the condition technique in order to find the appropriate condition records for performing a PPF action.

In EWM only SmartForms and Adobe Forms are supported with the standard PPF actions. If a customer wants to retain the SAPscript forms, they must create their own PPF actions with the processing type *Method Call* and with their own processing logic. If you want an overview of existing forms, use search help in the transaction SMARTFORMS or SFP with the pattern /SCWM/*.

For information on how to migrate SAPscript Forms, see SAP Library for SAP ERP on SAP Help Portal at <http://help.sap.com/erp>. Choose a release. In SAP Library, choose *Incentive and Sales Force Management -> Administration -> Information System Administration -> Correspondence in ICM -> Smart Forms -> Migrating SAPscript Forms*.

Various aspects of the LE-WM print setup can be replicated as follows:

- **Spool code**
On the *SAP Easy Access* screen for *Extended Warehouse Management*, go to *Work Scheduling -> Print -> Settings -> Maintain Warehouse-Specific Printing Parameters*.
 - **Printer pool/label printer**
In EWM the printers are defined in the condition records.
 - **Sort profile/coll. proc.**
In Customizing for *Extended Warehouse Management*, go to *Cross-Process Settings -> Warehouse Order -> Define Sort Rules for Warehouse Tasks*.
 - **Print Code**
The attributes of the print code are more or less the same as the attributes of the condition record which is defined in the *SAP Easy Access* screen for *Extended Warehouse Management* under *Work Scheduling -> Print -> Settings -> Create Condition Records for Printing (Warehouse Orders)*. The time of printing is defined in the PPF action definition.
 - **Printer Assignment**
The printers are determined by the condition records which are defined in the *SAP Easy Access* screen for *Extended Warehouse Management* under *Work Scheduling -> Print -> Settings -> Create Condition Records for Printing (Warehouse Orders)*. In EWM there is a hierarchy for how the printer is determined: Firstly the printer from the condition record, secondly the printer from the user parameters, thirdly the printer from the spool parameter, and fourthly the printer from the warehouse number default data.
 - **Print Code Assignment**
In EWM you must assign the determination procedure to a warehouse process type. Only if you do this assignment the print process is triggered. This is done in *IMG -> Extended Warehouse Management -> Cross-Process Settings -> Warehouse Order -> Print -> Assign Determination Procedure*
 - **Print Program Assignment**
In EWM the print procedure is defined in the PPF action definition. This is done in Customizing
-

for *Extended Warehouse Management* under *Cross-Process Settings* -> *Warehouse Order* -> *Define PPF Action Profiles*

- Print control for multiple processing
EWM has no extra logic for single or multiple processing. Both use the same technique.
- Analyze print control tables
This functionality does not exist in EWM. You can use the application log which is written by the PPF. In transaction `SLG1` you can read the application log for the object `PPF` and the subobject `DETERMINATION` or `PROCESSING`.

For printing HU documents in EWM see the specific transactions in the *SAP Easy Access* screen for *Extended Warehouse Management* under *Work Scheduling* -> *Print* -> *Settings*. Also see the specific activities in Customizing for *Extended Warehouse Management* under *Cross-Process Settings* -> *Handling Units* -> *Basics* -> *Print*.

2.5 Master Data

2.5.1 Hazardous Material

In EWM, EH&S services are used to support safe handling and storage of hazardous substances and transportation of dangerous goods in accordance with regulations. Depending on how many products are classified as dangerous or hazardous, the master data objects can be maintained centrally (including from the EH&S specification database) or locally. This means that master data is created locally in the SCM system. With phrase management, standard texts can be entered with little effort required for entry and translation. Phrases can be assigned in the hazardous substance master (such as risk and safety phrases) and in the dangerous goods master (for printing of the dangerous goods documents). Because of this new concept, existing hazardous material master data (`MGEF`) is not automatically taken over from ERP.

2.5.1.1 Integration of Hazardous Substance Master Data

The system uses the data in the hazardous substance master records in the following places:

- It outputs hazardous substance texts in RF transactions and packing UIs and on warehouse tasks. The hazardous substance texts displayed can be R and S phrases, for example. See the Customizing activity *Assign Activities to Text Types*.
- It uses putaway checks and putaway strategies to ensure that hazardous substances are stored correctly and safely. If a hazardous substance has a different hazard rating from that permitted, it cannot be stored in a warehouse of that storage type. The system takes the hazard rating from the hazardous substance master record for the hazardous substance.
- It outputs hazardous substance data in the inventory list of hazardous substances for the fire department.

You must map the storage class and water pollution class which you have maintained in the material master into the hazard rating 1 and hazard rating 2 of the hazardous master data.

2.5.1.2 Integration of Dangerous Goods Master Data

Dangerous goods master data are taken into account during the following processes:

- Route determination/check: the routing guide determines and assesses trips for transportation. This includes the selection of a means of transport for each leg of a trip and a list of carriers. With the routing guide, you can perform dangerous goods checks to confirm that a trip is safe from a dangerous goods regulation perspective. You can also simulate route determination for test purposes in the *SAP Easy Access* screen for *Extended Warehouse Management* under *Master Data* -> *Shipping and Receiving* -> *Route Determination* -> *Simulate Route Determination*.
 - Retrieving dangerous data for printing delivery notes. Retrieving, checking, and formatting the dangerous goods data is carried out by the `BAdI /SCWM/GET_DG_PRINT`. The active `BAdI` implementation `/SCWM/EHS_DGDATA_GET` is supplied with the standard system. You can adapt the default behavior of the method `GET_DG` to suit your own requirements.
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2.5.2 Batch

You have to transfer the batch master data and, if classified, the corresponding classes and characteristics to EWM using CIF.

2.5.2.1 Batches on Plant Level

If you work with batches on plant level in LE-WM you must consider using one of the following solution alternatives for EWM:

- Convert the batch level to material level. SAP offers a service for this change. Details can be found in SAP Note 533377 *Conversion of batch level*.
- Follow the consulting solution explained in SAP Note 1550626 *EWM - Batch management requirement at plant level*. This note contains details on the service, including how to order this consulting service from SAP.

2.5.3 Active Ingredient Quantity

If you work with active ingredient quantity in LE-WM, ask your implementation partner how to implement this functionality in EWM.

2.5.4 Product Unit of Measure

If you work with product unit of measure in LE-WM, ask your implementation partner how to implement this functionality in EWM.

2.5.5 Business Partner

LE-WM customers and vendors are mapped to business partners in EWM. A business partner is a general object for a person, organization or group that has roles such as customer or vendor.

Business partners are created by distributing the master data using CIF from LE-WM to EWM. For each customer or vendor in LE-WM, a business partner is created in EWM with the number of the corresponding LE-WM object. If there is a customer and a vendor that actually refer to the same person or organization they can be mapped to a single business partner with multiple roles. In the standard setup this is only done if customer and vendor have the same number. In this case the address of both entities is checked to verify that they are actually the same.

If there is a customer and a vendor with the same number that are different entities, a number conflict arises. For this case SAP provides a solution with business partner ID mapping, which you can activate with the business function `SCM_EWM_BP_IDMAP` *EWM, Business Partner ID Mapping*. This solution includes an example implementation for a CIF BAdI that draws a business partner number from a number range if a number conflict is detected. UI services are provided that display an ERP number-like business partner number on the EWM user interface, instead of the drawn number.

Besides customers and vendors, the ERP plant is also mapped to a business partner in EWM. Those business partners are used as owner or party entitled to dispose of the stock, which link the stock to a certain plant.

You can find step-by-step instructions for the EWM integration process regarding the business partner in the Integration Guide.

2.6 Interfaces to External Systems

2.6.1 Communication with External Systems

EWM has an interface that you can use to connect automated warehouse systems such as warehouse control units (WCU) to EWM. The interface allows communication between the connected systems on the basis of IDocs. The IDocs available in EWM are nearly the same as in LE-WM but use the SCM namespace, and the fields in the segments are adapted to EWM objects such as warehouse order.

EWM has also a material flow system (MFS) component. The MFS enables you to connect up an automatic warehouse to EWM without the need for an additional warehouse control unit. You can set up the MFS in such a way that warehouse tasks (for example, an identification point to a storage bin in an automatic high-rack storage area) are subdivided into smaller tasks. These are passed on using telegram communication to the programmable logic controller (PLC) responsible in each case. HU putaway and removal from storage can thus take place without the use of another software system.

2.6.2 ERP Integration

2.6.2.1 Purchasing Info Records Confirmation Control

EWM inbound deliveries are generated in the LE-WM system and distributed to the EWM system. Up to now, inbound deliveries were either created automatically when shipping notifications were received in the system through IDocs, or manually if confirmation control in purchasing is set accordingly. If you do not use shipping notifications or use them only in rare cases, you can generate inbound deliveries automatically from purchase orders. You can set up your system so that inbound deliveries are only created automatically for plant/storage location combinations for which decentralized processing is activated for the warehouse number assigned. To each combination of order type and plant/storage location, assign a confirmation so that inbound deliveries are created automatically.

You can change the relevant purchasing info records in the *SAP Easy Access* screen under *Logistics - > Materials Management -> Purchasing -> Master Data -> Info Record -> Mass Maintenance* (transaction MEMASSIN) in the field BSTAE of the database table EINE.

2.6.2.2 LE-TRA Integration

Delivery processing offers features to integrate EWM with the Transportation (LE-TRA) component of SAP ERP. With this integration, you can control and monitor the entire transportation process from the planning stage to the goods receipt at the customer location or your own plant.

To use transportation integration, you must activate the business function *EWM, Integration with Transportation* (SCM_EWM_TRANS_INT_1).

Transportation integration enables the following processes:

- *Warehouse Inbound Processing with Transportation Integration*

When you create a delivery in SAP ERP, the system replicates it to EWM. You can then create a shipment in SAP ERP and assign inbound deliveries to it. When the planning for the shipment is completed, the system replicates the shipment with the assigned inbound deliveries to EWM through the SHPMNT05 IDoc. After receiving the IDoc in EWM, the system automatically creates transportation unit (TU) activities (and optionally a vehicle activity) for the shipment with the assigned inbound deliveries. You can then process the unloading, the goods receipt and the putaway using the desktop or radio frequency.

- *Warehouse Outbound Processing with Transportation Integration*

In the outbound process, you can use the following process variations:

- *Warehouse Outbound Processing with Transportation Planning in SAP ERP*
When you create a delivery in SAP ERP, the system replicates it to EWM. You can then create a shipment in SAP ERP and assign outbound deliveries to it. When you save the shipment with the assigned outbound deliveries, the system replicates it to EWM through the SHPMNT05 IDoc. After receiving the IDoc in EWM, the system automatically creates corresponding TU activities (and optionally a vehicle activity). You can then process the picking (and optionally the packing and the loading) using the desktop or radio frequency. After loading is completed in the system, you can post the goods issue. When the system has set the *Goods Issue Posted* status of the TU, the system replicates the TU to SAP ERP through the SHPMNT05 IDoc as an update of the existing shipment in SAP ERP.
-

- *Warehouse Outbound Processing with Transportation Planning in EWM*
When you create a delivery in SAP ERP, the system replicates it to EWM. In EWM, you can assign the delivery to a TU (and optionally a vehicle). You can then process the picking (and optionally the packing and the loading) using the desktop or radio frequency. After loading is completed in the system, you can post the goods issue. When the system has set the *Goods Issue Posted* status of the TU, the system replicates the TU to SAP ERP through the SHPMNT05 IDoc as a new shipment in SAP ERP.

2.6.3 Connection to SAP GRC Global Trade Services (SAP GTS)

You can use the following features of SAP Global Trade Services (SAP GTS) in EWM:

- Connection of delivery processing to transit procedure (NCTS)
- Connection of delivery processing to safekeeping
- Connection of delivery processing to customs warehousing procedure
- Connection of delivery processing to checks in SAP GTS

For more information about SAP GTS, see SAP Library for Global Trade Services at <http://help.sap.com/grc-gts>.

2.6.3.1 Connection of Delivery Processing to NCTS

In EWM you can execute a transit procedure for all transportations that are relevant to transit procedures. EWM differentiates between inbound deliveries and outbound deliveries during the processing. It saves the previous document number together with its previous document type as the reference document number and category in the delivery document. Delivery processing uses these to recognize that an inbound delivery is relevant to transit procedures or to customs-blocked stock.

For inbound deliveries, you can subject complete inbound deliveries that are transit procedure relevant to a transit procedure. In doing so, you can ensure that the customs authority issues an unloading permission for the vehicles with the goods to be delivered. Communication with GTS in this case is done using RFC.

For outbound deliveries, you can subject complete outbound deliveries that are transit procedure relevant to a transit procedure. In doing so, you can ensure that the customs authority issues a loading permission for the vehicles with the goods to be delivered to the goods recipient. You can set the status of the outbound deliveries manually.

2.6.3.2 Connection of Delivery Processing to Safekeeping

Safekeeping is a customs procedure that begins, in most cases, automatically after completion of the transit procedure when you have received unloading permission from SAP GTS, and you post the goods receipt. The goods remain in safekeeping until the users in SAP GTS have made a decision about their subsequent use. For example, are you to import the goods and pay customs duties and taxes, or are the goods to be included in the customs warehousing procedure?

2.6.3.3 Connection of Delivery Processing to Customs Warehousing

If you use the customs warehousing procedure in EWM, the only effect on delivery processing is in the scrapping area. If you work with warehouse requests of the posting change type for scrapping in the scrapping process in the customs warehouse, SAP GTS can apply to the customs authority for permission to scrap.

2.6.3.4 Connection of Delivery Processing to Checks in SAP GTS

EWM uses the compliance check and letter of credit check from SAP GTS to check whether an outbound delivery can be delivered to a certain goods recipient.

The connection to SAP GTS means you can make use of the following checking criteria for your deliveries:

- Checking criteria for the compliance check:
 - Sanctioned party list
 - Embargos, for example, no exports from the USA to Cuba
 - Legal control, meaning licenses
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For example, a product is only allowed to be exported in a certain quantity and to a certain goods recipient.

- Check whether letter of credit is still valid

The system performs the checks in the following cases:

- If EWM changes certain fields in an outbound delivery order or outbound delivery, or you manually change certain fields (for example, address, partner, or delivery quantity) in an outbound delivery, EWM checks the outbound delivery order or the outbound delivery.
 - If you set in Customizing that the outbound delivery is relevant for the legal control, EWM checks the outbound delivery before goods issue.
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3 System Setup

Before you can start migrating data, you must set up the connection and basic settings for the system landscape. These settings are described in the Integration Guide.

This guide describes the complete configuration for integrating ERP and EWM. EWM can be installed in either of the following ways:

- As a component of SAP SCM
- As an add-on application which physically runs in the same client as ERP

You can use this guide to set up a warehouse containing the essential basic settings. If activities are specific for migration, this is mentioned accordingly.

4 Organizational Structure

4.1 Warehouse Number

In EWM you must create an EWM warehouse number. You can do this in Customizing for *Extended Warehouse Management* under *Master Data -> Define Warehouse Numbers*. You must also maintain some warehouse number-specific control parameters in Customizing for *Extended Warehouse Management* under *Master Data -> Define Warehouse Number Control*. The default units of measure in the LE-WM warehouse number are not supported. The unit of measure in EWM is determined dynamically during warehouse task creation based on the product and the quantity in the packaging specifications.

4.1.1 Warehouse Number Mapping

In EWM you have to map the EWM warehouse number to the LE-WM warehouse number. You can do this in Customizing for *Extended Warehouse Management* under *Interfaces -> ERP Integration -> General Settings -> Map Warehouse Numbers from ERP system to EWM System*. The system covers this step by default if you use the Implementation Tool for Warehouse Integration.

4.1.2 Warehouse Number Assignment

In EWM you must map the EWM warehouse number to the master data supply chain unit. You can do this in Customizing for *Extended Warehouse Management* under *Master Data -> Assign Warehouse Numbers*. The assignment is not transported into other systems, so you must create it manually in each system. The system covers this step by default if you use the Implementation Tool for Warehouse Integration.

4.2 Storage Type Including Storage Type Role

In EWM you must define EWM storage types. You can do this in Customizing for *Extended Warehouse Management* under *Master Data -> Define Storage Type*. Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing storage types over from LE-WM to EWM, including a high number of corresponding settings that are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Warehouse Layout Settings*, For more information, see the rapid deployment solution (RDS) business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

If a storage type is ID point or pick point this is handled in EWM over the storage type role.

In storage types marked as final putaway locations, you must select the checkboxes *Process-Oriented Storage Control/Putaway Completed* and *Delete Stock Identification*. *Delete Stock Identification* is needed to clear the stock identification. If you remove stock or partial stock, the system determines a new stock identification.

In EWM you can also group storage bins for the purposes of a process. Storage bins can be grouped and sorted in activity areas. Activity areas are used, for example, in resource management for the queue determination, for sorting the storage bins in processes such as putaway or stock removal, and as split criteria in the warehouse order creation. So you have to create those activity areas for all activities you use and for all storage types in Customizing for *Extended Warehouse Management* under *Master Data -> Activity Areas -> Generate Activity Area from Storage Type*.

4.3 Storage Section

In EWM you must define EWM storage types. You can do this in Customizing for *Extended Warehouse Management* under *Master Data -> Define Storage Section*. Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing storage sections over from LE-WM to EWM, including corresponding settings, which are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM ->*

Migrate Warehouse Layout Settings. For more information, see the RDS business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

4.4 Storage Bin Type

In EWM you must define EWM storage types. You can do this in Customizing for *Extended Warehouse Management* under *Master Data -> Storage Bins -> Define Storage Bin Types*. The values from LE-WM should be used because they are required for storage bin migration. Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing storage bin types and storage unit types over from LE-WM to EWM, including corresponding settings, which are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Warehouse Layout Settings*. For more information, see the RDS business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

4.5 Picking Area

The LE-WM picking area is replaced by the activity area in EWM. If you have defined a sort order for the picking area in LE-WM, refer to *Assign Storage Bins to Activity Area* and *Storage Bin Sorting*. Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing picking areas over from LE-WM to EWM, including corresponding settings, which are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Warehouse Layout Settings*. For more information, see the RDS business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

4.6 Doors

In EWM you must create doors in Customizing for *Extended Warehouse Management* under *Master Data -> Warehouse Door -> Define Warehouse Door*. For more information on how to set up door and staging area determination, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm>.

Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing doors over from LE-WM to EWM, including corresponding settings, which are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Warehouse Layout Settings*. For more information, see the RDS business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

4.7 Staging Areas

In EWM you must create staging areas in Customizing for *Extended Warehouse Management* under *Master Data -> Staging Areas -> Define Staging Areas*. The staging area group is a storage type which you have to create in advance. The staging areas are storage sections in EWM so you also have to create them. You must also create at least one storage bin for your staging area. For more information on how to set up door and staging area determination, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm>.

Alternatively, you can use the tool *Migrate Warehouse Layout Settings*, which helps you to take the existing staging areas over from LE-WM to EWM, including corresponding settings, which are mapped accordingly. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Warehouse Layout Settings*. For more information, see the RDS business process documentation or the Solution Manager documentation for Migration of SAP ERP WM to SAP EWM.

5 Customizing Settings for Product Master

This section contains Customizing settings related to the product master that you must make available in EWM before migrating the material master from LE-WM to the product master in EWM:

- **Storage type indicator**
The LE-WM storage type indicator offers more flexibility in EWM from a process point of view. It is available in EWM as two different entities:
 - In the inbound process you can use the putaway control indicator to influence the storage type search sequence for putaway. You can maintain it in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Storage Type Search -> Define Putaway Control Indicator*.
 - In the outbound process you can use the stock removal indicator to influence the storage type search sequence for stock removal. You can maintain it in Customizing for *Extended Warehouse Management* under *Goods Issue Process -> Strategies -> Define Stock Removal Control Indicator*.

In EWM the control indicators are 4 characters long, as opposed to 3 characters long in LE-WM.

- **Storage section indicator**
The storage section indicator for putaway is handled in the same way in EWM as it is in LE-WM. In EWM you can create the storage section indicator in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Storage Section Search -> Create Storage Section Indicators*. In EWM the storage section indicator is 4 characters long, as opposed to 3 characters long in LE-WM.
 - **Special movement indicator**
The LE-WM special movement indicator is referred to as *Control Indicator for Warehouse Process Type Determination* in EWM. You can maintain it in Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Warehouse Task -> Define Control Indicators for Determining Warehouse Process Type*. The EWM indicator is 2 characters long, as opposed to 1 character long in LE-WM.
 - **Bulk Storage Indicator**
In EWM you can create the bulk storage indicator in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Putaway Rules -> Storage Behavior: Bulk Storage -> Define Bulk Storage Indicators*.
 - **Cycle Counting Indicator**
In EWM you can create the cycle counting indicator in Customizing for *Extended Warehouse Management* under *Internal Warehouse Process -> Physical Inventory -> Warehouse-Number-Specific Settings -> Configure Cycle Counting*.
 - **Stock Determination Group**
In EWM you can maintain the stock determination group in Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Stock Determination -> Maintain Stock Determination Groups*. In EWM the stock determination group is 4 characters long, as opposed to 2 characters long in SCM EWM.
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6 Define Handling Unit Management

In EWM HUs are fully integrated into stock management. You no longer need to separate HUs into a special storage location. You can have loose stock and stock in HUs in the same storage bin and in the same storage location. SUs are treated as HUs in EWM.

6.1 Packaging Material Types

Packaging materials are used for the creation of HUs. You assign each packaging material to a packaging material type in order to group your packaging materials. The packaging material type contains essential control characteristics how the packaging material is used.

For the storage units you need to create the packaging material types in LE-WM. For information on how to synchronize LE-WM and EWM Customizing, see the corresponding chapter in the Integration Guide. You can also create the packaging material types manually in Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Handling Units -> Basics -> Define Packaging Material Types*.

6.2 Defining Warehouse Number Ranges for Handling Units and Storage Units

See also the Integration Guide.

To create HUs in EWM during migration, you have to set up the number range for HUs in EWM in such a way that the numbers for the HUs coming from LE-WM are in an external number range. So you must define the defined LE-WM number ranges for SUs and the pre-existing number ranges for HUs in EWM as external number ranges.

You must also create a new number range in LE-WM and EWM for the HUs which will be created in EWM. This number range should be an internal one in EWM and an external one in LE-WM.

The following shows how the number ranges could look:

LE-WM

Storage Unit

No.	From	To
01	00001000000	00001999999

Handling Unit

No.	From	To	External
01	00002000000	00002999999	
02	00003000000	00003999999	X
03	00008000000	00008999999	X (new in LE-WM for HUs created in EWM)

EWM

Handling Unit

No.	From	To	External
01	00001000000	00003999999	X (incl. ERP-01 and ERP-02)
03	00008000000	00008999999	HUs which will be created in EWM

6.3 Storage Unit Management

In LE-WM if you put stock into a storage type where SU management is activated, the system creates an SU automatically and places the stock into the SU. If the SU is moved into a storage type where SU management is not activated, the SU is automatically deleted.

EWM does not use SU management, only HUs. If you want to move stock with a HU you have to pack the stock into a HU. This can be done automatically during inbound delivery creation or manually during warehouse task confirmation. If a HU becomes empty, the system deletes it. If you do not want to store the goods with the HU in a storage type, you can disallow HUs in the storage type by setting the HU requirement to *Not Allowed*.

6.4 Storage Unit Types

In EWM there is no difference between HUs and SUs. Therefore you have to create HU types for all SU types. You also have to assign the HU type to the warehouse number in Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Handling Units -> Basics -> Define HU Types for Each Warehouse Number and Assign HU Type Group*. For packaging materials you must also add the HU type in the ERP material master in the LE-WM packaging view.

The capacity usage of the SU type is not maintained in the HU type. If you want to work with the capacity usage, you have to maintain the packaging material. You can enter the capacity consumption in the tab strip *Units of Measure* in the warehouse product maintenance in the LE-WM and distribute it to EWM.

7 Storage Bin Migration

7.1 Storage Bin Blocking Reasons and Blocking Status

In LE-WM blocking status can be set by the user or by the system. The blocking statuses for current stock removal and for current stock placement are not migrated because they are only set if an open transfer order exists. Open transfer orders must be confirmed before migration is started, therefore such blocks should not exist in the system. The user-set blocking status and the system-set blocking status for the current inventory counting are migrated.

A system status is set in status management according to the blocking indicator fields on the storage bin master. The blocking reason is translated into a user status in status management. This means that you have to set up the system and user statuses for the object type `BIN`. The user status must be equal to the blocking reason. This means that if your blocking reason in LE-WM is 1, the user status in EWM must also be 1.

7.2 Storage Bin Migration Tool

Before you start storage bin migration, see *Organizational Structure* to identify the objects which must be created beforehand. If you add information in the intermediate file that is only recognized in EWM (such as bin access type) you must create these objects in EWM before the upload step of the migration.

You can find the tool in the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Migration from LE-WM -> Storage Bin Migration*. The following features are available:

- The basis for storage bin migration is the storage bin master data on the LE-WM side.
- You can refine the storage bins to be migrated (for example, by warehouse number, storage type or storage bin)
- As the warehouse number in EWM is longer than in LE-WM, you can enter the EWM warehouse number. If you enter an EWM warehouse number, the storage bins are created with this warehouse number.
- As the storage bin has to be unique in EWM, you can enhance the storage bin identifier with the storage type. You can set this up in Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Assign Storage Type to Storage Bin*. For example, the LE-WM storage bin 01-01-01 in the storage type 001 becomes the storage bin 001-01-01-01 in EWM.
- Even if the storage bin value changes, the value of the verification field does not change.
- As the storage type in EWM is longer than in LE-WM, you can define a mapping between the LE-WM storage type and the EWM storage type. You can do this in Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Map LE-WM Storage Type to EWM Storage Type*. For example, the LE-WM storage type 001 becomes the storage type 0010 in EWM. If you enhance the storage type with the storage bin and then change the storage type, the new storage type is used in the concatenated storage bin.
- Some storage bin attributes such as fire compartment and maximum weight are migrated.
- The storage bins are created in EWM as empty bins. The tool to migrate stock fills the storage bins.
- Dynamic storage bins (for example, 18000354) are not migrated. The storage bins with the field `KZDYN` in the storage bin master database table `LAGP` which are not initial are not migrated.
- To upload the storage bins based on the intermediate file, you can use the transaction *Load Storage Bins*. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin -> Load Storage Bins* or by using transaction code `/SCWM/SBUP`.

For more information on storage bin migration, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Migration from LE-WM -> Storage Bin Migration*.

7.2.1 Deleting Migrated Storage Bins

To delete uploaded storage bin data, you can use the intermediate file used for the upload of storage bins as a source to delete storage bins with the transaction for storage bin upload. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin -> Load Storage Bins* or by using transaction code `/SCWM/SBUP`.

As an alternative, you can use the existing transaction for mass change of storage bins. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin -> Mass Change to Storage Bins* or by using transaction code `/SCWM/LS11`.

7.3 Create Additional Storage Bins in EWM

Because dynamic bins are not supported in EWM, you must create at least one storage bin for each storage type where you have used dynamic bins.

7.4 Assign Storage Bins to Activity Area

After creating the storage bins, you must assign and sort the storage bins to the activity areas. You can do this with the transaction *Sort Storage Bins* which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin*. If you have already defined a sorting sequence for cross-line stock putaway or picking, see *Storage Bin Sorting*.

If your storage type in LE-WM has more than one picking areas assigned, you cannot use the migration tool. The tool only works with one picking area. The migration tool takes the storage type as activity area and migrates the sort order one by one. If you have split the sort order according to picking area in your storage type in LE-WM you must create an activity area for each picking area, assign the storage bins to the correct activity area, and sort the storage bins manually.

7.5 Storage Bin Sorting

You can migrate the existing sorting for cross-line stock putaway and picking. To do this you must create an activity with the warehouse process categories *Cross-Line Stock Putaway* and *Stock Removal*. You must also create activity areas with the same name as the storage types you use. Be aware of the possible storage type mapping; the activity area must have the same value as the final EWM storage type.

You migrate the storage bin sorting with the storage bin migration tool. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Migration from LE-WM -> Storage Bin Migration*.

You upload the storage bin sorting based on the intermediate file using the existing upload tool for storage bin sorting.

If your storage type in LE-WM has more than one picking areas assigned, you cannot use the migration tool, because the tool only works with one picking area. It takes the storage type as activity area and migrates the sort order one by one. If you have split the sort order according to picking area in your storage type in LE-WM you must create an activity area for each picking area, assign the storage bins to the correct activity area, and sort the storage bins manually.

7.6 Storage Bin Structure for Creating Storage Bins

The storage bin structures are not migrated automatically into EWM and are not needed for this kind of migration. For documentation purposes, you can create them manually in Customizing for *Extended Warehouse Management* under *Master Data -> Storage Bins -> Define Storage Bin Structures*.

7.7 Customer-Specific Fields

If you have added your own fields to the database table `LAGP` you can also migrate these fields into EWM. To do this, you must add the fields to the database table `/SCWM/LAGP` and to the structures `/SCWM/S_LAGP_LSMW_MIG`, `/SCWM/S_LAGP_UPLOAD_MIG`, and `/SCWM/S_LAGP_MAINTAIN`. Keep in mind that the fields in the structure `/SCWM/S_LAGP_LSMW_MIG` can only be of data type character (CHAR or UNIT).

8 Putaway and Stock Removal

8.1 Putaway Strategies for Each Storage Type

This chapter explains how you can set up your LE-WM putaway strategy in EWM. Unless stated otherwise, you make these settings in Customizing for *Extended Warehouse Management* under *Master Data -> Define Storage Type*. You can use the migration tool *Migrate Strategy Settings* to take the strategy over to EWM so that it matches the existing strategy in LE-WM as closely as possible. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Strategy Settings*.

8.1.1 Putaway Strategy

To set up putaway strategies in EWM, you have two switches; the storage behavior and the putaway rule. The storage behavior specifies the general structure of the storage type. The putaway rule specifies the logic that the system uses to find destination bins during putaway. If nothing else is mentioned you set the storage behavior to *Standard Warehouse*. The following list shows the LE-WM concepts and explains how you can create them in EWM.

Manual Stock Placement

In EWM you can specify the destination storage bin for the warehouse task creation independently from the putaway strategy in the storage type.

Bulk Storage

Set the storage behavior to *Bulk Storage*. Set the available quantity level to *Storage Bin*. Activate the HU type check. Set the mixed storage in storage bin/HU to *Several Non-Mixed HUs with the Same Product/Batch* and the mixed storage in HU to *Mixed storage not allowed*. In EWM bulk storage is only supported with HUs, so you have to set the HU requirement.

Set up the strategy in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Putaway Rules -> Storage Behavior: Bulk Storage*. You can set the following attributes:

- Management of partial quantities
- Blocked for putaway after stock removal
- Time limit

In addition you have to define your bulk storage indicators. The setup of the bulk storage structure is more or less the same in EWM as in LE-WM.

Open Storage

Set the putaway rule in EWM to *General Storage Area*.

Fixed Bins

Select the checkbox *Use Fixed Storage Bins*. Set the putaway rule to *Addition to Existing Stock/Empty Bin*. Set the mixed storage in storage bin/HU to *Several Non-Mixed HUs with the Same Product/Batch* and the mixed storage in handling unit to *Mixed storage not allowed*. Set the maximum number of storage bins to 1.

Addition to Existing Stock

Set the putaway rule to *Addition to Existing Stock/Empty Bin*. Set the mixed storage in storage bin/HU to *Several Non-Mixed HUs with the Same Product/Batch* and the mixed storage in handling unit to *Mixed storage not allowed*.

Near Picking Bin

Set the putaway rule to *Empty Bin*. Set the mixed storage in storage bin/HU to *Several Non-Mixed HUs with the Same Product/Batch* and the mixed storage in handling unit to *Mixed storage not allowed*. Set the search rule for empty bins to *Near to Fixed Bin*. Set up the strategy in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Putaway Rules -> Sorting Near to Picking Bin*. Set up the storage type control and the search width per level. It is more or less the same as in LE-WM. You can number the storage bins in a storage type based on shelves or on aisles. EWM will not search for storage bins in another shelf or aisle.

Next Empty Bin

Set the putaway rule to *Empty Bin*. Set the mixed storage in storage bin/HU to *One HU Allowed in Bin*. Select the checkbox *Addition to Existing Stock Forbidden*.

Storage Unit Type

In EWM the created storage bins are called main storage bins. When a main storage bin is divided, sub storage bins are created. In EWM the sub storage bins are real storage bins. You can see them, for example, in the warehouse management monitor.

Set the storage behavior to *Pallet Storage*. Activate the HU type check. Set the putaway rule to *Empty Bin*. Select the checkbox *Addition to Existing Stock Forbidden*. Set the mixed storage in storage bin/HU to *One HU Allowed in Bin*. In EWM pallet storage is only supported with Hus, so you have to set the HU requirement. Set up the strategy in Customizing for *Extended Warehouse Management* under *Goods Receipt Process* -> *Strategies* -> *Putaway Rules* -> *Storage Behavior: Pallets*. The definition of the storage bin sections is more or less the same as in LE-WM. The storage bin type is the type of the sub storage bin. Set the maximum number of handling units to the number of sections. The assignment of the storage bin type and the HU type to the section is also the same as in LE-WM. Here the storage bin type is the type of the main storage bin.

Dynamic Coordinate Quant Number

This putaway strategy is different to LE-WM. In EWM there are no dynamic coordinates. You have to create a storage bin for your storage type. Set the storage type role to your needs. Set the putaway rule to *General Storage Area*. Set the capacity check to *No Check Against Key Figure, Weight and Volume*. Deselect the checkbox *Process-Oriented Storage Control/Putaway Completed*.

Dynamic Coordinate Reference Number

This putaway strategy is different to LE-WM. In EWM there are no dynamic coordinates. You have to create a storage bin for your storage type. Set the storage type role to your needs. Set the putaway rule to *General Storage Area*. Set the capacity check to *No Check Against Key Figure, Weight and Volume*. Deselect the checkbox *Process-Oriented Storage Control/Putaway Completed*.

User Exit

Several BADIs are available in EWM to implement customer-specific putaway rules. You can find the BADIs in Customizing for *Extended Warehouse Management* under *Business Add-Ins (BADIs) for Extended Warehouse Management* -> *Goods Receipt Process* -> *Strategies* -> *Putaway Strategies*.

8.1.2 Capacity Check Method

In EWM the check against maximum weight and volume is always carried out, unless the capacity check is set to *No Check Against Key Figure, Weight and Volume*. The check based on palletization according to SUT 1 is handled with the packaging specification. You can set up a quantity classification for putaway in the storage type definition. Then the capacity check is carried out against the corresponding packaging specification level. The check on maximum quantity per bin in storage type can be handled by using the key figure in the product.

8.1.3 Active Capacity Check

In EWM the early capacity check is the same as in LE-WM.

8.1.4 Destination Storage Bin Changeable During Confirmation

You can do this with exception handling. You can set up the exception handling in Customizing for *Extended Warehouse Management* under *Cross-Process Settings* -> *Exception Handling*.

8.1.5 Storage Unit Type Check

As SUs are treated as HUs in EWM, use the HU type check.

8.1.6 Mixed Stock Check

In EWM you can set up the mixed stock check with two separate fields. One is for the mixed storage check in the HU and one for the storage bin.

8.1.7 Storage Section Check

In EWM it is in the same as in LE-WM.

8.1.8 Addition to Stock

In EWM it is nearly the same as in LE-WM but with an inverse logic. If you have maintained the relevance in the material master, then in EWM you have to maintain the relevance in a product putaway profile. You do this in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Define Product Putaway Profile*. Here you create a putaway control indicator and maintain the putaway profile. Then you have to assign the putaway control indicator to the warehouse data of the product master.

EWM searches for a storage bin in a customizable combination of the optimal storage type, storage section, and storage bin type. Within this combination the possibility of addition to stock is checked. If it is not possible to do an addition to stock, the system searches for an empty storage bin in this combination. If no empty bin is found, the system checks whether addition to stock is possible for the next combination of storage type, storage section, and storage bin.

8.1.9 Set Blocking Indicator at Time of Placement into Storage

If you use this feature in LE-WM, ask your implementation partner how to set it up in EWM.

8.1.10 Retain Over Deliveries

If the picker cannot pick partial quantities for physical reasons, he or she has to move the whole quantity to the work center. After picking the partial quantity, the clerk can create a HU-WT using the work center dialog to move the HU with the remaining quantity back into a dedicated storage type.

8.1.11 ID Point

If an ID point is assigned to the storage type, you must maintain the relation to the ID point in Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Warehouse Task -> Define Layout-Oriented Storage Control*.

8.1.12 Mail Control

In EWM the system creates the warehouse tasks in the background using PPF, Job or qRFC. The application operation guide for EWM describes which monitor functions are available.

8.2 Stock Removal Strategies for Each Storage Type

This chapter explains how you can set up your LE-WM stock removal strategy in EWM. Unless stated otherwise, you make these settings in Customizing for *Extended Warehouse Management* under *Master Data -> Define Storage Type*. You can use the migration tool *Migrate Strategy Settings* to take the strategy over to EWM so that it matches the existing strategies in LE-WM as closely as possible. See Customizing for *Extended Warehouse Management* under *Interfaces -> Migration from LE-WM -> Migrate Strategy Settings*.

8.2.1 Stock Removal Strategy

You can decide how the stock for removal should be sorted with the stock removal rule. You can maintain the stock removal rule in Customizing for *Extended Warehouse Management* under *Goods Issue Process -> Strategies -> Specify Stock Removal Rule*.

Partial Quantity Management

In EWM the quantity classification describes which packaging unit a product is stored in. During WT creation the packaging specification is used to get the right quantity classification, based on the requested quantity. The stock removal search sequence is determined with this quantity classification. There must be one entry in the stock removal search sequence with a quantity classification for pieces and one entry with a quantity classification for pallets, which reflects the quantity of a full HU. You have to create the following stock removal rules:

- A rule for the pieces with the sort fields *Available Quantity*, *Shelf Life Expiration Date*, *Date of Goods Receipt*, and *Storage Bin*. Assign this stock removal rule to the stock removal search sequence for pieces.
-

- A rule for the pallets with the sort fields *Available Quantity* sorted in descending order, *Shelf Life Expiration Date*, *Date of Goods Receipt*, and *Storage Bin*. Assign this stock removal rule to the stock removal search sequence for pallets. If the required quantity is greater or equal the full HU quantity, the stock is sorted in descending order (a full pallet is picked). If the required quantity is less than a full HU quantity, the stock is sorted in ascending order, so a pallet with partial quantity is chosen.

FIFO (First In First Out)

Create a stock removal rule with the sort fields *Date of Goods Receipt* and *Storage Bin*.

Shelf Life Expiration Date

Create a stock removal rule with the sort fields *Shelf Life Expiration Date* and *Storage Bin*.

LIFO (Last in First Out)

Create a stock removal rule with the sort fields *Date of Goods Receipt* and *Storage Bin*, both sorted in descending order.

Large/Small Quantities Included

EWM needs a packaging specification to determine what constitutes a large or small quantity. The system looks for a packaging specification level with the requested quantity of the warehouse task. The assigned quantity classification is used to determine the storage type search sequence. Create a stock removal rule with the sort fields *Shelf Life Expiration Date*, *Date of Goods Receipt*, and *Storage Bin*.

Fixed Bin from Material Master

Select the checkbox *Use Fixed Storage Bins* so that the existing fixed storage bin assignments are considered. The system also selects stock which is not stored in a fixed bin.

Dynamic Coordinate Reference Number

Stock which was picked for an outbound delivery order is assigned to this outbound delivery order, so in EWM there is no need to have a special stock removal rule. You must create a storage bin for your storage type. Set the storage type role to your needs.

FIFO (First in First out), GUID-Based

In EWM the inspection ID is always used to identify the proper stock. So you must create a stock removal rule with the sort fields *Date of Goods Receipt* and *Storage Bin*.

Stringent FIFO

Create a stock removal rule with the sort fields *Shelf Life Expiration Date*, *Date of Goods Receipt*, and *Storage Bin*. Create a storage type group which includes all relevant storage types. The storage bin has to be part of the stock removal rule to achieve reproducible sort sequences for other identical sort criteria. For example, if there are multiple quants with the same goods receipt date, they should always be sorted in the same order.

User Exit

Several BADIs are available in EWM to implement customer-specific stock removal rules. You can find the BADIs in Customizing for *Extended Warehouse Management* under *Business Add-Ins (BADIs) for Extended Warehouse Management -> Goods Issue Process -> Strategies -> Stock Removal Strategies*.

8.2.2 Post and Leave Material in Same Storage Bin

This is handled in EWM with the checkbox *Storage Type Control for Posting Change in Bin* but with an inverse logic.

8.2.3 Negative Stock Quantity Allowed

In EWM it is more or less the same as in LE-WM.

8.2.4 Set Blocking Indicator at Time of Stock Removal

If you use this feature in LE-WM, ask your implementation partner how to set it up in EWM.

8.2.5 Complete Stock Removal Required

If you want to remove an entire HU from a storage bin and pick only the requested quantity at another place, you can use layout-oriented storage control to set up a full HU removal. If at a later stage you want to pick the whole quantity from the storage bin, you can use a BAdI in the stock removal strategies to adjust the requested quantity.

8.2.6 Pick Point

If a pick point is assigned to a storage type, you must maintain the relation to the pick point in the Customizing for *Extended Warehouse Management* under *Cross-Process Settings -> Warehouse Task -> Define Layout-Oriented Storage Control*.

8.2.7 Upon Transfer Return Quantity to Same Storage Bin

There is no similar checkbox in EWM. You can return a HU to a specific storage type and storage section maintained in a work center. You can maintain the data in Customizing for *Extended Warehouse Management* under *Master Data -> Work Center -> Define Work Center*.

8.2.8 Return Storage Type

You can return a HU to a specific storage type and storage section maintained in a work center. If multiple storage types are connected to one pick point, you can use the putaway strategy to determine the correct one. You can maintain the data in Customizing for *Extended Warehouse Management* under *Master Data -> Work Center -> Define Work Center*.

8.2.9 Execute Zero Stock Check

In EWM the zero stock check is maintained in Customizing for *Extended Warehouse Management* under *Internal Warehouse Processes -> Physical Inventory*. First you must create an activity area for the storage type. Then you must define a physical inventory area, set the low stock check with physical inventory for this physical inventory area, and assign it to the activity area of the warehouse.

8.2.10 Round off Requested Quantity for Stock Removal

In EWM you can use the checkbox *Round Warehouse Task Quantity to Whole Units* with the value *Round WT Quantity to Available Quantity*. The system creates the WT for the whole available quantity independently of the requested quantity.

8.2.11 Control for HU Pick

In EWM it is more or less the same as in LE-WM.

8.3 Other Strategies

This chapter explains how you can map your LE-WM storage type definition into EWM. Unless stated otherwise, you make these settings in Customizing for *Extended Warehouse Management* under *Master Data -> Define Storage Type*. It also explains how you can take your replenishment strategies over to EWM.

8.3.1 Storage Type Search

In EWM the storage type search is separated into search for putaway and search for stock removal. You can maintain the search for putaway in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Storage Type Search*. You can maintain the search for stock removal in Customizing for *Extended Warehouse Management* under *Goods Issue Process -> Strategies*.

In EWM the determination of storage type search sequence is more or less the same as in LE-WM. The key fields for the determination have slightly changed, as follows:

- Storage type search
Stock removal and putaway are separated into two tables. For two step picking, the field *Two Step Picking* is available.
-

- Storage type indicator
Depending on whether you are in putaway or stock removal, the putaway control indicator or the stock removal control indicator is used.
- Stock category in the warehouse management system
Stock type/group has similar meaning.
- Special stock indicator
Sales Order Stock or *Project Stock* and *Stock Usage* can be used.
- Storage class and water pollution class
These are replaced by *Hazard Rating 1* and *Hazard Rating 2*.
- Reference to movement type during storage type search
You can use *Warehouse Process Type / Warehouse Process Type Group*, which is similar to the movement type in LE-WM.
- Storage location reference
You can use *Stock Type / Group*.

With these key fields you will find a storage type search sequence. You can maintain your storage types behind this search sequence.

- Access optimization for storage type search
In EWM it is more or less the same as in LE-WM.

8.3.2 Storage Section Search

In EWM the logic of the storage section search is more or less the same as in LE-WM. You must create the storage section indicators and assign them to the product. Then you must maintain the storage section search sequence. Here the storage class and water pollution class are replaced by *Hazard Rating 1* and *Hazard Rating 2*. The single storage sections are entered as single table lines. The sequence number is the sorting criteria. Finally you must activate the storage section check in the storage type. You can do this in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Storage Section Search*.

8.3.3 Storage Bin Type Search

In EWM the logic of the storage bin type search is more or less the same as in LE-WM. You define storage bin types and HU types in Customizing for *Extended Warehouse Management* under *Goods Receipt Process -> Strategies -> Storage Bin Determination*. Define the HU types for each storage type and assign the HU types for each storage bin type. The assignment of the storage bin type to the HU type takes place on storage type level and not on warehouse number level. You can also define a preferred storage bin type in the product master.

8.3.4 Sort Sequence for Putaways (Cross-Line Stock Putaway)

EWM uses activity areas and activities for sorting storage bins. You set these up as follows:

1. Create an activity area for the storage type in Customizing for *Extended Warehouse Management* under *Master Data -> Activity Areas -> Define Sort Sequence for Cross-Line Stock Putaway*.
2. Define the sort sequence in Customizing for *Extended Warehouse Management* under *Master Data -> Activity Areas -> Define Sort Sequence for Cross-Line Stock Putaway*.
3. Assign the sort sequence to the storage bins using the transaction *Sort Storage Bins*, which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin*.
4. You can also migrate the sort sequence with the transaction *Storage Bin Migration*, which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Migration from LE-WM*.

8.3.5 Sort Sequence for Stock Removal (Picking)

EWM uses activity areas and activities for sorting storage bins. You set these up as follows:

1. Create an activity area for the storage type in Customizing for *Extended Warehouse Management* under *Master Data* -> *Activity Areas* -> *Generate Activity Area from Storage Type* -> *Stock Removal*.
2. Define the sort sequence in Customizing for *Extended Warehouse Management* under *Master Data* -> *Activity Areas* -> *Define Sort Sequence for Activity Area* for the same activity. The warehouse process type which is used for creating the stock removal warehouse tasks must have the same activity.
3. Assign the sort sequence to the storage bins using the transaction *Sort Storage Bins*, which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management* -> *Master Data* -> *Storage Bin*.
4. You can also migrate the sort sequence with the transaction *Storage Bin Migration*, which you can find on the *SAP Easy Access* screen under *Extended Warehouse Management* -> *Interfaces* -> *Migration from LE-WM*.

8.3.6 Replenishment Strategies

For replenishment strategies, you can use the migration tool *Migrate Strategy Settings* to take the replenishment strategies over from LE-WM to EWM, so that they match the existing strategies in LE-WM as much as possible. See Customizing for *Extended Warehouse Management* under *Interfaces* → *Migration from LE-WM* → *Migrate Strategy Settings*.

8.4 Warehouse Order and Warehouse Task Processing

In LE-WM a transfer order has one or more items. Every item is a task to move a product from one storage bin to another. In EWM a transfer order item is referred to as a warehouse task. Warehouse tasks are grouped into warehouse orders. A warehouse order is an executable work package that a warehouse worker is to execute at a specific time. BADIs are available for the warehouse order and warehouse task processing. Some of them are comparable with user exits in LE-WM. By default the system groups warehouse tasks for the same outbound delivery order together in one warehouse order. So it is more or less the same behavior as in LE-WM during transfer order creation.

9 Material Master Migration

9.1 Distribute Material Master Data to EWM Using CIF

In an integrated system landscape with LE-WM, the master data for partners, materials (products) and batches are maintained in LE-WM and transferred to EWM using CIF. The steps you must take to use CIF in LE-WM and EWM are described in the Integration Guide. This description includes a chapter on data transfer from ERP to SCM using CIF. However, the CIF tool does not transfer data on all organizational levels. In particular, the fields on warehouse number and storage type level are not transferred from LE-WM to EWM. There is a dedicated tool for migrating some of these fields.

9.2 Tool for Migration of Warehouse Number- and Storage Type-Specific Material Master Data

This tool converts warehouse number- and storage type-specific material master data into EWM. The central material master maintenance takes place in LE-WM. General material master data is transferred to EWM using CIF. Warehouse number- and storage type-specific data is in the responsibility of EWM and has to be maintained locally on the EWM side.

This tool initially fills warehouse number- and storage type-specific data based on LE-WM into EWM. It can also migrate the fixed bin assignment of the material into EWM. Here it is not stored in the material master record, but in its own database table. Additional attributes which are only available on the EWM side can be maintained in the intermediate file after the download from LE-WM has taken place.

To maintain warehouse-specific product data and stock in EWM, you must define an entitled to dispose. This term, abbreviated as 'entitled', refers to a partner or organization which is entitled to dispose of stock. Usually this is the plant in which the stocks are planned and in which the ATP check is performed. For each LE-WM plant, there is exactly one partner master record with the ID type *CRM011* and the ID number that matches the plant. You can check the assignment of the warehouse number to the LE-WM plant/storage location in Customizing. For more information, see Customizing for *Extended Warehouse Management* under *Interfaces -> ERP Integration -> Goods Movement -> Map Storage Locations from ERP System to WM System*. In the tool for material master data migration, the entitled is proposed as a parameter from the default value of the EWM warehouse number, but you can change this manually.

You can define a fixed bin for a material in LE-WM within the data for each storage type (MLGT-LGPLA). In EWM, the handling and assignment of fixed bins is more flexible. You can make multiple assignments which are stored in their own database table and can be maintained using the transaction */SCWM/BINMAT*. During migration, the LE-WM bin assignment can be transferred to EWM, together with attributes such as maximum and minimum quantity. Note that the bin must exist before the assignment can be created.

The following fields are transferred from LE-WM:

LE-WM	EWM	Description
MLGN-LGBKZ	LGBKZ	Storage section indicator
MLGN-LTKZE	PUT_STRA	Storage type indicator for stock placement
MLGN-LTKZA	REM_STRA	Storage type indicator for stock removal
MLGN-BLOCK	BLOCK	Bulk storage indicator
MLGN-BSSKZ	PTDETIND	Special movement indicator for warehouse management
MLGN-L2SKR	L2SKR	Material relevance for two-step picking
MLGT-LGTYP	LGTYP	Storage Type
MLGT-NSMN	REPQTY	Replenishment quantity

Fixed Bin Assignment (/SCWM/BINMAT):

MLGT-LGPLA	LGPLA	(Fixed) storage bin
MLGT-LPMAX	MAXQTY	Maximum storage bin quantity
MLGT-LPMIN	MINQTY	Minimum storage bin quantity

Some fields which are on a higher organizational level (general Material or plant data) are now defined for each storage type in EWM. These are also transferred using this tool, as follows:

LE-WM	EWM	Description
MARC-ABCIN	CCIND	Cycle Counting Indicator
MARC-EPRIO	STCKDETR	Stock determination group

The length of some of these indicators has been changed in EWM. By default, they are transferred with their original value. You must check and adapt the corresponding entries in Customizing before the migration.

You can also change the migration rules using BAdIs, for example to add leading or subsequent zeroes. All BAdIs are part of the new enhancement spot /SCWM/ES_MIGRATION.

For more information, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Migration from LE-WM -> Warehouse Product Migration*.

9.2.1 Deleting Migrated Material Master Data

To delete warehouse number- or storage type-specific product master data, use the existing transaction to change master data. You can find it on the *SAP Easy Access* screen under *SCM Basis -> Master Data -> General Master Data Functions -> Mass Maintenance* or by using the transaction code MASSD. Here you can initialize the affected fields, but the warehouse number and storage type views are not deleted completely.

To delete assignments of fixed storage bins, use the existing transaction for mass deletion. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Storage Bin -> Delete Fixed Storage Bin Assignment* or by using the transaction code /SCWM/FBINDEL.

9.3 Tool for Migration of Palletization Data

This tool creates packaging specifications in EWM from LE-WM palletization data. In LE-WM the palletization data is maintained in the material master. Based on this data, the system proposes how to pack a quantity onto loading devices when placing a material into stock. In EWM this data is not available on the product master level; instead, it uses packaging specifications. You can use the upload tool for packaging specifications to upload the packaging specifications based on the intermediate file. However, for EWM 9.0 and later releases, for products which are SUoM-relevant, no packaging specification is generated unless you select the checkbox *Always Create Packspect*. A product is SUoM-relevant when it has at least one UoM which is marked as stock-specific in Customizing for *Extended Warehouse Management* under *Master Data->Product-> Define Unit of Measure Attributes*. This is because a packaging specification is not required, as the palletization functionality can be customized using an inbound strategy with quantity classifiers and SUoM. For more information, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Stock-Specific Unit of Measure -> SUoM in Inbound Processes -> Putaway*.

Before you run the report, you should map the LE-WM storage unit type to a packaging material using the transaction *Extended Warehouse Management -> Interfaces -> Migration from LE-WM -> Map Storage Unit Type to Packaging Material* on the *SAP Easy Access* screen. Here you have to enter a pack specification group, a condition record and condition table. Create the pack specification groups you need and create the required condition records and condition tables in Customizing for *Extended Warehouse Management* under *Master Data -> Packaging Specification*. The standard SAP condition

type for palletization is `OPAL`. During putaway the system runs a determination with this condition type. If it finds a valid pack specification, the palletization data is proposed as the default for the warehouse task. For this it is important that you define your condition type as part of the palletization procedure in Customizing for *Extended Warehouse Management* under *Master Data -> Define Warehouse Number Control*.

For more information, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Migration from LE-WM -> Map Storage Unit Type to Packaging Material*.

9.3.1 Deleting Packaging Specification

To delete packaging specifications created with the migration tool, use the existing transaction for packaging specifications. The advanced search of this transaction allows you to query the required packaging specifications (for example, based on creator or creation date). Based on this search, you can select multiple lines for deletion. You can find the transaction on the *SAP Easy Access* screen under *Extended Warehouse Management -> Master Data -> Packaging Specification -> Maintain Packaging Specification* or by using the transaction code `/SCWM/PACKSPEC`.

9.4 Tool for Migration of the Warehouse Management UoM

The warehouse management UoM (either the WM unit or the unit of issue) is retrieved from LE-WM material master data and the system creates a pack specification accordingly in EWM. On the selection screen, select the checkbox *Pack. Spec. for Alt. UoM*. Fill in the other fields in the same way as for any other product migration type. However, for EWM 9.0 and later releases, for products which are SUoM-relevant, no packaging specification is generated unless you select the checkbox *Always Create Packspec*. A product is SUoM-relevant when it has at least one UoM which is marked as stock-specific in Customizing for *Extended Warehouse Management* under *Master Data->Product-> Define Unit of Measure Attributes*. This is because a packaging specification is not required, as the warehouse management UoM functionality can be customized using an outbound strategy with SUoM. For more information, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Putaway and Stock Removal Strategies -> Stock Removal Strategies -> Strategy: Partial Quantities First* and *Strategy: Preferred Unit of Measure Last*.

Before you run the report, you should map the warehouse management UoM to a packaging material using the transaction *Extended Warehouse Management -> Interfaces -> Migration from LE-WM -> Map Warehouse Management UoM to Packaging Material* on the *SAP Easy Access* screen. Here you enter a pack specification group, a condition record and condition table. Create the pack specification groups you need and create the needed condition records and condition tables in Customizing for *Extended Warehouse Management* under *Master Data -> Packaging Specification*. The standard SAP condition type for the warehouse management UoM is `OWHT`. During picking, the system runs a determination with this condition type. If it finds a valid packaging specification is found, the alternative UoM is retrieved from it and proposed as the default UoM for the warehouse task. For this it is important that you define your condition type as part of the *Warehouse-Internal Processes* procedure in Customizing for *Extended Warehouse Management* under *Master Data -> Define Warehouse Number Control*.

For more information, see SAP Library for SAP Extended Warehouse Management at <http://help.sap.com/ewm> under *Migration from LE-WM -> Map Warehouse Management Unit of Measure to Packaging Material*.

10 Transactional Data Migration

The migration tools do not support the transfer of any logistical or financial documents to EWM.

For migration to EWM, there should be no open documents in LE-WM. This chapter explains how to handle with open documents. It is expected that you do not want to execute the open documents in LE-WM but in EWM.

10.1 Purchase Orders

If you have open purchase, you can choose one of the following options to proceed:

- Manually enter the confirmation control key in the purchase order so that inbound deliveries are created automatically.
- Change the purchasing info records as described under *Purchasing Info Records Confirmation Control*.

10.2 Deliveries

Deliveries which are open or partially processed are not transferred to EWM by the migration tools. Therefore you must either delete or complete them in LE-WM. If your system contains old deliveries that are closed from a business perspective, but characterized as open by the system, you can use the transaction code `VL_COMPLETE` to complete them. For more information, see the documentation of this transaction and SAP Note 992587 *Manually closing completed deliveries*.

When you have made all the settings according to the Integration Guide, and you have mapped the LE-WM plant and storage location and EWM warehouse number, the system distributes new deliveries to EWM. Depending on the delivery type, the received data is stored as inbound or outbound delivery requests, and in the normal case, directly activated as inbound deliveries or outbound delivery orders in EWM.

10.3 Open Transfer Requirements

If there are already transfer orders created for the transfer requirement, confirm or cancel the transfer orders. If there are no open transfer orders, you must delete the transfer requirement.

10.4 Open Transfer Orders

You can execute and confirm the transfer order. If this is not possible, you must cancel it.

10.5 Physical Inventory Documents

You must close all open physical inventory documents and clear the differences. The date of the last counting is migrated.

10.6 Quality Inspection (QM)

Close as many open quality inspection documents as possible. If you migrate quality inspection stock, you must allow the system to use posting change for quality inspection stock, and do a manual posting change if the quality inspection is finished. You cannot use standard EWM inspection transactions to post quality inspection stock.

10.7 Open VAS Orders

As the concept of VAS differs in LE-WM and EWM, you must process open VAS orders in LE-WM before migration.

10.8 Stock in Transit

If you have stock in transit, ensure that there is no open inbound delivery created in ERP for this stock.

11 Stock Migration

11.1 Adapt Storage Locations

There are several ways of changing the LE-WM storage location to an EWM storage location, as follows:

- Clear the storage location posting to the cost account
- Consolidate the existing storage location(s) into a new storage location for EWM
- Keep the existing storage location with a temporary switch to an intermediate storage location



Consider the usage of existing or new storage locations for your EWM warehouse. In EWM you can use one or more storage locations in the plant. Two storage locations in one warehouse allow you more flexibility in the availability of the stock. For example, stock in storage location *Received On Dock* has been received in the warehouse but has not been put away into the final bin yet and as such is not available yet for customer orders; stock in storage location *Available For Sale* is stored in the final bin in the warehouse and is ready to be picked for customer orders.

As a general prerequisite you have to download the stock data from LE-WM using the stock migration tool.

Clear the storage location posting to the cost account

1. Maintain the Customizing activity *Logistics Execution -> Warehouse Management -> Activities -> Physical Inventory -> Clear Differences (Interface to Inventory Management)* as follows:
 - Under *MM-IM Movement Types for Clearing Inventory*, maintain the required movement types. Use movement type 562 for clearing, to facilitate using the transaction for stock data transfer in EWM later. The stock transfer posting in EWM will communicate movement type 561 to LE-WM.
 - Under *Forbid Clearing of Differences in Inventory Management*, deselect the checkbox *No diff. posting* for the affected storage types.
2. Use the transaction *Logistics -> Logistics Execution -> Internal Whse Processes -> Physical Inventory -> In Warehouse Management -> Clear Differences -> Inventory Management on the SAP Easy Access screen to clear the storage types of the storage location and post them to a cost account.*
3. Use the transaction *Extended Warehouse Management -> Interfaces -> Stock Data Transfer* to upload the stock to EWM. With this posting, the LE-WM stock is posted back to the balance sheet account from the cost account. Ensure that the checkbox *Do Not Post Data in ERP* is deselected during the stock upload.
Note that in this case the financial department probably has to approve the postings.

Consolidate the existing storage location(s) into a new storage location for EWM

1. Use the *Stock Migration* transaction to upload the stock of a given storage type into a file. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Migration from LE-WM -> Stock Migration* or by using transaction code `/SCWM/MIG_STOCK`.
 2. Create a new storage location, `AFS`, which is managed by IM.
 3. Define an intermediate storage type in LE-WM (`X04`). Set the putaway strategy to `Q = Dynamic coordinate quant number`. Ensure that SU management is not active. Be aware that after moving the stock, the information related to handling units and storage unit will get lost. The stock placement and stock removal don't need confirmation.
 4. Set the storage type to the destination data of the movement type. Select the checkboxes *TO Item can be confirmed immediately* and *Propose Confirmation*.
 5. Specify the destination storage location and the required movement type in Customizing for *Logistics Execution* under *Warehouse Management -> Interfaces -> Inventory Management -> Define Storage Location Control -> Storage Location Control In Warehouse Management*. You can ignore the error message *Assignment plant / storage location && to warehouse number & does not exist (LT225)*.
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6. On the *SAP Easy Access* screen, choose *Logistics -> Logistics Execution -> Internal Whse Processes -> Stock Transfer -> Create Transfer Order -> From Stock List* to transfer the stock to the newly created stock type X04.
7. The stock has been transferred to the storage location AFS, however, EWM does not yet recognize it. Thus, you have to upload the stock. On the *SAP Easy Access* screen, choose *Extended Warehouse Management -> Interfaces -> Data Upload -> Stock Data Transfer*. During the upload, ensure that the checkbox *Do Not Post Data in ERP* is selected. The new storage location settings are adapted to reflect the connection to the EWM system.

Keep the existing storage location with a temporary switch to an intermediate storage location

1. Create an intermediate storage location IM00.
2. Carry out the same steps 1, 3, 4, and 5 as in the second variant above.
3. Specify the destination storage location and the required movement type in Customizing for *Logistics Execution* under *Warehouse Management -> Interfaces -> Inventory Management -> Define Storage Location Control -> Storage Location Control In Warehouse Management*. You can ignore the error message *Assignment plant / storage location && to warehouse number & does not exist (LT225)*.
4.
 - a. Create an intermediate storage location (IM00) which is IM-managed. Use transaction code LQ01 in LE-WM to post the stock from the existing storage type to the new one. Use movement type 411.
 - b. Adapt the existing storage location, which is now empty, to reflect the connection to the EWM system. To post the stock in EWM and to post it to the correct storage location in LE-WM, use the *Stock Data Transfer* transaction. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Stock Data Transfer* or by using transaction code /SCWM/ISU. Use the BAdI /SCWM/EX_ERP_GOODSMVT_EXT to change the movement type from 561 to 411 and to specify the source storage location. You must make both changes in CT_GOODSMVT_ITEM.

You should execute the stock comparison using transaction code /SCWM/ERP_STOCKCHECK to ensure that LE-WM and EWM have the same stock data on the storage location level.

11.2 Map LE-WM Storage Location to EWM

In LE-WM, the storage locations can be HU-managed or SU-managed. This concept does not apply in EWM. Hence, you should use one of the following options to map the storage location during stock migration.

- Process the migration by considering the storage location; that is, without migrating stock that is located in more than one storage location. Whenever you want to carry out a migration, change the Customizing to reflect the mapping between the storage location in LE-WM and the storage location in EWM.

For example, assume that there are two storage locations in LE-WM:

- 0088 with storage units
- 0100 that is HU-managed

Assume that you start by migrating the stock which is available in 0088. In this case, you should make an entry for mapping the 0088 storage location in Customizing for *Extended Warehouse Management* under *Interfaces -> ERP Integration -> Goods Movements -> Map Storage Locations from ERP System to EWM*.

Once the migration has finished for this storage location, you can delete this mapping and create a new entry for the storage location 0100. So at the end, the stock has been migrated and has the same availability group in EWM.

- Use the existing storage locations, such as 0088 or 0100, for the integration with EWM. Enter the mapping of both storage locations in Customizing and process the migration without considering the storage location in EWM. Once the stock has been uploaded in EWM, you can perform an internal goods movement in order to have the same availability group for all the
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stock. For more information, see “Integration of SAP ERP with SAP EWM” in the Business Process Repository of SAP Solution Manager.

1. In transaction `SOLAR02`, select the structure node *Configuration*.
2. On the *Structure* tab page, select the *Change Configuration Structure* button.
3. On the *Structure* tab page, select the value help for the *Configuration Element* field.
4. In the displayed structure, choose *Solutions/Applications -> SAP EWM -> Basic Settings for SAP EWM 7.02*.

11.3 Change ERP Distribution Model to Communicate to EWM

You should carry out this step at the end because it implies that the warehouse is processed by EWM and no longer by LE-WM. We recommend that this you carry out this step when all the data and settings have been processed correctly. In Customizing for *Logistics Execution*, go to *Extended Warehouse Management Integration -> Basic Setup of EWM Connectivity -> Maintain Extended WM-Specific Parameters*. For more information, see “Integration of SAP ERP with SAP EWM” in the Business Process Repository of SAP Solution Manager.

1. In transaction `SOLAR02`, select the structure node *Configuration*.
2. On the *Structure* tab page, select the *Change Configuration Structure* button.
3. On the *Structure* tab page, select the value help for the *Configuration Element* field.
4. In the displayed structure, choose *Solutions/Applications -> SAP EWM -> Basic Settings for SAP EWM 7.02*.

11.4 Tool for Stock Migration

The following are prerequisites for stock migration:

- You have transferred all products and batches to EWM.
- You have created all storage bins in EWM.
- You have finalized the LE-WM-EWM configuration (such as HU integration, serial numbers profiles).

This tool converts LE-WM stock into EWM. The basis for stock migration is the LE-WM stock data. You can filter the stock that is migrated (for example, by warehouse number or storage type). Stock attributes including serial numbers, batches, and nested HUs are migrated. SUs and HUs are converted into EWM HUs. The existing EWM upload tool is reused to migrate stock, and the CSV file format is used for stock data. Stock in intermediate storage areas is not migrated, as this kind of stock is related to a delivery or to internal movement document. Only stocks which are not related to any processing document are migrated. There must not be any open transfer orders during stock transfer.

You run the tool in two steps, as follows:

1. Read the data from LE-WM and save it in a local file or in a logical file. You can change the file if necessary.
2. Import the data using the Initial Stock Upload transaction (transaction code `/SCWM/ISU`). You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Data Upload*.

This tool has the following mandatory parameters:

- LE-WM system from which the data should be read
- EWM warehouse number for the migration
- LE-WM warehouse number for the migration
- Name of the file where the data should be stored (local file or logical file)

You can also restrict the stock that is migrated by using additional selection parameters on the LE-WM side, such as the following:

- Plant
- Storage location
- storage type
- storage bin

You can also specify a range for these selection parameters. You must ensure that any given stock is not migrated more than once, as the tool does not check for or prevent this.

11.4.1 Deleting Migrated Stock

To delete the uploaded stock information, use the report to post unplanned goods issue. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Execution -> Post Unplanned Goods Issue* or by using transaction code `/SCWM/ADGI`. Here you must specify the process *Cancel GI Document* and the material document(s) of the upload. They are shown in the protocol during the upload and can be queried in the warehouse management monitor. As the checkbox *Do Not Post Data in ERP* is set in all the variants, the report does not send any information to LE-WM. Hence the stock is the same in both systems.

11.4.2 Stock Upload

Here we explain all the scenarios that are possible during the stock upload. We distinguish four different scenarios. The upload is executed in one step, so these different scenarios are described for illustration purposes. The configuration is the same in the tool for all scenarios.

11.4.2.1 Simple Stock Migration

This involves stock with no HU data. For every entry in the `LQUA` database table, a corresponding entry is made in the CSV file.

11.4.2.2 Stock with Storage Unit

This involves stock which is contained in an SU. In EWM there is no corresponding concept for SU. Therefore, for every SU in LE-WM, a handling unit is created in EWM. The SU entry is read from the database table `LQUA`. This is corresponding to the case where an entry in `LQUA` has the following fields with the corresponding values:

- The `LENUM` field is not initial
- The `KZHUQ` field is null

The HU in EWM has the same name as the SU. To set packaging material, you should make the relevant entries on the *SAP Easy Access* screen under *Extended Warehouse Management -> Interfaces -> Migration from LE-WM -> Map Storage Unit Type to Packaging Material*.

11.4.2.3 Stock with Handling Unit

This involves stock which is contained in a HU. The HU entry is read from the database table `LQUA` where both the fields `LENUM` and the `KZHUQ` are not initial.

In the case of nested HUs, `LQUA` does not provide all the HUs. The system only reads the HU which is on the top. The stock migration report also considers the HU hierarchy. This is rebuilt in EWM. If there are nested HUs, the system reads the entire hierarchy and rebuilds it in EWM with the same names. If the LE-WM stock is in several HUs of the hierarchy under the specified HU, the stock may be split according to HU in EWM.

11.4.2.4 Stock with Serial Numbers

This scenario is part of the previous one, as all stock with serial numbers is included in a HU. If the function module `BAPI_GET_HULIST` returns that the HU contains serial numbers, then all the serial numbers of that HU are read from the LE-WM database tables `SER06` and `OBJK`. The first one returns all the `OBJK` numbers which are related to the HU and the second one provides all the serial numbers for every `OBJK`. The serial numbers are created in EWM with the serial number profile that you have defined in the material master. It is important that you check that this serial number profile exists in EWM and is configured correctly.

12 Physical Inventory Completeness Migration

12.1 Overview

When creating inventory documents after the stock migration from LE-WM to EWM, initially all of the products are proposed for inventory. The progress of the inventory in the LE-WM system is not migrated with the stock. The *Physical Inventory Completeness Migration* report transfers data to EWM about when a product was last completely counted. The report migrates the completeness date for each product and entitled to dispose. It does not migrate inventory documents or partial count results.

12.2 Prerequisites

To migrate physical inventory completeness, the corresponding product master data and the entitled to dispose of the LE-WM plant must be available in EWM. You must also create inventory areas and map them to activity areas in Customizing. For more information about setting up the physical inventory, see the implementation guide.

12.3 How to Migrate

To migrate the date of a product's last inventory completeness from LE-WM to EWM, completeness data sets are created in the EWM database table `/LIME/PI_ADMI` according to the LE-WM inventory data. The inventory completeness in EWM is stored according to inventory area. As there are no inventory areas in LE-WM, the completeness is set for the whole warehouse.

To download data from LE-WM, enter the LE-WM system, the LE-WM plant and warehouse number and the EWM warehouse number. You can migrate the inventory completeness for certain products only by refining your selection by LE-WM product number. The downloaded data is stored in a CSV file. You must enter a local or a logical filename for this file. The data stored in the file is already converted into EWM data. The date of the last complete inventory is stored, along with the EWM product number and the entitled that represents the LE-WM plant.

To upload the inventory completeness into EWM, enter the EWM warehouse number and the name of the CSV file.

12.4 Delete Inventory Completeness Data

To delete the migrated inventory completeness data from EWM, use the transaction *Delete Completeness Data Sets*. You can find it on the *SAP Easy Access* screen under *Extended Warehouse Management -> Physical Inventory -> Periodic Processing* or by using transaction code `/SCWM/PI_COMPL_DEL`. This transaction allows you to delete inventory completeness data sets that are usually created by the EWM system. To prevent data loss, data sets that are created during a regular inventory cannot be deleted if they belong to the current or the previous inventory period. To allow you to test the inventory migration, the data sets created during this process are marked as migrated data sets. Those data sets can be deleted even if they are from the current inventory period.
