

# Warehouse Management (WM) I

This case study explains an integrated warehouse management process which is triggered by a purchase order for a warehouse-managed storage location.

#### **Product**

S/4HANA 2020 Global Bike

Fiori 3.0

#### Level

**Beginner** 

#### **Focus**

Warehouse Management

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#### **Version**

4.1

#### **Last Update**

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#### **MOTIVATION**

Warehousing has significant value for logistics.

Current trends such as higher cost cycles pressure, shorter innovation, higher customer expectations and globalization of markets make great demands on companies, particularly warehouse logistics. This is especially difficult in industries with differentiation high like the consumer goods industry. Furthermore, customers have increasingly higher demands on reliability, promptness and flexibility of deliveries.

Warehouse management systems support the global flow of goods between the producer and the purchaser and facilitate near fail-proof logistic operations in increasingly complex supply chains.

#### **PREREQUISITES**

Before you use this case study, you should be familiar with navigation in the SAP system.

In order to work successfully through this case study, it is not necessary to finish the WM exercises. Anyway, it is recommended.

#### **NOTES**

This case study uses the Global Bike (GB) data set, which has been exclusively created for SAP UA global curricula.





## Process Overview

**Learning Objective** Understand and perform a warehousing process for externally procured goods.

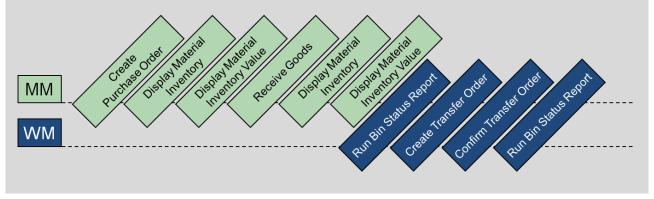
Time 70 min

**Scenario** Due to increasing sales output in your San Diego distribution center, management has decided to install a Warehouse Management System. This implementation has just been completed and the new system needs to be tested. For this purpose, trading goods should be procured by a vendor and put in the stock in San Diego, using the new warehouse management system.

**Employees involved** Jennifer Brown (Plant Manager)

Carolin Bruzik (Warehouse Supervisor) Sunil Gupta (Warehouse Employee) Yoshi Agawa (Goods Receipt Clerk)

In order to receive goods from a vendor you need to create a purchase order. Goods will be sent by the vendor to the distribution center and you will create a goods receipt in San Diego. The system will automatically create a transfer order for the received goods to put them into stock. In conclusion, you will check if the goods were stored in the correct storage bins. As this case study focuses on Warehouse Management, detailed instructions of how to receive the invoice and how to pay the vendor are not included. However, you may use respective parts of the Materials Management (MM) case study to finalize the procurement process and see the financial impact.



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## Step 1: Create Purchase Order

Task Create a purchase order.

Time 10 min

**Short Description** Use the SAP Fiori Launchpad to create an immediate purchase order for materials from a supplier, i.e. to start the procurement process without having created a purchase requisition before.

Name (Position) Jennifer Brown (Plant Manager)

To create a purchase order, use the app Create Purchase Order in the Warehouse Management area on the Storage Purchasing page in the Plant Manager role.

Create Purchase Order

**Note** By clicking vou can close the help on the left side of the screen. This can be shown again at any time by clicking on .

In the *Create Purchase Order* screen, change the type of purchase order to **NB Standard PO** and enter **103**### (replace ### with your number) as Supplier. Confirm your entries by clicking Enter and accept any warning messages.

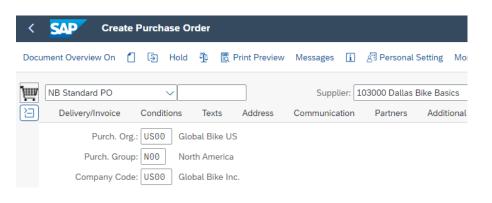
Then, fill in **US00** as Purch.Org, **N00** as Purch. Group and **US00** as Company Code. Press Enter again to confirm your entries.

US00

NB Standard PO 103###

N00

**US00** 



Select to expand the *Item Overview*. In the item overview enter **KPAD1**### as Material (replace ### with your number), **50** as PO Quantity, **8 days from today** as Delivery Date, **40** USD as Net Price, **SD00** as Plant and **TG00** as Storage Location.

KPAD1### 50 8 days from today 40 SD00 TG00 In the next row, repeat your entries but choose EPAD1### as Material. Confirm your entries by pressing Enter. Create Purchase Order Document Overview On 👩 🛐 Hold 🕸 🗒 Print Preview Messages 🗓 🖓 Personal Setting Services for Object 🗸 More 🗸 NB Standard PO Supplier: 103000 Dallas Bike Basics Delivery/Invoice Conditions Texts Address Communication Partners Additional Data Org. Data Status Incoterms Purch. Org.: US00 Global Bike US Purch. Group: N00 North America Company Code: US00 Global Bike Inc. 🕆 S... Itm A I Material Short Text PO Quantity OUn C Deliv. Date Net Price Cu... Per OPU Matl Group Plnt Stor. Location 
 KPAD1000
 Knee Pads
 50
 EA
 D
 06/16/2022
 40.00
 USD
 1
 EA
 Safety Gear
 DC S...
 Trading Goods

 EPAD1000
 Elbow Pads
 50
 EA
 D
 06/16/2022
 40.00
 USD
 1
 EA
 Safety Gear
 DC S...
 Trading Goods
Compare your entries with the screenshot above. Then, click on save your order. The system will assign a Standard PO document number. Standard PO created under the number 4500000022 to return to the SAP Fiori Launchpad. OK Confirm any browser warnings that may appear with

Repeat for EPAD1###



✓ Im SD00 DC San Diego

TG00 Trading Goods

## Step 2: Display Material Inventory

Task View the inventory of your material.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to display the inventory of your material.

Name (Position) Jennifer Brown (Plant Manager)

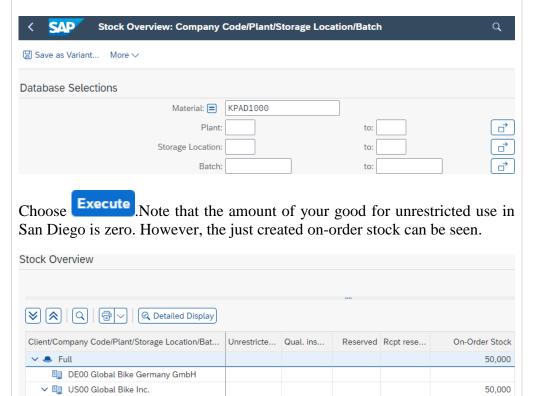
To display the material inventory, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Stock Overview*.

Display Stock Overview



Enter **KPAD1**### as Material (remember to replace ### with your number). All other settings can be applied.

KPAD1###

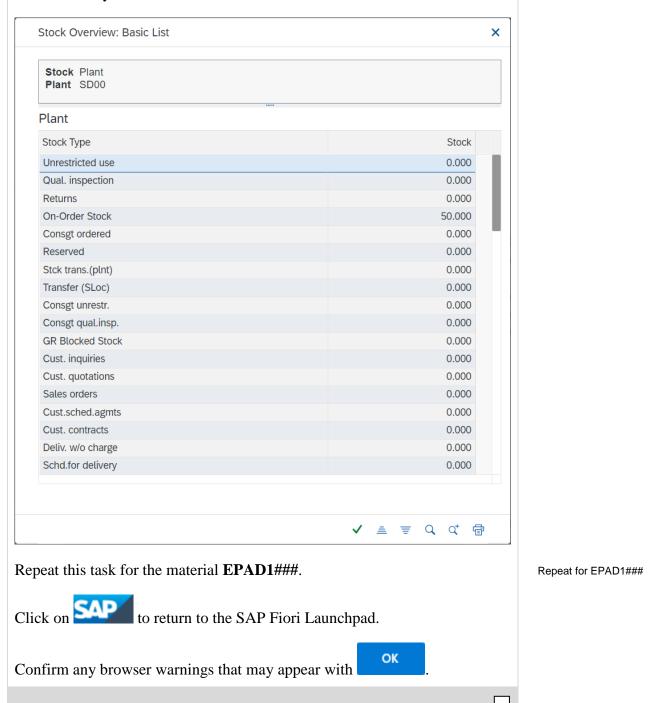


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50.000

50,000

After double clicking on *SD00 DC San Diego*, you will see a separate *Stock Overview* for your distribution center and the On-Order Stock balance of 50.





## Step 3: Display Material Inventory Value

Task View the value of your material inventory.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to display your material inventory.

Name (Position) Jennifer Brown (Plant Manager)

To display the material inventory value, use in the Warehouse Management area on the Storage Purchasing page in the Plant Manager role the app Display Warehouse Stock.

Display Warehouse Stock



In the *Display Warehouse Stocks of Material* screen, enter **KPAD1**### as Material. Ensure that all other search criteria fields are blank and click on **Execute** 

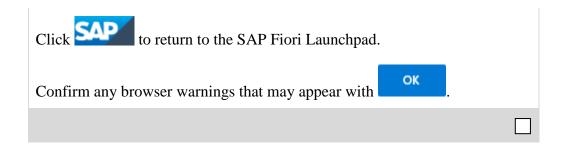
KPAD1###

	×		×	×	×	×	×
* Total							
	0.00	USD	0.00	0.00	0.00	0.00	0.00
TG00	0	EA	0	0	Θ	0	G
KPAD1000			Knee Pads		SD00 DC San D	iego	
	0.00	USD	0.00	0.00	0.00	0.00	0.00
TG00	0	EA	Θ	Θ	0	Θ	(
KPAD1000			Knee Pads		MI00 DC Miami		
	0.00	EUR	0.00	0.00	0.00	0.00	0.0
TG00	Θ	EA	Θ	Θ	0	Θ	(
KPAD1000			Knee Pads		HH00 DC Hambu	ırg	
TG00	0.00	EA	0.00	0.00	0.00	0.00	0.00
KPAD1000			Knee Pads	_	HD00 Plant He	-	
	Total Value	Crcy	Total Value	Total Value	Total Value	Total Value	Total Val
SLoc SL	Unrestricted	Unit	Transit/Transf. Qua	lity Inspection	Restricted-Use	Blocked	Retur

You can see that all values listed for this material are currently zero.

Repeat this task for the material EPAD1###.

Repeat for EPAD1###





## Step 4: Receive Goods

Task Receive goods at receiving plant.

Time 5 min

**Short Description** Use the Fiori Launchpad to create a goods receipt which documents the receiving of your materials in San Diego.

Name (Position) Yoshi Agawa (Goods Receipt Clerk)

To create a goods receipt, use the app *Post Goods Receipt* in the *Warehouse Management* area on the *Storage Purchasing* page in the *Goods Receipe Clerk* role.



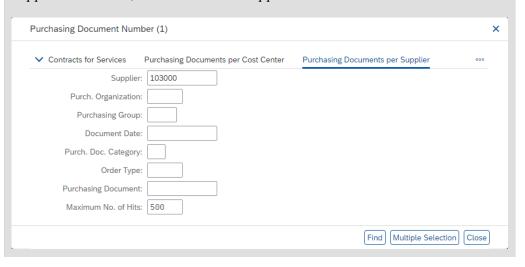
In the *Goods Receipt Purchase Order* screen, check that **A01 Goods Receipt** is selected in the first drop-down menu, that **R01 Purchase Order** is selected for Type of Goods Receipt and put your **Purchase Order Number** in the blank space next to it.

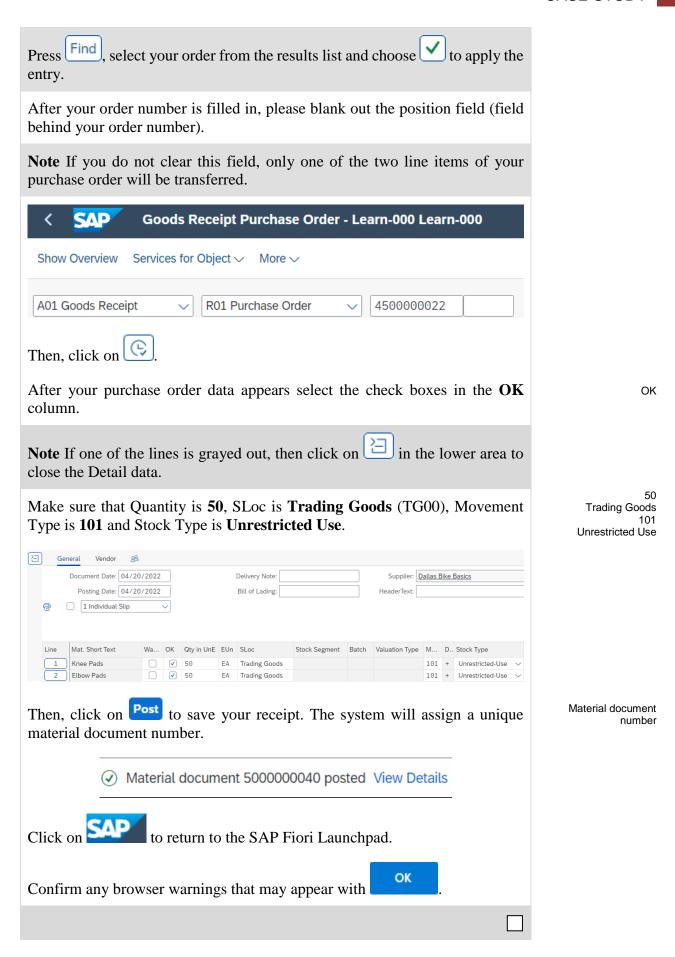
A01 Goods Receipt R01 Purchase Order PO Number

If you have not written down the PO number you have created in the first task, you may use the input help. Click in the PO number field (first blank field next to the second drop-down field) and choose  $\square$ .

103###

In the following screen, use to choose the *Purchasing Documents per Supplier* tab. Then, enter **103**### as *Supplier*.







## Step 5: Display Material Inventory

Task View the inventory of your material again.

Time 5 min

**Short Description** Use the Fiori Launchpad to display the inventory of your material again.

Name (Position) Jennifer Brown (Plant Manager)

To display the material inventory, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Plant Manager* role the app *Display Stock Overview*.

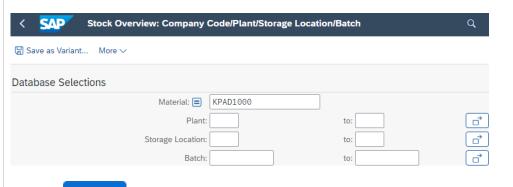
Display Stock Overview

Fiori App

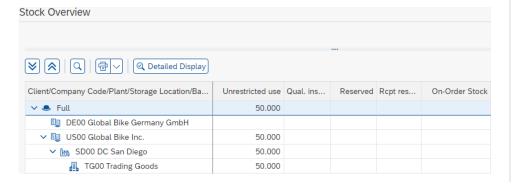


Enter **KPAD1**### as Material (remember to replace ### with your number). All other settings can be applied.

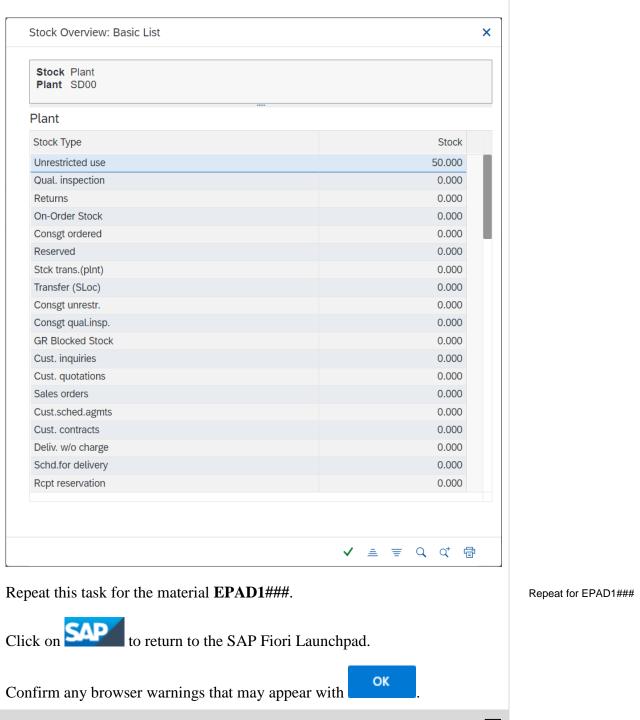
KPAD1###



Choose Execute. Note that the amount of your good for unrestricted use in San Diego has changed and that there is no longer any order inventory for it.



By double clicking on SD00 DC San Diego, you can again display the associated Basic List of the Stock Overview.





## Step 6: Display Material Inventory Value

Task View the value of your material inventory again.

Time 5 min

**Short Description** In this step, you will use the Fiori Launchpad to display the value of your material inventory again.

Name (Position) Jennifer Brown (Plant Manager)

To display the material inventory value, use in the Warehouse Management area on the Storage Purchasing page in the Plant Manager role the app Display Warehouse Stock.

Display Warehouse Stock



In the *Display Warehouse Stocks of Material* screen, enter **KPAD1**### as Material (remember to replace ### with your number). Ensure that all other search criteria fields are blank and click on **Execute**.

KPAD1###

SLoc SL	Unrestricted	Unit	Transit/Transf. Qua	lity Inspection	Restricted-Use	Blocked	Return
	Total Value	Crcy	Total Value	Total Value	Total Value	Total Value	Total Valu
KPAD1000			Knee Pads		HD00 Plant He	idelberg	
TG00	0	EA	0	0	0	0	6
	0.00	EUR	0.00	0.00	0.00	0.00	0.00
KPAD1000			Knee Pads		HH00 DC Hambu	ırg	
TG00	0	EA	0	Θ	0	0	G
	0.00	EUR	0.00	0.00	0.00	0.00	0.00
KPAD1000			Knee Pads		MI00 DC Miami		
TG00	Θ	EA	0	Θ	Θ	0	G
	0.00	USD	0.00	0.00	0.00	0.00	0.00
KPAD1000			Knee Pads		SD00 DC San D	iego	
TG00	50	EA	0	0	0	0	(
	2,000.00	USD	0.00	0.00	0.00	0.00	0.00
* Total							
	×		×	×	×	×	×

As you can see the value for the 50 units of your material has been added to the distribution center in San Diego.

Repeat this task for the material **EPAD1**###.

EPAD1###





## Step 7: Run Bin Status Report

**Task** Check the status of your bins.

Time 5 min

**Short Description** Use the SAP Fiori Launchpad to run a bin status report, which will display a detailed report of each storage bin within the specified warehouse.

Name (Position) Carolin Bruzik (Warehouse Supervisor)

To run a bin status report, use in the *Warehouse Management* area on the *Storage Purchasing* page in the *Warehouse Supervisor* role the app *Run Bin Status Report*.



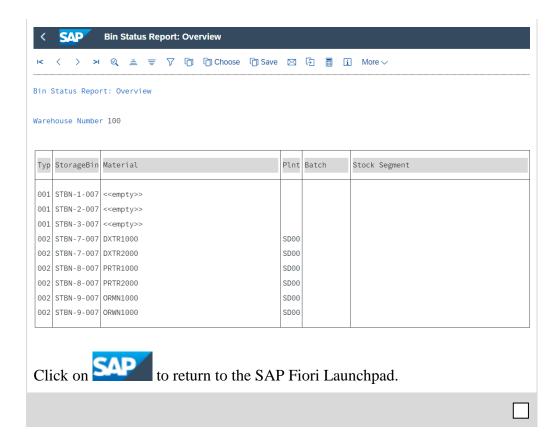
Fiori App

100 STBN\*###

In the *Bin Status Report: Initial Screen*, enter **100** (for your San Diego Warehouse) as Warehouse Number and **STBN\*###** as Storage bin (replace ### with your number). Then, click on Execute.



In the *Bin Status Report: Overview* screen you should see a list of all your storage bins for the entire warehouse in San Diego. Double click on one of your storage bins to get detailed information. As you can see the ordered materials are not present yet. Currently they are located in temporary bins.





## Step 8: Create Transfer Order

Task Create a transfer order.

Time 10 min

**Short Description** Use the Fiori Launchpad to create a transfer order to place your goods into your storage bin. It is a handoff from inventory management to warehouse management. The system recognizes that there are goods that have been received but need to be put away.

Name (Position) Sunil Gupta (Warehouse Employee)

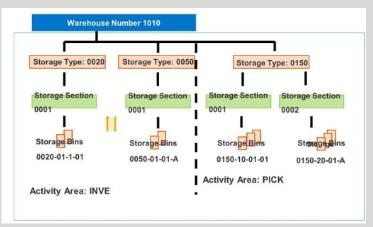
To create a transfer order, use in the Warehouse Management area on the Storage Purchasing page in the Warehouse Employee role the app Display Transfer Requirement – List for Material.

Display Transfer Requirement List for Material Fiori App

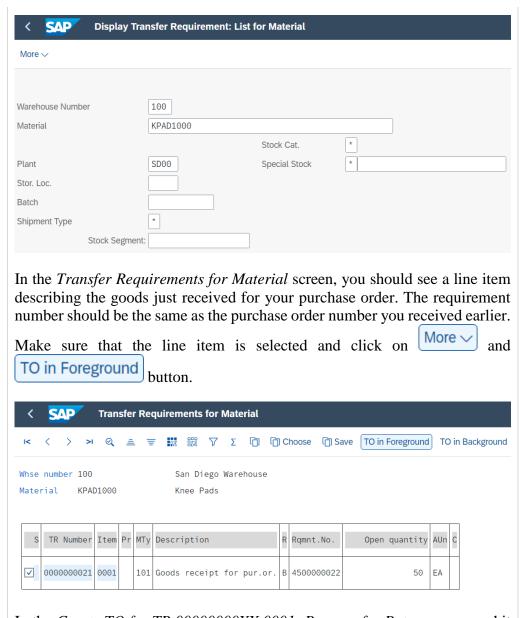
In the *Display Transfer Requirement: List of Material* screen, enter **100** (for your San Diego Warehouse) as Warehouse Number, **KPAD1**### as Material (replace ### with your number) and **SD00** as Plant. Then, press Enter.

100 KPAD1### SD00

**Note:** The warehouse number is the highest level of organizational unit in warehouse management. In practice, the warehouse number usually corresponds to a physical building or distribution center. Each warehouse number has a substructure that maps the spatial relationship in the warehouse complex in detail.

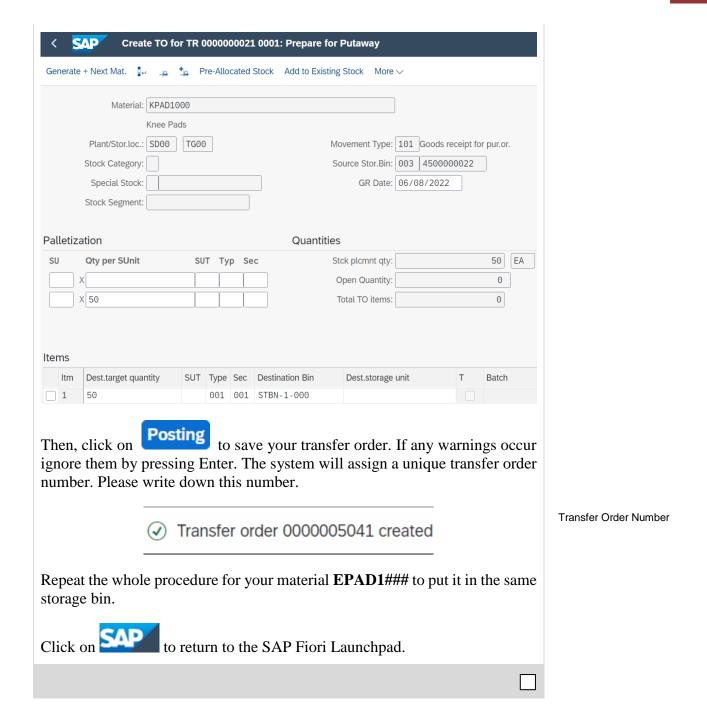


Storage bins are the lowest level of organizational structure. They are assigned to a storage type and a storage section (if one exists). Storage bins represent the physical location where the goods are stored in the warehouse.



In the *Create TO for TR 00000000XX 0001: Prepare for Putaway* screen, hit Enter to copy your quantity of 50 from the *Palletization* section to the *Items* section. Enter **001** as Sec, **STBN-1-###** as Destination Bin (replace ### with your number) and use F4 to select **Shelf Storage** as Type. Confirm your entries by pressing Enter.

001 STBN-1-### 001 (Shelf Storage)





## Step 9: Confirm Transfer Order

Task Confirm your transfer order.

Time 10 min

**Short Description** Use the Fiori Launchpad to confirm the transfer order you created in the previous step. This is to confirm that the goods are physically in the storage bin indicated in the transfer order.

Name (Position) Sunil Gupta (Warehouse Employee)

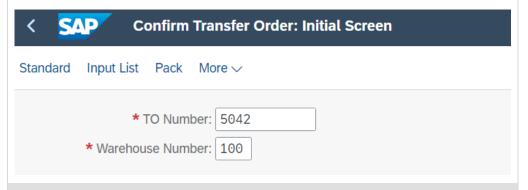
To confirm a transfer order, use in the Warehouse Management area on the Storage Purchasing page in the Warehouse Employee role the app Confirm Transfer Order.



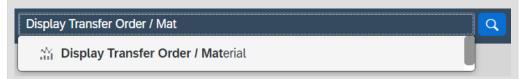
Fiori App

In the *Confirm Transfer Order: Initial Screen*, enter the **Transfer Order Number** from the previous task and **100** as Warehouse Number. Then press Enter.

Transfer Order Number



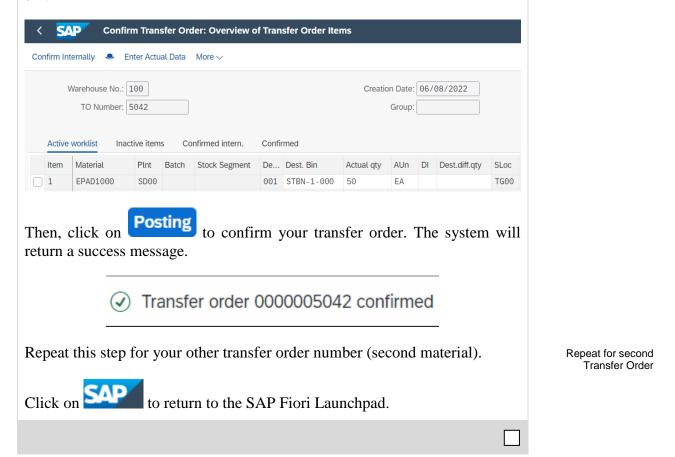
**Note** If you have not written down the number, you can search for it using the app *Display Transfer Order / Material*.



In the *Transfer Orders for Materials* you have to fill in **100** as *Warehouse number* and your material **KPAD1**### / **EPAD1**### to display the regarding transfer order. Then, click on **Execute**.

100 KPAD1### EPAD1###

In the *Confirm Transfer Order: Overview of Transfer Order Items* screen you should see an overview of your transfer order created in the previous step. Review all of the details to make sure you have the correct quantity and storage bin.





## Step 10: Run Bin Status Report

**Task** Check the status of your bins again.

Time 5 min

Short Description Use the Fiori Launchpad to run a bin status report, which will display a detailed report of each storage bin within the specified warehouse.

Name (Position) Carolin Bruzik (Warehouse Supervisor)

To run a bin status report, use in the Warehouse Management area on the Storage Purchasing page in the Warehouse Supervisor role the app Run Bin Status Report.



Fiori App

100

STBN\*###

In the Bin Status Report: Initial Screen, enter 100 (for your San Diego Warehouse) as Warehouse Number and STBN\*### as Storage bin (replace Execute ### with your number). Then, click on

<	SAP	Bin Status Report: Overview			
<b> </b> <	< > >I	Q ≜ ₹ 7 🛅 Ĉ∏ Choose Ĉ∏ S	Save ⊠ [ş	i ii	More V
in	Status Repo	rt: Overview			
are	nouse Numbe	r 100			
-	0 D.		D1		
ТУР	StorageBin	material	Plnt Ba	atch	Stock Segment
001	STBN-1-000	EPAD1000	SD00		
001	STBN-1-000	KPAD1000	SD00		
001	STBN-2-000	< <empty>&gt;</empty>			
001	STBN-3-000	< <empty>&gt;</empty>			
002	STBN-7-000	DXTR1000	SD00		
002	STBN-7-000	DXTR2000	SD00		
002	STBN-8-000	PRTR1000	SD00		
002	STBN-8-000	PRTR2000	SD00		
002	STBN-9-000	ORMN1000	SD00		
002	STRN_Q_000	OPWN1 000	SDOO		

In the Bin Status Report: Overview screen you should see that the Storage Bin STBN-1-### is filled now. Click on one of your storage bins to display

detailed information and check whether 50 of each of your goods are stored in SAP **Display Storage Bin** < More ∨ \* Warehouse No.: 100 \* Storage Type: 001 Shelf Storage \* Storage Bin: STBN-1-000  $\mathbb{C}$ Stor. bin Stock Invent. Bin sectioning Statistic Storage Section: 001 Total Section Picking Area: Fire-cont.sect.: Stor. bin type: S1 Shelf Maximum Weight: 9,999.000 Occupied weight: 150.000 Total capacity: 0.000 Cap.used: 0.000 Utilization: X 1.50 No. of quants: 2 No.stor.units: 0.000 Status Putaway block Stock Removal Block Blk.reason: Stock per storage bin Material Plant Stor... Total Stock KPAD1000 SD00 TG00 50 EA

**Note** As you can see each of the materials is dedicated to an own quant within the storage bin you have selected.

SD00 TG00

50 EA

Click on to return to the SAP Fiori Launchpad.

○ EPAD1000

## WM I Challenge

**Learning Objective** Understand and perform a warehousing process for ext. **Time** 70 min goods.

**Motivation** After having finished the *Warehouse Management I* case study successfully, you should now be able to solve the following challenge.

**Scenario** The warehouse management system has been tested without any problems, so the management decided to use the system productively. Now your task is to order two different products (water bottles and road helmets) from the supplier *Spy Gear*, 50 pieces each. A water bottle will cost 11 USD and a road helmet will cost 27 USD. The trading goods should be delivered in 8 days.

After the goods arrived in your Distribution Center in San Diego, they need to be transferred in two different bins.

**Task Information** You can use the *Warehouse Management I* case study as a guideline, but it is recommended to complete this challenge without further assistance to prove your WM skills.

