

# Inventory and Order Management

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D210 Inventory and Order  
Management: Automated Warehouse  
Operations

Training Guide

# Contents

<b>Copyright.....</b>	<b>4</b>
<b>How To Use This Course.....</b>	<b>5</b>
<b>Company Story.....</b>	<b>7</b>
<b>Warehouse Structure.....</b>	<b>9</b>
<b>Automated Warehouse Operations: General Information.....</b>	<b>10</b>
<b>Lesson 1: Automated Inventory Transfers.....</b>	<b>12</b>
Processing of Transfers: General Information.....	12
Processing of Transfers: Implementation Checklist.....	15
Processing of Transfers: Process Activity.....	17
<b>Lesson 2: Automated Counting in Physical Inventory.....</b>	<b>21</b>
Counting in Physical Inventory: General Information.....	21
Counting in Physical Inventory: Implementation Checklist.....	24
Counting in Physical Inventory: Process Activity.....	25
<b>Lesson 3: Automated Processing of Inventory Issues.....</b>	<b>30</b>
Processing of Inventory Issues: General Information.....	30
Processing of Inventory Issues: Implementation Checklist.....	32
Processing of Inventory Issues: Process Activity.....	34
<b>Lesson 4: Automated Processing of Inventory Receipts.....</b>	<b>38</b>
Processing of Inventory Receipts: General Information.....	38
Processing of Inventory Receipts: Implementation Checklist.....	40
Processing of Inventory Receipts: Process Activity.....	42
<b>Lesson 5: Automated Item and Storage Lookup.....</b>	<b>46</b>
Item and Storage Lookup: General Information.....	46
Item and Storage Lookup: Implementation Checklist.....	48
Item and Storage Lookup: Process Activity.....	49
<b>Lesson 6: Automated Picking and Packing Operations.....</b>	<b>53</b>
Picking and Packing Operations: General Information.....	53
Picking and Packing Operations: Implementation Checklist.....	58
Picking and Packing Operations: Process Activity.....	61
<b>Automated Shipping Operations: General Information.....</b>	<b>65</b>
<b>Lesson 7: Automated Packing Operations.....</b>	<b>67</b>
Packing Operations: General Information.....	67
Packing Operations: Implementation Checklist.....	70
Packing Operations: Process Activity.....	73
<b>Lesson 8: Automated Receiving and Putting Away Operations.....</b>	<b>77</b>
Receiving and Putting Away Operations: General Information.....	77
Receiving and Putting Away Operations: Implementation Checklist.....	84
Receiving and Putting Away Operations: Process Activity.....	87
<b>Lesson 9: Automated Fulfilling Orders with Wave Picking.....</b>	<b>91</b>

Wave Picking: General Information.....	91
Wave Picking: Implementation Checklist.....	101
Wave Picking: Process Activity.....	102
<b>Lesson 10: Automated Fulfilling Orders with Batch Picking.....</b>	<b>116</b>
Batch Picking: General Information.....	116
Batch Picking: Implementation Checklist.....	126
Batch Picking: Process Activity.....	127
<b>Lesson 11: Automated Operations with Lot- and Serial-Tracked Items.....</b>	<b>138</b>
Automated Operations with Lot- and Serial-Tracked Items: General Information..	138
Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist.....	141
Automated Operations with Lot- and Serial-Tracked Items: Picking and Packing Items.....	142
Automated Operations with Lot- and Serial-Tracked Items: Receiving and Putting Away Items.....	148
Automated Operations with Lot- and Serial-Tracked Items: Transferring Items....	155
Automated Operations with Lot- and Serial-Tracked Items: Process Activity.....	158
Automated Operations with Lot- and Serial-Tracked Items: Issuing Items.....	165
Automated Operations with Lot- and Serial-Tracked Items: To Issue Items.....	169
Automated Operations with Lot- and Serial-Tracked Items: Counting Items in Physical Inventory.....	172
Automated Operations with Lot- and Serial-Tracked Items: To Count Items in a Physical Inventory.....	175
<b>(Optional) Lesson 12: Mobile Operations.....</b>	<b>178</b>
Counting in Physical Inventory: Process Activity (Mobile).....	178
Item and Storage Lookup: Process Activity (Mobile).....	181
Picking and Packing Operations: Process Activity (Mobile).....	184
Receiving and Putting Away Operations: Process Activity (Mobile).....	187
<b>Working Modes and Supported Commands.....</b>	<b>191</b>

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# How To Use This Course

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This course introduces the automated warehouse operations in Acumatica ERP based on a set of examples that illustrate warehouse processes in a midsize company with a warehouse. The course consists of lessons that guide you step by step through the examples and explanations of the configuration and business process flow in Acumatica ERP. This course must be completed on Acumatica ERP 2020 R1 Update 1 or later. For this course, you will use an Acumatica ERP tenant with the *U100* dataset preloaded.

You perform the following general steps to complete the course:

1. You prepare an Acumatica ERP 2020 R1 (Update 1 or later) instance as described in [How to Create a Tenant with the U100 Dataset](#).
2. In the company with the *U100* dataset, you complete the process activities.
3. In Partner University, you take the Certification Test.
4. In Partner University, you complete the course survey to finish the course and get the Partner University certificate of course completion.

## What Is in a Lesson?

Lessons of this training guide are dedicated to automated performing of particular warehouse operations. Each lesson includes a description of the workflow that is used for performing a warehouse operation and a process diagram that illustrates the user scenario supported by this workflow. The lesson also provides a brief overview of the settings and entities that need to be prepared in the system before you start to perform this business process.

Each lesson includes at least one process activity that you have to complete in your Acumatica ERP instance to learn how to perform the described process.

## What Are the Documentation Resources?

The complete Acumatica ERP documentation is available on <https://help.acumatica.com/> and is included in the Acumatica ERP instance. While viewing any form used in the course, you can click the **Help** button on the top pane to bring up a form-specific help menu; you can use the links on this menu to quickly access form-related concepts and procedures and to open a reference topic with detailed descriptions of the form elements.

## How to Create a Tenant with the *U100* Dataset

To add to an existing Acumatica ERP instance a tenant with the *U100* dataset, which is required for the completion of this course, perform the following instructions:

1. Go to [Amazon Storage](#) (the **builds/20.1/** folder).
2. Open the folder of your Acumatica ERP instance version.
3. In this folder, open the **Snapshots** folder, and download the **u100.zip** file.

4. Launch the Acumatica ERP instance, and sign in.
5. Open the [Tenants](#) (SM203520) form, and click **Add New Record** on the form toolbar.
6. In the **Login Name** box, type the name to be used for the tenant.
7. On the form toolbar, click **Save**.
8. On the **Snapshots** tab, click **Import Snapshot**.
9. In the **Upload Snapshot Package** dialog box, select the **u100.zip** file, which you have downloaded, and click **Upload**.

The system uploads the snapshot to the **Snapshots** tab of the [Tenants](#) form.

10. On the form toolbar, click **Restore Snapshot**.
11. If the **Warning** dialog box appears, click **Yes**.
12. In the **Restore Snapshot** dialog box, make sure that the correct snapshot package is being uploaded, and click **OK**.
13. Sign out of the current tenant.

You are now on the Sign-In page, and you can sign in to the tenant you have just created.

### **Licensing Information**

For educational purposes of this course, you use Acumatica ERP under the trial license that doesn't require activation and provides all available features. For production, you have to activate the purchased license; each particular feature may be a subject to additional licensing; please consult the Acumatica ERP sales policy for details.

# Company Story

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This topic explains the organizational structure and operational activity of the company with which you will work during this training.

## Company Structure

The SweetLife Fruits & Jams company is a midsize company located in New York City. The company consists of the following branches:

- SweetLife Head Office and Wholesale Center: This branch of the company consists of a jam factory and a large warehouse where the company stores fruit (purchased from wholesale vendors) and the jam it produces. Warehouse workers perform warehouse operations by using barcode scanners or mobile device with barcode scanning support.
- SweetLife Store: This branch has a retail shop with a small warehouse to which the goods to be sold are distributed from the company's main warehouse.
- Service and Equipment Sales Center: This branch is a service center with a small warehouse where juicers are stored. This branch sells juicers, installs juicers, trains customers' employees to operate juicers, and provides juicer servicing.

## Operational Activity

The company has been operating starting in the *01-2019* financial period. In November 2019, the company started using Acumatica ERP as an ERP and CRM system and migrated all data of the main office and retail store to Acumatica ERP. Because the company has grown, the equipment center has begun its operations in *01-2020*.

## Company Purchases

The company purchases fruits and spices from large fruit vendors for sale and for jam production. For producing jams and packing jams and fruits, the company purchases jars, labels, and paper bags from various vendors. For the internal needs of the main office and store, the company purchases stationery (printing paper, pens, and pencils), computers, and computer accessories from various vendors. The company also purchases juicers for sale from a large juicer vendor and either purchases the installation service for the juicers or provides the installation service on its own, depending on the complexity of the installation.

## Company Sales and Services

Each company's branch has its own business processes, as follows:

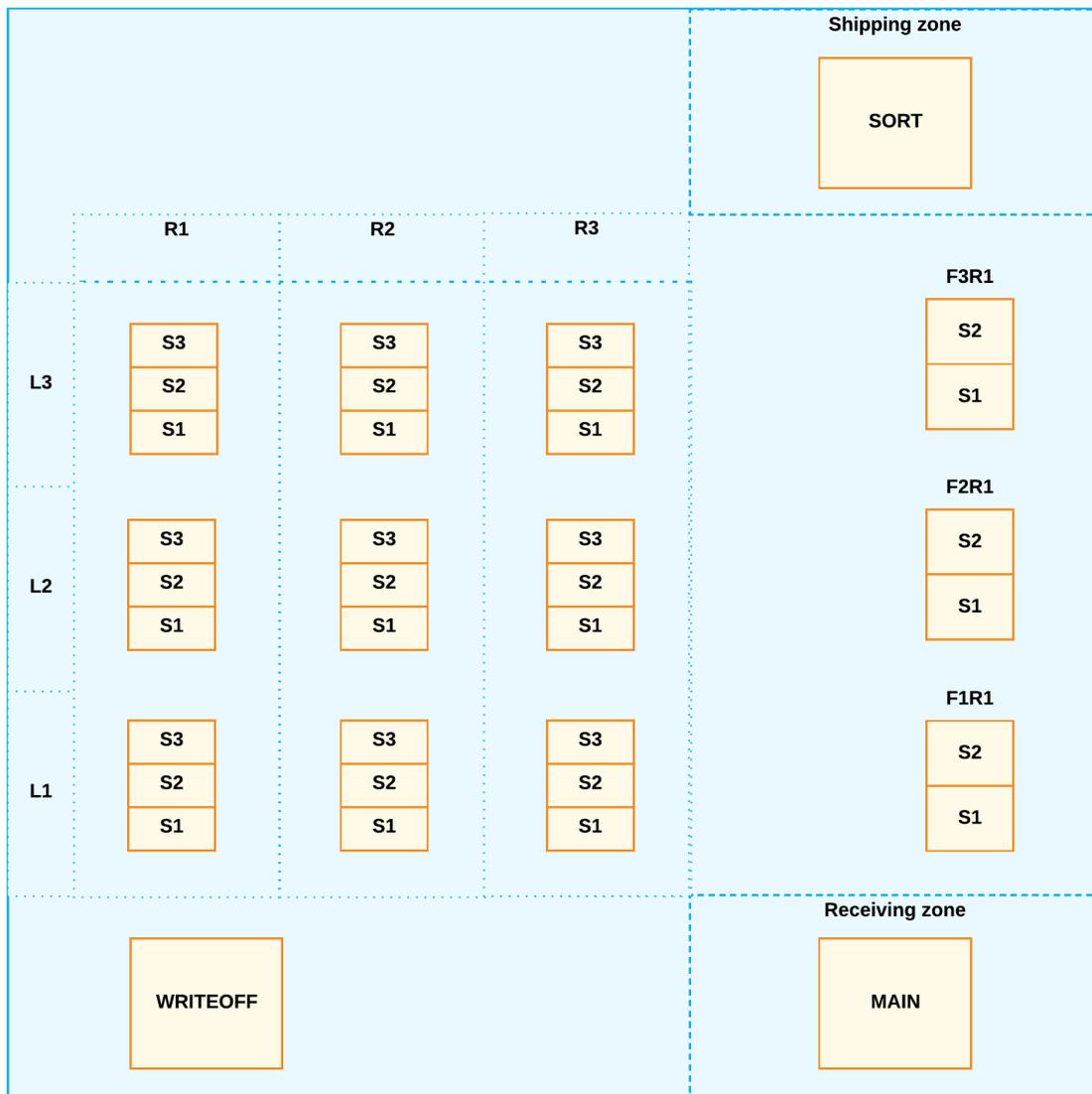
- SweetLife Head Office and Wholesale Center: In this branch, jams and fruit are sold to wholesale customers, such as restaurants and cafés. The company also conducts home canning training at the customer's location and webinars on the company's website.
- SweetLife Store: In the store, small retail customers purchase fresh fruit, berries, and jams, or pick up the goods they have ordered on the website. Some of the goods listed in the website catalog are not stored in the retail warehouse, such as tropical fruits (which are purchased on demand) and tea (which is drop-shipped from a third-party vendor).

- Service and Equipment Sales Center: This branch sells juicers, provides training on equipment use, and offers equipment installation, including site review and maintenance services.

# Warehouse Structure

The structure of the warehouse of the SweetLife Head Office and Wholesale Center branch is shown in the following diagram.

Structure of the SweetLife wholesale warehouse



# Automated Warehouse Operations: General Information

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Acumatica ERP provides a solution to automate basic warehouse operations, such as the picking, packaging, receiving, putting away, transferring, and counting of items. This functionality and the related forms become available if the *Warehouse Management* feature is enabled on the [Enable/Disable Features](#) (CS100000) form.

In this topic, you will read about the automation of warehouse operations in Acumatica ERP and in the Acumatica mobile app.

## Supported Warehouse Operations

You can automate the following warehouse operations by using a barcode scanner or a mobile device with barcode scanning support:

- Picking and packing the items for a particular shipment
- Processing picking of shipments in a wave
- Processing picking of shipments in a batch
- Receiving items based on a purchase receipt defined in the system and putting away the received items to storage locations
- Issuing items from a warehouse
- Transferring items within a warehouse
- Receiving items in a warehouse
- Counting items within the physical inventory

You can configure the workflow for each group of related operations to correspond to the business processes of your organization. For example, for shipping items, you can configure the workflow so that users can use only Pick mode, Pack mode, or Ship mode, or they can use these modes in any combination. As another example, for receiving items with a purchase order, you can configure the workflow so that users can use either Receive mode or Put Away mode, or they can use both modes in one workflow.

## Special Commands for Scanning

When you work in any of the modes, you can use special commands to quickly switch to another mode or to perform an action in the current mode. You can scan a barcode of the command or type the command in the **Scan** box of a processing form. For the list of commands, see [Working Modes and Supported Commands](#).

## Working Modes

The forms you use for automated warehouse operations, and the corresponding screens you use in the Acumatica mobile app, provide both *working modes* and *service modes*. Working modes are modes that correspond to key operations you perform while using the form.

Some forms that support the automation of warehouse operations, such as [Pick, Pack, and Ship](#) (SO302020), have multiple working modes. Each mode of a form, which corresponds to the operation you are currently performing, shows different content and supports a different set of actions. Other forms, such as [Scan and Transfer](#) (IN304020), have only one working mode, so that you can perform only a particular operation by using this form.

While you are performing warehouse operations, you can change the working mode on the current form or navigate from the current form to another form by entering special commands (or by scanning special barcodes) starting with @. On the forms related to automated warehouse operations, you type the command or barcode into the **Scan** box and press Enter. For example, if you enter @pack in the **Scan** box or scan it, the system navigates to the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the mobile app) in Pack mode. When you change the mode of a form, the system keeps the current document selected. For example, if you have entered the shipment number in Pick mode and have entered the command (or have scanned the barcode) to switch to Pack mode, the system keeps the current shipment selected.

## Service Modes

Service modes are modes that correspond to secondary operations you may perform, such as removing document lines. On each form related to automated warehouse operations, you can activate any of the following service modes:

- **Quantity Editing:** In this mode, you can change the quantity of the item in the selected line. You activate the mode by scanning the \*qty barcode or by clicking **Set Qty** on the form toolbar.
- **Remove:** In this mode, you can remove the selected document line or a specific quantity of the inventory item from the current document. You activate the mode by scanning the \*remove barcode or by clicking **Remove** on the form toolbar.

## Support of Automatic and Manual Packaging

If the *Automatic Packaging* feature is disabled on the [Enable/Disable Features](#) (CS100000) form, while you are performing picking and packing operations on the [Pick, Pack, and Ship](#) (SO302020) form, you specify the packaging options for the order manually.

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) form, when you process a shipment in Pick mode, all boxes in the shipment are selected and confirmed, and the box weight is specified automatically. If a single box was automatically specified for a shipment while you picked the items, then in Pack mode, the system automatically specifies the packaging details and confirms the box. Shipments for which multiple boxes were assigned cannot be packed automatically; you have to manually specify the packaging details and confirm the boxes. For a description of the picking and packing processes, see [Picking and Packing Operations: General Information](#) and [Packing Operations: General Information](#).

# Lesson 1: Automated Inventory Transfers

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## Processing of Transfers: General Information

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If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated transfer of inventory items between locations of the same warehouse or between locations of different warehouses that are assigned to the same building by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated transfer of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Transfers: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn how to process single-step transfers of items between warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process a transfer of items between locations of the same warehouse in automated mode

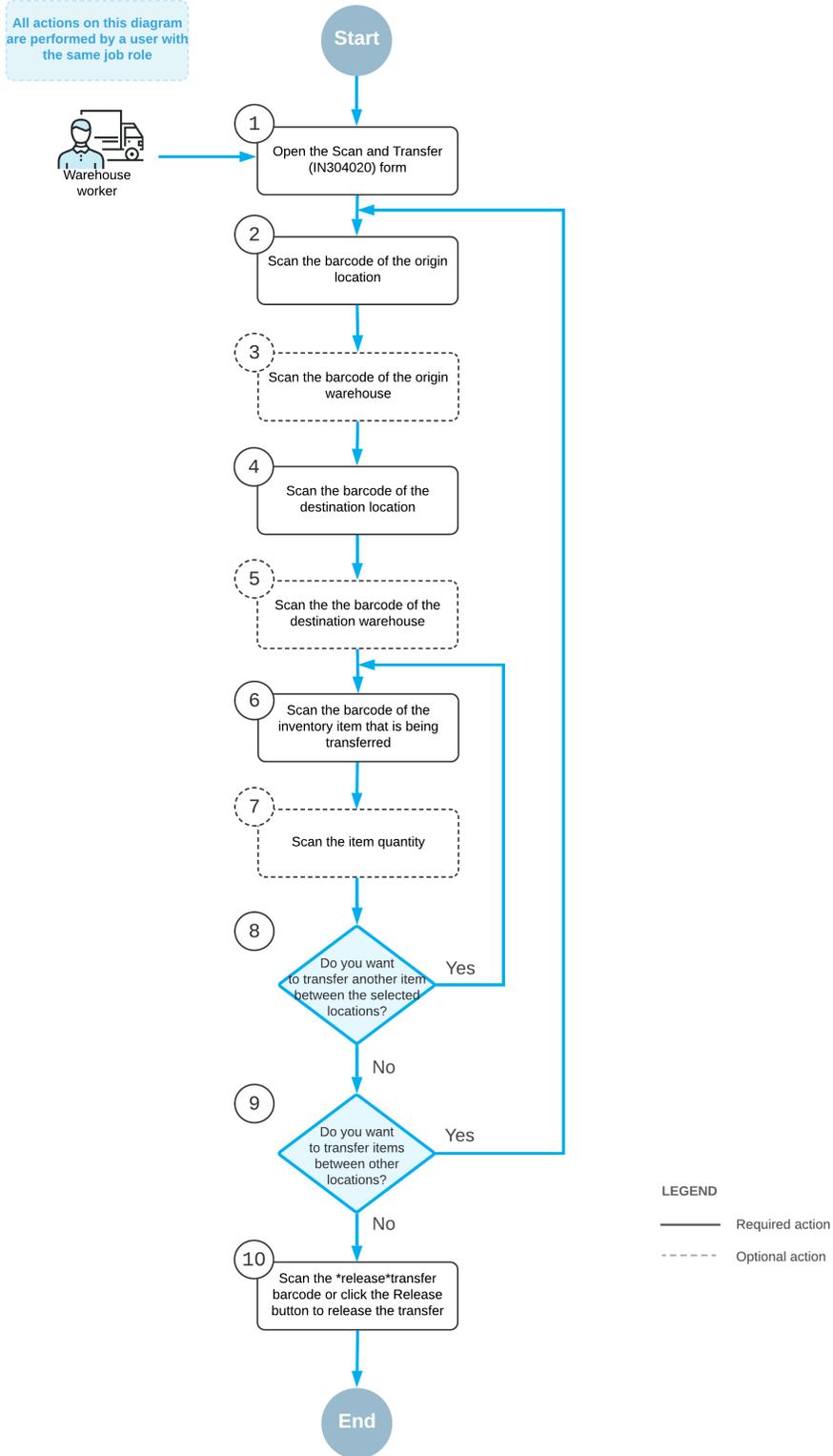
### Applicable Scenarios

You process single-step transfers when you need to move items from one location to another location within the same warehouse or between locations of different warehouses that are assigned to the same building by using a barcode scanner or a mobile device with a scanning option and to track this movement in the system.

### Workflow for the Automated Scanning and Transferring of Items

The automated processing of transferring inventory items involves the steps shown in the following diagram.

### Automated transferring of items



To transfer items (and use Scan and Transfer mode), you perform the following steps:

**1.** Open the *Scan and Transfer (IN304020)* form.

You open the *Scan and Transfer* form (or the corresponding screen in the Acumatica mobile app) to start processing a transfer.

**2.** Scan the origin location barcode.

You scan the barcode of the origin location (that is, the location where the item to be transferred is currently being stored).

**3.** Optional: Scan the origin warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the origin warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

**4.** Scan the destination location barcode.

You scan the barcode of the destination location (that is, the location to which you are transferring items).

**5.** Optional: Scan the destination warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the destination warehouse barcode. The system inserts the warehouse ID in the **To Warehouse** box.



If the destination warehouse differs from the origin warehouse and the warehouses are assigned to different buildings (or the building is not specified in the settings of either of the warehouses), the system displays an error message, and the transfer cannot be performed.

**6.** Scan the item barcode.

You scan the barcode of the item to be transferred.

**7.** Optional: Scan the item quantity.

To change the transferred quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the base unit of measure.

**8.** Optional: Scan the barcode of the next item to be transferred between the selected locations.

If another item must be transferred between the currently selected locations, you scan the barcode of the next item (return to Step 6) and repeat the process for the next item.

**9.** Optional: Scan the barcode of the next origin location.

If items must be transferred between another locations, you scan the barcode of the next origin location (return to Step 2) and repeat the process.

#### 10. Release the inventory transfer.

When you have finished issuing items, you scan the barcode of the \*release\*transfer command or click **Release** on the form toolbar. The system releases the inventory transfer.

## Processing of Transfers: Implementation Checklist

This topic provides details you can use to ensure that the system is configured properly for the automated processing of transfers.



The recommendations in this topic are for systems in which lot and serial tracking will not be used—that is, in which the *Lot and Serial Tracking* feature is disabled on the [Enable/Disable Features](#) (CS100000) form.

### Prerequisites

Before you start automated processing of transfers, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	<p>Make sure that the following features are enabled:</p> <ul style="list-style-type: none"> <li>• <i>Multiple Warehouse Locations</i></li> <li>• <i>Warehouse Management</i></li> <li>• <i>Inventory Operations</i></li> </ul>
<a href="#">Inventory Preferences</a> (IN101000)	<p>Make sure that all necessary settings related to inventory have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Activity</a>.</p>
<a href="#">Warehouses</a> (IN204000)	<p>Make sure that the following entities have been created:</p> <ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>

Form	Criteria to Check
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .

### Recommended Workflow Settings

We recommend that you specify the following settings, which determine the workflow for the automated processing of transfers. You specify these settings on the [Inventory Preferences](#) (IN101000) form.

Setting	Value	Description
<b>Hold Documents on Entry</b>	Cleared	With this check box cleared, users can release transfers on the <a href="#">Scan and Transfer</a> (IN304020) form.
<b>Use Default Quantity in Transfers</b>	Cleared	With this check box cleared, a user can enter the item quantity for each line after entering an item. By default, the system will add one unit of the item to the line.
<b>Use Default Reason Code in Transfers</b>	Selected	With this check box selected, if a reason code for transfers has been created on the <a href="#">Reason Codes</a> (CS211000) form, the system will copy this reason code to all transfers created on the <a href="#">Scan and Transfer</a> form.
<b>Request Location for Each Item in Transfers</b>	Cleared	With this check box cleared, the system prompts a user to enter the barcodes of the origin and destination locations once. Then the user can enter all needed item barcodes to transfer the items between the selected locations.
<b>Use Explicit Line Confirmation</b>	Cleared	With this check box cleared, a user confirms all lines after adding all required data for all items to a transfer.
<b>Use Warehouse from User Profile</b>	Selected	With this check box selected, the system copies the warehouse to be used in the

Setting	Value	Description
		transfer from the profile of the signed-in user.

## Processing of Transfers: Process Activity

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In the following activity, you will learn how to transfer stock items between locations of the same warehouse in a single step by using the [Scan and Transfer](#) (IN304020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to transfer all jam jars from one location of the wholesale warehouse to another, which will clear the origin location for a new batch of jam.

You will prepare the single-step transfer to reflect the movement of jam jars between the warehouse locations.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L3R3S1*, *L2R3S1*, and *WRITEOFF*.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

### Process Overview

In this activity, as you process transferring items between warehouses by using the [Scan and Transfer](#) (IN304020) form, you will enter barcodes of the origin and destination locations, the

items, and their quantities. You will also remove the entire or partial quantity of items from the document, and scan barcodes of other origin and destination locations and items to be moved between these locations. When all items that must be transferred have been added to the document, you will release the transfer.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

## System Preparation

Before you start processing transfers between warehouse locations, you need to launch the Acumatica ERP website and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

### Step 1: Creating a Transfer

Suppose that the *L3R3S1* location contains one 96-ounce jar of apple jam, one 96-ounce jar of lemon jam, and two 96-ounce jars of orange jam. To create a single-step transfer that will register the movement of these items from the *L3R3S1* location to the *L2R3S1* location of the *WHOLESALE* warehouse, do the following:

1. On the [Storage Summary](#) (IN409010) form, specify *WHOLESALE* as the **Warehouse ID** and *L3R3S1* as the **Storage ID**. In the table, notice that the location contains one jar of *APJAM96*, one jar of *LEMJAM96*, and two jars of *ORJAM96*.
2. Open the [Scan and Transfer](#) (IN304020) form.
3. In the **Scan** box of the Summary area, enter *L3R3S1* as the origin location.
4. Enter *L2R3S1* as the destination location.
5. Enter *AJ96* as the first item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.
6. Enter *LJ96* as the next item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.
7. Enter *OJ96* as the last item to be transferred. The system adds a line with one unit of the item to the table on the **Transfer** tab.
8. Set the quantity of the last entered item to 2 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter 2.
9. On the form toolbar, click **Save**. The system creates the transfer with the data you have entered. (Notice that it has inserted the transfer number in the **Reference Nbr.** box of the Summary area.)

You have created the inventory transfer for moving *APJAM96*, *LEMJAM96*, and *ORJAM96* between the *L3R3S1* and *L2R3S1* locations.

## Step 2: Removing Items from the Transfer

Suppose that while you were moving jars of *ORJAM96* between the locations, you noticed that the lid of one of the jars had been dented. The warehouse manager asked you to move this jar to the warehouse location for items to be written off (indicated as *WRITEOFF* in the system). To remove one jar of orange jam from the inventory transfer, do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, on the form toolbar, click **Remove** to switch to Remove mode.
2. In the **Scan** box, enter *L3R3S1* as the origin location.
3. Enter *L2R3S1* as the destination location.
4. Enter *OJ96* as the item to be removed from the transfer. On the **Transfer** tab, the system decreases the value of the **Quantity** column in the line with the *ORJAM96* item by 1.
5. On the form toolbar, click **Save**.

You have removed one unit of the *ORJAM96* item from the transfer. Now you need to add another line to the transfer to reflect the movement of the jar to the *WRITEOFF* location.

## Step 3: Adding Items to Be Transferred Between Other Locations

To add to the same transfer the line that reflects the movement of one jar of *ORJAM96* from the *L3R3S1* location to the *WRITEOFF* location, do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, in the **Scan** box, enter *L3R3S1* as the origin location.
2. Enter *WRITEOFF* as the destination location.
3. Enter *OJ96* to indicate the item to be transferred. The system adds the line with one unit of the item to the table on the **Transfer** tab.
4. On the form toolbar, click **Save**.

You have added another line to the transfer.

## Step 4: Reviewing and Releasing the Transfer

Now that you have added all required items to the transfer, you can release the transfer. Do the following:

1. While you are still viewing the transfer on the *Scan and Transfer* (IN304020) form, review the lines that have been added to the table on the **Transfer** tab. They should have the settings indicated in the following table.

Inventory ID	Location	To Location	Quantity
<i>APJAM96</i>	<i>L3R3S1</i>	<i>L2R3S1</i>	1

Inventory ID	Location	To Location	Quantity
LEMJAM96	L3R3S1	L2R3S1	1
ORJAM96	L3R3S1	L2R3S1	1
ORJAM96	L3R3S1	WRITEOFF	1

- On the form toolbar, click **Release**. The system releases the transfer.
- Click the Edit button next to the **Reference Nbr.** box, and on the *Transfers* (IN304000) form that opens, review the inventory transfer transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

Transfers

← SAVE & CLOSE [Print] [Refresh] + [Delete] [Copy] [Paste] [Home] [Left] [Right] [End] RELEASE REPORTS ▾

Reference Nbr.: 000051 Warehouse ID: WHOLESALE - Wholesale Warehouse Total Qty.: 4.00  
 Status: **Released** To Warehouse ... WHOLESALE - Wholesale Warehouse  
 Hold External Ref.:  
 Transfer Type: 1-Step Description:  
 \* Date: 3/17/2020  
 Post Period: 03-2020

TRANSACTION DETAILS FINANCIAL DETAILS

[Refresh] + [Close] ALLOCATIONS ADD ITEM INVENTORY SUMMARY [Filter] [Print] [Sort]

Inventory ID	Location	To Location ID	UOM	Quantity	Reason Code	Description
APJAM96	L3R3S1	L2R3S1	PIECE	1.00		Apple jam 96 oz
LEMJAM96	L3R3S1	L2R3S1	PIECE	1.00		Lemon jam 96 oz
ORJAM96	L3R3S1	L2R3S1	PIECE	1.00		Orange jam 96 oz
ORJAM96	L3R3S1	WRITEOFF	PIECE	1.00		Orange jam 96 oz

**Figure: Inventory transfer transaction**

- On the *Storage Summary* (IN409010) form, make sure *WHOLESALE* is specified as the **Warehouse ID** and *L3R3S1* is specified as the **Storage ID**. Review the table which must contain no lines which indicates that you have successfully moved all items from the location.

You have successfully processed the transfer for moving jam jars between warehouse locations.

# Lesson 2: Automated Counting in Physical Inventory

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## Counting in Physical Inventory: General Information

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If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform automated counting of items during physical inventory by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated physical inventory in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Counting in Physical Inventory: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn how to count stock items during physical inventory by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process counting of items during physical inventory in automated mode

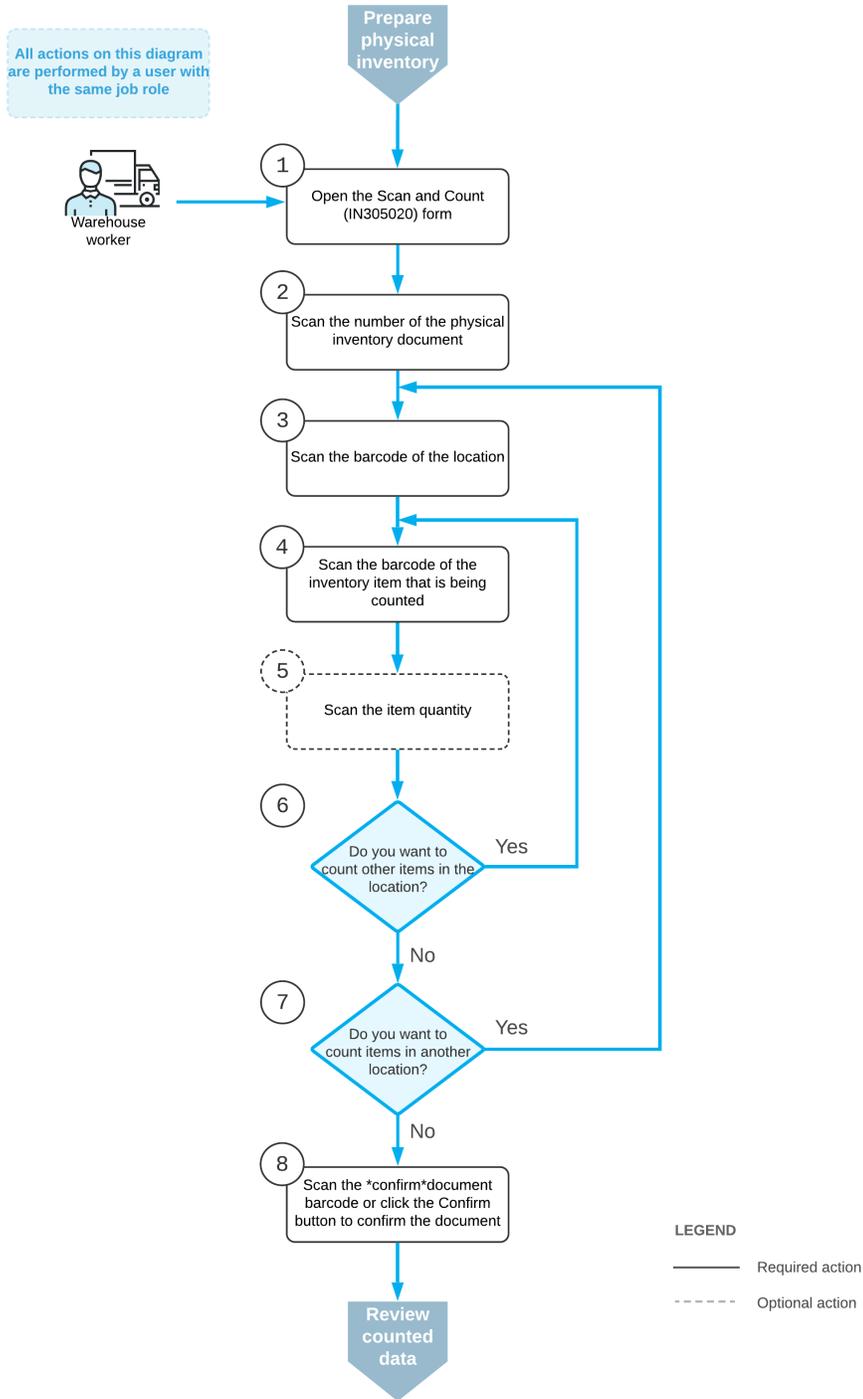
### Applicable Scenarios

You can use automated counting during physical inventory if your organization uses barcode scanners or mobile devices with a scanning option and all stock items and locations in warehouses are barcoded.

### Workflow for the Automated Scanning and Counting of Items

The automated processing of counting inventory items involves the steps shown in the following diagram.

### Automated counting in physical inventory



To count inventory items (and use Scan and Count mode), you perform the following steps:

**1.** *Open the [Scan and Count \(IN305020\)](#) form.*

You open the [Scan and Count](#) form (or the corresponding screen in the Acumatica mobile app) to start the counting process.

**2.** *Scan the document number*

To start the automated counting, you scan the reference number of the physical inventory document. The lines of the scanned document are shown in the table. The reference number of the document selected for processing is displayed in the **Reference Nbr.** box.

**3.** *Scan the location barcode.*

You scan the barcode of the location where the items to be counted are stored. All items that you scan after scanning the location barcode will be assigned to this location.

**4.** *Scan the item barcode.*

When you scan the barcode of the item, the system changes the status of the line for this item to *Entered*.

**5.** *Optional: Scan the item quantity.*

To change the counted quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

**6.** *Optional: Scan the barcode of the next item in the same location.*

If you have more items to count in the same location, you scan the barcode of the next item (return to Step 4) and repeat the process for the item.

**7.** *Optional: Scan the barcode of the next location.*

If items in another location must be counted, you return to scanning the warehouse location (return to Step 3) and repeat the process for the items in this location.

**8.** *Confirm the counted quantities.*

When you have finished counting items, you scan the `*confirm*document` command or click **Confirm** on the form toolbar. The system saves your changes to the physical inventory document.

## Counting in Physical Inventory: Implementation Checklist

This topic provides details you can use to ensure that the system is configured properly for the automated counting of items during physical inventory.



The recommendations in this topic are for systems in which lot and serial tracking will not be used—that is, in which the *Lot and Serial Tracking* feature is disabled on the [Enable/Disable Features](#) (CS100000) form.

### Prerequisites

Before you start automated counting items during physical inventory, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>• <i>Multiple Warehouse Locations</i></li> <li>• <i>Warehouse Management</i></li> <li>• <i>Inventory Operations</i></li> </ul>
<a href="#">Inventory Preferences</a> (IN101000)	Make sure that all necessary settings related to inventory have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Activity</a> .
<a href="#">Warehouses</a> (IN204000)	Make sure that the following entities have been created: <ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .
<a href="#">Physical Inventory Types</a> (IN208900)	Make sure that the required inventory types have been created, as described in <a href="#">Types of Physical Inventory</a> .

Form	Criteria to Check
<a href="#">Prepare Physical Count</a> (IN504000)	Make sure that the physical inventory document has been prepared properly, as described in <a href="#">Preparation for Physical Count</a> .

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated counting of physical inventory by specifying the following setting on the [Inventory Preferences](#) (IN101000) form.

Setting	Value	Description
<b>Use Default Quantity in PI Counts</b>	Cleared	With this check box cleared, the system will prompt a user to enter the item quantity for each new item.

## Counting in Physical Inventory: Process Activity

In this activity, you will learn how to perform automated physical inventory on the [Scan and Count](#) (IN305020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker and you are assigned to perform a physical inventory count by entering barcodes of the stock items and locations. You will count the quantities of orange jam in particular warehouse locations added to the physical inventory document, which your manager has provided to you.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Advanced Physical Count*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L1R3S1*, *L1R3S2*, and *L1R3S3*.
- The following stock items on the [Stock Items](#) (IN202500) form: *ORJAM08*, *ORJAM32*, and *ORJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.
- A physical inventory type on the [Physical Inventory Types](#) (IN208900) form: *ORJCNT*.

Also, on the [Prepare Physical Count](#) (IN504000) form, the physical inventory document has been created, and it has the *Counting in Progress* status.

### Process Overview

In this activity, as you count stock items during a physical inventory, you will use the [Scan and Count](#) (IN305020) form. You will scan the barcode of the physical inventory document and then scan a location barcode and the barcodes of each item you find in this location. You will correct the quantities of items and add extra lines for items that you find in a location. When you have counted all items in all locations added to the physical inventory document, you will confirm the document.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start counting stock items, you need to launch the Acumatica ERP website and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

### Step 1: Entering the Counted Quantities of Items

Suppose that you are starting to count orange jam in the locations listed in the physical inventory document. Do the following to enter the counted quantities in the system:

1. Open the [Scan and Count](#) (IN305020) form.
2. In the **Scan** box, enter *000001* (which is the reference number of the physical inventory count). Notice that the list of items that you will count is displayed on the **Count** tab.
3. Enter *L1R3S1* as the first location in which you are performing counting.

Suppose that in this location, you find two boxes of orange jam in 8-ounce jars.

4. Enter *OJ08B*, which is the barcode for a box of 10 jars of orange jam in 8-ounce jars. The system adds 10 units of the *ORJAM08* item to the row that corresponds to this item.
5. Enter *OJ08B* again to add the second box. The system adds another 10 units to the first line, so the quantity is *20*.

You have finished counting items in the *L1R3S1* location and can start counting items in the next location.

6. Enter *L1R3S2*.

Suppose that in this location, you find three boxes of orange jam in 32-ounce jars.

7. Enter *OJ32B*, which is the barcode for a box of 10 jars of orange jam in 32-ounce jars. The system adds 10 units of the *ORJAM32* item to the row that corresponds to this item.
8. To enter two more boxes, do the following to set the quantity:
  - a. On the form toolbar, click **Set Qty**.
  - b. In the **Scan** box, enter 3.

On the **Count** tab, the system changes the quantity of the *ORJAM32* item in the second line to 30.

You have finished counting items in the *L1R3S2* location and can start counting items in the next location.

9. Enter *L1R3S3*.

Suppose that in this location, you find one box of orange jam in 96-ounce jars.

10. Enter *OJ96B*, which is the barcode for a box of 10 jars of orange jam in 96-ounce jars. The system adds 10 units of the *ORJAM96* item to the row that corresponds to this item.

You have finished counting items in the *L1R3S3* location, which was the last location in your physical inventory document.

## Step 2: Correcting Quantities in the Physical Inventory Document

Suppose that you have realized that you entered an extra box of *ORJAM32* item in the *L1R3S2* location by mistake (suppose, for instance, that you had intended to set the quantity of the boxes to 2 instead of 3), and now you need to correct the quantity in the document. Do the following:

1. While you are still viewing the *Scan and Count* (IN305020) form with the *000001* physical inventory document opened, on the form toolbar, click **Remove** to switch to Remove mode.
2. Enter *L1R3S2*.
3. Enter *OJ32B*. The system removes 10 units of the *ORJAM32* item from the row that corresponds to the item.

You have corrected the quantity of the *ORJAM32* item in the *L1R3S2* location.

### Step 3: Adding Extra Lines to the Physical Inventory Document

Suppose that in the *L1R3S3* location, you have found one jar of the *ORJAM08* item, which is not in the physical inventory document. To add this item to the document, do the following:

1. While you are still viewing the *Scan and Count* (IN305020) form with the *000001* physical inventory document opened, enter *L1R3S3*.
2. Enter *OJ08*, which is the barcode of one 8-ounce jar of orange jam. The system adds a new row to the table with the *L1R3S3* location and one unit of the *ORJAM08* item.

You have added the extra item to the physical inventory document. Now you will review the counted quantities and confirm the entered data.

### Step 4: Reviewing the Quantities and Confirming the Entered Data

To review the quantities and confirm the entered data, do the following:

1. While you are still viewing the *000001* physical inventory document on the *Scan and Count* (IN305020) form, review the lines in the table on the **Count** tab. They should have the settings indicated in the following table.

Line Nbr.	Location	Inventory ID	Physical Quantity
1	<i>L1R3S1</i>	<i>ORJAM08</i>	20
2	<i>L1R3S2</i>	<i>ORJAM32</i>	20
3	<i>L1R3S3</i>	<i>ORJAM96</i>	10
4	<i>L1R3S3</i>	<i>ORJAM08</i>	1

2. On the form toolbar, click **Confirm** to confirm the entered data. The system confirms the data and clears the physical inventory document number. The form is ready for a new count.
3. On the *Physical Inventory Count* (IN305000) form, open the physical inventory document for which you have performed count. In the **Physical Quantity** column, make sure all counted quantities are shown (see the screenshot below).

Physical Inventory Review

← SAVE & CLOSE    ↻    +    🗑️    ⏪    <    >    ⏩    FINISH COUNTING    COMPLETE PI    ACTIONS ▾

Reference Nbr.: 000001    Total Physical Qty.: 0.00  
 Warehouse: WHOLESALE - Wholesale Ware    Total Variance Qty.: 0.00  
 Status: Counting In Progress    Total Variance Cost: 0.00  
 Freeze Date: 1/29/2020  
 Description: Physical inventory for orange jam

PHYSICAL INVENTORY DETAILS    ADJUSTMENT INFO

🔍	🗑️	📄	Status	Line Nbr.	Inventory ID	Description	Location	Book Quantity	Base Unit	Physical Quantity	Variance Quantity
>	🗑️	📄	Entered	1	<a href="#">ORJAM08</a>	Orange jam 8 oz.	L1R3S1	20.00	PIECE	20.00	0.00
	🗑️	📄	Entered	2	<a href="#">ORJAM32</a>	Orange jam 32 oz.	L1R3S2	22.00	PIECE	20.00	-2.00
	🗑️	📄	Entered	3	<a href="#">ORJAM96</a>	Orange jam 96 oz.	L1R3S3	10.00	PIECE	10.00	0.00
	🗑️	📄	Entered	4	<a href="#">ORJAM08</a>	Orange jam 8 oz.	L1R3S3	0.00	PIECE	1.00	1.00

**Figure: Counted items in the physical inventory document**

You have successfully counted orange jam in the warehouse locations and entered data in the system.

# Lesson 3: Automated Processing of Inventory Issues

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## Processing of Inventory Issues: General Information

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If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated issue of inventory items from a particular warehouse location by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated issue of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Inventory Issues: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn how to process inventory issues of items from warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process an issue of items from a warehouse in automated mode

### Applicable Scenario

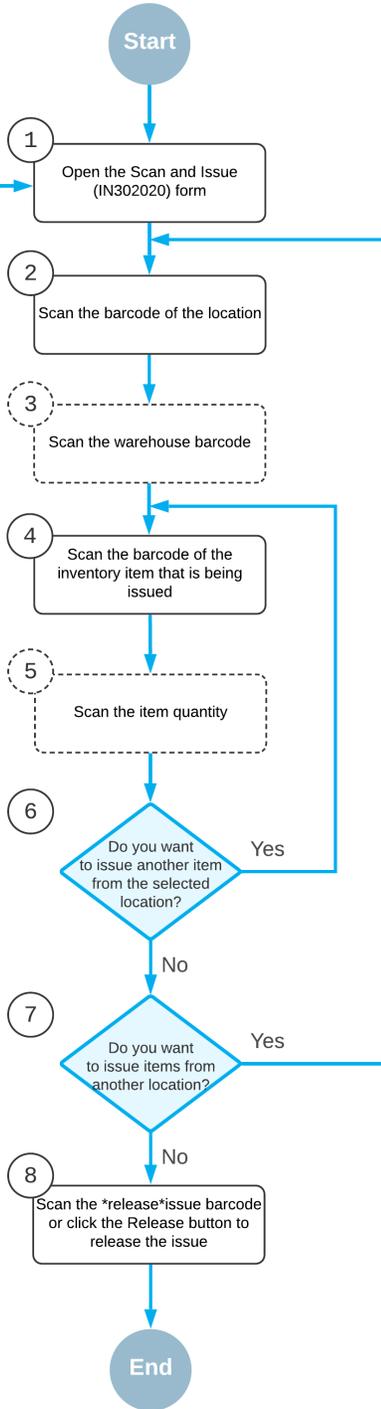
You can use automated processing of inventory issues when you need to remove items from a warehouse location, for example, expired items that must be removed from warehouse locations and, in your organization, all items and locations have barcodes and warehouse workers are equipped with barcode scanners or mobile devices with a scanning option.

### Workflow for the Automated Issuing of Items

The automated processing of issuing inventory items involves the actions shown in the following diagram.

### Automated issuing of items

All actions on this diagram are performed by a user with the same job role



**LEGEND**

- Required action
- - - - - Optional action

To issue items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

1. Open the *Scan and Issue (IN302020)* form.

You open the *Scan and Issue* form (or the corresponding screen in the Acumatica mobile app).

2. Scan the location barcode.

You scan the barcode of the warehouse location where the items to be issued are stored.

3. Optional: Scan the warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

4. Scan the item barcode.

You scan the barcode of the item that must be issued from the selected location.

5. Optional: Scan the item quantity.

To change the issued quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the *\*qty* barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

6. Optional: Scan the barcode of the next item to be issued from the selected location

If another item must be issued from the currently selected location, you scan the barcode of the next item (that is, return to Step 4) and repeat the process for this item.

7. Optional: Scan the barcode of the next location.

If items must be issued from another warehouse location, you scan the barcode of this location (that is, return to Step 2) and repeat the process for this location.

8. Release the inventory issue.

When you have added all items to be issued, you scan the *\*release\*issue* command or click **Release** on the form toolbar. The system releases the inventory issue.

## Processing of Inventory Issues: Implementation Checklist

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This topic provides details you can use to ensure that the system is configured properly for the automated processing of inventory issues.



The recommendations in this topic are for systems in which lot and serial tracking will not be used—that is, in which the *Lot and Serial Tracking* feature is disabled on the [Enable/Disable Features](#) (CS100000) form.

### Prerequisites

Before you start automated processing issues, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	<p>Make sure that the following features are enabled:</p> <ul style="list-style-type: none"> <li>• <i>Multiple Warehouse Locations</i></li> <li>• <i>Warehouse Management</i></li> <li>• <i>Inventory Operations</i></li> </ul>
<a href="#">Inventory Preferences</a> (IN101000)	<p>Make sure that all necessary settings related to inventory have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Activity</a>.</p>
<a href="#">Warehouses</a> (IN204000)	<p>Make sure that the following entities have been created:</p> <ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	<p>Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a>.</p>

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated processing of issues by specifying the following settings on the [Inventory Preferences](#) (IN101000) form.

Setting	Value	Description
<b>Hold Documents on Entry</b>	Cleared	With this check box cleared, users can release issues on the <a href="#">Scan and Issue</a> (IN302020) form.
<b>Use Default Quantity in Issues</b>	Cleared	With this check box cleared, a user can enter the item

Setting	Value	Description
		quantity for each line after entering an item. By default, the system will add one unit of the item to the line.
<b>Use Default Reason Code in Issues</b>	Selected	With this check box selected, if a reason code for issues has been created on the <a href="#">Reason Codes</a> (CS211000) form and specified in the <b>Issue/Return Reason Code</b> box on the <a href="#">Inventory Preferences</a> (IN101000) form, the system will copy this reason code to all issues created on the <a href="#">Scan and Issue</a> form.
<b>Request Location for Each Item in Issues</b>	Cleared	With this check box cleared, the system prompts a user to enter the barcode of a location once. Then the user can enter all needed item barcodes to issue the items from the selected location.
<b>Use Explicit Line Confirmation</b>	Cleared	With this check box cleared, a user confirms all lines after adding all required data for all items to an issue.
<b>Use Warehouse from User Profile</b>	Selected	With this check box selected, the system copies the warehouse to be used in the issue from the profile of the signed-in user.

## Processing of Inventory Issues: Process Activity

In the following activity, you will learn how to issue stock items by using the [Scan and Issue](#) (IN302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to inspect the jars of apple jam to find out if they are of appropriate quantity and to

write off jars with any defects. If you find any jars with defects, you need to remove them from the location and process an inventory issue to record this removal in the system.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L2R3S1*, *L2R3S3* and *L3R3S3*.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM08* and *APJAM96*. For these stock items, the barcodes have been specified on the **Cross-Reference** tab of the form.

### Process Overview

In this activity, as you issue stock items by using the [Scan and Issue](#) (IN302020) form, you will scan the barcode of the location where the items are stored and then scan the barcode of each item to be issued. When you have entered all items in all locations that should be issued, you will release the issue.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start issuing stock items, you need to launch the Acumatica ERP website and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

#### Step 1: Creating an Inventory Issue

Suppose that you have found the following damaged jars of apple jam while inspecting them: three units of apple jam in 8-ounce jars in the *L2R3S1* location, four units of apple jam in 96-ounce jars in the *L2R3S3* location, and two units of apple jam in 96-ounce jars in the *L3R3S3* location. To create an issue with these items, do the following:

1. Open the [Scan and Issue](#) (IN302020) form.

2. In the **Scan** box, enter *L2R3S1*, which is the barcode of the location where you have found the damaged apple jam in 8-ounce jars.
3. Enter *AJ08*, which is the barcode that corresponds to one unit of apple jam in an 8-ounce jar. The system adds 1 unit of the *APJAM08* item to the table on the **Issue** tab.
4. Set the quantity of the item to 3, the number of damaged 8-ounce jars you found, as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter 3.
5. Enter *L2R3S3*, which is the barcode of the location where the damaged apple jam in 96-ounce jars is stored.
6. Enter *AJ96*, which is the barcode that corresponds to one unit of apple jam in a 96-ounce jar. The system adds 1 unit of the *APJAM96* item to the table on the **Issue** tab.
7. Set the quantity of the item to 4, the number of damaged 96-ounce jars you found.
8. Enter *L3R3S3*, which is the barcode of the location where the damaged apple jam in 96-ounce jars is stored.
9. Enter *AJ96*, which is the barcode that corresponds to one unit of apple jam in a 96-ounce jar. The system adds 1 unit of the *APJAM96* item to the table on the **Issue** tab.
10. Set the quantity of the item to 2, the number of damaged 96-ounce jars you found.
11. On the form toolbar, click **Save**. The system saves your changes and creates the inventory issue, whose reference number you can view in the **Reference Nbr.** box of the Summary area.

You have added the required items to the issue. Now you will review the issue and release it.

## Step 2: Reviewing and Releasing the Issue

To review and release the issue, do the following:

1. While you are still viewing the inventory issue on the *Scan and Issue* (IN302020) form, review the lines that have been added to the table on the **Issue** tab. They should have the settings indicated in the following table.

Inventory ID	Location	Quantity	UOM
<i>APJAM08</i>	<i>L2R3S1</i>	3	<i>PIECE</i>
<i>APJAM96</i>	<i>L2R3S3</i>	4	<i>PIECE</i>
<i>APJAM96</i>	<i>L3R3S3</i>	2	<i>PIECE</i>

2. On the form toolbar, click **Release** to release the inventory issue.

- Click the Edit button next to the **Reference Nbr.** box, and on the *Issues* (IN302000) form that opens, review the inventory issue transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

Issues NOTES AC

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Reference Nbr.: <input type="text" value="000061"/>	External Ref.: _____	Total Qty.: <input type="text" value="9.00"/>
Status: <span style="border: 1px solid red; padding: 2px;">Released</span>		Total Amount: <input type="text" value="283.35"/>
<input type="checkbox"/> Hold		Total Cost: <input type="text" value="0.00"/>
* Date: <input type="text" value="3/17/2020"/>	Description: _____	
Post Period: <input type="text" value="03-2020"/>		

TRANSACTION DETAILS FINANCIAL DETAILS

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+
×
ALLOCATIONS
ADD ITEM
INVENTORY SUMMARY
|←|
☒
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	Tran. Type	Inventory ID	Warehouse	Location	Quantity	UOM	Unit Price	Ext. Price
>	Issue	APJAM08	WHOLESALE	L2R3S1	3.00	PIECE	4.1500	12.45
	Issue	APJAM96	WHOLESALE	L2R3S3	4.00	PIECE	45.1500	180.60
	Issue	APJAM96	WHOLESALE	L3R3S3	2.00	PIECE	45.1500	90.30

**Figure: Inventory issue transaction**

You have successfully created and released the inventory issue to record the removal of the damaged jars of apple jam from the warehouse locations.

# Lesson 4: Automated Processing of Inventory Receipts

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## Processing of Inventory Receipts: General Information

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If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated receipt of inventory items to a particular warehouse location by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated receipt of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Processing of Inventory Receipts: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn how to process inventory receipts of items from warehouse locations by using the functionality of automated warehouse operations. In particular, you will do the following:

- Enable the needed system features
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Process a receipt of items to a warehouse in automated mode

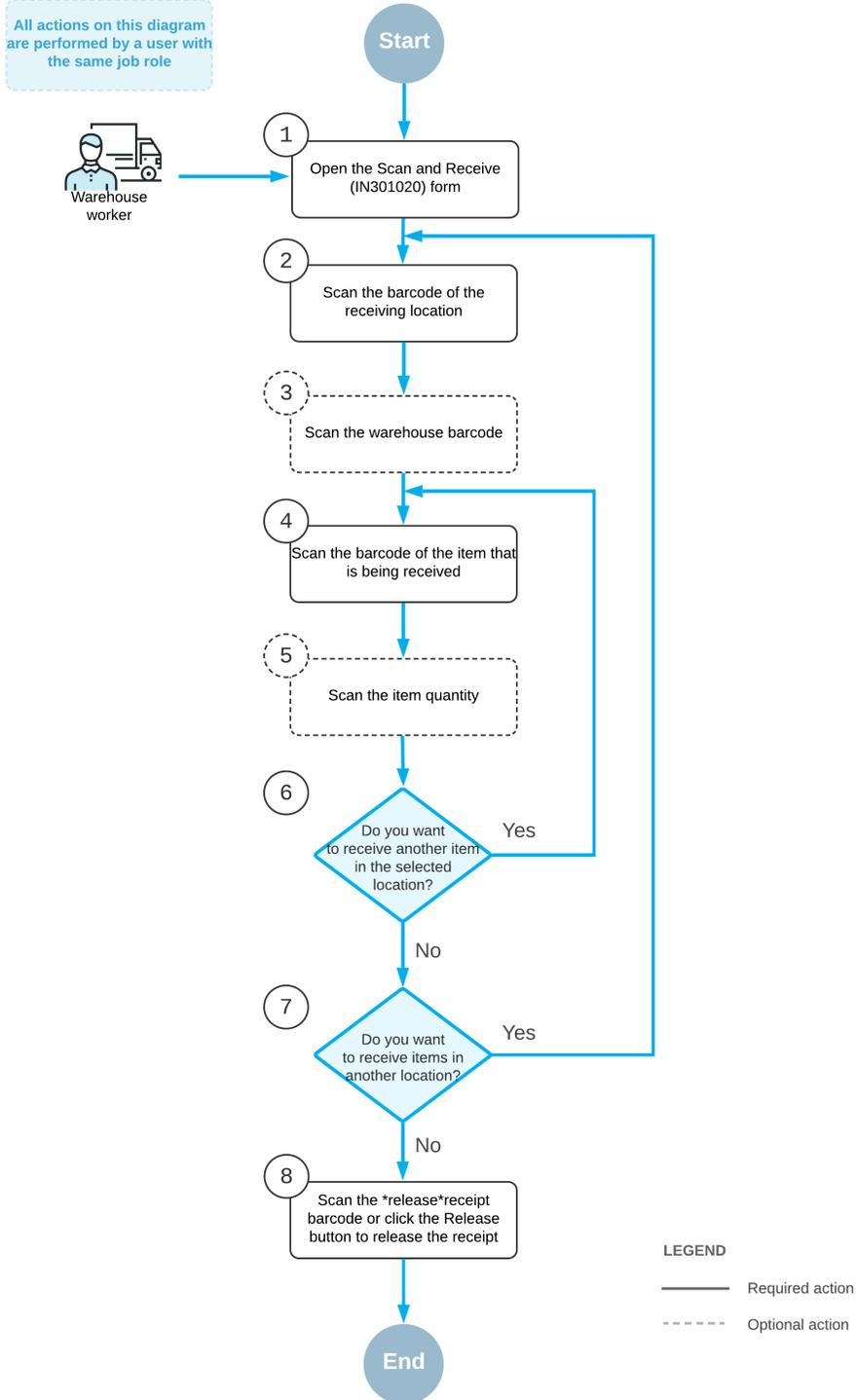
### Applicable Scenario

You can use automated processing of inventory receipts when you need to move items to a warehouse location and, in your organization, all items and locations have barcodes and warehouse workers are equipped with barcode scanners or mobile devices with a scanning option.

### Workflow for the Automated Receiving of Items

The automated processing of receiving inventory items involves the actions shown in the following diagram.

### Automated receiving of items



To receive items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

**1.** *Open the [Scan and Receive \(IN301020\)](#) form.*

You open the [Scan and Receive](#) form (or the corresponding screen in the Acumatica mobile app).

**2.** *Scan the location barcode.*

You scan the barcode of the warehouse location, where the items are to be received.

**3.** *Optional: Scan the warehouse barcode.*

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

**4.** *Scan the item barcode.*

You scan the barcode of the item being received.

**5.** *Optional: Scan the item quantity.*

To change the received quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the UOM coded in the scanned item barcode.

**6.** *Optional: Scan the barcode of the next item to be received.*

If more items need to be received in the currently selected location, you scan the barcode of the next item barcode (that is, return to Step 4), and repeat the process for the item.

**7.** *Optional: Scan the barcode of the next location.*

If items must be received in another warehouse location, you scan the barcode of this location (that is, return to Step 2) and repeat the process for this location.

**8.** *Release the inventory receipt.*

When you have finished receiving items, you scan the `*release*receipt` command or click **Release** on the form toolbar. The system releases the inventory receipt.

## Processing of Inventory Receipts: Implementation Checklist

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This topic provides details you can use to ensure that the system is configured properly for the automated processing of inventory receipts.



The recommendations in this topic are for systems in which lot and serial tracking will not be used—that is, in which the *Lot and Serial Tracking* feature is disabled on the [Enable/Disable Features](#) (CS100000) form.

### Prerequisites

Before you start automated processing receipts, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	<p>Make sure that the following features are enabled:</p> <ul style="list-style-type: none"> <li>• <i>Multiple Warehouse Locations</i></li> <li>• <i>Warehouse Management</i></li> <li>• <i>Inventory Operations</i></li> </ul>
<a href="#">Inventory Preferences</a> (IN101000)	<p>Make sure that all necessary settings related to inventory have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Activity</a>.</p>
<a href="#">Warehouses</a> (IN204000)	<p>Make sure that the following entities have been created:</p> <ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	<p>Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a>.</p>

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated processing of receipts by specifying the following settings on the [Inventory Preferences](#) (IN101000) form.

Setting	Value	Description
<b>Hold Documents on Entry</b>	Cleared	With this check box cleared, users can release receipts on the <a href="#">Scan and Receive</a> (IN301020) form.
<b>Use Default Quantity in Receipts</b>	Cleared	With this check box cleared, a user can enter the item

Setting	Value	Description
		quantity for each line after entering an item. By default, the system will add one unit of the item to the line.
<b>Use Default Reason Code in Receipts</b>	Selected	With this check box selected, if a reason code for receipts has been created on the <a href="#">Reason Codes</a> (CS211000) form and specified in the <b>Receipt Reason Code</b> box on the <a href="#">Inventory Preferences</a> (IN101000) form, the system will copy this reason code to all receipts created on the <a href="#">Scan and Receive</a> form.
<b>Request Location for Each Item in Receipts</b>	Cleared	With this check box cleared, the system prompts a user to enter the barcode of a location once. Then the user can enter all needed item barcodes to receive the items from the selected location.
<b>Use Explicit Line Confirmation</b>	Cleared	With this check box cleared, a user confirms all lines after adding all required data for all items to a receipt.
<b>Default Warehouse from User Profile</b>	Selected	With this check box selected, the system copies the warehouse to be used in receipts from the profile of the signed-in user.

## Processing of Inventory Receipts: Process Activity

In the following activity, you will learn how to receive stock items by using the [Scan and Receive](#) (IN301020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you, as a warehouse worker of the SweetLife Fruits & Jams company, have a task to put apple, orange, and lemon jam, which you recently have received from

production, to appropriate warehouse locations and process an inventory receipt to register this operation in the system.

Suppose that you have received the following jam, which you will move to appropriate locations: three boxes of apple jam in 8-ounce jars and four boxes of orange jam in 8-ounce jars (you will put these boxes to the *L2R3S1* location); two boxes of apple jam in 96-ounce jars, three boxes of orange jam in 96-ounce jars, and one box of lemon jam in 96-ounce jars (you will put these boxes to the *L2R3S3* location).

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L2R3S1* and *L2R3S3*.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM08*, *ORJAM08*, *APJAM96*, *ORJAM96*, and *LEMJAM96*. For these stock items, the barcodes have been specified on the **Cross-Reference** tab of the form.

### Process Overview

In this activity, as you register receiving of stock items by using the [Scan and Receive](#) (IN301020) form, you will scan the barcode of the location where the items must be stored and then scan the barcode of each item to be issued. When you have entered all items in all locations that should be issued, you will release the issue.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start receiving stock items, you need to launch the Acumatica ERP website and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

#### Step 1: Creating an Inventory Receipt

To create an inventory receipt with the received jam, do the following:

1. Open the [Scan and Receive](#) (IN301020) form.

2. In the **Scan** box, enter `L2R3S1`, which is the barcode of the location where you put apple and orange jam in 8-ounce jars.
3. Enter `AJ08B`, which is the barcode that corresponds to one box of ten 8-ounce jars of apple jam. The system adds 1 box of the `APJAM08` item to the table on the **Receive** tab.
4. Set the quantity of the item to 3, the number of received boxes of apple jam in 8-ounce jars, as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter 3.
5. Enter `OJ08B`, which is the barcode that corresponds to one box of ten 8-ounce jars of orange jam. The system adds 1 box of the `ORJAM08` item to the table on the **Receive** tab.
6. Set the quantity of the item to 4.
7. Enter `L2R3S3`, which is the barcode of the location where you put apple, orange, and lemon jam in 96-ounce jars.
8. Enter `AJ96B`, which is the barcode that corresponds to one box of ten 96-ounce jars of apple jam. The system adds 1 box of the `APJAM96` item to the table on the **Receive** tab.
9. Enter `AJ96B` one more time to add second unit to the current line.
10. Enter `OJ96B`, which is the barcode that corresponds to one box of ten 96-ounce jars of orange jam. The system adds 1 box of the `ORJAM96` item to the table on the **Receive** tab.
11. Set the quantity of the item to 3.
12. Enter `LJ96B`, which is the barcode that corresponds to one box of ten 96-ounce jars of lemon jam. The system adds 1 box of the `LEMJAM96` item to the table on the **Receive** tab.
13. On the form toolbar, click **Save**. The system saves your changes and creates the inventory receipt, whose reference number you can view in the **Reference Nbr.** box of the Summary area.

You have added the required items to the receipt. Now you will review the receipt and release it.

## Step 2: Releasing and Reviewing the Receipt

To release and review the receipt, do the following:

1. While you are still viewing the inventory receipt on the [Scan and Receive](#) (IN301020) form, review the lines that have been added to the table on the **Receive** tab. They should have the settings indicated in the following table.

Inventory ID	Location	Quantity	UOM
APJAM08	L2R3S1	3	JBOX
ORJAM08	L2R3S1	4	JBOX
APJAM96	L2R3S3	2	JBOX
ORJAM96	L2R3S3	3	JBOX
LEMJAM96	L2R3S3	1	JBOX

- On the form toolbar, click **Release** to release the inventory receipt.
- Click the Edit button next to the **Reference Nbr.** box, and on the *Receipts* (IN301000) form that opens, review the inventory receipt transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.

Receipts

SAVE & CLOSE [Icons] RELEASE REPORTS ▾

Reference Nbr.: 000054 [Search] Transfer Nbr.: \_\_\_\_\_ Total Qty.: 13.00  
 Status: **Released** External Ref.: \_\_\_\_\_ Total Cost: 0.00  
 Hold Description: \_\_\_\_\_  
 \* Date: 3/19/2020  
 Post Period: 03-2020

TRANSACTION DETAILS FINANCIAL DETAILS

[Icons] ALLOCATIONS ADD ITEM [Icons]

Inventory ID	Warehouse	Location	Quantity	UOM	Unit Cost	Ext. Cost
APJAM08	WHOLESALE	L2R3S1	3.00	JBOX	0.0000	0.00
ORJAM08	WHOLESALE	L2R3S1	4.00	JBOX	0.0000	0.00
APJAM96	WHOLESALE	L2R3S3	2.00	JBOX	0.0000	0.00
ORJAM96	WHOLESALE	L2R3S3	3.00	JBOX	0.0000	0.00
LEMJAM96	WHOLESALE	L2R3S3	1.00	JBOX	0.0000	0.00

**Figure: Inventory receipt transaction**

You have successfully created and released the inventory receipt to record the addition or received jam to the warehouse locations.

# Lesson 5: Automated Item and Storage Lookup

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## Item and Storage Lookup: General Information

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In everyday work of warehouse workers, there could be a need to find some items in the system or get information about items stored in a particular location (storage). If the *Inventory Operations* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, in Acumatica ERP, you can search for items by scanning barcodes of items and locations by using a barcode scanner or a mobile device with a scanning option, as described in this topic.

### Learning Objectives

In this chapter, you will learn how to search for information about stock items by scanning an item barcode and for the list of items stored in a particular location by scanning a location barcode with a barcode scanner or a mobile device with a scanning option.

### Applicable Scenarios

You can use automated lookup if your organization uses barcode scanners or mobile devices with a scanning option to perform warehouse operations and all stock items and locations in warehouses are barcoded. You can look up for items and locations in any of the following cases:

- In a warehouse, you find a stock item that is not in a location and you would like to find an appropriate location for the item.
- You would like to view the list of stock items stored in a particular warehouse location as it is registered in the system.

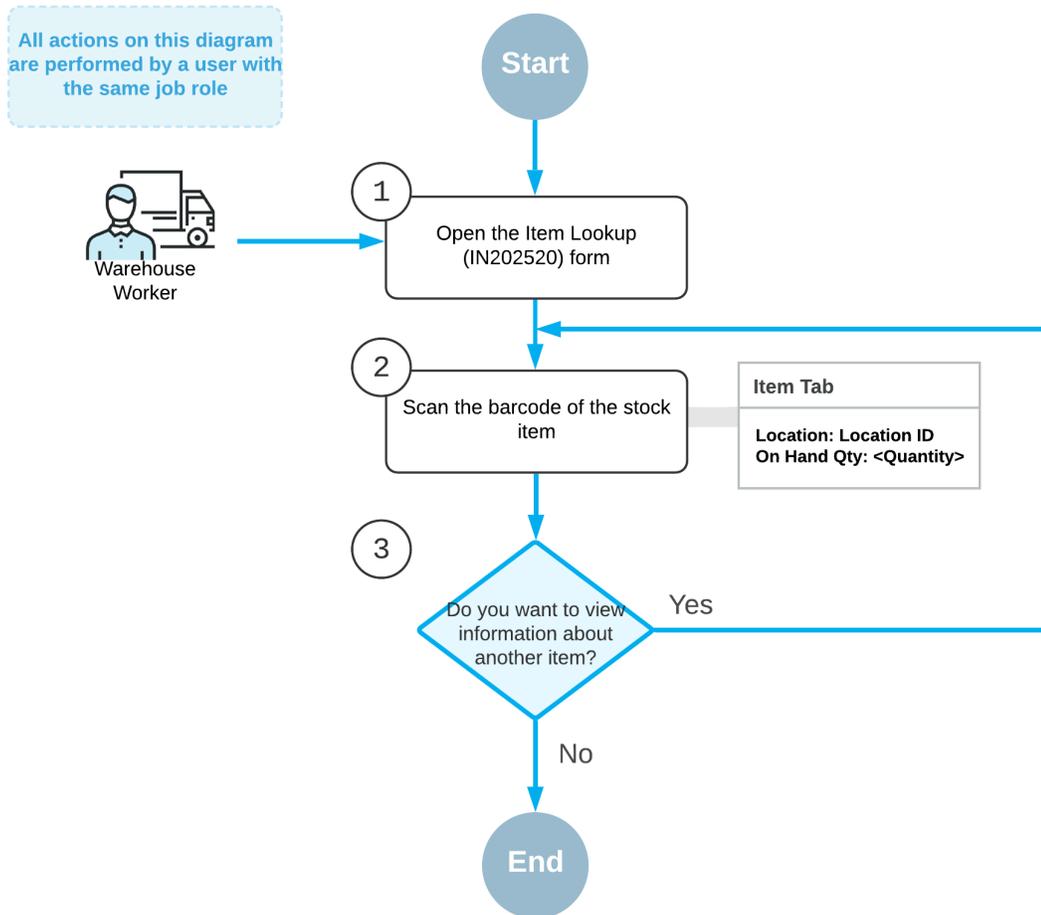
### Item Lookup

As you perform any of the warehouse operations, you may need to search for items. For example, you might find a box that is not in a location and want to find out what is in the box and where the box should be placed. To get information about a particular item by scanning the item barcode, you use the [Item Lookup](#) (IN202520) form.

On this form, you can find information about the location where the item is stored, the quantity of items in the location or locations, and other information about the item (such as item class and base units of measure).

In the following diagram, you can find the general process of item lookup.

## Automated lookup by item

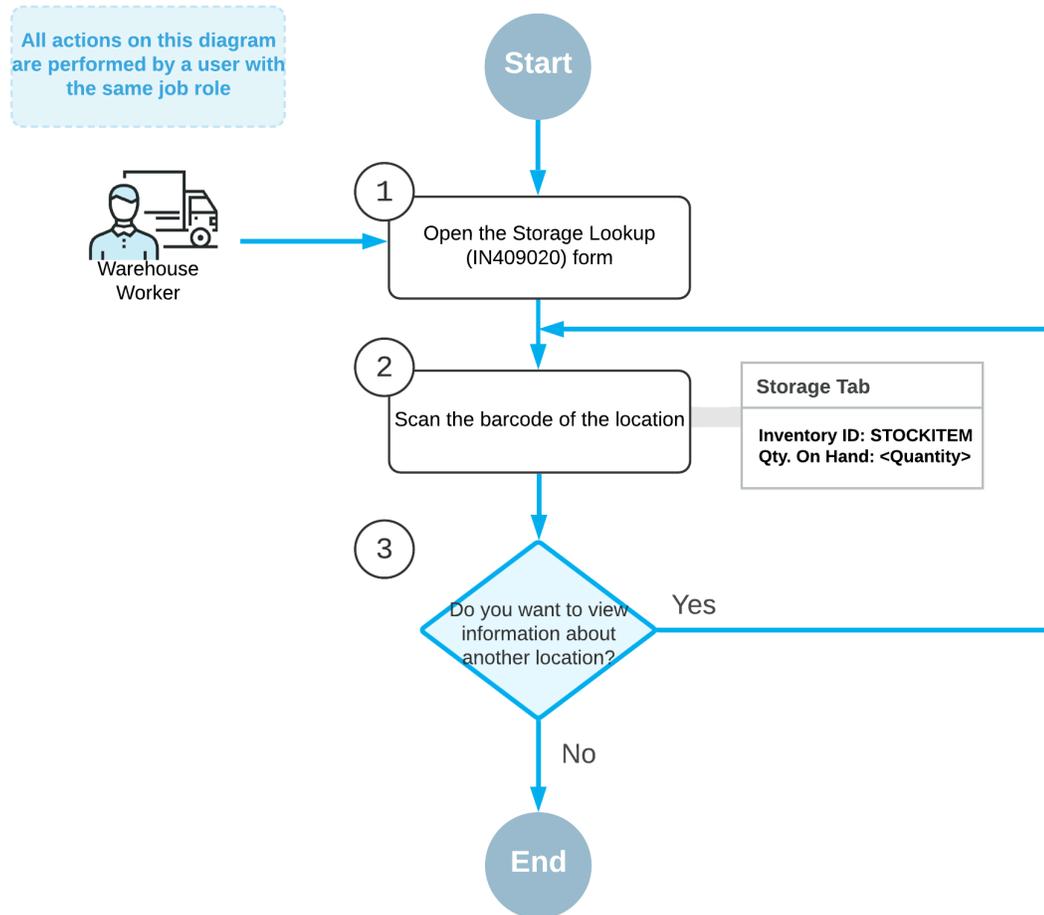


### Location Lookup

If you want to view the list of items in a specific location, you can scan the barcode of the location when the [Storage Lookup](#) (IN409020) form is opened on your mobile device. On this form, you can see the list of items and their quantities stored in the location.

In the following diagram, you can see the general process of the lookup by location.

## Automated lookup by storage



## Item and Storage Lookup: Implementation Checklist

This topic provides details you can use to ensure that the system is configured properly for the automated lookup of items by scanning or entering a barcode of an item or location.

### Prerequisites

Before you can start using automated lookup of items, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	<p>Make sure that the following features are enabled:</p> <ul style="list-style-type: none"> <li>• <i>Multiple Warehouse Locations</i></li> <li>• <i>Warehouse Management</i></li> <li>• <i>Inventory Operations</i></li> </ul>
<a href="#">Inventory Preferences</a> (IN101000)	<p>Make sure that all necessary settings related to inventory have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Activity</a>.</p>
<a href="#">Warehouses</a> (IN204000)	<p>Make sure that the following entities have been created:</p> <ul style="list-style-type: none"> <li>• Required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• Required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	<p>Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a>.</p>

## Item and Storage Lookup: Process Activity

In this activity, you will learn how to search for information about stock items by using the [Item Lookup](#) (IN202520) form and for information about items stored in a particular location by using the [Storage Lookup](#) (IN409020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. When you walk around the warehouse you find items and boxes that have been inappropriately placed on the floor or on tables. Your work task is to find out what are these items storage and where they should be stored, so that you can move the items to the appropriate storage.

## Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*
- The following warehouse locations on the [Warehouses](#) form: *MAIN, L1R3S2, L2R3S2, and L3R3S2*
- A stock item on the [Stock Items](#) (IN202500) form: *APJAM08*. For this stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

## Process Overview

In this activity, you will look up an item by scanning the item barcode on the [Item Lookup](#) (IN409020) form, you will scan the item barcode and view information about the item, such as the location and availability.

You will also search for a list of the items stored in a particular location by using the [Storage Lookup](#) (IN409020) form, where you will scan the location barcode and view the list of items, with the on-hand quantity for each item.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

## System Preparation

Before you start looking up items, launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

### Step 1: Looking Up an Item by Scanning the Item Barcode

Suppose that as you are walking through the warehouse, you notice a box on the floor near some shelves; the box has 10 apple jars, each 32 ounces. You do not see other warehouse workers nearby, so you decide to find out what this box contains and where it should be placed. Do the following:

1. Open the [Item Lookup](#) (IN202520) form.

2. In the **Scan** box, enter `AJ32B`, which is the barcode affixed to the box you found. Notice that `APJAM32` item (for which this barcode is specified in the item settings) is shown in the **Inventory ID** box.
3. In the table on the **Item** tab, notice that the item is stored in the following locations: `MAIN`, `L1R3S2`, `L2R3S2`, and `L3R3S2`, as shown in the following screenshot.

Item Lookup ☆

LOOKUP MODE IS IN USE  
The APJAM32 item is selected.  
Scan the barcode of the item.

Warehouse: `WHOLESALE - Wholesale Warehouse`

Inventory ID: `APJAM32 - Apple jam 32 oz`

ITEM    SCAN LOG

Item Class:	JAM - Jam	Product Workgroup:	
Type:	Finished Good	Product Manager:	
	<input type="checkbox"/> Is a Kit	* Base Unit:	PIECE
Valuation Method:	Average	* Sales Unit:	BOX
Lot/Serial Class:	DEFAULT	* Purchase Unit:	PIECE

Location	Available	Available for Shipment	On Hand	Base Unit
> L1R3S2	13.00	13.00	13.00	PIECE
L2R3S2	8.00	8.00	8.00	PIECE
L3R3S2	26.00	26.00	26.00	PIECE
MAIN	100.00	100.00	100.00	PIECE
TOTAL	147.00	147.00	147.00	PIECE

**Figure: Reviewing the locations with apple jam**

You know the box did not come from the `MAIN` location because it is a receiving location, and you first need to make sure that the box was not taken from any of the racks with sorted items. Because you know that the box you found contains 10 jars, this box could have been taken from the `L1R3S2` or `L3R3S2` locations. (The `L2R3S2` location contains only 8 jars of this item, so the box definitely is not from this shelf.)

Now you need to find out if the `L1R3S2` or `L3R3S2` locations contain less jam than the quantity that is recorded in the system.

## Step 2: Looking Up Items Stored in a Location

Suppose that you have counted the quantities of boxes and jars of the *APJ32B* item on the *L1R3S2* and *L3R3S2* shelves. You have found out that the *L1R3S2* shelf contains one box of 10 jars and 3 single jars; the *L3R3S2* contains one box of 10 jars and 6 single jars. To find out if the *L1R3S2* or *L3R3S2* location contain less jam than the quantity that is recorded in the system, do the following:

1. Open the [Storage Lookup](#) (IN409020) form.
2. In the **Scan** box, enter `L1R3S2`.
3. In the table on the **Storage** tab, you can see that the on-hand quantity of the *APJAM32* item is 13, which corresponds to one box of 10 jars and 3 separate jars. All the specified items are on the shelf, so the box you have found is not from this shelf.
4. In the **Scan** box, enter `L3R3S2`.
5. In the table on the **Storage** tab, you can see that the on-hand quantity of the *APJAM32* item is 26, which corresponds to two boxes of 10 jars each and 6 separate jars. You have found only one box on this shelf, so the box you have found should be placed on this shelf.

# Lesson 6: Automated Picking and Packing Operations

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## Picking and Packing Operations: General Information

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If the *Warehouse Management* and *Fulfillment* features are enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated picking and packing of inventory items for shipping by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated picking and packing of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Picking and Packing Operations: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn about configuring and performing automated picking and packing. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated picking and packing workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Pick the items for a shipment in an automated mode
- Pack the items into a box in an automated mode
- Confirm a shipment after picking and packing items

### Applicable Scenarios

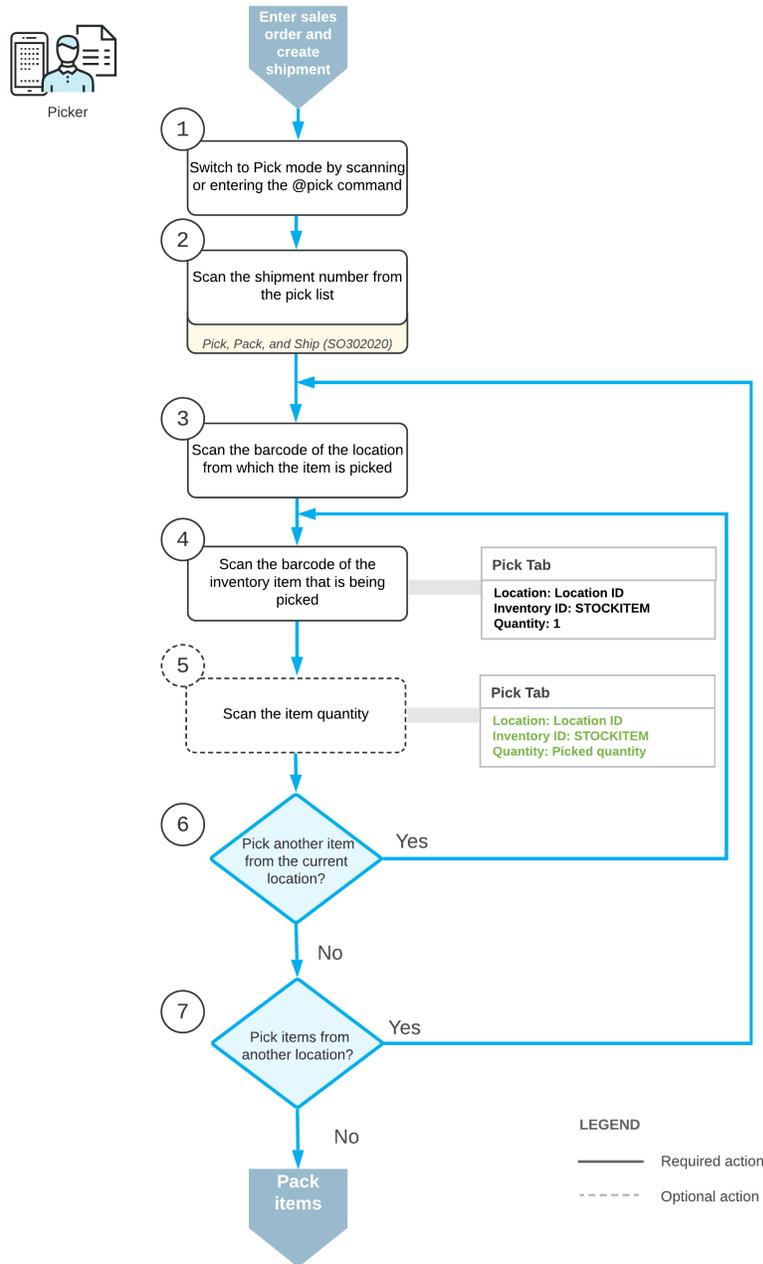
In your company's warehouses, picking processes and packing processes are completed by different warehouse workers. Each warehouse worker acting as a picker goes through the warehouse with a printed pick list, picks the items from the warehouse locations specified in the pick list, and transfers them to a packing line. A packer that works at the packing line selects the box for packing the shipment and packs the items; after the shipment is completely packed, the packer confirms the shipment. To track the operations as they are being performed, both pickers and packers scan the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated picking of items for open shipments prepared for sales orders, transfer orders, and return orders (that is, the shipments of the *Shipment*, *Transfer*, and *Receipt* operation type specified on the [Shipments](#) (SO302000) form, respectively). You can perform automated packing for open shipments prepared for sales orders and transfer orders with at least one picked item.

## Workflow for the Automated Picking of Items

The automated processing of picking items to be packed involves the actions shown in the following diagram.

Automated workflow of picking before packing



To process the picking of items by using Pick mode, you perform the following steps:

**1. Switch to Pick mode.**

You open the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pick mode by scanning or entering *@pick* barcode.

**2. Scan the shipment number.**

To start the automated processing, you scan the reference number of the shipment to be processed. The system displays the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

**3. Scan the location barcode.**

When you scan the barcode of the location from which the item is picked, the system searches for the location in the lines of the document that is currently selected.

**4. Scan the item barcode.**

When you scan the barcode of the picked item, the system searches for the item in the lines of the currently selected document. If the UOM defined by the barcode of the scanned item is specified for a non-base unit of measure (UOM), the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item. The system displays the picked quantity in the **Picked Qty.** column and highlights the line (in bold if the line has been picked partially, or in green if the line has been picked in full).

**5. Optional: Scan the item quantity.**

To change the picked quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the *\*qty* barcode, and manually enter the quantity in the UOM of defined by the barcode of the scanned item.

**6. Pick another line.**

If another item needs to be picked for the currently selected location, you scan the item barcode (return to Step 4) and repeat the process for the item.

**7. Pick items from another location.**

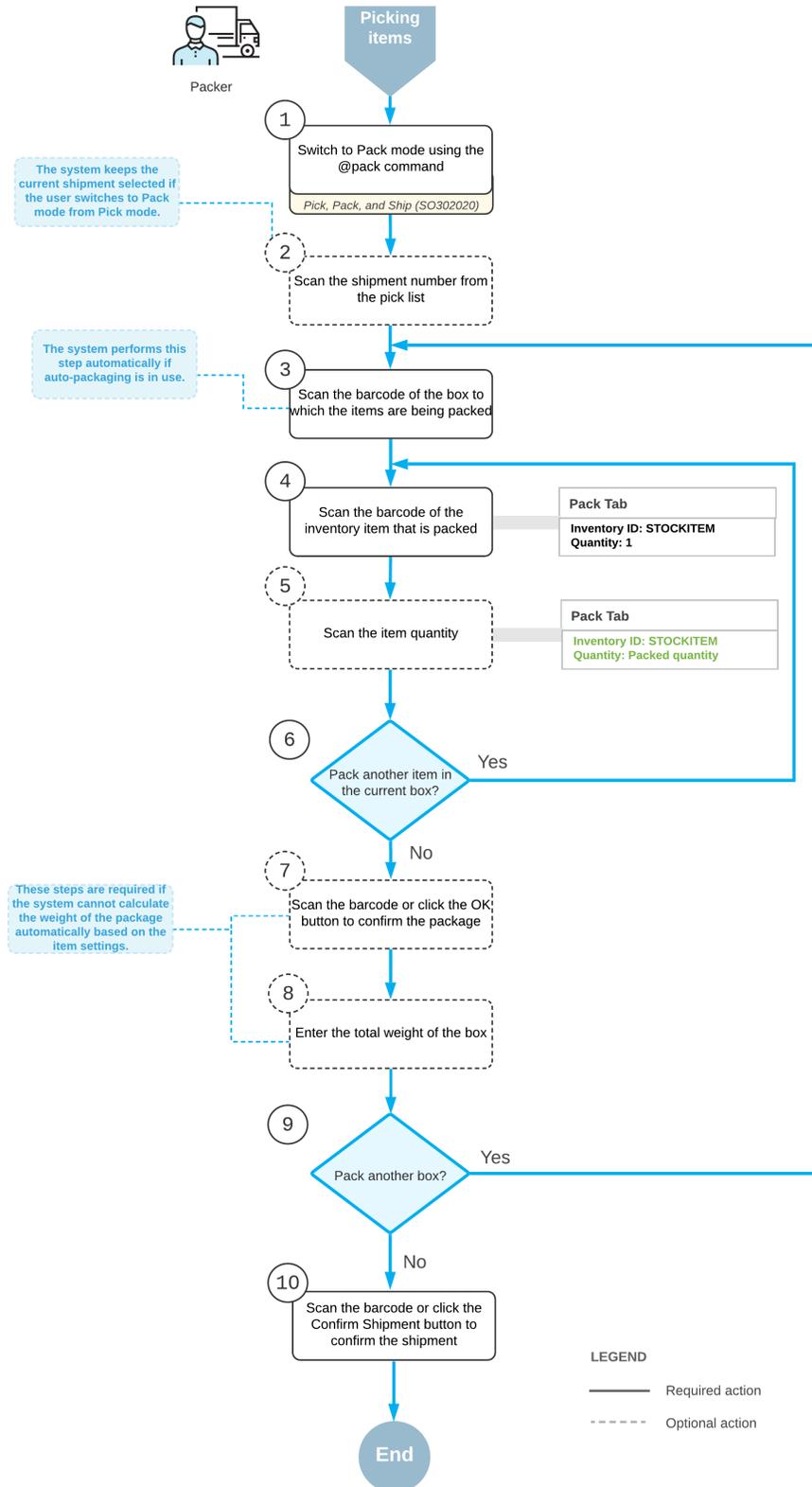
If you need to pick items from another location, you scan the location barcode (return to Step 3), and repeat the process for the location.

If you have finished the picking operation, to proceed with packaging, you scan the *@pack* barcode to switch to Pack mode.

### **Workflow for the Automated Packing of Items**

The automated processing of packing items that have been picked involves the actions shown in the following diagram.

Automated workflow of packing already picked items



To process the packing of items (and use Pack mode) after picking them, you perform the following steps:

**1. Switch to Pack mode.**

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pack mode by scanning or entering @pack barcode.

**2. Scan the document number.**

To start automated processing, you scan the reference number of the shipment to be processed. (If you have switched to Pack mode from Pick mode with the document selected, the document is selected automatically.) The system shows the lines of the document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

**3. Scan the barcode of the box.**

You scan the barcode of the box into which the items will be packed.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically.

**4. Scan the item barcode.**

When you scan the barcode of the packed item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system also shows the packed quantity in the **Packed Qty.** column, and highlights the line (in bold if the line has been processed partially, or in green if the line has been processed in full).

**5. Optional: Scan the item quantity.**

To change the quantity of packed items in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**6. Pack another line.**

If another item needs to be packed in the current box, you return to scanning the item barcode (return to Step 4) and repeat the process for the item.

**7. Optional: Confirm the box.**

If all items are packed in a single box, you confirm the box by scanning the \*ok barcode or by clicking the **OK** button. If the items are packed in multiple boxes, the system automatically confirms the current box when you scan the barcode of the next box to be packed for the current shipment.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically for the shipments that are being packed to a single box that the system has suggested automatically.

**8. Optional: Enter the box weight.**

You enter the total weight of the box if the weight cannot be calculated by the system based on the item settings.

**9. Pack another box.**

If more items need to be packed to another box for the current shipment, you return to scanning the barcode of the box barcode (return to Step 3) and repeat the process for another box.

**10. Complete the packing process.**

If you have finished the packing operation and you don't need to specify shipping options, you scan the *\*confirm\*shipment* barcode or click the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed.

**Known Process Limitations**

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. Processing of shipments packed to two or more boxes in Pack mode is currently not supported.

## Picking and Packing Operations: Implementation Checklist

---

This topic provides details you can use to ensure that the system is configured properly for the automated picking and packing of items.

**Prerequisites**

Before you start configuring the workflow for automated processing of shipments, you should make sure that the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following checklist.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: General Information</a> .
<a href="#">Warehouses</a> (IN204000)	Make sure that the following entities have been created:

Form	Criteria to Check
	<ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .

### Minimum Workflow Settings

Before you start picking and packing items for shipments by using a barcode scanner or other device, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>• <i>Warehouse Management</i></li> <li>• <i>Fulfillment</i></li> </ul>
The <b>Warehouse Management</b> tab of the <a href="#">Sales Orders Preferences</a> (SO101000) form	Make sure the following check boxes are selected: <ul style="list-style-type: none"> <li>• <b>Display the Pick Tab:</b> If this check box is selected, a user starts the processing of a shipment with picking the items.</li> <li>• <b>Display the Pack Tab:</b> If this check box is selected, a user packs the items into the boxes before confirming a shipment.</li> </ul>
The <b>Cross-Reference</b> tab of the <a href="#">Stock Items</a> (IN202500)	Make sure that the barcodes have been specified for each item.

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated picking and packing by specifying the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Display the Scan Log Tab</b>	Selected	With this check box selected, the system will display the <b>Scan Log</b> tab on the <a href="#">Pick</a> ,

Setting	Value	Description
		<a href="#">Pack, and Ship</a> (SO302020) form; on this tab, a user can review the list of operations that have been performed during the past two weeks.
<b>Short Shipment Confirmation</b>	<i>Forbid</i>	With the <i>Forbid</i> value selected, a user cannot confirm the picking of the shipment if not all items have been picked.
<b>Explicit Line Confirmation</b>	Cleared	With this check box cleared, the system does not request user confirmation for each line when the user is performing automated operations in Pick mode and Pack mode.
<b>Confirm Weight for Each Package</b>	Cleared	With this check box cleared, the user confirms a package, and the system calculates the package weight automatically.

### Printing Settings

If the *DeviceHub* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the printing of documents by using the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Print Shipment Confirmation Automatically</b>	Selected	With this check box selected, the system prints the shipment confirmation automatically when a user confirms a shipment.
<b>Print Shipment Labels Automatically</b>	Selected	With this check box selected, the system prints the shipment labels for the packages included in a shipment when the user confirms the shipment.

### Other Settings That Affect the Workflow

You can affect the workflow for the automated picking and packing of items by specifying additional settings on the [Sales Orders Preferences](#) (SO101000) form:

- To speed the entry of quantities in the processed lines, select the **Use Default Quantity** check box to make the system specify the quantity entered by the user by default for all lines in the document currently being processed.
- To allow users to confirm partially picked and packed shipments, select *Allow with Warning* in the **Short Shipment Configuration** box.

## Picking and Packing Operations: Process Activity

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In the following activity, you will learn how to perform the picking and packing of items for a shipment by using the *Pick, Pack, and Ship* (SO302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker of the wholesale warehouse of SweetLife company. Your warehouse manager gives you a task to prepare a shipment. In your organization, the pick and pack workflow is used, which means that you go through the warehouse locations and pick the items listed in the shipment pick list. Then you go to the packing line and pack the picked items into boxes.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the *Enable/Disable Features* (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*

On the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, the **Display the Pick Tab** and the **Display the Pack Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the *Warehouses* (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations are configured.
- The following stock items on the *Stock Items* (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a sales order for the *COFFEESHOP* customer has been entered in the system on the *Sales Orders* (SO301000) form, and a shipment document has been prepared for this order on the *Shipments* (SO302000) form.

## Process Overview

In this activity, you will open the *Pick, Pack, and Ship* (SO302020) form, switch to Pick mode, and scan the number of the shipment from the pick list. Then you will pick the items from the warehouse locations and scan their barcodes and quantities. After you finish picking items, you will switch to Pack mode on the same form and scan the barcode of the box to which you pack the items. Then you will scan the item barcode and quantity of the items being packed into the box. After you finish packing the items, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

## System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded by using the *perkins* login and the *123* password..
2. On the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, make sure the **Display the Pick Tab** and **Display the Pack Tab** check boxes are selected.

### Step 1: Picking Items for Shipping

To record that the items to be added to a shipment have been picked from the warehouse locations, do the following:

1. Sign in as a warehouse worker by using the *perkins* login and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter *000029*, which is the reference number of the shipment for which you are performing picking and packing operations. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the shipment that is currently being processed in the **Shipment Nbr.** box of the Summary area.
4. Enter *L3R2S1* to select the location from which the item is picked.
5. Enter *AJ08* to select the item being picked. The system highlights the first line of the shipment in bold and specifies *1* as the **Picked Quantity**.
6. Set the quantity of the item to *10* as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, type *10*. The system highlights the corresponding line of the shipment in green and specifies *10* as the **Picked Quantity**.

7. Enter L2R1S3 to select another location from which the item is picked.
8. Enter OJ32 to select the item being picked. The system highlights the second line of the shipment in bold and specifies 1 as the **Picked Quantity**.
9. Set the quantity of the line to 8. The system highlights in green the second line of the shipment and specifies 8 as the **Picked Quantity**.

You have picked the items for the shipment, and now you can proceed with packing the shipment.

### Step 2: Packing Items for Shipping

To record that the items have been packed into a box, do the following:

1. While you are still on the *Pick, Pack, and Ship* (SO302020) form viewing the 000029 shipment, enter @pack in the **Scan** box to switch to Pack mode. Notice that the shipment is still selected and its reference number is shown in the **Shipment Nbr.** box of the Summary area.
2. Enter MEDIUM to select the box for packaging the shipment.
3. Enter AJ08 to select the item being packed. The system highlights the first line of the shipment in bold and specifies 1 as the **Packed Quantity**.
4. Set the quantity of the item to 10 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, type 10. The system highlights the first line of the shipment in green and specifies 10 as the **Packed Quantity**.
5. Enter OJ32 to select the item being picked.
6. Set the quantity of the item to 8. The shipment is packed in full now.
7. On the form toolbar, click **OK** to confirm the package.
8. On the form toolbar, click **Confirm Shipment**.

### Step 3: Reviewing the Shipment

To review the result and make sure that the shipment has been confirmed, do the following:

1. On the *Shipments* (SO302000) form, open the shipment with the 000029 reference number that you have processed earlier. It is now assigned the *Confirmed* status.
2. Review the **Packages** tab. Notice that one MEDIUM box is shown in the upper table, and the **Contents of Selected Package** table shows the items that you have packed into this box, as shown in the following screenshot.

### Shipments

← SAVE & CLOSE [Print] [Refresh] + [Delete] K < > | ACTIONS ▾ REPORTS ▾

Shipment Nbr.: 000029	Customer: COFFEESHOP - FourStar Coffee&Sweet	Shipped Quant...: 18.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 18.00
Status: <b>Confirmed</b>	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 3.100000
<input type="checkbox"/> Hold	Workgroup:	Shipped Volume: 3.100000
Operation: Issue	Owner:	Packages: 1
Shipment Date: 1/30/2020		Package Weight: 0.030000

DOCUMENT DETAILS   ORDERS   SHIPPING SETTINGS   **PACKAGES**

Confirm	* Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
<input checked="" type="checkbox"/>	MEDIUM	Manual		0.0300	KG	0.0000	0.0000

**Contents of Selected Package**

Shipment Split Line Nbr.	Inventory ID	UOM	Quantity
9	APJAM08	PIECE	10.00
16	ORJAM32	PIECE	8.00

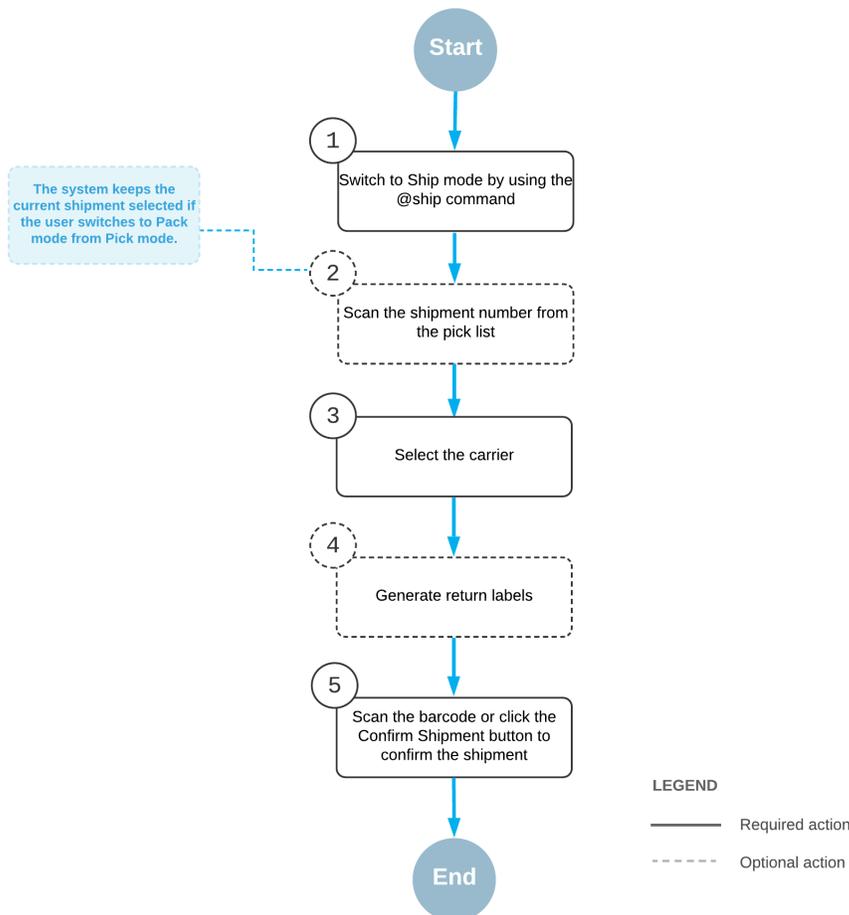
**Figure: Confirmed shipment**

The shipment processing is completed.

# Automated Shipping Operations: General Information

After you have picked and packed items, or packed items without picking, you may need to specify shipping options before you confirm the applicable shipment. This workflow is illustrated in the following diagram.

Automated shipping workflow



To specify shipping options for the shipment that is currently being processed, you perform the following steps:

1. *Switch to Ship mode.*

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Ship mode by scanning or entering `@ship` barcode.

**2.** *Scan the shipment number.*

To start automated processing, you scan the reference number of the shipment to be processed. In the **Shipment Nbr.** box, the system inserts the reference number of the document that is currently selected for processing. (If you have switched to Ship mode from Pick mode or Pack mode with a document selected, the document is selected automatically.)

The boxes for the shipment are shown in the **Packages** table.

**3.** *Select the carrier rate.*

In the **Carrier Rates** table, you select the unlabeled check box in the row of the carrier rate to be used for shipping.

**4.** *Optional: Generate return labels.*

On the table toolbar of the **Carrier Rates** table, click **Get Return Labels** to generate return labels for the shipment.

**5.** *Confirm the shipment.*

To confirm the processed shipment, you scan the \*confirm\*shipment barcode, or click **Confirm Shipment** on the form toolbar.

# Lesson 7: Automated Packing Operations

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## Packing Operations: General Information

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If the *Warehouse Management* and *Fulfillment* features are enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated packing of inventory items for shipping by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated packing of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Packing Operations: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn about configuring and performing automated packing. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated packing workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Pack items for a shipment in an automated mode
- Confirm a shipment after packing the items

### Applicable Scenarios

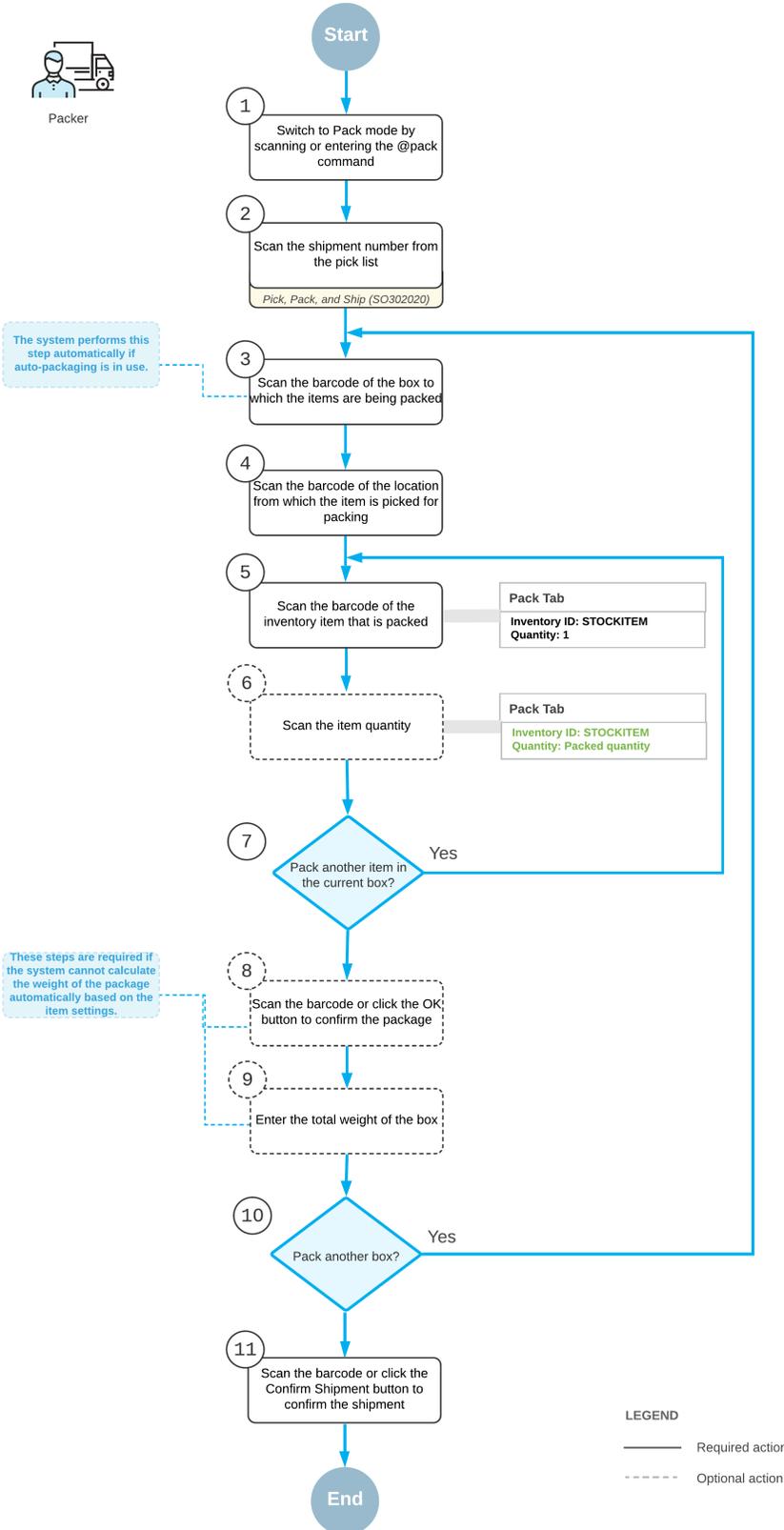
In your company's warehouses, there is no separate packing line, so each warehouse worker goes through the warehouse with a printed pick list, picks the items from the warehouse locations specified in the pick list, and immediately packs the items into a box for shipping. The warehouse worker then confirms the shipment. To track the performed operations, the warehouse worker scans the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated packing for open shipments prepared for sales orders and transfer orders (that is, the shipments of the *Shipment* and *Transfer* operation type specified on the [Shipments](#) (SO302000) form, respectively).

### Workflow for the Automated Packing of Items

The automated processing of packing items involves the actions shown in the following diagram.

### Automated packing workflow without picking



To process the packing of items (and use Pack mode) without picking them, you perform the following steps:

**1.** *Switch to Pack mode.*

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pack mode by scanning or entering @pack barcode.

**2.** *Scan the document number.*

To start the automated processing, you scan the reference number of the shipment to be processed. The system shows the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

**3.** *Scan the barcode of the box.*

You scan the barcode of the box to which the items will be packed.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically.

**4.** *Scan the location barcode.*

When you scan the barcode of the location from which the item is being taken for packing, the system searches for the location in the lines of the document that is currently selected.

**5.** *Scan the item barcode.*

When you scan the item barcode of the packed item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item; the system also displays the packed quantity in the **Packed Qty.** column, and highlights the line (in bold if the line is processed partially, or in green if the line is processed in full).

**6.** *Optional: Scan the item quantity.*

To change the packed quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**7.** *Pack another line.*

If another item needs to be packed in the current box, you return to scanning the item barcode (that is, return to Step 4) and repeat the process for the item.

**8.** *Optional: Confirm the package.*

If all items are packed in a single box, you confirm the box by scanning the \*ok barcode or by clicking the **OK** button. If the items are packed in multiple boxes, the system

automatically confirms the current box when you scan the barcode of the next box to be packed for the current shipment.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically.

**9.** Optional: *Enter the box weight.*

You enter the total weight of the box if the weight cannot be calculated by the system based on the item settings.

**10.** *Pack another box.*

If at least one other item needs to be packed for the current shipment, you return to scanning the barcode of the box (that is, return to Step 3) and repeat the process for another box.

**11.** *Complete the packing process.*

If you have finished the packing operation and you don't need to specify shipping options, you scan the *\*confirm\*shipment* barcode or click the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed.

**Known Process Limitations**

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

## Packing Operations: Implementation Checklist

---

This topic provides details you can use to ensure that the system is configured properly for the automated packing of items.

**Prerequisites**

Before you start configuring the workflow for automated processing of shipments, you should make sure that the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following checklist.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Checklist</a> .
<a href="#">Warehouses</a> (IN204000)	Make sure that the following entities have been created:

Form	Criteria to Check
	<ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .

### Minimum Workflow Settings

Before you start packing items for shipments by using a barcode scanner or other device, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>• <i>Warehouse Management</i></li> <li>• <i>Fulfillment</i></li> </ul>
The <b>Warehouse Management</b> tab of the <a href="#">Sales Orders Preferences</a> (SO101000) form	Make sure the <b>Display the Pick Tab</b> check box is cleared and the <b>Display the Pack Tab</b> check box is selected. With these settings, a user processes the packing of items in Pack mode (without first picking them) and then confirms the shipment.
The <b>Cross-Reference</b> tab of the <a href="#">Stock Items</a> (IN202500) form	Make sure that the barcodes have been specified for each item.

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated packing by specifying the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Display the Scan Log Tab</b>	Selected	With this check box selected, the system will display the <b>Scan Log</b> tab on the <a href="#">Pick, Pack, and Ship</a> (SO302020) form; on this tab, a user can review the list of operations

Setting	Value	Description
		that have been performed during the past two weeks.
<b>Short Shipment Configuration</b>	<i>Forbid</i>	With the <i>Forbid</i> value selected, the system does not allow a user to confirm a shipment that is not packed in full.
<b>Explicit Line Confirmation</b>	Cleared	With this check box cleared, the system does not request user confirmation for each line when the user is performing automated operations in Pack mode.
<b>Confirm Weight for Each Package</b>	Cleared	With this check box cleared, the user confirms a package, and the system calculates the package weight automatically.

### Printing Settings

If the *DeviceHub* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the printing of documents by using the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Print Shipment Confirmation Automatically</b>	Selected	With this check box selected, the system prints the shipment confirmation automatically when a user confirms a shipment.
<b>Print Shipment Labels Automatically</b>	Selected	With this check box selected, the system prints the shipment labels for the packages included in a shipment when the user confirms the shipment.

### Other Settings That Affect the Workflow

You can affect the workflow for automated packing by specifying additional settings on the [Sales Orders Preferences](#) (SO101000) form:

- To speed the entry of quantities in the processed lines, select the **Use Default Quantity** check box to make the system specify the quantity entered by the user by default for all lines in a currently processed document.

- To allow users to confirm partially packed shipments, select *Allow with Warning* in the **Short Shipment Configuration** box.

## Packing Operations: Process Activity

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In the following activity, you will learn how to perform the packing of items for a shipment by using the *Pick, Pack, and Ship* (SO302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker of the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to pack a shipment. In your organization, the pack workflow is used, which means that you go through the warehouse locations, take the items, and pack the items into boxes for shipping.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the *Enable/Disable Features* (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the *Warehouses* (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations are configured.
- The following stock items on the *Stock Items* (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a sales order to *COFFEESHOP* customer has been entered on the *Sales Orders* (SO301000) form, and a shipment document has been prepared for this order on the *Shipments* (SO302000) form.

### Process Overview

In this activity, you will open the *Pick, Pack, and Ship* (SO302020) form, switch to Pack mode, and scan the number of the shipment from the pick list. Then you will scan the barcode of the box to which you pack the items, and the barcode of the location from which you take the items. Then you will scan the item barcode and quantity of items being packed into the box. After you finish packing the items, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start the automated packing operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded by using the *perkins* login and the *123* password.
2. On the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, clear the **Display the Pick Tab** check box and make sure the **Display the Pack Tab** check box is selected.
3. Save your changes

### Step 1: Packing Items for Shipping

To record that items to be added to a shipment have been picked from the warehouse locations and packed into boxes, do the following:

1. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pack** tab is opened.
2. In the **Scan** box of the Summary area, enter 000031, which is the reference number of the shipment for which you are performing picking and packing operations. The system loads the shipment lines to the table on the **Pack** tab, and shows the reference number of the shipment that is currently being processed in the **Shipment Nbr.** box of the Summary area.
3. Enter *MEDIUM* to select the box to which the items are packed.
4. Enter *L3R2S2* to specify the next location from which the items are taken.
5. Enter *AJ08* to select the item being packed. The system highlights the first line of the shipment in bold and specifies *1* as the **Picked Quantity** and **Packed Quantity**.
6. Set the quantity of the current line to 10 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, type 10. The system highlights the first line of the shipment in green and specifies *10* as the **Picked Quantity** and **Packed Quantity**.
7. Enter *L2R1S3* to specify the next location from which the items are taken.
8. Enter *OJ32* to select the item being packed.
9. Set the quantity of the item to 7.
10. On the form toolbar, click **OK** to confirm the package.

11. On the form toolbar, click **Confirm Shipment** to confirm the shipment document, which is assigned the *Confirmed* status.

**Step 2: Reviewing the Shipment**

To review the result and make sure that the shipment has been confirmed, do the following:

1. On the *Shipments* (SO302000) form, open the shipment with the *000031* reference number that you have processed in the previous step. It now is assigned the *Confirmed* status.
2. Review the **Packages** tab. Notice that one *MEDIUM* box is shown in the upper table, and the **Contents of Selected Package** table shows the items that you have packed into this box, as shown in the following screenshot.

Shipments

← SAVE & CLOSE [Icons] ACTIONS ▾ REPORTS ▾

Shipment Nbr.: 000031	Customer: COFFEESHOP - FourStar Coffee&Sweet	Shipped Quant...: 17.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 17.00
Status: <b>Confirmed</b>	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 3.100000
<input type="checkbox"/> Hold	Workgroup:	Shipped Volume: 3.100000
Operation: Issue	Owner:	Packages: 1
Shipment Date: 1/30/2020		Package Weight: 0.030000

DOCUMENT DETAILS   ORDERS   SHIPPING SETTINGS   **PACKAGES**

Confirmed	* Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
<input checked="" type="checkbox"/>	MEDIUM	Manual		0.0300	KG	0.0000	0.0000

**Contents of Selected Package**

Shipme Split Line Nbr.	Inventory ID	UOM	Quantity
5	APJAM08	PIECE	10.00
6	ORJAM32	PIECE	7.00

**Figure: Confirmed shipment**

3. On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, select the **Display the Pick Tab** check box and save your changes.

# Lesson 8: Automated Receiving and Putting Away Operations

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## Receiving and Putting Away Operations: General Information

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If the *Receiving* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can perform the automated receiving and putting away of inventory items by using a barcode scanner or a mobile device with a scanning option.

In this topic, you will read about the workflow for the automated receiving and putting away of inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Receiving and Putting Away Operations: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn about configuring and performing automated receiving and putting away. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the automated receiving and putting away workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Receive items to a receiving location of a warehouse in an automated mode
- Put away items in their storage locations in an automated mode

### Applicable Scenarios

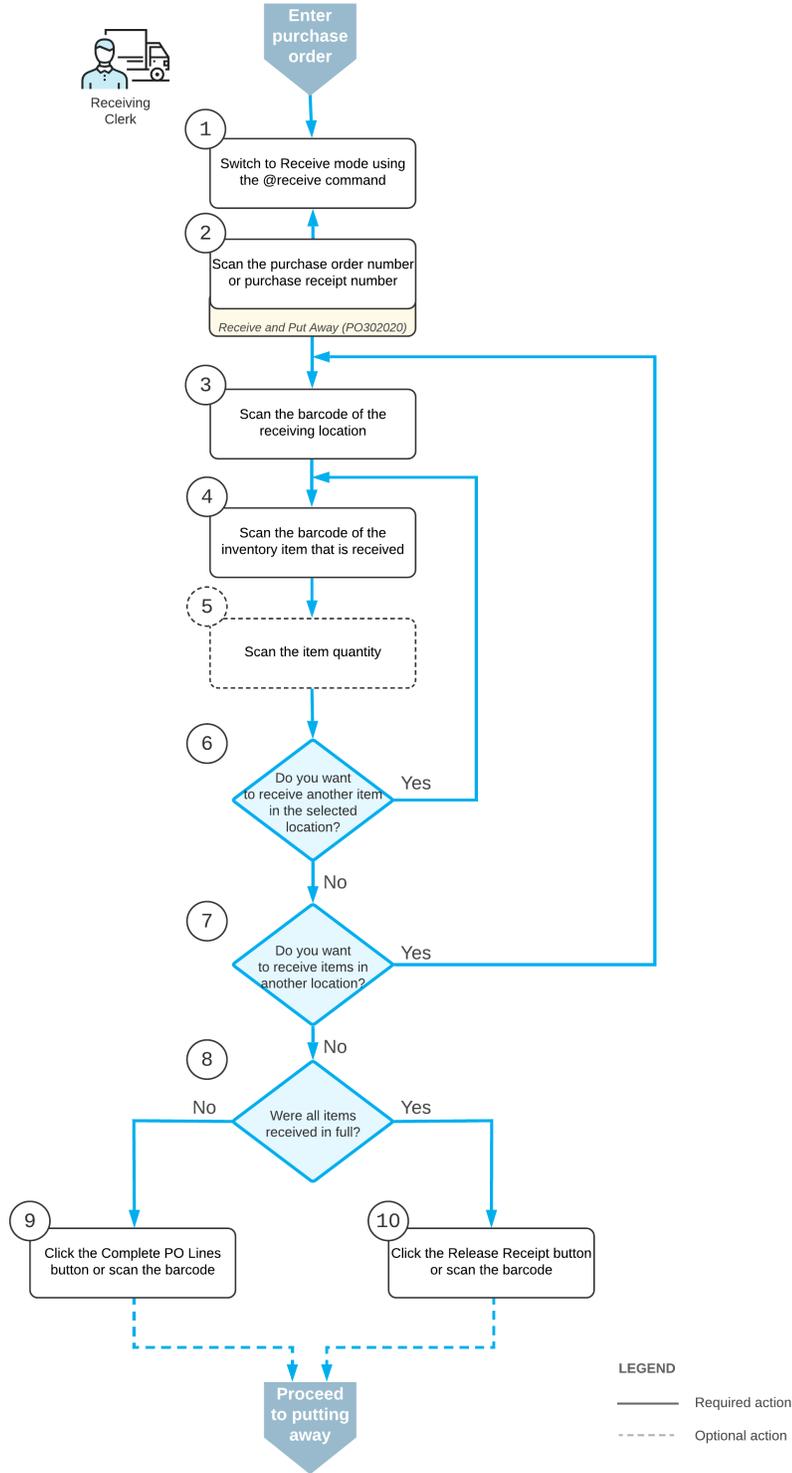
You can perform the automated receiving and putting away of inventory items if in your company's warehouses, all purchased items are received to a dedicated location. A warehouse worker receives items from a purchase receipt to this location. Then the warehouse worker puts away the received items in the locations where the items will be stored. To track the operations as they are being performed, the worker scans the appropriate barcodes by using a barcode scanner or mobile device.

You can perform automated receiving of items for purchase orders with the *Open* status on the [Purchase Orders](#) (PO301000) form, and purchase receipts and purchase returns with the *Balanced* status on the [Purchase Receipts](#) (PO302000) form. You can perform the automated putting away of items for purchase receipts with the *Released* status on the [Purchase Receipts](#) (PO302000) form.

### **Workflow for the Automated Receipt of Items**

The automated processing of receiving items involves the actions shown in the following diagram.

Automated receiving workflow



To process the receipt of items (and to use Receive mode), you perform the following steps:

**1.** *Switch to Receive mode.*

You open the [Receive and Put Away](#) (PO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Receive mode by scanning or entering @receive barcode.

**2.** *Scan the document number.*

To start the automated processing, you scan the reference number of the purchase order, purchase receipt, or purchase return document to be processed. The system displays the lines of the scanned document in the table. If you have scanned the purchase order number, the system creates and saves the related purchase receipt automatically. In the **Receipt Nbr.** box, the system inserts the reference number of the receipt or return that is currently selected for processing.

**3.** *Scan the barcode of the receiving location.*

You scan the barcode of the warehouse location where the items are being received.

**4.** *Scan the item barcode.*

When you scan the barcode of the received item, the system searches for the item in the lines of the document that is currently selected. If the item is found, the system highlights the line with bold. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the received quantity in the base unit of measure for this item.

**5.** *Optional: Scan the item quantity.*

To change the received quantity in the line that is currently being processed, you switch on Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item..

**6.** *Optional: Scan the barcode to confirm the received quantity.*

If no more changes are needed for the line that is currently being processed, you scan the \*ok barcode or click the **OK** button to confirm the received quantity.

**7.** *Receive another item.*

If you need to receive at least one other item for the document currently being processed, you return to scanning the item barcode (that is, return to Step 4) and repeat the process for the item.

**8.** *Receive items in another location.*

If items must be received in another warehouse location, you scan the barcode of this location (return to Step 3) and repeat the process for the next location.

**9.** *Complete the receiving process.*

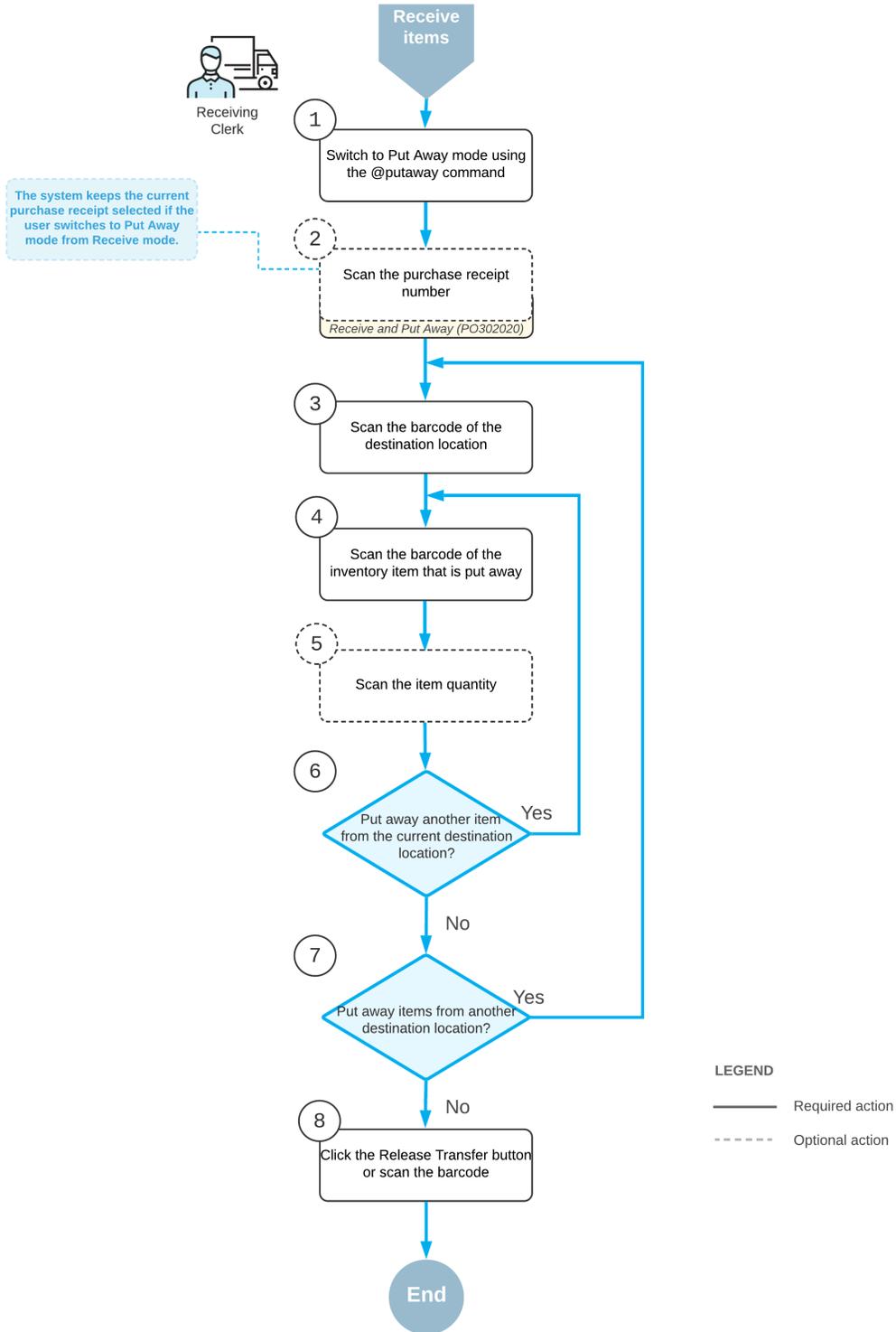
If you have finished the receiving operation but not all items have been received for the purchase receipt (and they will not be received in the future), you scan the `*complete*polines` barcode, or click the **Complete PO Lines** button. The system marks all purchase receipt lines as completed and releases the purchase receipt.

If you have finished the receiving operation and all items have been received for the purchase receipt (or the items were received partially and more items will be received in the future), you scan the `*release*receipt` barcode or click the **Release Receipt** button. The system does not mark partially received lines as completed and releases the purchase receipt.

### **Workflow for the Automated Putting Away of Items**

The automated processing of putting away items involves the actions shown in the following diagram.

### Automated workflow of putting away received items



To process the putting away of items by using Put Away mode, you perform the following steps:

**1.** *Switch to Put Away mode.*

You open the [Receive and Put Away](#) (PO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Put Away mode by scanning or entering @putaway barcode.

**2.** *Scan the document number.*

To start the automated processing, you scan the reference number of the released purchase receipt to be processed. (If you switch to Put Away mode from Receive mode with a document selected, the system selects the document automatically.) The system displays the lines of the scanned document in the table. In the **Receipt Nbr.** box, the system inserts the reference number of the document that is currently selected for processing.

**3.** *Scan the barcode of the destination location.*

You scan the barcode of the destination location in which you are putting away items. If the items of a particular line are put away in multiple locations, the system splits the line by locations and shows <SPLIT> in the **Location** column. You can review the IDs of the locations to which the items are put away by clicking **Transfer Allocations** on the table toolbar of the **Put Away** tab.

Once you have specified the destination location, the system automatically creates a single-step inventory transfer document that reflects the movement of the items from the receiving location to the storage location.

**4.** *Scan the barcode of the item.*

When you scan the barcode of the received item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the put away quantity in the base unit of measure for this item. To indicate the line or lines with the scanned barcode, the system selects the **Matched** check box in these lines. The system highlights the lines in bold if they are processed partially, and in green if they are processed in full.

**5.** *Optional: Scan the item quantity.*

To change the quantity being put away in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**6.** *Scan another item.*

If at least one other item needs to be put away, you return to scanning the barcode of the item (that is, return to Step 4) and repeat the process for the item.

**7.** *Scan another destination location.*

If items must be transferred to another destination location, you scan the barcode of this location (return to Step 3) and repeat the process.

#### 8. Complete the process of putting items away.

When you have finished the operation of putting away items, you scan the \*release\*transfer barcode or click the **Release Transfer** button. The system releases the inventory transfer document that was prepared during the automated operation; the items are moved to the destination locations.

#### Receipt of Extra Quantity

If the actual quantity of received items is more than the quantity specified in the processed purchase document, you can process the receipt of these items as an automated operation as well. If you scan a quantity that exceeds the quantity in the line that is currently being processed, the system requests confirmation for adding this quantity. If you confirm this addition with the \*ok barcode or the **OK** button, the system adds a new line with the extra quantity to the processed purchase receipt document, and shows this line in the table on the **Receive** tab of the [Receive and Put Away](#) (PO302020) form. The line with the extra quantity is not linked to the purchase order for which the purchase receipt was prepared.

## Receiving and Putting Away Operations: Implementation Checklist

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This topic provides details you can use to ensure that the system is configured properly for the automated receiving and putting away of items.

#### Prerequisites

Before you start configuring automated warehouse operations, you should make sure that the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following checklist.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (PO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: General Information</a> .
<a href="#">Warehouses</a> (IN204000)	Make sure that the following entities have been created: <ul style="list-style-type: none"> <li>• The required warehouses, as described in <a href="#">Warehouses: Implementation Activity</a>.</li> <li>• The required locations, as described in <a href="#">Warehouse Locations and Single-Step Transfers: Implementation Activity</a>.</li> </ul>

Form	Criteria to Check
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .

### Minimum Workflow Settings

Before you start receiving and putting away items for shipments by using a barcode scanner or other device, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following table.

Form	Criteria to Check
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>• <i>Warehouse Management</i></li> <li>• <i>Receiving</i></li> </ul>
The <b>Warehouse Management</b> tab of the <a href="#">Purchase Orders Preferences</a> (PO101000) form	Make sure that the following check boxes are selected: <ul style="list-style-type: none"> <li>• <b>Display the Receive Tab</b></li> <li>• <b>Display the Put Away Tab</b></li> </ul> <p>With these settings, the receiving workflow is configured so that a user processes the receipt of the items to the receiving location in Receive mode, and the user processes the putting away of items from the receiving location to the locations where the items will be stored in Put Away mode.</p>
The <b>Cross-Reference</b> tab of the <a href="#">Stock Items</a> (IN202500)	Make sure that the barcodes have been specified for each item.

### Recommended Workflow Settings

We recommend that you configure the workflow for the automated receiving and putting away items by specifying the following settings on the **Warehouse Management** tab of the [Purchase Orders Preferences](#) (PO101000) form.

Setting	Value	Description
<b>Display the Scan Log Tab</b>	Selected	With this check box selected, the system will display the <b>Scan Log</b> tab on the <a href="#">Receive and Put Away</a> (PO302020) form; on this tab, a user can review the list of operations

Setting	Value	Description
		that have been performed during the past two weeks.
<b>Explicit Line Confirmation</b>	Cleared	With this check box cleared, the system does not request user confirmation for each line when the user is performing automated operations in Receive mode and Put Away mode.
<b>Use Single Receiving Location</b>	Selected	With this check box selected, the system asks for the receiving location only once for each purchase receipt being processed; all items of this purchase receipt are received to this location.

### Printing Settings

If the *DeviceHub* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the printing of documents by using the following settings on the **Warehouse Management** tab of the [Purchase Orders Preferences](#) (PO101000) form.

Setting	Value	Description
<b>Print Inventory Labels Automatically</b>	Selected	With this check box selected, the system automatically prints the inventory label for the purchase receipt being processed.
<b>Print Purchase Receipts Automatically</b>	Selected	With this check box selected, the system automatically prints the processed purchase receipts.

### Other Settings That Affect the Workflow

You can affect the workflow for the automated receiving and putting away of items by specifying additional settings on the [Purchase Orders Preferences](#) (PO101000) form:

- To speed the entry of quantities in the processed lines, select the **Use Default Quantity** check box, which makes the system specify the quantity entered by the user by default for all lines in the currently being processed.
- To make the system automatically specify the default receiving location of a warehouse for all receipt documents being processed, select the **Default Receiving Location** check box.

- To make the system request the receiving location for each item being processed in Receive mode, clear the **Use Single Receiving Location** check box, and select the **Request Location for Each Item on Receiving** check box.

To make the system request the location to which each item must be put away in Put Away mode, clear the **Use Single Receiving Location** check box, and select the **Request Location for Each Item on Putting Away** check box.

## Receiving and Putting Away Operations: Process Activity

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In the following activity, you will learn how to perform the receiving and putting away of items by using the [Receive and Put Away](#) (PO302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to receive the purchased fruits (80 pounds of apples and 60 pounds of oranges) in the warehouse. In your organization, the receive and put away workflow is used, which means that you receive the purchased items at a receiving location of the warehouse, and then go through the warehouse locations and put away the items in the locations where the fruits are stored. Also suppose that you are putting away the apples and part of the oranges in one fruit location, and the rest of the oranges in another fruit location.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Receiving*

On the **Warehouse Management** tab of the [Purchase Orders Preferences](#) (PO301000) form, the **Display the Receive Tab** and **Display the Put Away Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations reflecting the warehouse structure have been configured.

- The following stock items on the *Stock Items* (IN202500) form: *APPLES* and *ORANGES*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a purchase order to the *ALLFRUITS* vendor has been entered on the *Purchase Orders* (PO301000) form, and a purchase receipt has been prepared for this order on the *Purchase Receipts* (PO302000) form.

### Process Overview

In this activity, you will open the *Receive and Put Away* (PO302020) form, switch to Receive mode, and scan the number of the purchase receipt. Then you will receive the items and scan their barcodes and quantities. After you finish receiving items, you will switch to Put Away mode on the same form and scan the barcodes of the warehouse locations to which the items are being put away, and scan the item barcodes and quantities. After you finish putting away items, you will release the transfer receipt.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start the automated receiving and putting away operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded by using the *perkins* login and the *123* password.
2. On the **Warehouse Management** tab of the *Purchase Orders Preferences* (PO301000) form, make sure that the **Display the Receive Tab** and **Display the Put Away** tab check boxes are selected.

### Step 1: Receiving Items in the Receiving Location

To record that items have been received in the receiving location of the warehouse, do the following:

1. Open the *Receive and Put Away* (PO302020) form and make sure the **Receive** tab is opened.
2. In the **Scan** box of the Summary area, enter 000018, which is the reference number of the purchase receipt for which you are receiving and putting away items. The system loads the purchase receipt lines to the table, and shows the reference number of the purchase receipt that is currently being processed in the **Receipt Nbr.** box of the Summary area.
3. Enter `MAIN` to select the location in which you are receiving the items.
4. Enter `AP1LB` to select the item being received. The system highlights the first line of the purchase receipt in bold and specifies *1* as the **Received Quantity**.

5. Set the quantity of the item to 80 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter 80. The system highlights the first line of the purchase receipt in green and specifies 80 as the **Received Quantity**.
6. Enter OR1LB to select the item being received. The system highlights the second line of the purchase receipt in bold and specifies 1 as the **Received Quantity**.
7. Set the quantity of the current line to 60.
8. On the form toolbar, click **Release Receipt** to release the purchase receipt. The system releases the purchase receipt and generates the inventory receipt transaction to record the receipt of items in the *MAIN* location of the warehouse.

You have received the items for the purchase receipt, and now you can proceed with putting away the received items in the storage locations.

## Step 2: Putting Away the Received Items in the Storage Locations

To record that items are being put away from the receiving location of the warehouse in the locations where these items will be stored, do the following:

1. While you are still on the [Receive and Put Away](#) (PO302020) form with the 000018 purchase receipt selected, in the **Scan** box, enter *@putaway* to switch to Put Away mode.
2. Enter F1S2 to select the location to which the items are being put away.
3. Enter AP1LB to select the item to be put away in this location. The system highlights the first line of the purchase receipt in bold and specifies 1 as the **Put Away Qty**. In the Summary area, the **Transfer Ref. Nbr.** box shows the reference number of the inventory transfer transaction that the system automatically creates to record the movement of items from the receiving location to the storage locations.
4. Set the quantity of the item to 80 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, type 80. The system highlights the first line of the purchase receipt in green and specifies 80 as the **Put Away Quantity**, indicating that 80 pounds of apples have been put away on the second shelf of the first fruit location.
5. Enter OR1LB to select the item being put away.
6. Set the quantity of the line to 40, indicating that 40 pounds of oranges have been put away on the second shelf of the first fruit location.
7. Enter F2S2 to select another location to which the rest of the oranges is being put away.

8. Enter `OR1LB` to select the item being put away. The system shows `<SPLIT>` in the **To Location ID** box, indicating that the items are being put away in multiple locations.
9. Set the quantity of this line to `20`, indicating that 20 pounds of oranges have been put away on the second shelf of the second fruit location. Now all items from the purchase receipt have been put away in the appropriate storage locations, and these actions have been reflected in the system.
10. On the form toolbar, click **Release Transfer**.

### Step 3: Reviewing the Inventory Transfer

To review the results of the receiving and putting away operations and make sure that the items have been transferred, do the following:

1. While you are still on the *Receive and Put Away* (PO302020) form with the `000018` purchase receipt selected, on the **Transfers** tab, click the **Reference Nbr.** link to open the generated inventory transfer.
2. On the *Transfers* (IN304000) form that opens, review the details of the inventory transfer that has been generated as the result of the previous step. Make sure the transaction has been released.

Transfers NOTES ACTIVITIES FILES NOTIFICATIONS TOOLS

SAVE & CLOSE ↺ + ↻ ↵ < > RELEASE REPORTS ▾

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Reference Nbr.:  Warehouse ID:  Total Qty.:   
 Status:  To Warehouse ...   
 Hold External Ref.:   
 Transfer Type:  Description:   
 \* Date:   
 Post Period:

TRANSACTION DETAILS FINANCIAL DETAILS

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ALLOCATIONS ADD ITEM INVENTORY SUMMARY ⌂ ↕

Inventory ID	Location	To Location ID	UOM	Quantity	Reason Code	Description
APPLES	MAIN	F1S2	LB	80.00		Fresh apples 1 lb
ORANGES	MAIN	F1S2	LB	40.00		Fresh oranges 1 lb
ORANGES	MAIN	F2S2	LB	20.00		Fresh oranges 1 lb

**Figure: Inventory transfer transaction**

### Self-Test Exercise

On the *Purchase Orders* (PO301000) form, create a copy of the purchase order to *ALLFRUITS* dated `1/28/2019` for a purchase of 80 pounds of apples and 60 pounds of oranges. Process the receiving and putting away of 100 pounds of apples and 80 pounds of oranges—20 pounds more of each fruit than were ordered—from this order to the *F1S2* location, and review how the system processes the receipt of extra items.

# Lesson 9: Automated Fulfilling Orders with Wave Picking

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## Wave Picking: General Information

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If the *Advanced Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can optimize and speed up the warehouse operations needed for fulfilling the order by using the wave picking workflow.

In this topic, you will read about the wave picking workflow in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Wave Picking: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn about using wave picking workflow for fulfilling the orders. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the wave picking workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Prepare a wave picking worksheet
- Pick and pack items in a wave
- Confirm a shipment after packing the items

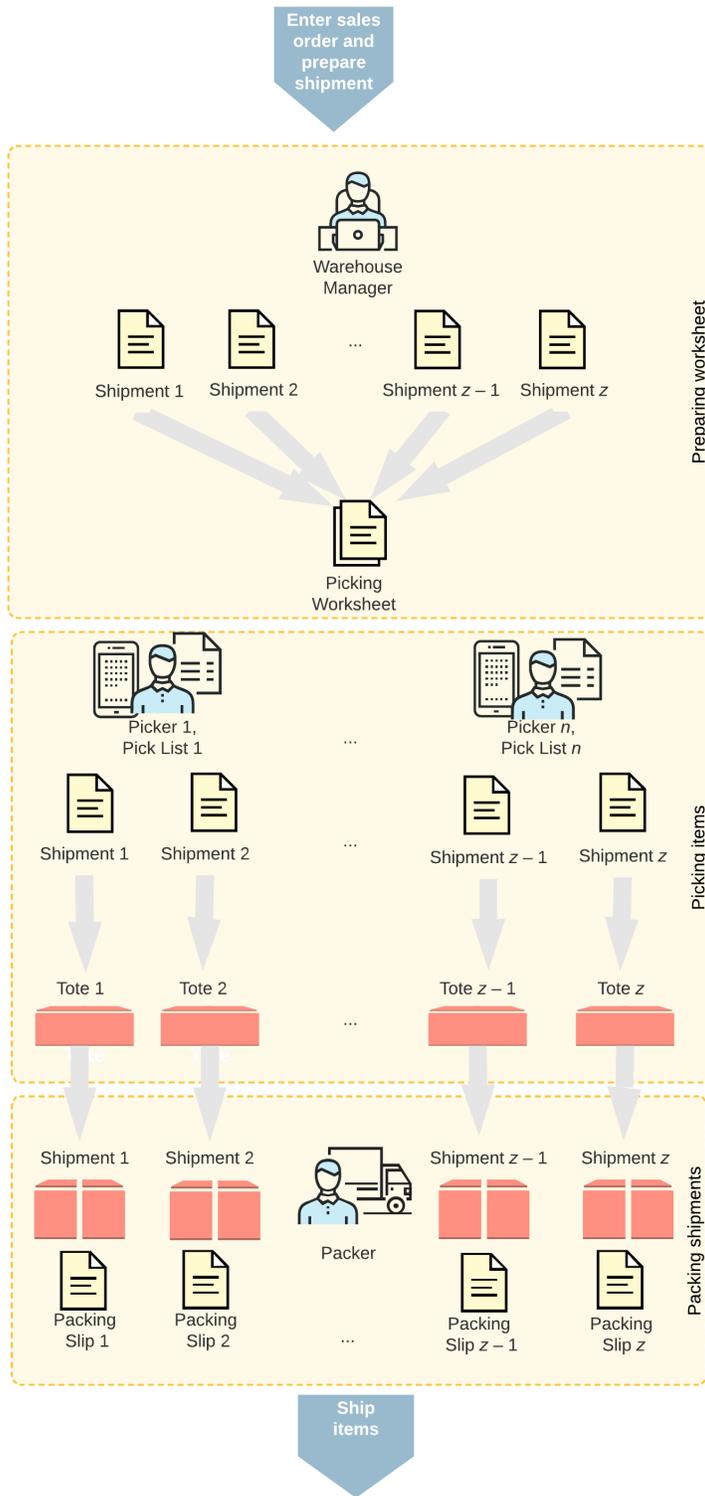
### Applicable Scenarios

You use wave picking if you need to optimize the process of picking and packing items for a group of orders to be shipped. With a wave picking flow, the warehouse manager prepares a series of pick lists for a group of orders to be shipped (also called a *wave*). Each picker receives a consolidated pick list that includes multiple shipments for which the picker can pick all the listed items in one pass through the warehouse. The pickers collect the items and organize them in the individual totes assigned to each of the shipments. When the items are brought to the packing location, the packer takes the items from each of the totes, verifies that the shipment is collected correctly, and packs the items into boxes.

### General Process of Wave Picking

The workflow of fulfilling orders with the wave picking workflow is shown in the following diagram.

### Wave picking process



Processing a wave includes the following processes performed by the following persons:

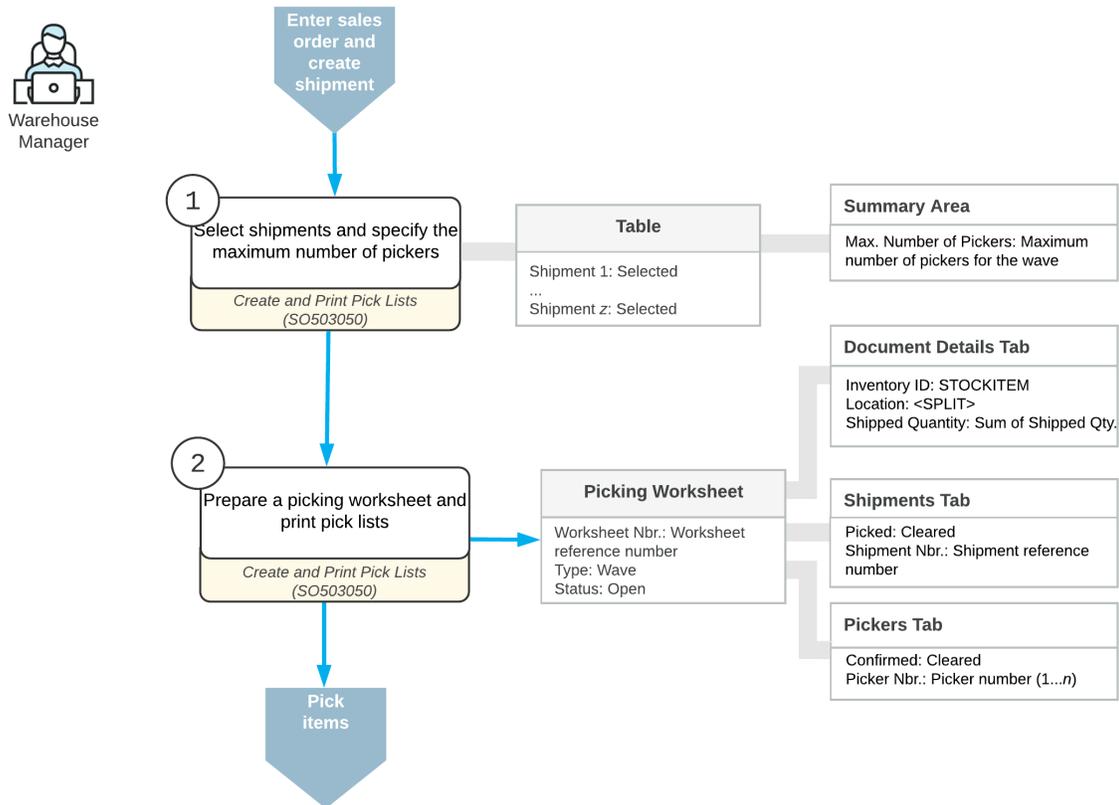
1. A warehouse manager opens the *Create and Print Pick Lists* (SO503050) form, selects the shipments to be processed in a wave, specifies the maximum number of pickers, creates a picking worksheet, and prints the wave pick lists.
2. Each warehouse worker acting as a picker opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pick mode, and scans the reference number of the wave pick list. Then the picker scans the barcodes of the totes that will be used for picking items for particular shipments. The picker goes through the warehouse, picks the items from the locations, scans locations' barcodes, and items' barcodes and quantities, and put the items in the totes.
3. A warehouse worker acting as a packer opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pack mode and scans the reference number of the wave pick list. Then the packer scans the barcode of the box to which the items are being packed, takes the items from the totes, scans the barcodes and the quantity of items being packed, and puts items in boxes. After all the items are packed, the packer confirms the shipment.

The following sections illustrate and describe the workflow for a warehouse manager, a picker, and a packer. By understanding the workflow for each of these employees, you can better understand the wave picking workflow as a whole in a warehouse.

### **Workflow for a Warehouse Manager**

The workflow of a warehouse manager involves the actions shown in the following diagram.

## Preparation of the picking worksheet for wave picking



To prepare a wave picking worksheet, the warehouse manager performs the following steps:

1. *Selects the type of picking worksheet to be prepared.*

The warehouse manager opens the *Create and Print Pick Lists* (SO503050) form and selects the *Create and Print Wave Pick List* action.

2. *Specifies the number of pickers.*

To specify the maximum number of pickers who are currently available to be assigned to a wave, the manager enters the value in the **Max. Number of Pickers** box.

3. *Optional: Defines the number of totes for each picker.*

To define the number of totes used by each picker assigned to a wave, the manager enters the value in the **Define Nbr. of Totes per Picker** box.

4. *Selects the shipments.*

In the table, the manager selects the unlabeled check boxes in the lines with the shipments to be included in the picking worksheet.

**5.** *Creates a picking worksheet and selects the pickers.*

On the form toolbar, the manager clicks **Process** to create the picking worksheet for the selected shipments and to print wave pick lists (in which the items are grouped by the wave) and standard pick lists for each shipment to be picked. Then the manager gives these pick lists to the pickers (that is, the warehouse workers who will perform the picking).

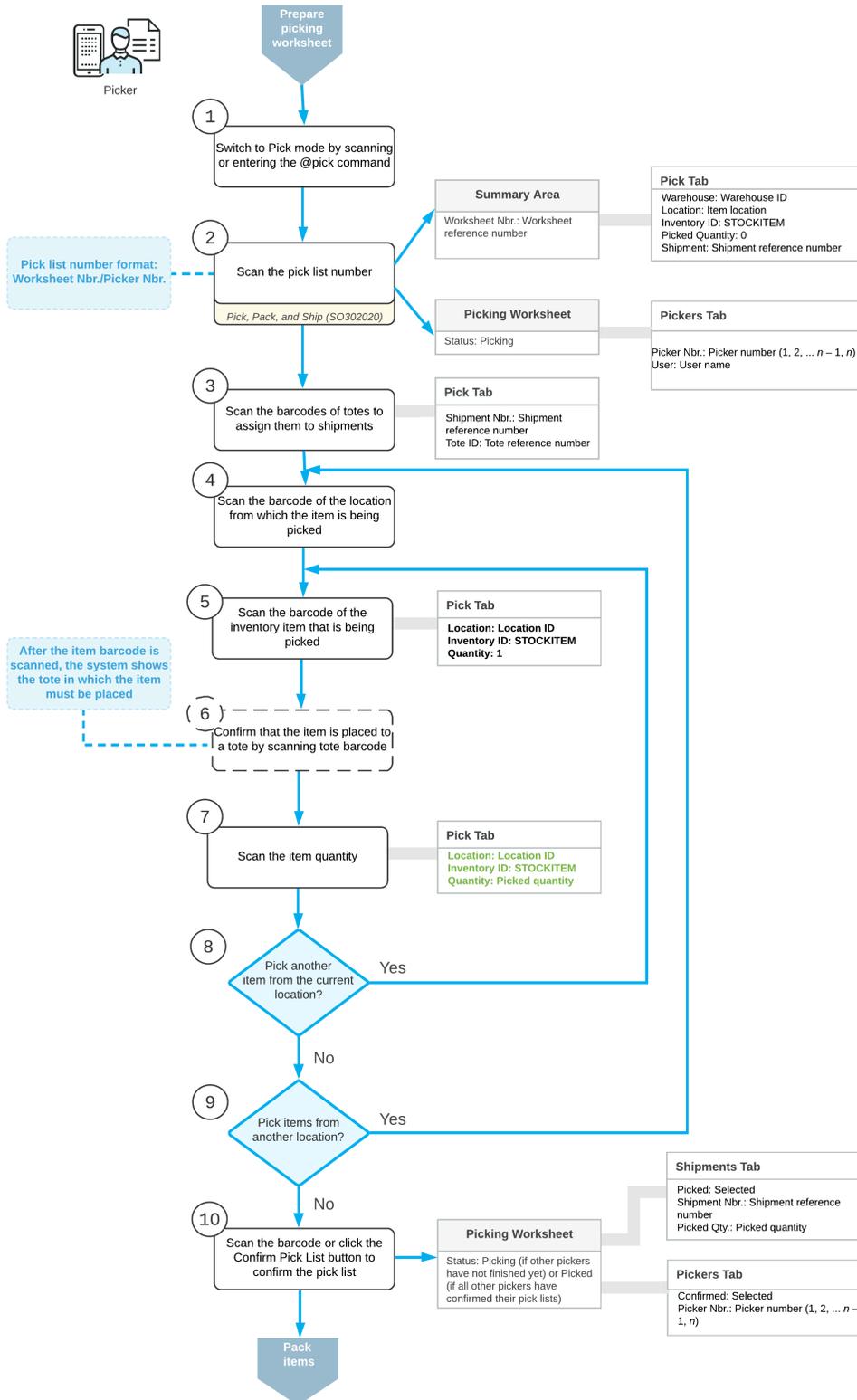


If the **Print Packing Slips with Pick Lists** check box is selected on the [Sales Orders Preferences](#) (SO101000) form, the system also prints packing slips with the pick lists.

### **Workflow for a Picker**

The workflow of a picker involves the actions shown in the following diagram.

### Wave picking of items



To pick the items for a wave pick list, the picker performs the following steps:

**1.** *Switches to Pick mode.*

The picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pick mode by scanning or entering @pick barcode.

**2.** *Scans the number of the wave pick list.*

To start the automated processing, the picker scans the reference number of the wave pick list. This reference number has the *Worksheet Nbr./Picker Nbr.* format, where *Worksheet Nbr.* is the reference number of the related picking worksheet, and the *Picker Nbr.* is the reference number of the picker assigned to this worksheet (for example, 000001/1). The system displays the pick list lines in the table and inserts the reference number of the picking worksheet that is currently selected for processing in the **Shipment Nbr.** box.

**3.** *Scans the barcodes of the totes to be assigned to the shipments.*

The picker scans the barcodes of all totes that will be used for picking the wave. Each tote is assigned to a particular shipment. The picker also places into each tote the pick list (or the packing slip) of the related shipment.

**4.** *In each location from the wave pick list, picks the items as follows:*

**a.** *Scans the location barcode.*

When the picker scans the barcode of the location from which the item is picked, the system searches for the location in the lines of the picking worksheet that is currently selected.

**b.** *Scans the item barcode.*

When the picker scans the item barcode of the picked item, the system searches for the item in the lines of the currently selected document. The system displays the picked quantity in the **Picked Qty.** column and highlights the line (with bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.

**c.** *Scan the tote barcode.*

The system notifies the picker in which tote the items must be placed. The picker scans the tote to confirm that the picked item is placed in the right tote (that is, in the one assigned to the shipment).

**d.** *Optional: Scans the item quantity.*

To change the picked quantity in the line that is currently being processed, the picker switches to Quantity Editing mode by clicking the **Set Qty** button on the form toolbar

(or by scanning or entering the \*qty barcode) and manually enters the quantity in the UOM defined by the barcode of the scanned item.

**e.** *Picks another item.*

If another item needs to be picked from the currently selected location, the picker scans the item barcode (returns to the second substep of this step) and repeats the process for the item.

**f.** *Picks items from another location.*

If the picker needs to pick items from another location, he or she scans the location barcode (returns to the first substep of this step), and repeats the process for the location.

**5.** *Completes the picking process.*

If the picker has finished picking items from his or her part of the wave, the picker scans the \*confirm\*pick barcode or clicks the **Confirm Picking** button on the form toolbar to confirm that the picking process is finished.



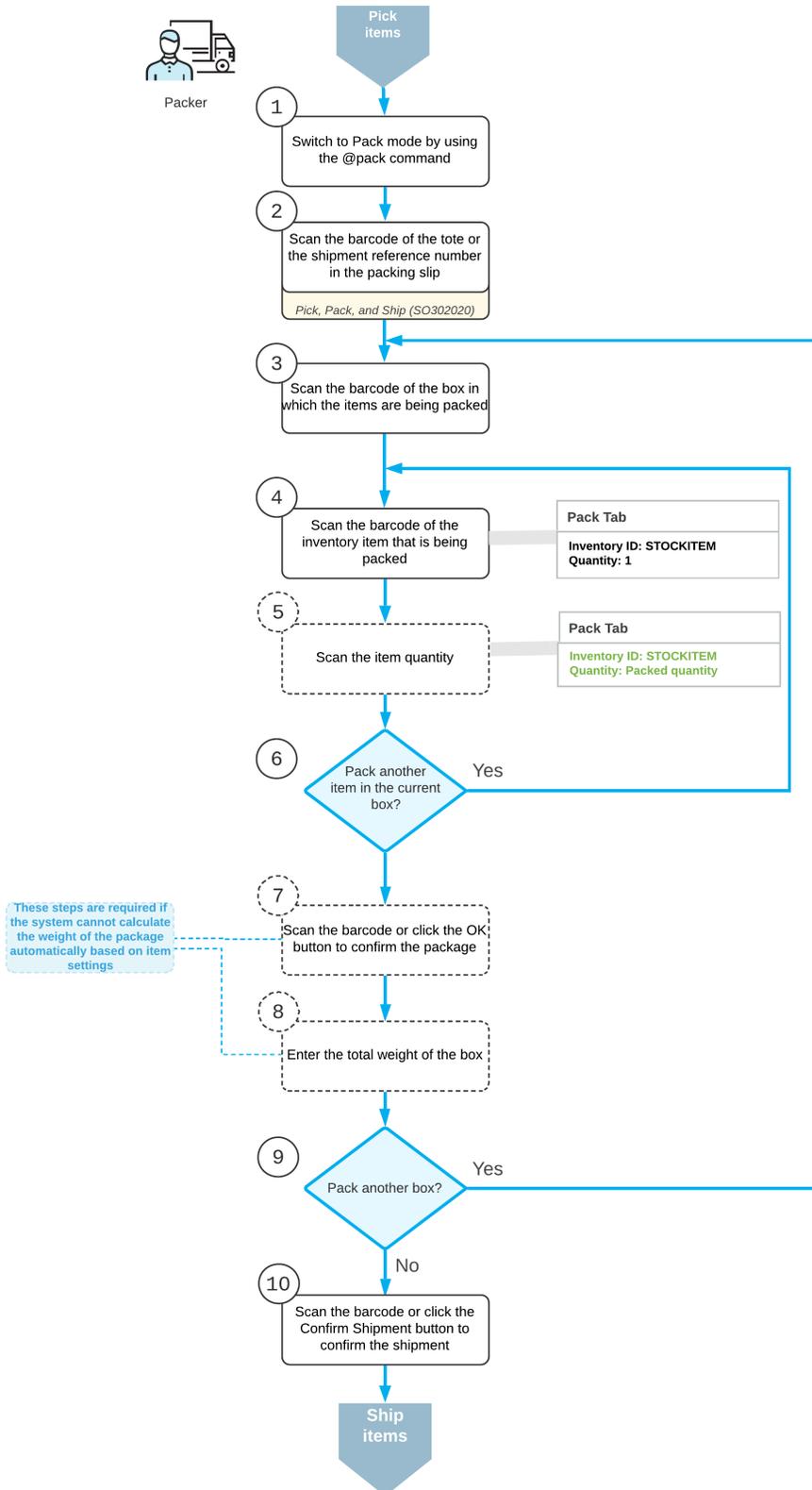
Confirming the picking of a wave does not confirm the picked shipments.

After finishing the wave picking, the picker brings the totes with items to the packing location.

**Workflow for a Packer**

The workflow of a packer involves the actions shown in the following diagram.

### Packing of items after wave picking



To pack the items for a shipment, the packer performs the following steps:

**1. Switches to Pack mode.**

The picker opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pack mode by scanning or entering @pack barcode.

**2. Scans the tote barcode or the shipment number.**

The packer scans the barcode of the tote or the shipment number from the packing slip to start packing the items from this tote for shipping.

**3. For each box being packed for the selected shipment, the picker does the following:**

**a. Scans the barcode of the box.**

The packer scans the barcode of the box into which the items will be packed.

**b. Scans the item barcode.**

When the packer scans the barcode of the packed item, the system searches for the item in the lines of the shipment that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system shows the packed quantity in the **Packed Qty.** column and highlights the line (with bold if the line has been processed partially, or in green if the line has been processed in full).

**c. Optional: Scans the item quantity.**

To change the packed quantity in the line that is currently being processed, the packer switches to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enters the quantity in the UOM defined by the barcode of the scanned item..

**d. Packs another item.**

If another item needs to be packed in the current box, the packer returns to scanning the item barcode (that is, returns to the second substep of this step) and repeats the process for the item, or proceeds to the next step if all items have been packed in the box.

**e. Confirms the box.**

If all items have been packed in the box, the packer confirms the current box by scanning the \*ok barcode or by clicking the **OK** button.

**f. Enters the box weight.**

The packer enters the total weight of the box.

**g. Packs another box.**

If more items need to be packed for the current shipment, the packer returns to scanning the barcode of the box barcode (returns to the first substep of this step) and repeats the process for another box.

#### 4. Completes the packing process.

If the packer has finished the packing operation and specifying shipping options is not needed, the packer scans the `*confirm*shipment` barcode or clicks the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed, and prints labels for the packed boxes.

#### Known Process Limitations

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

## Wave Picking: Implementation Checklist

---

This topic provides details you can use to ensure that the system is configured properly for picking and packing items in a wave.

#### Prerequisites

Before you begin processing shipments in a wave, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following checklist.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: General Information</a> .
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>• <i>Warehouse Management</i></li> <li>• <i>Fulfillment</i></li> <li>• <i>Advanced Picking</i></li> </ul>
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .
<a href="#">Sales Orders Preferences</a> (SO101000) form	Make sure that the automated picking workflow is configured to fit the workflow estab-

Form	Criteria to Check
	lished in your organization, as described in <a href="#">Picking and Packing Operations: Implementation Checklist</a> and <a href="#">Packing Operations: Implementation Checklist</a> .

### Printing Settings

If the *DeviceHub* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the printing of documents by using the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Print Shipment Confirmation Automatically</b>	Selected	With this check box selected, the system prints the shipment confirmation automatically when a user confirms a shipment.
<b>Print Shipment Labels Automatically</b>	Selected	With this check box selected, the system prints the shipment labels for the packages included in a shipment when the user confirms the shipment.

### Other Settings That Affect the Workflow

You can affect the workflow for wave picking by specifying additional settings on the [Sales Orders Preferences](#) (SO101000) form:

- To make the user confirm that the items have been placed in the tote assigned to the shipment for which the items are being picked, select the **Confirm Tote Selection on Wave Picking**.
- To make the system print both packing slips and pick lists for a picking worksheet, select the **Print Packing Slips with Pick Lists** check box on the **Warehouse Management** tab.

## Wave Picking: Process Activity

---

In the following activity, you will learn how to process shipments in a wave by using the [Pick, Pack, and Ship](#) (SO302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the

workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

## Story

Suppose that the wholesale warehouse of SweetLife was temporarily closed because of inventory counting. During this time, multiple orders have been entered into the system, and they now require shipping. The warehouse manager wants to speed up the process of picking and packing items by creating a wave picking worksheet and assigning this work to multiple pickers. After the warehouse workers pick the items in a wave, a warehouse worker acting as the packer needs to pack the items and confirm the shipments.

## Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*
- *Advanced Picking*

The **Print Packing Slips with Pick Lists** check box is selected on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form; with this check box selected, when a user prints worksheet pick lists, the packing slips are also printed.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations have been configured. On the **Totes** tab, multiple totes have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Multiple sales orders for different customers have been entered into the system on the [Sales Orders](#) form, and the shipment documents have been prepared for these orders on the [Shipments](#) (SO302000) form.

## Process Overview

Acting as a warehouse manager, you will open the [Create and Print Pick Lists](#) (SO503050) form, select the shipments to be processed in a wave, specify the maximum number of pickers, create a picking worksheet, and print the wave pick lists. Then, acting as each warehouse worker, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and scan the reference number of the wave pick list. Then you will scan the barcodes of the totes that will be used for picking items for particular shipments. After that you will scan locations' barcodes, and barcodes and quantities of items being picked from these locations. Then, acting as a warehouse worker, you will open the [Pick, Pack, and Ship](#)

(SO302020) form, switch to Pack mode, and scan the reference number of the wave pick list. Then you will scan the barcode of the box to which the items will be packed, take the items from the totes, and scan the barcodes and the quantity of items being packed. After all the items will be packed, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

## System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to the system with the *U100* dataset preloaded using the *angelo* login and the *123* password. You are initially signing in as the warehouse manager to prepare the wave picking worksheet.
2. On the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, make sure that the **Display the Pick Tab** and **Display the Pack Tab** check boxes are selected.

### Step 1: Preparing the Wave Picking Worksheet

To prepare the wave picking worksheet, acting as the warehouse manager, do the following:

1. Open the *Create and Print Pick Lists* (SO503050) form, and in the **Action** box, select *Create and Print Wave Pick List*.
2. In the **Warehouse ID** box, select *WHOLESALE*.
3. Specify 4 as the **Max. Number of Pickers** and 4 as **Max. Number of Totes per Picker**.
4. In the table, select the unlabeled check boxes next to the shipments with reference numbers from *000034* through *000045*.
5. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing completes.
6. On the *Picking Worksheets* (SO302500) form, open the created worksheet of the *Wave* type, and review its details. The **Document Details** tab lists all the items that have to be packed in a wave (as shown in the following screenshot). Notice that *<SPLIT>* is shown in the **Location** column for two of the lines, indicating that these items have to be picked from multiple locations.
7. Click the first line in the table, and on the table toolbar, click **Allocations**. In the **Allocations** window, that opens, review the which of locations in which the items are allocated for the wave (see the following screenshot).

Picking Worksheets

Worksheet Nbr.: 000001 Warehouse ID: WHOLESALE - Wholesale Warehouse

Type: Wave Shipped Quantity: 136.00

Status: Open Shipped Weight: 23.000000

Hold Shipped Volume: 23.000000

Picking Date: 3/17/2020 Packages: 0

Package Weight: 0.00000

DOCUMENT DETAILS SHIPMENTS PICKERS

ALLOCATIONS

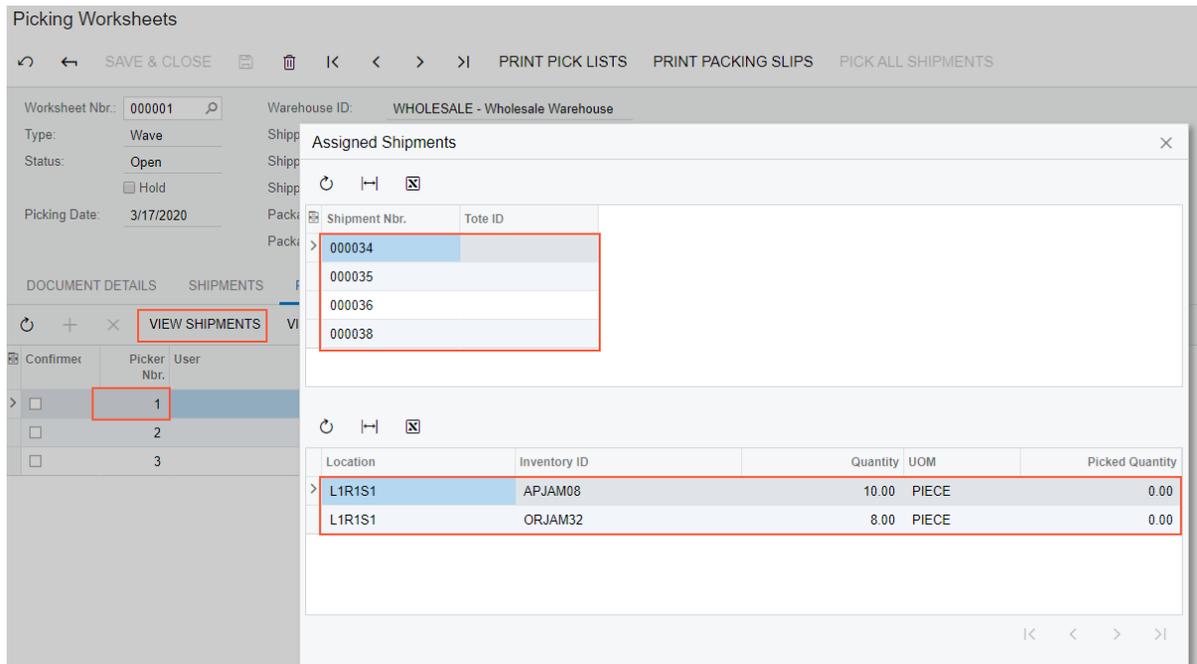
Warehouse	Location	Inventory ID	UOM
> WHOLESALE	<SPLIT>	APJAM08	PIECE
WHOLESALE	<SPLIT>	ORJAM32	PIECE
WHOLESALE	L1R2S2	LEMJAM96	PIECE

Allocations

Inventory ID	Location	Picked Quantity	Quantity	UOM
> APJAM08	L1R1S1	0.00	22.00	PIECE
APJAM08	L1R1S2	0.00	6.00	PIECE
APJAM08	L1R2S1	0.00	21.00	PIECE
APJAM08	L1R2S2	0.00	5.00	PIECE
APJAM08	L2R2S1	0.00	11.00	PIECE

**Figure: Locations in which the items are allocated**

8. Open the **Pickers** tab, and notice that the wave will be picked by three pickers. (Although you have entered 4 as the maximum number of pickers, the system has found the optimal workflow and determined that three pickers are enough for picking the wave.)
9. Click the first line in the table (which corresponds to the first picker), and on the table toolbar, click **View Shipments**. In the **Assigned Shipments** window, which opens, review the shipments assigned to the first picker and the items that the picker will pick for these shipments.



**Figure: Shipments assigned to the picker**

**10.** On the form toolbar, click **Print Pick Lists**. The system opens the [Worksheet Pick List](#) (SO644006) report with generated printable pick lists and packing slips. You print the pick lists and packing slips and distribute them to the three pickers. Each picker puts pick lists and packing slips to totes assigned to shipments. For each pick list, notice the **Pick List Nbr.** number; you will load the pick lists for processing by using these numbers.

**11.** Sign out of the system.

### Step 2a: Picking Items in a Wave (Picker 1)

Acting as the first picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

- 1.** Sign in to the system as the first picker by using the *perkins* login and the 123 password.
- 2.** Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
- 3.** In the **Scan** box of the Summary area, enter 000001/1, which is the reference number of the pick list for the first picker. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
- 4.** Assign totes to the shipments you will be picking by doing the following:
  - a.** Enter T1. The system assigns the tote to the shipment 000034, and shows the tote ID in the **Tote ID** column of all lines of this shipment.

- b. Enter T2. The system assigns the tote to the shipment 000035.
- c. Enter T3. The system assigns the tote to the shipment 000036.
- d. Enter T4. The system assigns the tote to the shipment 000038.

Now you have assigned the totes to shipments, and you can start picking items.

**5.** Pick the items from the first location by doing the following:

- a. Enter L1R1S1 to select the location from which you are currently picking items.
- b. Enter OJ32 to pick the item.
- c. Set the quantity of the item to 11 as follows:
  1. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  2. In the **Scan** box, enter 11. This indicates that eleven 32-ounce jars of orange jam have been picked from the location and placed in the T3 tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

- d. Enter AJ08 to pick the item.
- e. Set the quantity to 12.
- f. Enter AJ08 to pick the item.
- g. Set the quantity to 10.
- h. Enter OJ32 to pick the item.
- j. Set the quantity to 8.
- k. Enter OJ32 to pick the item.
- l. Set the quantity to 3.

You have finished picking items from this location, so you will proceed to picking items from another location.

**6.** Pick the items from the second location by doing the following:

- a. Enter L1R1S2 to select the location from which you are currently picking items.
- b. Enter AJ08 to pick the item.
- c. Set the quantity to 6.

You have finished picking items from this location, so you proceed to picking items from another location.

**7.** Pick the items from the third location by doing the following:

- a. Enter `L1R2S1` to select the location from which you are currently picking items.
- b. Enter `AJ08` to pick the item.
- c. Set the quantity to 4.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

- d. Enter `AJ08` to pick the item.
- e. Set the quantity to 4.

**8.** Pick the items from the last location by doing the following:

- a. Enter `L1R2S2` to select the location from which you are currently picking items.
- b. Enter `LJ96` to pick the item.
- c. Set the quantity to 3.

**9.** On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.

As the first picker, you have finished picking the items.

**10.** Sign out of the system.

**Step 2b: Picking Items in a Wave (Picker 2)**

Acting as the second picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

1. Sign in to the system as the second picker by using the *rollins* login and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter `000001/2`. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Assign totes to the shipments you will be picking by doing the following:
  - a. Enter `T5`. The system assigns the tote to the *000037* shipment, and shows the tote ID in the **Tote ID** column of all lines of this shipment.
  - b. Enter `T6`. The system assigns the tote to the *000041* shipment.
  - c. Enter `T7`. The system assigns the tote to the *000044* shipment.

d. Enter T8. The system assigns the tote to the 000045 shipment.

Now you have assigned the totes to shipments, and you can start picking items.

5. Pick the items from the first location by doing the following:

a. Enter L1R2S1 to select the location from which you are currently picking items.

b. Enter AJ08 to pick the item.

c. Set the quantity of the item to 11 as follows:

1. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.

2. In the **Scan** box, type 11. This indicates that eleven 8-ounce jars of apple jam have been picked from the location and placed in the T5 tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

d. Enter OJ32 to pick the item.

e. Set the quantity of the item to 14.

f. Enter OJ32 to pick the item.

g. Set the quantity of the item to 4.

You have finished picking items from this location, so you will proceed to picking items from another location.

6. Pick the items from the second location by doing the following:

a. Enter L1R2S2 to select the location from which you are currently picking items.

b. Enter LJ96 to pick the item.

c. Enter LJ96 one more time to add second unit of the item to the current line.

7. On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.

As the second picker, you have finished picking the items.

8. Sign out of the system.

### Step 2c: Picking Items in a Wave (Picker 3)

Acting as the third picker selected in the picking worksheet, you will assign totes to the shipments assigned to you and then pick the items, placing them in the appropriate totes. Do the following:

1. Sign in to the system as the third picker by using the *hardin* login and the 123 password.

2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000001/3. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Assign totes to the shipments you will be picking by doing the following:
  - a. Enter T9. The system assigns the tote to the shipment 000039, and shows the tote ID in the **Tote ID** column of all lines of this shipment.
  - b. Enter T10. The system assigns the tote to the shipment 000040.
  - c. Enter T11. The system assigns the tote to the shipment 000042.
  - d. Enter T12. The system assigns the tote to the shipment 000043.

You have assigned the totes to the shipments, and you can start picking items.

5. Pick the items from the first location by doing the following:
  - a. Enter L1R1S1 to select the location from which you are currently picking items.
  - b. Enter OJ32 to pick the item.
  - c. Set the quantity of the item to 5 as follows:
    1. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
    2. In the **Scan** box, enter 5. This indicates that five 32-ounce jars of orange jam have been picked from the location and placed in the T9 tote.

You are continuing to pick items for different shipments from the same location, so you do not need to scan the location barcode again.

- d. Enter OJ32 to pick the item from the same location for one more line.

You have finished picking of items in the location, so you proceed to picking items from another location.

6. Pick the items from the second location by doing the following:
  - a. Enter L1R1S2 to select the location from which you are currently picking items.
  - b. Enter OJ32 to pick the item.
  - c. Set the quantity of the item to 5.
7. Pick the items from the third location by doing the following:
  - a. Enter L1R2S1 to select the location from which you are currently picking items.

- b. Enter `OJ32` to pick this item.
  - c. Set the quantity of the item to 10.
  - d. Enter `AJ08` to pick the item.
  - e. Enter `AJ08` one more time to add second unit to the current line.
  - f. Enter `OJ32` to pick the item.
  - g. Enter `OJ32` one more time to add second unit to the current line.
8. Pick the items from the fourth location by doing the following:
- a. Enter `L1R2S2` to select the location from which you are currently picking items.
  - b. Enter `LJ96` to pick this item.
  - c. Set the quantity of the item to 3.
  - d. Enter `AJ08` to pick the item.
  - e. Set the quantity of the item to 5.
9. Pick the items from the last location by doing the following:
- a. Enter `L2R2S1` to select the location from which you are currently picking items.
  - b. Enter `AJ08` to pick this item.
  - c. Set the quantity of this item to 6.
  - d. Enter `AJ08` to pick this item.
  - e. Set the quantity of the item to 3.
  - f. Enter `AJ08` to pick the item.
  - g. Enter `AJ08` one more time to add second unit to the current line.

10. On the form toolbar, click **Confirm Pick List** to confirm that picking is finished.

As the third picker, you have finished picking the items.

11. Sign out of the system.

### Step 3: Reviewing the Worksheet Status

As the pack line operator, you will review the progress the three pickers who picked the items. Do the following:

1. Sign in to the system as the pack line operator by using the *rueb* login and the 123 password.

- On the *Picking Worksheets* (SO302500) form, open the wave picking worksheet, and review the **Pickers** tab (see the following screenshot). The user names of the workers who performed the picking operations are shown in the **User** column; the selected check boxes in each line of the **Confirmed** column indicate that each picker has confirmed the completion of the picking.

### Picking Worksheets

↶ ← SAVE & CLOSE 📄 🗑️ ⏪ < > ⏩ PRINT PICK LISTS PRINT PACKING SLIPS

Worksheet Nbr.: <input type="text" value="000001"/>	Warehouse ID: <u>WHOLESALE - Wholesale Warehouse</u>
Type: <u>Wave</u>	Shipped Quantity: <u>136.00</u>
Status: <u>Picked</u>	Shipped Weight: <u>23.000000</u>
<input type="checkbox"/> Hold	Shipped Volume: <u>23.000000</u>
Picking Date: <u>3/17/2020</u>	Packages: <u>0</u>
	Package Weight: <u>0.000000</u>

DOCUMENT DETAILS SHIPMENTS **PICKERS**

↶ + × VIEW SHIPMENTS VIEW PICK LIST ⏪ 🗑️

Confirmer	Picker Nbr.	User	Path Length	Cart ID
<input checked="" type="checkbox"/>	1	perkins	10	
<input checked="" type="checkbox"/>	2	rollins	0	
<input checked="" type="checkbox"/>	3	hardin	40	

**Figure: The users who confirmed the picking of the wave**

- Review the **Shipments** tab, as shown in the following screenshot. All shipments have been picked, as the selected check boxes in the **Picked** column indicate; the picking worksheet now is assigned the *Picked* status.

## Picking Worksheets

SAVE & CLOSE       PRINT PICK LISTS  PRINT PACKING SLIP

Worksheet Nbr.:	<input type="text" value="000001"/>	Warehouse ID:	WHOLESALE - Wholesale Warehouse
Type:	Wave	Shipped Quantity:	136.00
Status:	Picked	Shipped Weight:	23.000000
	<input type="checkbox"/> Hold	Shipped Volume:	23.000000
Picking Date:	3/17/2020	Packages:	0
		Package Weight:	0.000000

DOCUMENT DETAILS **SHIPMENTS** PICKERS

VIEW PICKERS

<input type="checkbox"/>	Picked	Shipment Nbr.	Picked Qty.	Packed Qty.	Shipped Quantity	Shipped Weight	Shipped Volume	Status
<input checked="" type="checkbox"/>		<a href="#">000034</a>	18.00	0.00	18.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000035</a>	25.00	0.00	25.00	8.520000	8.520000	Open
<input checked="" type="checkbox"/>		<a href="#">000036</a>	11.00	0.00	11.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000037</a>	11.00	0.00	11.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000038</a>	7.00	0.00	7.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000039</a>	18.00	0.00	18.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000040</a>	8.00	0.00	8.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000041</a>	4.00	0.00	4.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000042</a>	12.00	0.00	12.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000043</a>	6.00	0.00	6.00	8.520000	8.520000	Open
<input checked="" type="checkbox"/>		<a href="#">000044</a>	14.00	0.00	14.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000045</a>	2.00	0.00	2.00	5.680000	5.680000	Open

**Figure: Shipments ready for packing**

4. Sign out of the system.

#### Step 4: Packing a Shipment for the Wave

At this point in the wave picking, all of the shipments from the wave can be packed. For the purposes of this activity, you will pack just one of the shipments, acting as a warehouse worker who handles packing. To pack one of the shipments from a wave, do the following:

1. Sign in to the system as a warehouse worker who will perform packing operations by using the *sauer* login and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form.

3. In the **Scan** box of the Summary area, enter *@pack* to switch to Pack mode.
4. Enter *000034*, which is the reference number of one of the shipments ready for packing.
5. Enter *LARGE* to select the box in which you are packing the items.
6. Enter *AJ08* to select the item being packed. The system highlights the first line of the shipment in bold and specifies *1* as the **Packed Qty.**, and shows this item in the **Package Content** tab.
7. Set the quantity of the item to 10 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter *10*. The system highlights the first line of the shipment in green and specifies *10* as the **Packed Qty**.
8. Enter *OJ32* to select the next item being packed in the same box.
9. Set the quantity of this item to 8.
10. On the form toolbar, click **OK** to confirm the package.
11. On the form toolbar, click **Confirm Shipment**.
12. Sign out of the system, and sign in again as a warehouse manager by using the *angelo* login and the *123* password.
13. On the [Shipments](#) (SO302000) form, open the shipment with the *000034* reference number that you have packed, which is now assigned the *Confirmed* status. On the **Packages** tab (see the following screenshot), the box in which the items were packed is listed, and the items packed into this box are listed in the **Contents of the Selected Package** table.

## Shipments

← SAVE & CLOSE 📄 ↶ + 🗑️ ⏪ < > ⏩ ACTIONS ▾ REPORTS ▾

Shipment Nbr.: 000034 🔍	Customer: COFFEESHOP - FourStar Coffee&Sweet ✎	Shipped Quant... 18.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 18.00
Status: <b>Confirmed</b>	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 0.000000
<input type="checkbox"/> Hold	Workgroup:	Shipped Volume: 0.000000
Operation: Issue	Owner:	Packages: 1
Shipment Date: 1/30/2020	Worksheet Nbr.: 000001 ✎	Package Weight: 0.050000

DOCUMENT DETAILS   ORDERS   SHIPPING SETTINGS   **PACKAGES**

🔍	📄	Confirmed	* Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
>	📄	<input checked="" type="checkbox"/>	LARGE	Manual		0.0500	KG	0.0000	0.0000

**Contents of Selected Package**

🔍	Shipmer Split Line Nbr.	Inventory ID	UOM	Quantity
>	2	APJAM08	PIECE	10.00
	4	ORJAM32	PIECE	8.00

**Figure: Packing details for the shipment**

### Self-Test Exercise

Pack the remaining shipments in the worksheet that you have created in this activity, to complete the processing of the wave, and review the completed wave worksheet.

# Lesson 10: Automated Fulfilling Orders with Batch Picking

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## Batch Picking: General Information

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If the *Advanced Picking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can optimize and speed up the warehouse operations needed for fulfilling the order by using the batch picking workflow.

In this topic, you will read about the batch picking workflow in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Batch Picking: Implementation Checklist](#).

### Learning Objectives

In this chapter, you will learn about using batch picking workflow for fulfilling the orders. In particular, you will do the following:

- Enable the needed system features
- Specify the minimum required configuration for the batch picking workflow
- Learn the recommended settings that you can specify to make the system fit your business requirements
- Prepare a batch picking worksheet
- Pick and pack items in a batch
- Confirm a shipment after packing the items

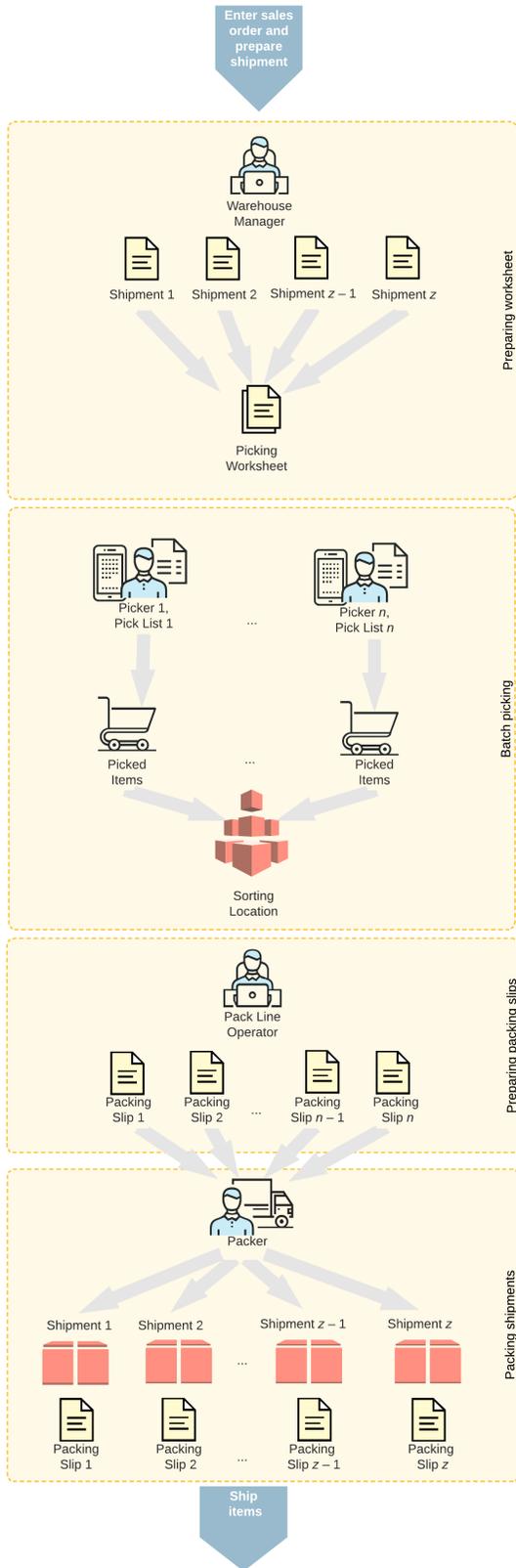
### Applicable Scenarios

You use batch picking if you need to optimize the process of picking and packing items for a group of orders to be shipped. With a batch picking flow, the warehouse manager prepares a batch picking worksheet with a batch of orders to be shipped, prints the related pick lists, and gives the pick lists to the pickers who will perform this work. In batch picking, each pick list generally includes items from multiple sales orders. The pickers collect the items listed in the pick lists from the specified warehouse locations and bring these items to the sorting location. A pack line operator prints packing slips for the shipments ready for packing and give these packing slips to a packer. The packer sorts the picked items by shipments and packs them into boxes.

### General Process of Batch Picking

The workflow of fulfilling orders with batch picking is shown in the following diagram.

### Batch picking process



Processing a batch includes the following processes performed by the following persons:

1. A warehouse manager opens the [Create and Print Pick Lists](#) (SO503050) form, selects the shipments to be processed in a batch, specifies the maximum number of pickers, creates a picking worksheet, and prints the batch pick lists.
2. Each warehouse worker acting as a picker opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pick mode, and scans the reference number of the batch pick list. Then the picker goes through the warehouse, picks the items from the needed locations, and scans their barcodes and quantities. Then the picker transfers the items to the sorting location and confirms the pick list.
3. A pack line operator verifies that batch is picked and prints the packing slips on the [Picking Worksheets](#) (SO503050) form.
4. A warehouse worker acting as a packer opens the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switches to Pack mode, and scans the reference number of the batch pick list. Then the packer scans the barcode of the box to which the items are being packed, and scans the barcodes and the quantity of items being packed. After all the items are packed, the packer confirms the shipment.

The following sections describe the workflow for a warehouse manager, a picker, a pack line operator, and a packer. By understanding the workflow for each of these employees, you can better understand the batch picking workflow as a whole in a warehouse.

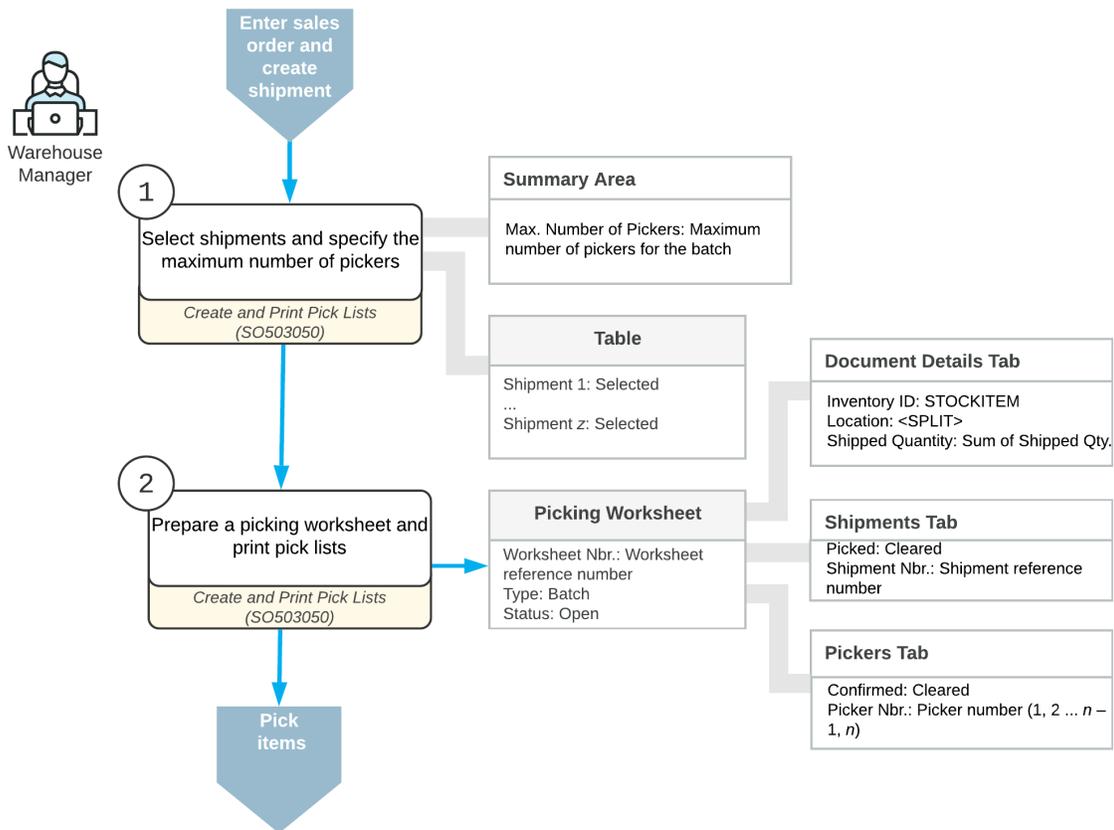


In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### Workflow for a Warehouse Manager

The workflow of a warehouse manager involves the actions shown in the following diagram.

## Preparation of the picking worksheet for batch picking



To prepare a batch picking worksheet, the warehouse manager performs the following steps:

1. *Selects the type of picking worksheet to be prepared.*

The warehouse manager opens the *Create and Print Pick Lists (SO503050)* form and selects the *Create and Print Batch Pick List* action.

2. *Specifies the number of pickers.*

To specify the maximum number of pickers who are currently available to be assigned to a batch, the manager enters the value in the **Max. Number of Pickers** box.

3. *Selects the shipments.*

In the table, the manager selects the unlabeled check boxes in the lines with the shipments to be included in the picking worksheet.

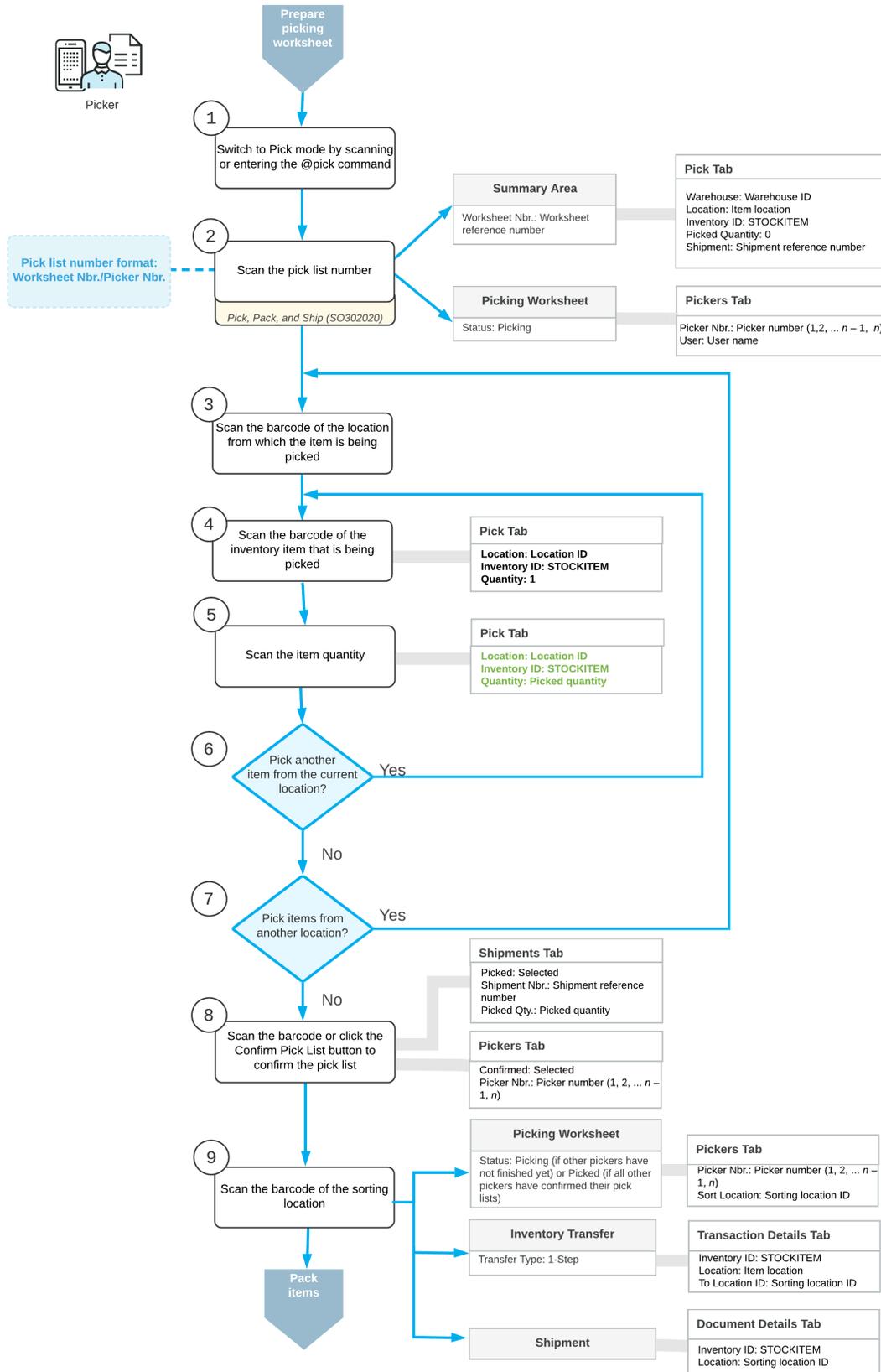
4. *Creates a picking worksheet and selects the pickers.*

On the form toolbar, the manager clicks **Process** to create the picking worksheet for the selected shipments and to print the pick lists for the batch. Then the manager gives these pick lists to the pickers (that is, the warehouse workers who will perform the picking).

### **Workflow for a Picker**

The workflow of a picker involves the actions shown in the following diagram.

### Batch picking of items



To pick the items for a batch pick list, the picker performs the following steps:

**1.** *Switches to Pick mode.*

The picker opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pick mode by scanning or entering @pick barcode.

**2.** *Scans the number of the batch pick list.*

To start the automated processing, the picker scans the reference number of the batch pick list. This reference number has the *Worksheet Nbr./Picker Nbr.* format, where *Worksheet Nbr.* is the reference number of the related picking worksheet, and the *Picker Nbr.* is the reference number of the picker assigned to this worksheet (for example, 000001/1). The system displays the lines of the scanned document in the table and inserts the reference number of the picking worksheet that is currently selected for processing in the **Shipment Nbr.** box.

**3.** *In each location from the pick list, picks the items as follows:*

**a.** *Scans the location barcode.*

When the picker scans the barcode of the location from which the item is picked, the system searches for the location in the lines of the picking worksheet that is currently selected.

**b.** *Scans the item barcode.*

When the picker scans the item barcode of the picked item, the system searches for the item in the lines of the currently selected document. The system displays the picked quantity in the **Picked Qty.** column and highlights the line (with bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.

**c.** *Optional: Scans the item quantity.*

To change the picked quantity in the line that is currently being processed, the picker switches to Quantity Editing mode by clicking the **Set Qty** button on the form toolbar (or by scanning or entering the \*qty barcode) and manually entering the quantity in the UOM defined by the barcode of the scanned item.

**d.** *Picks another item.*

If another item needs to be picked from the currently selected location, the picker scans the item barcode (returns to the second substep of this step) and repeats the process for the item.

**e.** *Picks items from another location.*

If the picker needs to pick items from another location, he or she scans the location barcode (returns to the first substep of this step) and repeats the process for the location.

**4. Completes the picking process.**

If the picker has finished picking all items in the pick list, he or she scans the \*confirm\*pick barcode or clicks the **Confirm Pick List** button on the form toolbar.

**5. Scans the barcode of the sorting location.**

When the picker brings the picked items to the sorting location, he or she scans the barcode of this location. The system creates and releases an inventory transfer transaction with the lines with the picked items to record the movement of items within the warehouse. In the transaction lines, the location from which the items were picked is specified as the source location, and the sorting location is specified as the destination location. On release of the inventory transfer, the system updates the picked quantity and in the lines of shipments for which the items have been picked, changes the initial location to the sorting location.

After the picker finishes the batch picking and brings the items to the sorting location, he or she gives the batch pick list to a pack line operator.

### **Workflow for a Pack Line Operator**

To start the packing of the batch, the pack line operator performs the following steps:

**1. Verifies that all pickers have completed the picking for the batch.**

The pack line operator opens the batch picking worksheet on the *Picking Worksheets (SO302050)* form, and on the **Shipments** tab, makes sure that all shipments included in the batch have been picked (which is indicated by the **Picked** check box being selected in each line).

**2. Prints the packing slips.**

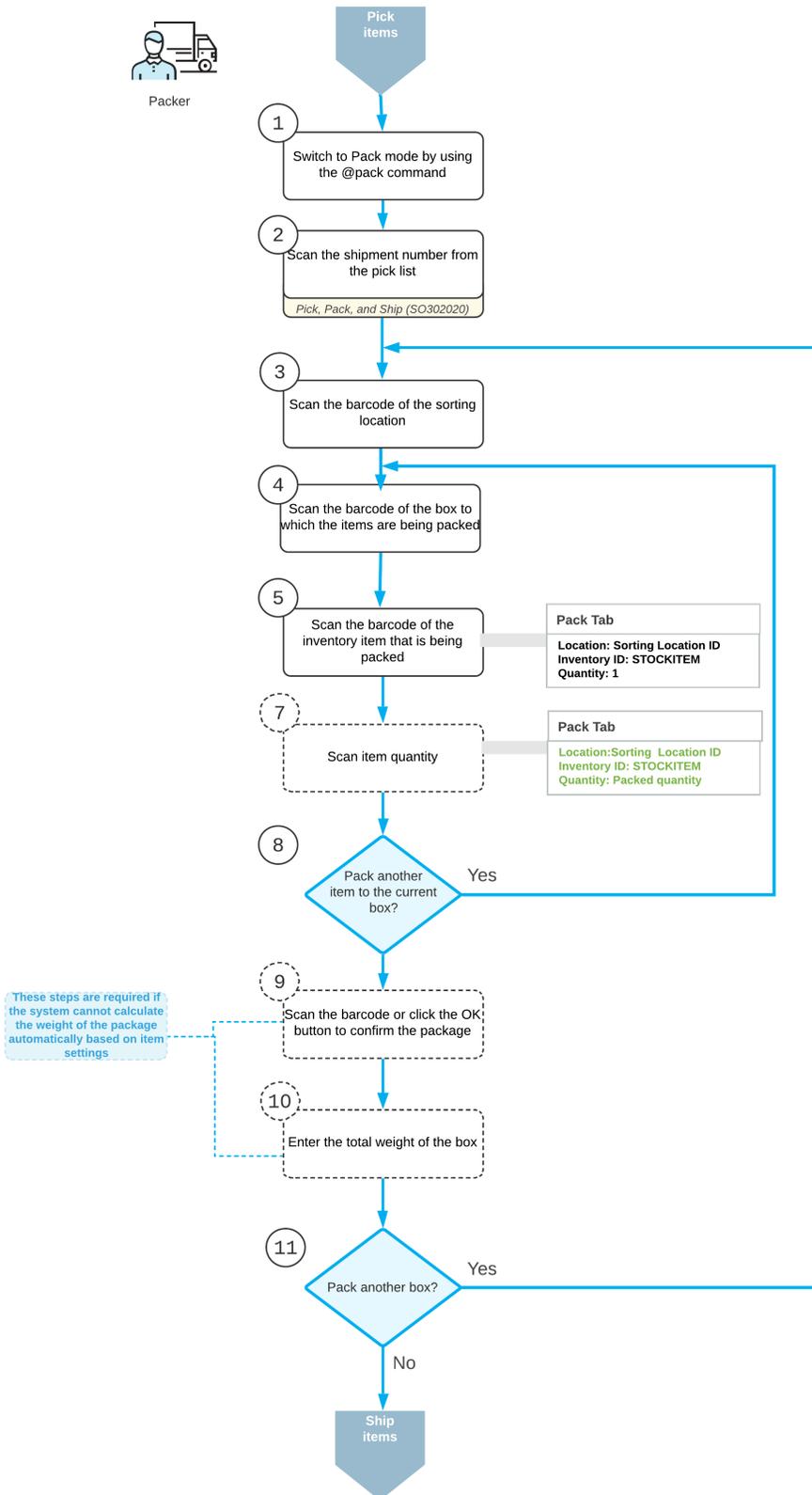
The pack line operator prints packing slips for the shipments of the batch by opening the picking worksheet on the *Picking Worksheets (SO302500)* form and clicking **Print Packing Slips** on the form toolbar.

After the pack line operator prints the packing slips, this employee gives them to a packer working at the sorting location.

### **Workflow for a Packer**

The workflow of a packer involves the actions shown in the following diagram.

### Packing of items after batch picking



To pack the items for shipping, the packer performs the following steps:

**1.** *Switches to Pack mode.*

The packer opens the *Pick, Pack, and Ship* (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switches to Pack mode by scanning or entering @pack barcode.

**2.** *Scans the shipment number.*

To start the automated processing, the packer scans the reference number of the shipment in the packing slip. The system shows the shipment lines in the table and inserts the reference number of the document in the **Shipment Nbr.** box.

**3.** *Scans the sorting location barcode.*

The packer scans the barcode of the location from which the item is picked (which is always a sorting location for the batch picking process).

**4.** *For each box being packed for the selected shipment, does the following:*

**a.** *Scans the barcode of the box.*

The packer scans the barcode of the box into which the items will be packed.

**b.** *Scans the item barcode.*

When the packer scans the barcode of the packed item, the system searches for the item in the lines of the shipment that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item. The system shows the packed quantity in the **Packed Qty.** column, and highlights the line (with bold if the line has been processed partially, or in green if the line has been processed in full).

**c.** *Optional: Scans the item quantity.*

To change the packed quantity in the line that is currently being processed, the packer switches to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enters the quantity in the UOM defined by the barcode of the scanned item.

**d.** *Packs another item.*

If another item needs to be packed in the current box, the packer returns to scanning the item barcode (return to the second substep of this step) and repeats the process for the item, or proceeds to the next step if all items have been packed in the box.

**e.** *Confirms the box.*

If all items have been packed in the box, the packer confirms the current box by scanning the \*ok barcode or by clicking the **OK** button.

**f.** *Enters the box weight.*

The packer enters the total weight of the box.

**g.** *Packs another box.*

If more items need to be packed for the current shipment, the packer returns to scanning the barcode of the box barcode (returns to the first substep of this step) and repeats the process for another box.

**5.** *Completes the packing process.*

If the packer has finished the packing operation and shipping options do not need to be specified, the packer scans the `*confirm*shipment` barcode or clicks the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed, and prints labels for the packed boxes.

**Known Process Limitations**

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

## Batch Picking: Implementation Checklist

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This topic provides details you can use to ensure that the system is configured properly for picking and packing items in a batch.

**Prerequisites**

Before you begin processing shipments in a batch, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as summarized in the following checklist.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: General Information</a> .
<a href="#">Enable/Disable Features</a> (CS100000)	Make sure that the following features are enabled: <ul style="list-style-type: none"> <li>● <i>Warehouse Management</i></li> <li>● <i>Fulfillment</i></li> <li>● <i>Advanced Picking</i></li> </ul>

Form	Criteria to Check
<a href="#">Stock Items</a> (IN202500)	Make sure that the required stock items have been created, as described in <a href="#">Stock Items: Implementation Activity</a> .
<a href="#">Sales Orders Preferences</a> (SO101000) form	Make sure that the automated picking workflow is configured to fit the workflow established in your organization, as described in <a href="#">Picking and Packing Operations: Implementation Checklist</a> or <a href="#">Packing Operations: Implementation Checklist</a> .

### Printing Settings

If the *DeviceHub* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the printing of documents by using the following settings on the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form.

Setting	Value	Description
<b>Print Shipment Confirmation Automatically</b>	Selected	With this check box selected, the system prints the shipment confirmation automatically when a user confirms a shipment.
<b>Print Shipment Labels Automatically</b>	Selected	With this check box selected, the system prints the shipment labels for the packages included in a shipment when the user confirms the shipment.

## Batch Picking: Process Activity

In the following activity, you will learn how to process shipments in a batch by using the [Pick, Pack, and Ship](#) (SO302020) form.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that the wholesale warehouse of SweetLife was temporarily closed because of inventory counting. During this time, multiple orders have been entered into the system, and they now require shipping. The warehouse manager wants to speed up the process of picking and packing items by creating a batch picking worksheet and assigning this work to multiple pickers. After the warehouse workers pick the items and transfer them to a sorting

location, a warehouse worker acting as the packer needs to pack the items and confirm the shipments.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*
- *Advanced Picking*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, and *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Multiple sales orders for different customers have been entered into the system on the [Sales Orders](#) (SO301000) form, and the shipment documents have been prepared for these orders on the [Shipments](#) (SO302000) form.

### Process Overview

Acting as a warehouse manager, you will open the *Create and Print Pick Lists* (SO503050) form, select the shipments to be processed in a batch, specify the maximum number of pickers, and create a picking worksheet. Then, acting as each picker, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pick mode, and scan the reference number of the batch pick list. Then you will scan the barcodes and quantities of the items being picked. After you finish picking, you will scan the barcode of the sorting location and confirm the pick list. Then, acting as a pack line operator, you will verify that batch is picked and prepare the printable packing slips on the *Picking Worksheets* (SO503050) form. Then, acting as packer, you will open the [Pick, Pack, and Ship](#) (SO302020) form, switch to Pack mode, and scan the reference number of the batch pick list. Then you will scan the barcode of the box to which the items will be packed, and scan the barcodes and the quantity of items being packed. After all the items are packed, you will confirm the shipment.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to the system with the *U100* dataset preloaded by using the *angelo* login and the *123* password.
2. On the **Warehouse Management** tab of the *Sales Orders Preferences* (SO101000) form, make sure the **Display the Pick Tab** and the **Display the Pack Tab** check boxes are selected.

**Step 1: Preparing the Batch Picking Worksheet**

As the warehouse manager, you will prepare the batch picking worksheet as follows:

1. Open the *Create and Print Pick Lists* (SO503050) form, and in the **Action** box, select *Create and Print Batch Pick List*.
2. In the **Warehouse ID**, select *WHOLESALE*.
3. Specify 4 as the **Max. Number of Pickers**.
4. In the table, select the unlabeled check box in the rows of the shipments with reference numbers from *000046* through *000058*.
5. On the form toolbar, click **Process**. Close the **Processing** dialog box after processing has completed.
6. On the *Picking Worksheets* (SO302500) form, review the details of the created worksheet with the *Open* status, as shown in the screenshot below. The **Document Details** tab lists all the items that have to be packed in the batch (as shown in the following screenshot). Notice that *<SPLIT>* is shown in the **Location** column for all lines, indicating that each item has to be picked from multiple locations. You can select any line and then click **Allocations** on the table toolbar of the **Document Details** tab to review the list of locations from which the items will be picked.

Picking Worksheets

↶ ← SAVE & CLOSE 📄 🗑️ ⏪ < > ⏩ PRINT PICK LISTS PRINT PACKING SLIPS PICK ALL SHIPME

Worksheet Nbr.: 000002	Warehouse ID: WHOLESALE - Wholesale Warehouse
Type: Batch	Shipped Quantity: 125.00
Status: Open	Shipped Weight: 43.000000
<input type="checkbox"/> Hold	Shipped Volume: 43.000000
Picking Date: 3/26/2020	Packages: 0
	Package Weight: 0.000000

[DOCUMENT DETAILS](#) [SHIPMENTS](#) [PICKERS](#)

🔄 + × **ALLOCATIONS** ↔ 🔍

Warehouse	Location	Inventory ID	UOM	Shipped Qty.	Ordered Qty.	Open Qty.	Picked Qty.	Packed Qty.
WHOLESALE	<SPLIT>	APJAM08	PIECE	56.00	0.00	0.00	0.00	0.00
WHOLESALE	<SPLIT>	LEMJAM96	PIECE	15.00	0.00	0.00	0.00	0.00
WHOLESALE	<SPLIT>	ORJAM32	PIECE	54.00	0.00	0.00	0.00	0.00

**Figure: Items to be picked for all the shipments included in the worksheet**

7. Review the **Pickers** tab. The system has calculated the optimal path and determined that the appropriate number of pickers is four (see the following screenshot).
8. Click the first line in the table, and click **View Pick List** on the table toolbar to review the items included in the pick list for the first picker.

The screenshot shows the 'Picking Worksheets' interface. At the top, there are navigation buttons: 'SAVE & CLOSE', 'PRINT PICK LISTS', 'PRINT PACKING SLIPS', and 'PICK ALL SHIPMENTS'. Below this, there are fields for 'Worksheet Nbr.' (000001), 'Warehouse ID' (WHOLESALE - Wholesale Warehouse), 'Type' (Batch), 'Status' (Open), and 'Picking Date' (3/25/2020). There are also fields for 'Shipped Quantity' (125.00), 'Shipped Weight' (43.000000), 'Shipped Volume' (43.000000), 'Packages' (0), and 'Package Weight' (0.000000).

The 'PICKERS' tab is selected, showing a table with columns: 'Confirm', 'Picker Nbr.', 'User', 'Path Length', and 'Cart'. The table has four rows, with the first row (Picker Nbr. 1) highlighted. A 'VIEW PICK LIST' button is visible above the table.

A 'Pick List' window is open, showing a table with columns: 'Location', 'Inventory ID', 'Quantity', 'UOM', and 'Picked Quantity'. The table has three rows, with the first row (L1R2S1, ORJAM32, 5.00, PIECE, 0.00) highlighted.

**Figure: List of pickers of the shipments**

9. Sign out of the system.

### Step 2a: Picking the Items in a Batch (Picker 2)

Acting as the first picker in the picking worksheet, you will do the following:

1. Sign in to the system as the first picker by using the *rollins* login and the *123* password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter *000002/1*, which is the reference number of the pick list for the second picker.
4. Pick the first line by doing the following:
  - a. Enter *L1R2S1* to select the location from which you are picking items.
  - b. Enter *OJ32* to select the item being picked.
  - c. Set the quantity of the item to *5* as follows:

1. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  2. In the **Scan** box, enter 5.
5. Pick the second line by doing the following:
- a. Enter L1R2S2 to select the location from which you are picking items.
  - b. Enter LJ96 to select the item being picked.
  - c. Set the quantity of the item to 9.
6. Pick the third line by doing the following:
- a. Enter L1R2S3 to select the location from which you are picking items.
  - b. Enter LJ96 to select the item being picked.
  - c. Set the quantity to 4.
7. On the form toolbar, click **Confirm Pick List**.
8. In the **Scan** box, enter *SORT* to specify the sorting location to which you have transferred the picked items.
- As the first picker, you have finished picking the items.
9. Sign out of the system.

### Step 2b: Picking the Items in a Batch (Picker 1)

Acting as the second picker in the picking worksheet, you will do the following:

1. Sign in to the system as the second picker by using the *perkins* login and the 123 password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000002/2, which is the reference number of the pick list for the first picker. The system loads the shipment lines to the table on the **Pick** tab, and shows the reference number of the picking worksheet that is currently being processed in the **Worksheet Nbr.** box of the Summary area.
4. Pick the first line by doing the following:
  - a. Enter L2R1S1 to select the location from which you are picking items.
  - b. Enter OJ32 to select the item being picked.
  - c. Set the quantity of the item to 24 as follows:
    1. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.

2. In the **Scan** box, enter 24. The system highlights the line in green and inserts 8 as the **Picked Quantity**.
5. Pick the second line by doing the following:
    - a. Enter L2R1S3 to select the location from which you are picking items.
    - b. Enter OJ32 to select the item being picked.
    - c. Set the quantity of this item to 13.
  6. On the form toolbar, click **Confirm Pick List**.
  7. In the **Scan** box, enter *SORT* to specify the sorting location to which you have transferred the picked items.

As the second picker, you have finished picking the items.

8. Sign out of the system.

### Step 2c: Picking the Items in a Batch (Picker 3)

Acting as the third picker in the picking worksheet, you will do the following:

1. Sign in to the system as the third picker by using the *hardin* login and the 123 password.
2. Open the *Pick, Pack, and Ship* (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter 000002/3, which is the reference number of the pick list for the third picker.
4. Pick the first line by doing the following:
  - a. Enter L2R2S1 to select the location from which you are picking items.
  - b. Enter AJ08 to select the item being picked. The system highlights the line in bold and specifies 1 as the **Picked Quantity**.
  - c. Set the quantity of the item to 16 as follows:
    - On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
    - In the **Scan** box, enter 16. The system highlights the line in green and inserts 24 as the **Picked Quantity**.
5. Pick the second line by doing the following:
  - a. Enter L2R2S3 to select the location from which you are picking items.
  - b. Enter AJ08 to select the item being picked.
  - c. Set the quantity of the item to 13.

6. Pick the last line by doing the following:
  - a. Enter `L2R2S3` to select the location from which you are picking items.
  - b. Enter `LJ96` to select the item being picked.
  - c. Enter `L96` again to add second unit to the current line.
7. On the form toolbar, click **Confirm Pick List**.
8. In the **Scan** box, enter `SORT` to specify the sorting location to which you have transferred the picked items.
 

As the third picker, you have finished picking the items.
9. Sign out of the system.

### Step 2d: Picking the Items in a Batch (Picker 4)

Acting as the fourth picker in the picking worksheet, you will do the following:

1. Sign in to the system as the fourth warehouse worker by using the *barber* login and the `123` password.
2. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
3. In the **Scan** box of the Summary area, enter `000002/4`, which is the reference number of the pick list for a fourth picker.
4. Pick the first line by doing the following:
  - a. Enter `L3R1S1` to select the location from which you are picking items.
  - b. Enter `AJ08` to select the item being picked. The system highlights the line in bold and inserts `1` as the **Picked Quantity**.
  - c. Set the quantity of the item to `10` as follows:
    - On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
    - In the **Scan** box, enter `10`. The system highlights the line in green and inserts `10` as the **Picked Quantity**.
5. Pick the second line by doing the following:
  - a. Enter `L3R1S2` to select the location from which you are picking items.
  - b. Enter `AJ08` to select the item being picked.
  - c. Set the quantity of this item to `13`.
6. Pick the third line by doing the following:

- a. Enter `L3R2S1` to select the location from which you are picking items.
  - b. Enter `OJ32` to select the item being picked.
  - c. Set the quantity of this item to 12.
7. Pick the last line by doing the following:
- a. Enter `L3R2S2` to select the location from which you are picking items.
  - b. Enter `AJ08` to select the item being picked.
  - c. Set the quantity of this item to 4.
8. On the form toolbar, click **Confirm Pick List**.
9. In the **Scan** box, enter `SORT` to specify the sorting location to which you have transferred the picked items.

As the fourth picker, you have finished picking the items.

You have picked all the items for the picking worksheet, and now you can proceed with packing the shipments.

### Step 3: Preparing the Packing Slips

You will now act as the pack line operator who prepares packing slips for the processed shipments. Do the following:

1. Sign in to the system as a pack line operator by using the `rueb` login and the `123` password.
2. On the [Picking Worksheets](#) (SO302500) form, open the batch picking worksheet, and review the **Pickers** tab (see the following screenshot). The user names of the workers who performed the picking operations are shown in the **User** column; the selected check boxes in each line of the **Confirmed** column indicate that each picker has confirmed the completion of the picking. The values in the **Sorting Location** column indicate that the pickers have finished the picking and taken the picked items to the sorting location.

## Picking Worksheets

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Worksheet Nbr.:	000002	Warehouse ID:	WHOLESALE - Wholesale Warehouse
Type:	Batch	Shipped Quantity:	125.00
Status:	Picked	Shipped Weight:	43.000000
	<input type="checkbox"/> Hold	Shipped Volume:	43.000000
Picking Date:	3/26/2020	Packages:	0
		Package Weight:	0.000000

DOCUMENT DETAILS SHIPMENTS PICKERS

🔄 + × VIEW PICK LIST ↔️ 🔍

Confirmer	Picker Nbr.	User	Path Length	Cart ID	Sorting Location
<input checked="" type="checkbox"/>	1	rollins	0		SORT
<input checked="" type="checkbox"/>	2	perkins	0		SORT
<input checked="" type="checkbox"/>	3	hardin	0		SORT
<input checked="" type="checkbox"/>	4	barber	10		SORT

**Figure: The users who confirmed the picking of the batch**

- Review the **Shipments** tab, as shown in the following screenshot. All shipments have been picked, as the selected check boxes in the **Picked** column indicate; the picking worksheet now is assigned the *Picked* status.

### Picking Worksheets

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Worksheet Nbr.: <input type="text" value="000002"/>	Warehouse ID: <input type="text" value="WHOLESALE - Wholesale Warehouse"/>
Type: <input type="text" value="Batch"/>	Shipped Quantity: <input type="text" value="125.00"/>
Status: <input type="text" value="Picked"/>	Shipped Weight: <input type="text" value="43.000000"/>
<input type="checkbox"/> Hold	Shipped Volume: <input type="text" value="43.000000"/>
Picking Date: <input type="text" value="3/26/2020"/>	Packages: <input type="text" value="0"/>
	Package Weight: <input type="text" value="0.000000"/>

DOCUMENT DETAILS **SHIPMENTS** PICKERS

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<input checked="" type="checkbox"/>	Picked	Shipment Nbr.	Picked Qty.	Packed Qty.	Shipped Quantity	Shipped Weight	Shipped Volume	Status
<input checked="" type="checkbox"/>		<a href="#">000046</a>	6.00	0.00	6.00	5.680000	5.680000	Open
<input checked="" type="checkbox"/>		<a href="#">000047</a>	9.00	0.00	9.00	5.680000	5.680000	Open
<input checked="" type="checkbox"/>		<a href="#">000048</a>	4.00	0.00	4.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000049</a>	8.00	0.00	8.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000050</a>	13.00	0.00	13.00	11.360000	11.360000	Open
<input checked="" type="checkbox"/>		<a href="#">000051</a>	12.00	0.00	12.00	8.520000	8.520000	Open
<input checked="" type="checkbox"/>		<a href="#">000052</a>	7.00	0.00	7.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000053</a>	15.00	0.00	15.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000054</a>	9.00	0.00	9.00	5.680000	5.680000	Open
<input checked="" type="checkbox"/>		<a href="#">000055</a>	24.00	0.00	24.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000056</a>	12.00	0.00	12.00	0.000000	0.000000	Open
<input checked="" type="checkbox"/>		<a href="#">000057</a>	2.00	0.00	2.00	5.680000	5.680000	Open
<input checked="" type="checkbox"/>		<a href="#">000058</a>	4.00	0.00	4.00	0.000000	0.000000	Open

**Figure: Shipments ready for packing**

- On the form toolbar, click **Print Packing Slips**. The system opens the printable packing slips on the *Batch Packing Slip*(SO644005) report form. You print the packing slips and give them to a warehouse worker who will perform packing of shipments.
- Sign out from the system.

#### Step 4: Packing Items for a Shipment in the Batch

At this point in the batch picking, all of the shipments from the batch can be packed. For the purposes of this activity, you will pack just one of the shipments, acting as a warehouse worker who handles packing.

To pack this shipment, do the following:

- Sign in to the system as a warehouse worker who will perform packing operations by using the *sauer* login and the *123* password.

2. Open the *Pick, Pack, and Ship* (SO302020) form and make sure the Pack mode is active.
3. In the **Scan** box of the Summary area, enter *000046*, which is the reference number of a shipment ready for packing.
4. Enter *MEDIUM* to select the box into which you are packing the items.
5. Enter *SORT* to specify that the items are being taken from the sorting location.
6. Enter *AJ08* to select the item being packed. The system highlights the first line of the shipment in bold and specifies *1* as the **Packed Quantity**.
7. Set the quantity of this item to *4* as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, enter *4*. The system highlights the first line of the shipment in green and inserts *4* as the **Packed Quantity**, indicating that four 8-ounce jars of apple jam have been packed into the selected box.
8. Enter *LJ96* to select another item being packed to the current box
9. Enter *LJ96* again to pack one more unit of this item.
10. On the form toolbar, click **Confirm Shipment**.

### Self-Test Exercise

Pack the remaining shipments to complete the processing of the batch worksheet.

# Lesson 11: Automated Operations with Lot- and Serial-Tracked Items

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## Automated Operations with Lot- and Serial-Tracked Items: General Information

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Lot numbers and serial numbers are used to track certain types of inventory items and keep accurate records about these items' distribution. If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, you can configure the tracking of stock items by lot or serial number, as well as by expiration date, and process documents with these items in automated mode.

### Learning Objectives

In this chapter, you will learn how to do the following:

- Perform automated picking and packing operations with lot- and serial-tracked items
- Perform automated receiving and putting away operations with lot- and serial-tracked items
- Perform automated transfer operations with lot- and serial-tracked items
- Perform automated counting of lot- and serial-tracked items during physical inventory
- Perform automated issuing of lot- and serial-tracked items
- Perform automated receiving of lot- and serial-tracked items by using inventory receipts

### Applicable Scenarios

You may need to track lot or serial numbers for items in any of the following cases:

- When your organization purchases items with serial numbers provided by vendors and you need to track these items by their serial numbers in a warehouse
- When your organization accepts returns or replacements of serialized items that it has sold
- When your organization provides services (such as installation or repair) for serialized items that it has sold
- When a vendor from which your organization buys items sells them in lots and provides lot numbers and expiration dates for each lot, which you want to track for the items
- When your organization sells items in lots and it is important to keep the assigned lot number tracked in the sales documents

- When your organization sells items with an expiration date and issues items based on this date

### Picking and Packing Lot- and Serial-Tracked Items

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app), switch to Pick mode, and scan a shipment number, the system loads the shipment lines into the table on the **Pick** tab. To select a line of the shipment for processing, you scan the item barcode and the barcode of the location from which the item is being picked.

For serial-tracked items (with any assignment method), the system shows a separate line for each picked item. For lot-tracked items, the system shows the total quantity to be picked as one line and splits the line by lot.

When you process the packing of items in Pack mode, for each item to be packed in a selected box, you scan the item barcode and lot or serial number; optionally, you also scan the expiration date (which must be the same as the expiration date in the shipment).

### Receiving and Putting Away Lot- and Serial-Tracked Items

You open the [Receive and Put Away](#) (PO302020) form (or the corresponding screen in the Acumatica mobile app), switch to Receive mode, and scan or enter the purchase receipt number, the system loads the purchase receipt lines into the table on the **Receive** tab. To select a line for processing, you scan the item barcode and the barcode of the location to which the item is received. The settings of the item being received determine the item settings that you must enter.

For lot-tracked and serial-tracked items with the *When Used* assignment method, specifying the lot or serial number in automated receiving and putting away operations is not applicable.

For lot-tracked items with the *When Received* assignment method, the system requests the lot information as follows:

- You must scan or enter the lot number when you are receiving an item. You receive each lot from a received quantity separately; the system splits the lines by the received lots.
- For items of a lot class with the *User-Enterable* issue method, the auto-generation of lot numbers is mandatory, otherwise these items cannot be processed in an automated mode. For items that belong to a lot class for which the **Auto-Generate Next Number** check box is selected on the [Lot/Serial Classes](#) (IN207000) form, the system automatically generates lot numbers and displays them in the **Lot/Serial Nbr.** column. If you then scan a different lot number than the one that was automatically generated by the system, the system replaces the automatically generated number with the one that you have entered.
- For items of a lot class that requires the expiration date to be specified—that is, a class for which the **Track Expiration Date** check box is selected on the [Lot/Serial Classes](#) form—you must enter the expiration date.

For serial-tracked items with the *When Received* assignment method, the system requests the serial information as follows:

- You must scan or enter the serial number when you are receiving an item. The system splits the line once you enter a serial number for a received item. If you specify a different serial number than the one that was automatically generated by the system, the system replaces the automatically generated number with the one that you have entered.
- For items of a serial class with the *User-Enterable* issue method, the auto-generation of serial numbers is mandatory, otherwise these items cannot be processed in an automated mode. For items that belong to a serial class for which the **Auto-Generate Next Number** check box is selected on the [Lot/Serial Classes](#) (IN207000) form, the system automatically generates serial numbers and displays them in the **Lot/Serial Nbr.** column. If you then scan a different serial number than the one that was automatically generated by the system, the system replaces the automatically generated number with the one that you have entered.

When you process the putting away of the items in Put Away mode, for each item to be put away, you scan the barcode of the receiving location, the item barcode, and then the lot or serial number.

### Processing Inventory Transfers with Lot- and Serial-Tracked Items

On the [Scan and Transfer](#) (IN304020) form, when you transfer lot- or serial-tracked items, for each item to be processed, you scan the location barcode, the item barcode, and the barcode of the lot or serial number.

### Counting Lot- and Serial-Tracked Items

On the [Scan and Count](#) (IN305020) form, when, during physical inventory, you enter counted data that contain lot- or serial-tracked items, for each item to be processed, you scan the location barcode, the item barcode, and the barcode of the lot or serial number. During the counting of the items, if you find an item with an unregistered serial number, you can add this item to the physical inventory document by scanning the item barcode and the serial number.

### Processing Inventory Issues with Lot- and Serial-Tracked Items

On the [Scan and Issue](#) (IN302020) form, you can process inventory issues that contain lot- or serial-tracked items. The system may prompt you to enter the lot or serial number of the item, depending on the lot or serial class settings specified on the [Lot/Serial Classes](#) (IN207000) form as follows:

- For the lot or serial class with the *When Received* assignment method and *User-Enterable* issue method, the system prompts you to scan the lot or serial number (which was specified on receiving of items).
- For the lot or serial class with the *When Used* assignment method, the system prompts you to scan the lot or serial number only if the number is not generated automatically and must be entered manually.

## Processing Inventory Receipts with Lot- and Serial-Tracked Items

On the [Scan and Receive](#) (IN301020) form, you can process inventory receipts that contain lot- or serial-tracked items. The system may prompt you to enter the lot or serial number of the item and an expiration date, depending on the lot or serial class settings specified on the [Lot/Serial Classes](#) (IN207000) form as follows:

- For the lot or serial class with the *When Received* assignment method, the system prompts you to scan the lot or serial number only if the number is not generated automatically and must be entered manually.
- For the lot or serial class with the *Expiration* issue method, the system prompts you to enter the expiration date of the item.

## Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist

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This topic provides details you can use to ensure that the system is configured properly for processing items with lot and serial numbers.

### Prerequisites

Before you begin performing automated operations with lot- or serial-tracked stock items, you should make sure the needed features have been enabled, settings have been specified, and entities have been created, as described in the following table.

Form	Criteria to Check
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that all necessary settings related to inventory and order management have been specified, as described in <a href="#">Order Management with Inventory Configuration: Implementation Checklist</a> .
<a href="#">Lot/Serial Classes</a> (IN207000) form, <a href="#">Item Classes</a> (IN201000) form, <a href="#">Stock Items</a> (IN202500) form	Make sure that stock items with lot or serial numbers have been configured, as described in <a href="#">Items with Lot and Serial Numbers: Implementation Checklist</a> .
<a href="#">Sales Orders Preferences</a> (SO101000) form, <a href="#">Purchase Orders Preferences</a> (PO101000) and <a href="#">Inventory Preferences</a> (IN101000) form	Make sure that the workflows for automated operations have been configured to fit your company processes, as described in <a href="#">Picking and Packing Operations: Implementation Checklist</a> , <a href="#">Packing Operations: Implementation Checklist</a> , <a href="#">Processing of Transfers: Implementation Checklist</a> , and <a href="#">Counting in Physical Inventory: Implementation Checklist</a> .

### Other Settings That Affect the Workflow

You can affect the workflow of wave picking by specifying the following additional settings:

- To make the system generate lot or serial numbers for processed serialized items automatically, select the **Default Auto-Generated Lot/Serial Nbr.** check box on the [Purchase Orders Preferences](#) (PO101000) form.
- To make the system generate expiration dates for processed serialized items automatically, select the **Default Expiration Date** on the [Purchase Orders Preferences](#) form.

## Automated Operations with Lot- and Serial-Tracked Items: Picking and Packing Items

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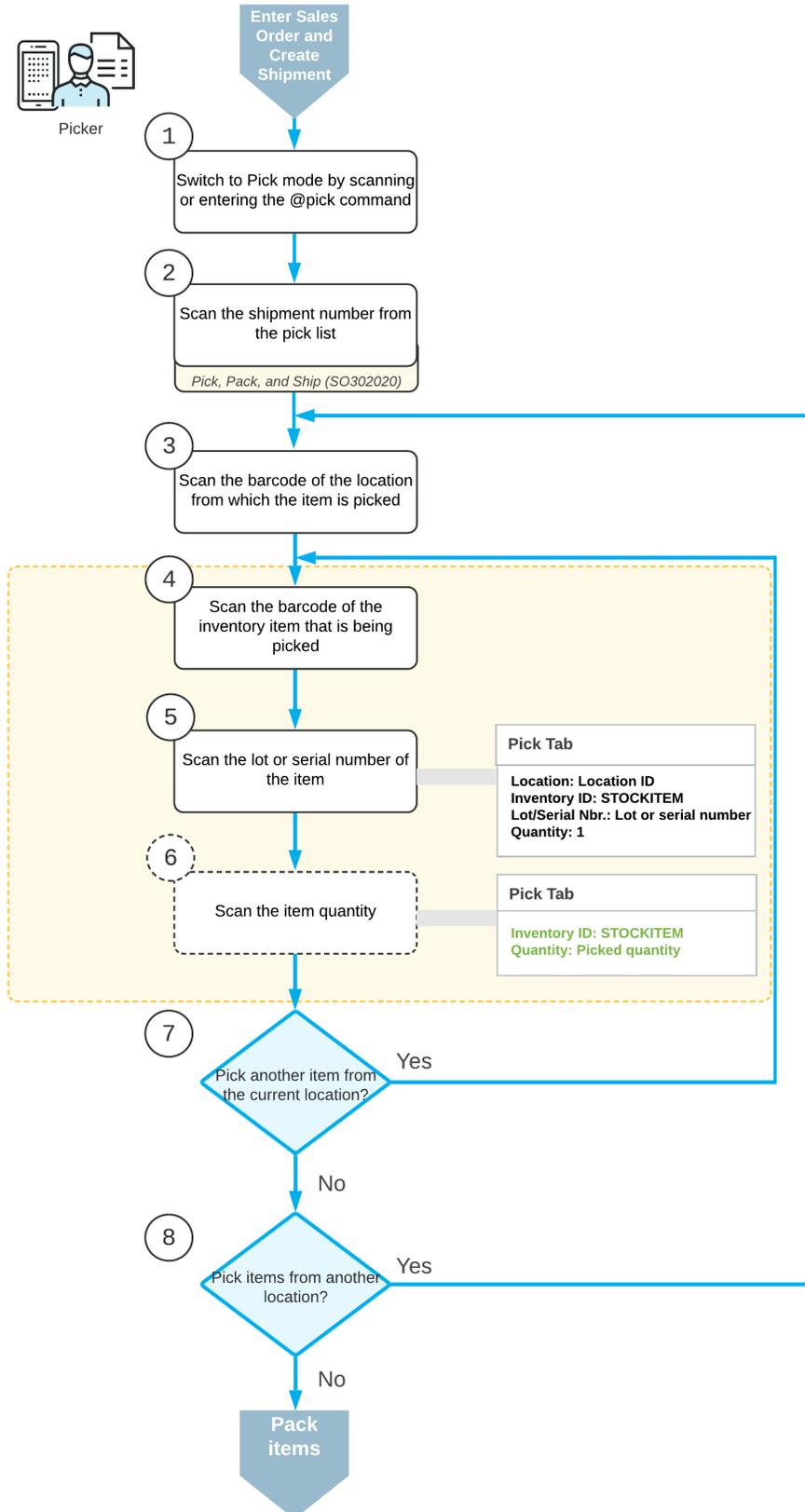
If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the tracking of stock items by lot or serial number has been configured in the system, when you pick and pack lot- or serial-tracked items by using the [Pick, Pack, and Ship](#) (SO302020) form or the corresponding screen in the Acumatica mobile app, the system may prompt the user to enter the lot or serial number during this process.

In this topic, you will read about the workflow for the automated picking and packing of lot- and serial-tracked inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist](#).

### Workflow for the Automated Picking of Lot- and Serial-Tracked Items

The automated processing of picking lot- or serial-tracked items involves the actions shown in the following diagram.

### Automated picking workflow for lot- and serial-tracked items



To process the picking of lot- or serial-tracked items in Pick mode, you perform the following steps:

**1. Switch to Pick mode.**

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pick mode by scanning or entering *@pick* barcode.

**2. Scan the shipment number.**

To start the automated processing, you scan the reference number of the shipment to be processed. The system displays the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

**3. Scan the location barcode.**

When you scan the barcode of the location from which the item is picked, the system searches for the location in the lines of the document that is currently selected.

**4. Scan the item barcode.**

When you scan the item barcode of the picked item, the system searches for the item in the lines of the currently selected document.

**5. Scan the lot or serial number of the item.**

You scan the lot or serial number of the item being picked. The system displays the picked quantity in the **Picked Qty.** column and highlights the line (in bold if the line has been picked partially, or in green if the line has been picked in full). If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the picked quantity in the base unit of measure for this item.



If the **Default Auto-Generated Lot/Serial Nbr.** check box is selected on the [Sales Orders Preferences](#) (SO101000) form, the system specifies the lot or serial number for the item automatically.

**6. Optional: Scan the item quantity.**

To change the picked quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the *\*qty* barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**7. Pick another line.**

If another item needs to be picked for the currently selected location, you scan the item barcode (return to Step 4) and repeat the process for the item.

**8. Pick items from another location.**

If you need to pick items from another location, you scan the location barcode (return to Step 3) and repeat the process for the location.

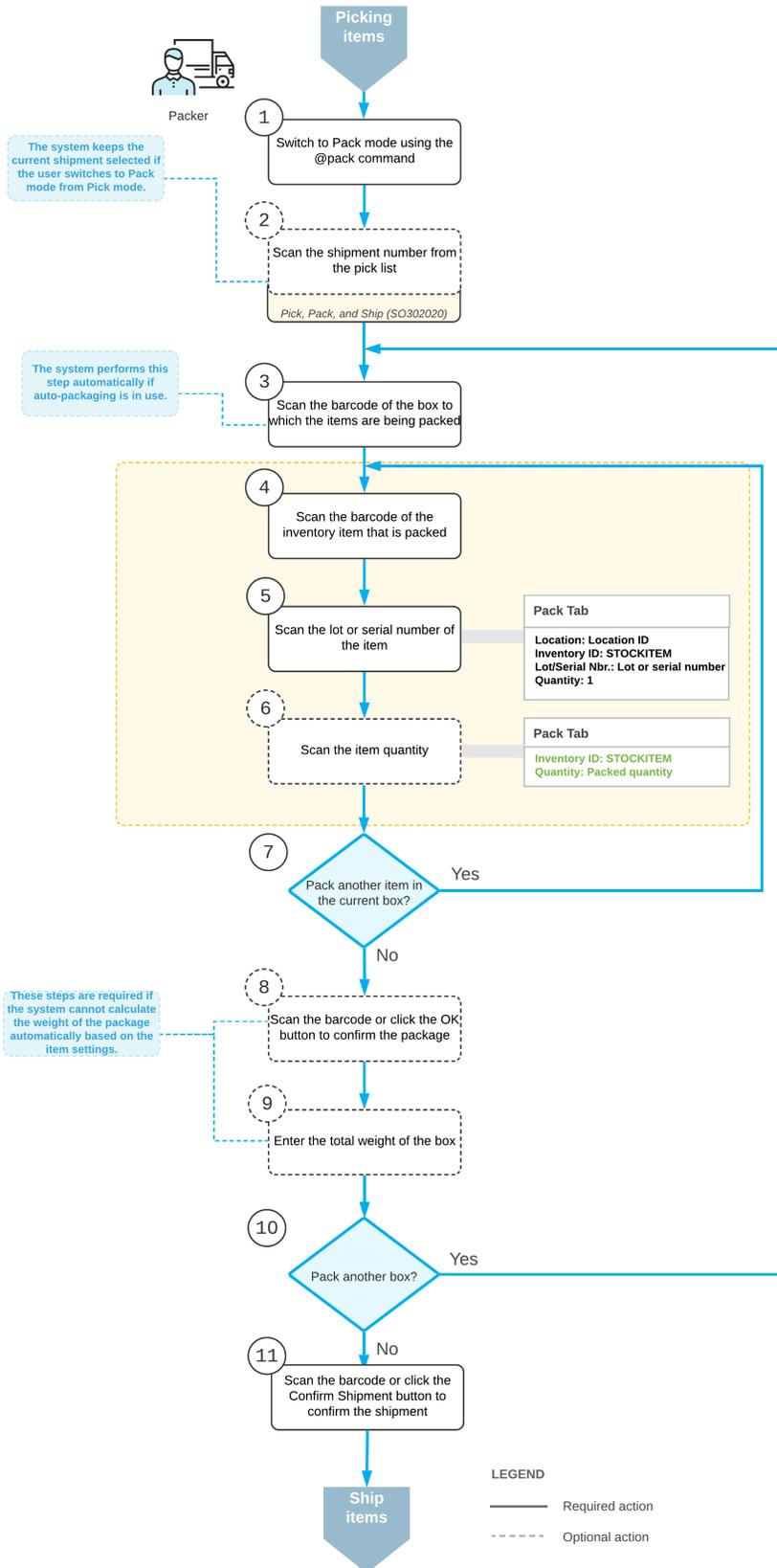
**9.** *Complete the picking process.*

If you have finished the picking operation for the currently selected document, you scan the @pack barcode to switch to Pack mode and proceed with packing.

**Workflow for the Automated Packing of Lot- and Serial-Tracked Items**

The automated processing of packing lot- or serial-tracked items that have been picked involves the actions shown in the following diagram.

Automated packing workflow for lot- and serial-tracked items



To process the packing of lot- or serial-tracked items in Pack mode, you perform the following steps:

**1. Switch to Pack mode.**

You open the [Pick, Pack, and Ship](#) (SO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Pack mode by scanning or entering @pack barcode.

**2. Scan the document number.**

To start the automated processing, you scan the reference number of shipment to be processed. (If you have switched to Pack mode from Pick mode with the document selected, the document is selected automatically.) The system shows the lines of the scanned document in the table and inserts the reference number of the document that is currently selected for processing in the **Shipment Nbr.** box.

**3. Scan the barcode of the box.**

You scan the barcode of the box into which the items will be packed.



If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS101000) form, this step is performed automatically.

**4. Scan the item barcode.**

When you scan the barcode of the packed item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the packed quantity in the base unit of measure for this item.

**5. Scan the lot or serial number of the item.**

You scan the lot or serial number of the item being packed. If the barcode of the scanned item is specified for a non-base unit of measure, the system converts this quantity to the packed quantity in the base unit of measure for this item; the system also shows the packed quantity in the **Packed Qty.** column, and highlights the line (in bold if the line has been processed partially, or in green if the line has been processed in full).



If the **Default Auto-Generated Lot/Serial Nbr.** check box is selected on the [Sales Orders Preferences](#) (SO101000) form, the system specifies the lot or serial number for the item automatically.

**6. Optional: Scan the item quantity.**

To change the packed quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**7. Pack another line.**

If another item needs to be packed in the current box, you return to scanning the item barcode (return to Step 4) and repeat the process for the item.

**8. Confirm the box.**

If all items have been packed in the box, you confirm the current box by scanning the \*ok barcode or by clicking the **OK** button.



This step is performed automatically for the shipments that are being packed in a single box that the system has suggested automatically.

**9. Enter the box weight.**

You enter the total weight of the box.



This step is performed automatically for the shipments that are being packed in a single box that the system has suggested automatically.

**10. Pack another box.**

If more items need to be packed for the current shipment, you return to scanning the barcode of the box barcode (return to Step 3) and repeat the process for another box.

**11. Complete the packing process.**

If you have finished the packing operation and do not need to specify shipping options, you scan the \*confirm\*shipment barcode or click the **Confirm Shipment** button on the form toolbar. The system confirms the shipment that is currently being processed.

**Known Process Limitations**

If the *Automatic Packaging* feature is enabled on the [Enable/Disable Features](#) (CS100000) form, a user can process in Pack mode only shipments packed to a single box. The processing of shipments packed in two or more boxes in Pack mode is currently not supported.

## Automated Operations with Lot- and Serial-Tracked Items: Receiving and Putting Away Items

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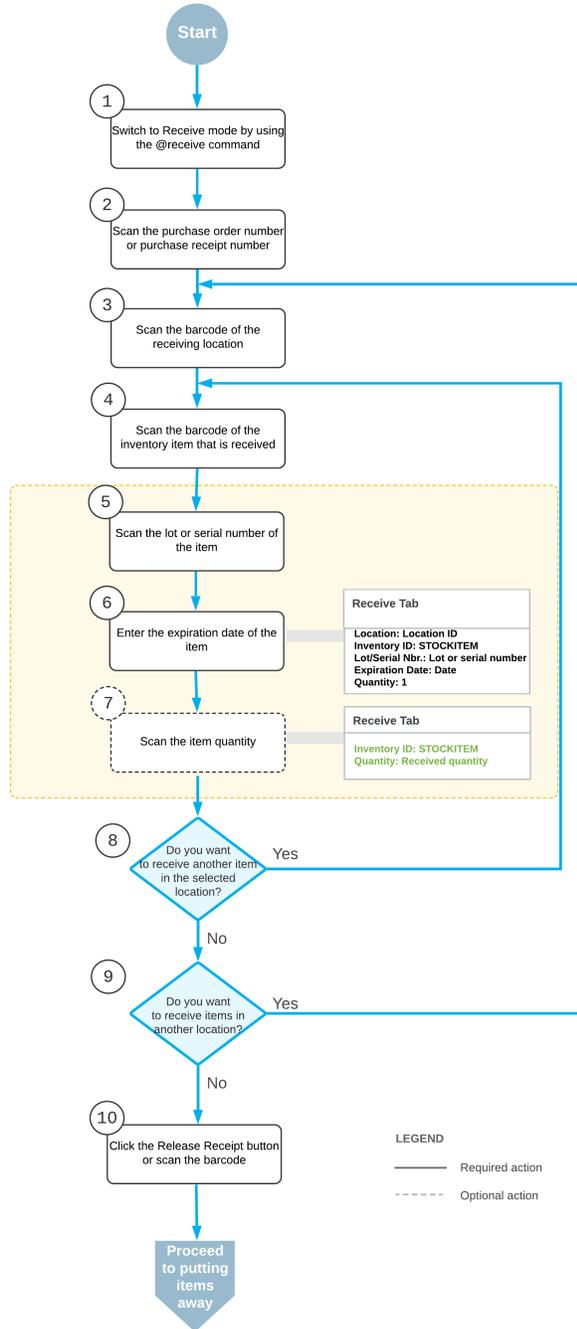
If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the tracking of stock items by lot or serial number has been configured in the system, when you receive and put away lot- or serial-tracked items by using the [Receive and Put Away](#) (PO302020) form, the system may prompt the user to enter the lot or serial number during this process.

In this topic, you will read about the workflow for the automated receiving and putting away of lot- and serial-tracked inventory items in Acumatica ERP. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist](#).

### **Workflow for the Automated Receiving of Lot- or Serial-Tracked Items**

The automated processing of receiving items involves the actions shown in the following diagram.

Automated receiving workflow for lot- and serial-tracked items



To process the receipt of lot- or serial-tracked items in Receive mode, you perform the following steps:

1. Switch to Receive mode.

You open the [Receive and Put Away](#) (PO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Receive mode by scanning or entering `@receive` barcode.

**2. Scan the document number.**

To start the automated processing, you scan the reference number of the purchase order, purchase receipt, or purchase return document to be processed. The system displays the lines of the scanned document in the table. If you have scanned the purchase order number, the system creates and saves the related purchase receipt automatically. In the **Receipt Nbr.** box, the system inserts the reference number of the receipt or return that is currently selected for processing.

**3. Scan the barcode of the receiving location.**

You scan the barcode of the warehouse location where the items are being received.

**4. Scan the item barcode.**

When you scan the barcode of the received item, the system searches for the item in the lines of the document that is currently selected.

**5. Scan the lot or serial number of the item.**

You scan the lot or serial number of the item being received.



If the **Default Auto-Generated Lot/Serial Nbr.** check box is selected on the [Purchase Orders Preferences](#) (PO101000) form, the system assigns and inserts the lot or serial number for the item automatically.

**6. Scan or enter the expiration date of the item.**

You scan the expiration date of the item being received. The system highlights the processed line in bold. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the received quantity in the base unit of measure for this item. If the scanned item barcode corresponds to a non-base unit of measure, the system converts this quantity to the received quantity in the base unit of measure for this item.



If the **Default Expiration Date** check box is selected on the [Purchase Orders Preferences](#) (PO101000) form, the system fills in the expiration date for the item automatically.

**7. Optional: Scan the item quantity.**

To change the received quantity in the line that is currently being processed, you switch on Quantity Editing mode by scanning or entering the `*qty` barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**8. Receive another line.**

If you need to receive at least one other item for the document currently being processed, you return to scanning the item barcode (that is, return to Step 4) and repeat the process for the item.

**9.** *Receive items in another location.*

If items must be received in another warehouse location, you scan the barcode of this location (return to Step 3) and repeat the process for the next location.

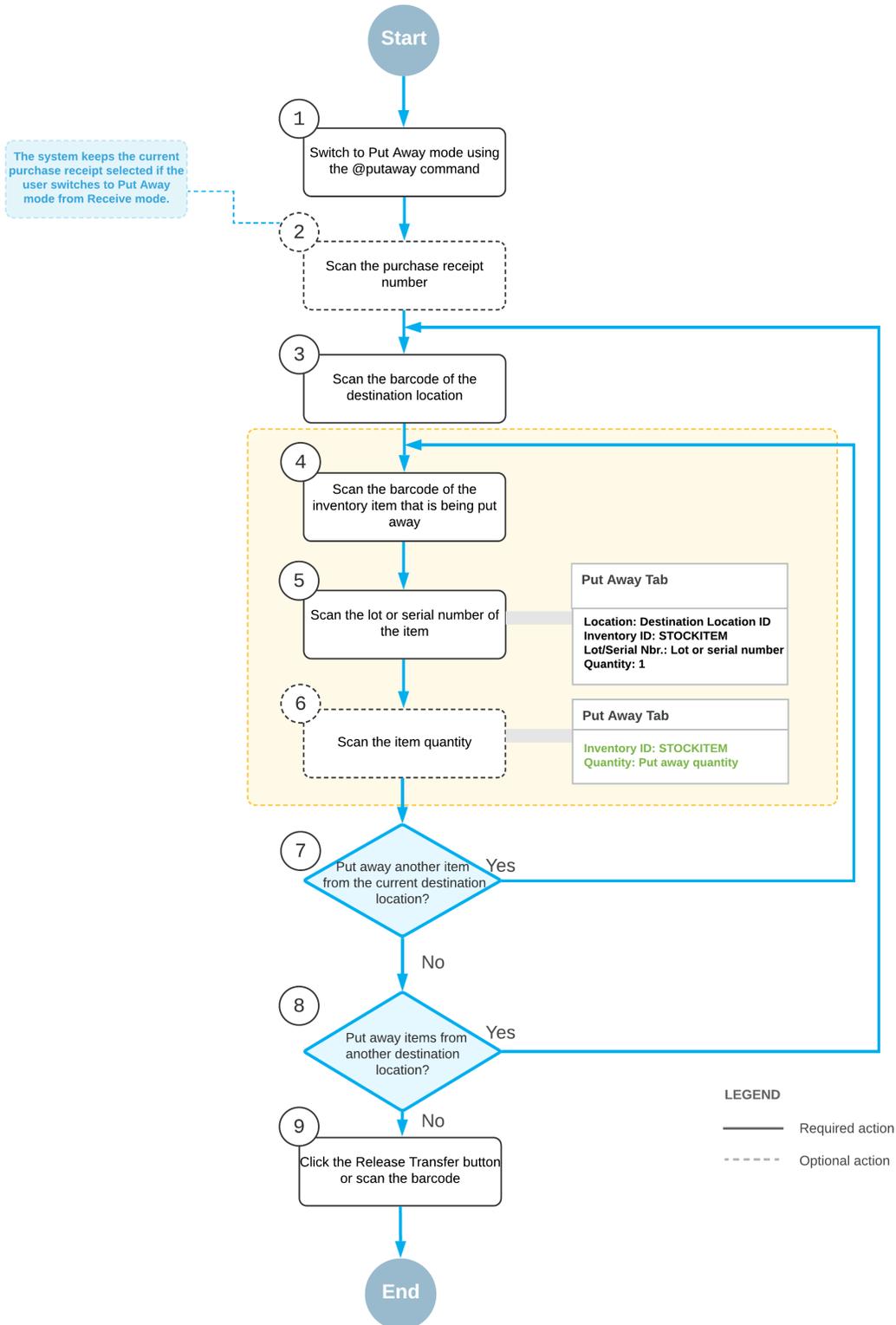
**10.** *Complete the receiving process.*

If you have finished the receiving operation and all items have been received for the purchase order (or the items were received partially and more items will be received in the future), you scan the *\*release\*receipt* barcode or click the **Release Receipt** button. The system releases the purchase receipt.

**Workflow for the Automated Putting Away of Items**

The automated processing of putting away items involves the actions shown in the following diagram.

### Automated putting away workflow for lot- and serial-tracked items



To process the putting away of lot- or serial-tracked items in Put Away mode, you perform the following steps:

**1.** *Switch to Put Away mode.*

You open the [Receive and Put Away](#) (PO302020) form (or the corresponding screen in the Acumatica mobile app) and switch to Put Away mode by scanning or entering @putaway barcode.

**2.** *Scan the document number.*

To start the automated processing, you scan the reference number of the released purchase receipt to be processed. (If you switched to Put Away mode from Receive mode with a document selected, the system selected the document automatically.) The system displays the lines of the scanned document in the table. In the **Receipt Nbr.** box, the system inserts the reference number of the document that is currently selected for processing.

**3.** *Scan the barcode of the destination location.*

You scan the barcode of the destination location in which you are putting away items. If the items of a particular line are put away in multiple locations, the system splits the line by locations and shows <SPLIT> in the **Location** column. You can review the IDs of the locations to which the items are put away by clicking **Transfer Allocations** on the table toolbar of the **Put Away** tab.

Once you have specified the destination location, the system automatically creates a one-step inventory transfer storage document that reflects the movement of the items from the receiving location to the storage location.

**4.** *Scan the barcode of the item.*

When you scan the item barcode of the received item, the system searches for the item in the lines of the document that is currently selected. If the UOM defined by the barcode of the scanned item corresponds to a non-base unit of measure, the system converts the item quantity defined by this barcode to the put away quantity in the base unit of measure for this item. To indicate the line or lines with the scanned barcode, the system selects the **Matched** check box in these lines. The system highlights the lines in bold if they are processed partially, and in green if they are processed in full.

**5.** *Scan the lot or serial number of the item.*

Scan the lot or serial number of the item to be put away.

**6.** *Optional: Scan the item quantity.*

To change the quantity being put away in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*qty barcode, and manually enter the quantity in the UOM defined by the barcode of the scanned item.

**7.** *Scan another item.*

If at least one other item needs to be put away, you return to scanning the barcode of the item (that is, return to Step 4) and repeat the process for the item.

**8. Scan another destination location.**

If items must be transferred to another destination location, you scan the barcode of this location (return to Step 3) and repeat the process.

**9. Complete the process of putting items away.**

When you have finished the operation of putting away items, you scan the `*release*transfer` barcode or click the **Release Transfer** button. The system releases the inventory transfer document that was prepared during the automated operation; the items are moved to the destination locations.

## Automated Operations with Lot- and Serial-Tracked Items: Transferring Items

---

If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the tracking of stock items by lot or serial number has been configured in the system, when you transfer lot- or serial-tracked items by using the [Scan and Transfer](#) (IN304020) form or the corresponding screen in the Acumatica mobile app, the system may prompt the user to enter the lot or serial number during this process.

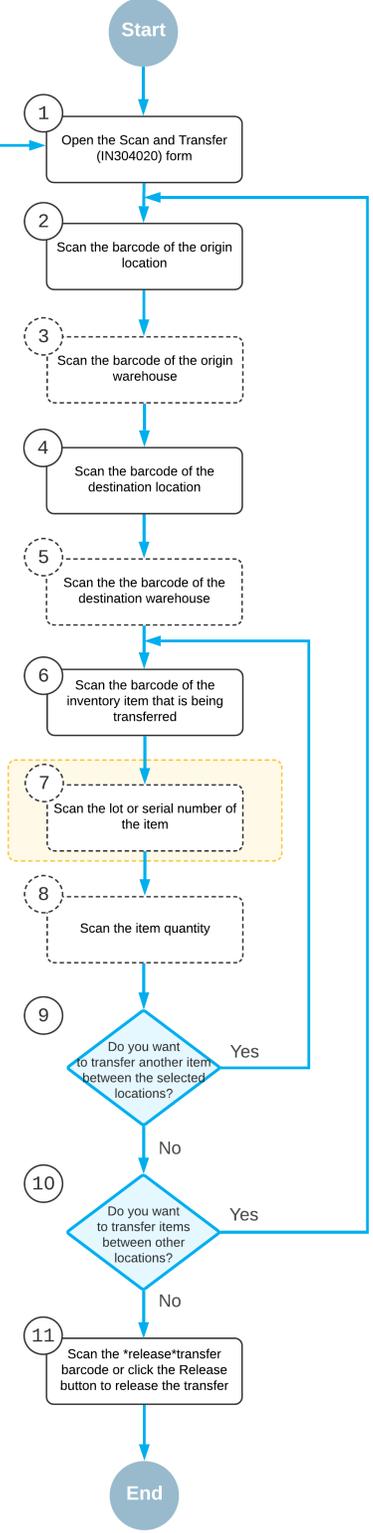
This topic describes the workflow for the automated transfer of items that are tracked by lot or serial numbers. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist](#).

### Workflow for the Automated Scanning and Transferring of Lot- and Serial-Tracked Items

The automated processing of scanning and transferring lot- or serial-tracked items involves the actions shown in the following diagram.

### Automated transferring of lot- or serial-tracked items

All actions on this diagram are performed by a user with the same job role



**LEGEND**  
 — Required action  
 - - - - - Optional action

To transfer items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

**1.** *Open the Scan and Transfer (IN304020) form.*

You open the [Scan and Transfer](#) form (or the corresponding screen in the Acumatica mobile app).

**2.** *Scan the origin location barcode.*

You scan the barcode of the origin location (that is, the location where the item to be transferred is currently being stored).

**3.** *Optional: Scan the origin warehouse barcode.*

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the origin warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

**4.** *Scan the destination location barcode.*

You scan the barcode of the destination location (that is, the location to which you are transferring items).

**5.** *Optional: Scan the destination warehouse barcode.*

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the destination warehouse barcode. The system inserts the warehouse ID in the **To Warehouse** box.



If the destination warehouse differs from the origin warehouse and the warehouses are assigned to different buildings (or the building is not specified in the settings of either of the warehouses), the system displays an error message, and the transfer cannot be performed.

**6.** *Scan the item barcode.*

You scan the barcode of the item to be transferred.

**7.** *Optional: Scan the lot or serial number of the item.*

You scan the lot or serial number of the item.

**8.** *Optional: Scan the item quantity.*

To change the transferred quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the \*`qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the base unit of measure.

**9.** *Optional: Scan the barcode of the next item to be transferred between the selected locations.*

If another item must be transferred between the currently selected locations, you scan the barcode of the next item (return to Step 6) and repeat the process for the next item.

**10.**Optional: *Scan the barcode of the next origin location.*

If items must be transferred between another locations, you scan the barcode of the next origin location (return to Step 2) and repeat the process.

**11.***Release the inventory transfer.*

When you have finished transferring items, you scan the `*release*transfer` command or click **Release** on the form toolbar. The system releases the inventory transfer.

## Automated Operations with Lot- and Serial-Tracked Items: Process Activity

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In the following activity, you will learn how to process purchase documents, sales documents, and transfer transactions with lot-tracked stock items in automated mode.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that on 1/27/2020, the purchasing manager of the wholesale warehouse of SweetLife company has entered a purchase order for 30 pounds of pears (three boxes of 10 pounds each, and the boxes can have different expiration dates) from the Glory Fruit Case vendor. The vendor supplies each box with a lot number that must be used for tracking the enclosed items in the Wholesale warehouse. Then, on 1/29/2020, the sales manager has entered a sales order for 12 pounds of pears being sold to GoodFood One Restaurant.

As the warehouse worker, you will receive the items in the purchase order and put them away in the fruit locations. Then you will pick and pack the items for the sales order. Finally, at the request of the warehouse manager, you will move the remaining items (those not included in the sales order) from one location to another.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Inventory*
- *Lot and Serial Tracking*
- *Warehouse Management*
- *Fulfillment*

- *Receiving*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*
- A stock item on the [Stock Items](#) (IN202500) form: *PEARS*. For the stock item, the *PE1LB* barcode has been specified on the **Cross-Reference** tab of the form, and the *ALTFRT* lot class is assigned.
- A lot class on the [Lot/Serial Classes](#) (IN207000) form: *ALTFRT*. The lot class is defined so that the fruits with the earliest expiration date are issued first. Also, auto-generation of lot numbers is configured for the lot class.
- A vendor on the [Vendors](#) (AP303000) form: *GLORYFRUIT*
- A customer on the [Customers](#) (AR303000) form: *GOODFOOD*

A purchase order to *GLORYFRUIT* has been entered into the system on the [Purchase Orders](#) (PO301000) form. Also, a sales order to *GOODFOOD* has been entered into the system on the [Sales Orders](#) form.

### Process Overview

In this process activity, you will act as a warehouse worker in the Wholesale warehouse. You will receive the items for a purchase order in automated mode and specify the lot number and expiration date for each unit of the items, and then put the received items away in the appropriate storage locations. Then you will create a shipment for a sales order on the [Sales Orders](#) (SO301000) form, and pick and pack the items for this shipment in the automated mode. Finally, you will prepare an inventory transfer to record the movement of the items from one location to another on the [Scan and Transfer](#) (IN304020) form.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start performing the activity, you need to perform the following instructions:

1. Launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded. To sign in as the sales and purchasing manager, use the *perkins* login and the *123* password.
2. In the info area, in the upper-right corner of the top pane of the Acumatica ERP screen, make sure that the business date in your system is set to 1/30/2020. If a different date is displayed, click the Business Date menu button, and select 1/30/2020 on the calendar.
3. On the [Enable/Disable Features](#) (CS100000) form, make sure that the *Lot and Serial Tracking* feature is enabled.

### Step 1: Receiving and Putting Away Items

Suppose that the Glory Fruit Case vendor has delivered the 30 pounds of pears to the Wholesale warehouse: three boxes of 10 pounds each. Two of the boxes (that is, 20 pounds of pears) have one lot number and expiration date, and the third box (that is, 10 pounds of pears) has a different lot number and expiration date. You will prepare the needed documents to reflect the receipt of the pears as follows:

1. Open the *Receive and Put Away* (PO302020) form, and make sure the **Receive** tab is opened.
2. In the **Scan** box of the Summary area, enter *000025*, which is the reference number of the purchase order for which you will perform receiving items and putting them away to storage locations. The system creates the purchase receipt for the purchase order and loads the purchase receipt lines to the table on the **Receive** tab. The reference number of the purchase receipt that is currently being processed is displayed in the **Receipt Nbr.** box of the Summary area.
3. Enter *MAIN* to select the location in which you have received the items.
4. Enter *PE1LB* to select the item being received.
5. Enter *FR000762* to specify the lot number of the first and second boxes of pears. (These boxes have the same lot number.)
6. Enter *02/20/2020* to specify the expiration date of these boxes, which have the same expiration date. The system highlights the purchase receipt line in bold, and specifies 1 as the **Received Quantity**. The two boxes with the lot number and expiration date you have specified contain 20 pounds, so the quantity of the line should be 20.
7. Set the quantity of the current line to 20 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the item quantity.
  - b. In the **Scan** box, type *20*.
8. Enter *PE1LB* to select the item being received. You are now processing the third box of 10 pounds of pears, which has a different lot number and expiration date than the first two boxes had.
9. Enter *FR000782* to specify the lot number of the third box of pears.
10. Enter *02/13/2020* to specify the expiration date of this box. The system splits the line, and specifies 1 as the **Received Quantity** in the newly added line. The box with the lot number and expiration date you just entered contains 10 pounds, so the quantity of the line should be 10.
11. Set the quantity of the current line to 10. On the **Receive** tab, the system highlights both lines in green, indicating that these lines have been received in full.

12. On the form toolbar, click **Release Receipt** to release the purchase receipt. The system releases the purchase receipt and generates a corresponding inventory receipt transaction to record the receipt of the items to the *MAIN* location of the warehouse.
13. Enter *@putaway* to switch to Put Away mode. Notice that the purchase receipt is still selected and its reference number is shown in the **Receipt Nbr.** box of the Summary area.
14. Enter *F1S2* to select the location to which the items (the 20 pounds of pears in the first two boxes) are being put away.
15. Enter *PE1LB* to select the item to be put away to this location.
16. Enter *FR000762* to specify the lot number of the first and second box of pears.
17. Set the quantity to 20.
18. Enter *F2S1* to select the location to which the rest of the items (the remaining 10 pounds of pears, which are in the third box) are being put away.
19. Enter *PE1LB* to select the item to be put away to this location.
20. Enter *FR000782* to specify the lot number of the third box of pears.
21. Set the quantity to 10.
22. On the form toolbar, click **Release Transfer**.
23. On the **Transfers** tab, click the **Reference Nbr.** link to open the prepared inventory transfer transaction on the *Transfers* (IN304000) form. Make sure that the transfer has the *Released* status shown in the *Status* box, and make sure the lot number and expiration date have been assigned to the lines, as shown in the screenshot.

Transfers NOTES ACTIVITIES FILES NOTIFICATIONS TOOLS

SAVE & CLOSE + - K < > X RELEASE REPORTS

Reference Nbr.: 000053	Warehouse ID: WHOLESALE - Wholesale Warehouse	Total Qty.: 30.00
Status: <span style="border: 1px solid red; padding: 2px;">Released</span>	To Warehouse ... WHOLESALE - Wholesale Warehouse	
<input type="checkbox"/> Hold	External Ref.:	
Transfer Type: 1-Step	Description:	
* Date: 1/30/2020		
Post Period: 01-2020		

**TRANSACTION DETAILS** FINANCIAL DETAILS

Inventory ID	Location	To Location ID	UOM	Quantity	Lot/Serial Nbr.	Expiration Date	Reason Code	Description
PEARS	MAIN	F1S2	LB	20.00	FR000762	2/20/2020		Fresh pears 1 lb
PEARS	MAIN	F2S1	LB	10.00	FR000782	2/13/2020		Fresh pears 1 lb

**Figure: Lot-tracked items moved to storage locations**

## Step 2: Creating a Shipment

In this step, will create a shipment for some of the pears that have been received and put away. Do the following:

1. On the [Sales Orders](#) (SO301000) form, open a sales order to *GOODFOOD* dated 1/29/2020, and make sure it has a line with the *PEARS* item and quantity *12*.
2. On the form toolbar, click **Actions > Create Shipment** to prepare a shipment.
3. In the **Specify Shipment Parameters** dialog box, which opens, make sure that the 1/30/2020 date and the *WHOLESALE* warehouse are selected, and click **OK**. The system creates a shipment and opens it on the [Shipments](#) (SO302000) form. Notice the reference number of the shipment; you will need it in the next step.

## Step 4: Picking and Packing Items for the Shipment

To perform automated picking and packing of the ordered items, do the following:

1. Open the [Pick, Pack, and Ship](#) (SO302020) form, and make sure the **Pick** tab is opened.
2. In the **Scan** box of the Summary area, enter the reference number of the shipment that you have prepared earlier in this activity. The system loads the shipment lines to the **Pick** tab, and shows the reference number of the shipment that is currently being processed in the **Shipment Nbr.** box of the Summary area. Notice that the system has split the line so that 10 units for the shipment are taken from the box with the earlier expiration date, and the rest of the shipment (2 units) are taken from another box.
3. Enter *F2S1* to select the location from which the item is picked.
4. Enter *PE1LB* to select the item that is being picked from the selected location.
5. Enter *FR000782* to specify the lot number. The system highlights the second line of the shipment in green and specifies *1* as the **Picked Quantity**.
6. Set the quantity to 10 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the quantity.
  - b. In the **Scan** box, type *10*. The system highlights the first line of the shipment in green and specifies *10* as the **Picked Quantity**.
7. Enter *F1S2* to select the location from which the item is picked for the remainder of the order..
8. Enter *PE1LB* to select the item being picked from the selected location.
9. Enter *FR000762* to specify the lot number.
10. Set the quantity to 2. You have picked items for both lines, and now can processed with packing them in the box.

11. Enter `@pack` to switch to Pack mode. Notice that the shipment is still selected and its reference number is shown in the **Shipment Nbr.** box of the Summary area.
12. Enter `MEDIUM` to select the box for packaging the shipment.
13. Enter `PE1LB` to select the item to be packed to the selected box.
14. Enter `FR000782` to specify the lot number.
15. Set the quantity to 10.
16. Enter `PE1LB` to select the item to be packed to the selected box.
17. Enter `FR000762` to specify the lot number.
18. Set the quantity to 2. All items are packed in the box, so you can confirm the package.
19. On the form toolbar, click **OK** to confirm the package.
20. On the form toolbar, click **Confirm Shipment**.

#### **Step 5: Reviewing the Shipment**

Review the shipment in the system as follows:

1. Open the shipment that you have processed earlier on the [Shipments](#) (SO303000) form. Notice that it is assigned the *Confirmed* status.
2. Review the **Packages** tab. Notice that one box with the *MEDIUM* identifier is shown in the upper table, and the **Contents of Selected Package** table shows the items that have been packed into this box, as shown in the following screenshot.

## Shipments

← SAVE & CLOSE 📄 ↶ + 🗑️ ⏪ < > ⏩ ACTIONS ▾ REPORTS ▾

Shipment Nbr.: 000059 🔍	Customer: GOODFOOD - GoodFood One Restaurar ✎	Shipped Quant... 12.00
Type: Shipment	Location: MAIN - Primary Location	Control Quantity: 12.00
Status: Confirmed	Warehouse ID: WHOLESALE - Wholesale Warehouse	Shipped Weight: 0.000000
<input type="checkbox"/> Hold	Workgroup:	Shipped Volume: 0.000000
Operation: Issue	Owner:	Packages: 1
Shipment Date: 1/30/2020		Package Weight: 0.030000

DOCUMENT DETAILS   ORDERS   SHIPPING SETTINGS   **PACKAGES**

🔍	🔗	📄	Confirmed	* Box ID	Type	Description	Weight	UOM	Declared Value	C.O.D. Amount
>	🔗	📄	<input checked="" type="checkbox"/>	MEDIUM	Manual		0.0300	KG	0.0000	0.0000

**Contents of Selected Package**

🔍	Shipment Split Line Nbr.	Inventory ID	Lot/Serial Nbr.	UOM	Quantity
>	2	PEARS	FR000782	LB	10.00
	3	PEARS	FR000762	LB	2.00

**Figure: Confirmed shipment**

### Step 6: Transferring Items

Suppose that the warehouse manager has decided to clean the *F1S2* location and asked you to move all items from this location to the *F2S1* location, which has already been cleaned. In the *F1S2* location, you found 18 pounds of pears and moved them to the *F2S1* location. Now you acting as a warehouse worker need to record this movement in the system by creating an inventory transfer. Do the following:

1. Open the *Scan and Transfer* (IN304020) form.
2. In the **Scan** box of the Summary area, enter *F1S2* as the origin location.
3. Enter *F2S1* as the destination location.
4. Enter *PE1LB* as the item to be transferred.

5. Enter `FR000762` to specify the lot number. The system adds a line with one unit of the item to the table on the **Transfer** tab.
6. Set the quantity of the line to 18 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the quantity.
  - b. In the **Scan** box, enter 18.
7. On the form toolbar, click **Save**. The system creates the transfer with the data you have entered. You can view the transfer number in the **Reference Nbr.** box of the Summary area.
8. On the form toolbar, click **Release**. The system releases the transfer.
9. Click the Edit button next to the **Reference Nbr.** box, and on the *Transfers* (IN304000) form that opens, review the inventory transfer transaction. Make sure it includes the needed line and is assigned the *Released* status, as shown in the screenshot below.

Transfers NOTES ACTIVITIES

SAVE & CLOSE + - K < > > RELEASE REPORTS

Reference Nbr.: <input type="text" value="000054"/>	Warehouse ID: <input type="text" value="WHOLESALE - Wholesale Warehouse"/>	Total Qty.: <input type="text" value="18.00"/>
Status: <span style="border: 1px solid red; padding: 2px;">Released</span>	To Warehouse ... <input type="text" value="WHOLESALE - Wholesale Warehouse"/>	
<input type="checkbox"/> Hold	External Ref.: <input type="text"/>	
Transfer Type: <input type="text" value="1-Step"/>	Description: <input type="text"/>	
* Date: <input type="text" value="1/30/2020"/>		
Post Period: <input type="text" value="01-2020"/>		

[TRANSACTION DETAILS](#) [FINANCIAL DETAILS](#)

ALLOCATIONS ADD ITEM INVENTORY SUMMARY

Inventory ID	Location	To Location ID	UOM	Quantity	Lot/Serial Nbr.	Expiration Date
<span style="color: blue;">PEARS</span>	<span style="border: 1px solid red;">F1S2</span>	<span style="border: 1px solid red;">F2S1</span>	LB	18.00	FR000762	2/20/2020

**Figure: Lot-tracked items transferred to another location**

You have successfully moved pears between the locations.

## Automated Operations with Lot- and Serial-Tracked Items: Issuing Items

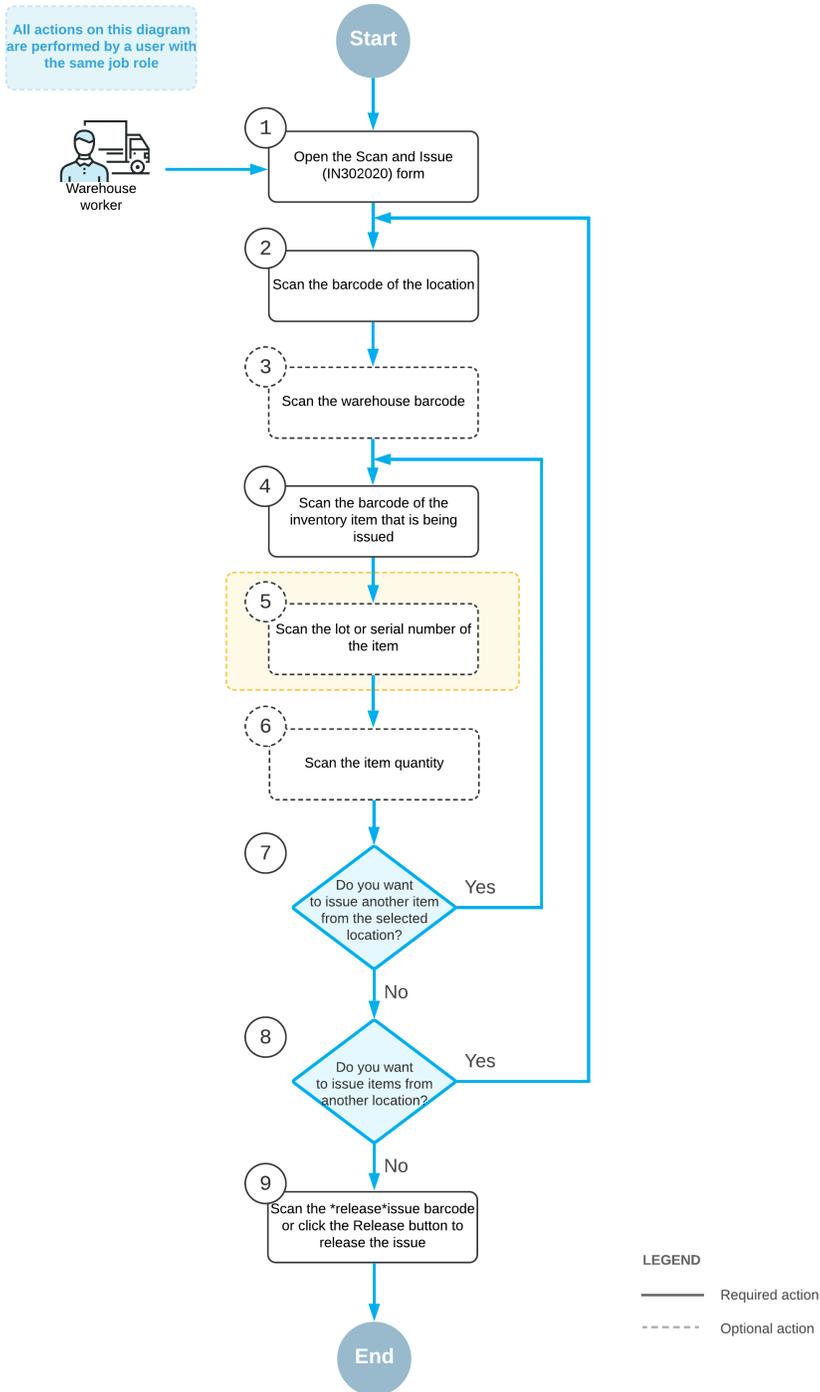
If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the tracking of stock items by lot or serial number has been configured in the system, when you issue lot- or serial-tracked items by using the [Scan and Issue](#) (IN302020) form or the corresponding screen in the Acumatica mobile app, the system prompts the user to enter the lot or serial number during this process.

This topic describes the workflow for the automated issuing of lot- or serial-tracked items. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist](#).

### **Workflow for the Automated Issuing of Lot- and Serial-Tracked Items**

The automated processing of issuing lot- or serial-tracked items involves the actions shown in the following diagram.

### Automated issuing of lot- or serial-tracked items



To issue items by using a barcode scanner or a mobile device with a scanning option, you perform the following steps:

**1.** Open the [Scan and Issue](#) (IN302020) form.

You open the [Scan and Issue](#) form (or the corresponding screen in the Acumatica mobile app).

**2.** Scan the location barcode.

You scan the barcode of the warehouse location where the items to be issued are stored.

**3.** Optional: Scan the warehouse barcode.

If the location whose identifier you scanned in the previous step is assigned to multiple warehouses, you scan the warehouse barcode. The system inserts the warehouse ID in the **Warehouse** box.

**4.** Scan the item barcode.

You scan the barcode of the item that must be issued from the selected location.

**5.** Optional: Scan the lot or serial number of the item.

The system may prompt you to enter the lot or serial number of the item, depending on the lot or serial class settings specified on the [Lot/Serial Classes](#) (IN207000) form.

If the assignment method of the lot or serial class dictates that the lot or serial number be specified on receipt of the item and the issue method dictates that the lot or serial number must be entered by a user, the system prompts you to scan the lot or serial number.

If the assignment method of the lot or serial class dictates that the lot or serial number be specified on issue of the item, the system prompts you to scan the lot or serial number only if the number is not generated automatically and must be entered manually.

**6.** Optional: Scan the item quantity.

To change the issued quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the base unit of measure.

**7.** Optional: Scan the barcode of the next item to be issued from the selected location

If another item must be issued from the currently selected location, you scan the barcode of the next item (return to Step 4) and repeat the process for this item.

**8.** Optional: Scan the barcode of the next location.

If items must be issued from another warehouse location, you scan the barcode of this location (return to Step 2) and repeat the process for this location.

**9.** Release the inventory issue.

When you have finished issuing items, you scan the `*release*issue` command or click **Release** on the form toolbar. The system releases the inventory issue.

## Automated Operations with Lot- and Serial-Tracked Items: To Issue Items

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In this activity, you will learn how to perform automated counting of lot-tracked items during a physical inventory.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker and your manager asks you to check the boxes of bananas in refrigerators in order to find rotten bananas and write them off. To record writing off boxes with rotten bananas in the system, you will create and process an inventory issue.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Lot and Serial Tracking*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *F2S2* and *F3S2*.
- A stock item on the [Stock Items](#) (IN202500) form: *BANANAS*. For this stock item, the barcodes have been specified on the **Cross-Reference** tab of the form.

### Process Overview

When you issue lot-tracked items in this activity, you will scan the barcode of the location where the items are stored; you then scan a barcode of each item to be issued and the barcodes of the lot numbers that correspond to each item. When you have added all items in all locations to the issue, you will release the issue.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

### System Preparation

Before you start performing the activity, launch the Acumatica ERP website and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

### Step 1: Processing the Issue of Items

Suppose that when you were checking the boxes with bananas in the refrigerator locations, as instructed by your manager, you have found four boxes with rotten bananas: two boxes with different lot numbers in the *F2S2* location, and two boxes with the same lot number in the *F3S2* location. Do the following to process the issue transaction in the system:

1. Open the [Scan and Issue](#) (IN302020) form.
2. In the **Scan** box, enter *F2S2*, which is the barcode of the location where the first box of bananas is stored.
3. In the **Scan** box, enter *BNBOX*, which is the barcode that corresponds to a box of 10 pounds of bananas.
4. In the **Scan** box, enter *FR200384* to specify the lot number of the box. The system adds 1 unit of the *BANANAS* item in the *BNBOX* unit of measure to the table on the **Issue** tab.
5. In the **Scan** box, enter *BNBOX* for the second box of bananas.
6. In the **Scan** box, enter *FR200401* to specify the lot number of the box. The system adds 1 unit of the *BANANAS* item in the *BNBOX* unit of measure to the table on the **Issue** tab.
7. In the **Scan** box, enter *F3S2*, which is the barcode of the location where the second box of bananas is stored.
8. In the **Scan** box, enter *BNBOX* to add the box of bananas.
9. In the **Scan** box, enter *FR200335* to specify the lot number of the box. The system adds 1 unit of the *BANANAS* item in the *BNBOX* unit of measure to the table on the **Issue** tab.
10. Set the quantity to 2 as follows:
  - a. On the form toolbar, click **Set Qty**. The system prompts you to enter the quantity.
  - b. In the **Scan** box, enter 2. The system changes the quantity of the *BANANAS* item with the *FR200335* lot number to 2.
11. On the form toolbar, click **Save**. The system saves your changes and creates the inventory issue, whose identifier you can view in the **Reference Nbr.** box of the Summary area.

You have added four boxes of bananas to the issue. Now you will review the inventory issue and release the issue.

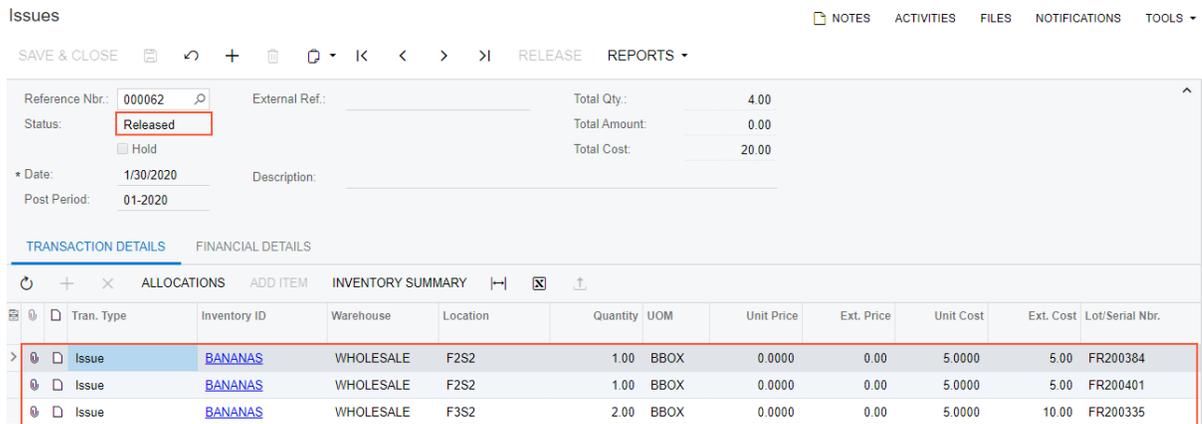
**Step 2: Releasing and Reviewing the Issue**

To release and review the issue, do the following:

1. While you are still viewing the inventory issue on the **Issue** tab of the *Scan and Issue* (IN302020) form, make sure that the settings of the rows you have entered correspond to the settings in the following table.

Inventory ID	Lot/Serial Nbr.	Expiration Date	Location	Quantity	UOM
BANANAS	FR200384	2/3/2020	F2S2	1	BBOX
BANANAS	FR200401	2/6/2020	F2S2	1	BBOX
BANANAS	FR200335	2/4/2020	F3S2	2	BBOX

2. On the form toolbar, click **Release** to release the inventory issue.
3. Click the Edit button next to the **Reference Nbr.** box, and on the *Issues* (IN302000) form that opens, review the inventory issue transaction. Make sure it includes the needed lines and is assigned the *Released* status, as shown in the screenshot below.



**Figure: Inventory issue transaction**

You have successfully created and released the inventory issue to record the removal of four boxes of bananas from their warehouse locations.

## Automated Operations with Lot- and Serial-Tracked Items: Counting Items in Physical Inventory

---

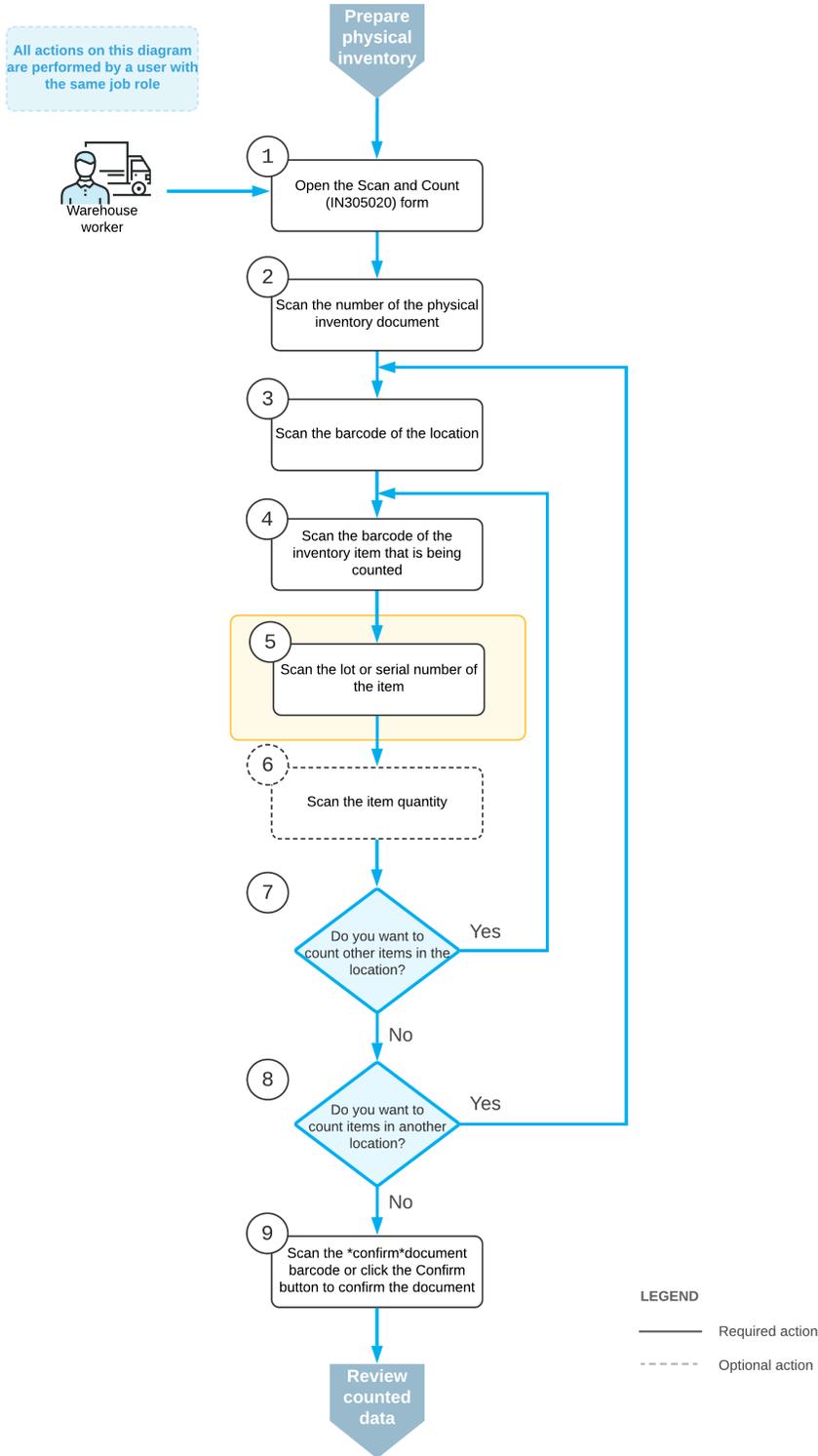
If the *Lot and Serial Tracking* feature is enabled on the [Enable/Disable Features](#) (CS100000) form and the tracking of stock items by lot or serial number has been configured in the system, when you count lot- or serial-tracked items by using the [Scan and Count](#) (IN305020) form or the corresponding screen in the Acumatica mobile app, the system prompts the user to enter the lot or serial number during this process.

This topic describes the workflow for the automated counting of lot- or serial-tracked items during physical inventory. The workflow in this topic is based on the assumption that your system has the recommended configuration described in [Automated Operations with Lot- and Serial-Tracked Items: Implementation Checklist](#).

### **Workflow for the Automated Scanning and Counting of Lot- and Serial-Tracked Items**

The automated processing of scanning and counting lot- or serial-tracked items involves the actions shown in the following diagram.

### Automated counting of lot- or serial-tracked items in physical inventory



To count inventory items (and use Scan and Count mode), you perform the following steps:

**1.** *Open the [Scan and Count](#) (IN305020) form.*

You open the [Scan and Count](#) form (or the corresponding screen in the Acumatica mobile app) to start the counting process.

**2.** *Scan the document number*

To start the automated counting, you scan the reference number of the physical inventory document. The lines of the scanned document are shown in the table. The reference number of the document selected for processing is displayed in the **Reference Nbr.** box.

**3.** *Scan the location barcode.*

You scan the barcode of the location where the items to be counted are stored. All items that you scan after scanning the location barcode will be assigned to this location.

**4.** *Scan the item barcode.*

You scan the barcode of the item that is stored in the selected location.

**5.** *Scan the lot or serial number of the item.*

You scan the lot or serial number of the item. The system changes the status of the line for this item to *Entered*.

**6.** *Optional: Scan the item quantity.*

To change the counted quantity in the line that is currently being processed, you switch to Quantity Editing mode by scanning or entering the `*qty` barcode or by clicking **Set Qty** on the form toolbar; you then manually enter the quantity in the base unit of measure.

**7.** *Optional: Scan the barcode of the next item in the same location.*

If you have more items to count in the same location, you scan the barcode of the next item (return to Step 4) and repeat the process for the item.

**8.** *Optional: Scan the barcode of the next location.*

If items in another location must be counted, you return to scanning the warehouse location (return to Step 3) and repeat the process for the items in this location.

**9.** *Confirm the physical inventory count.*

When you have finished counting items, you scan the `*confirm*document` command or click **Confirm** on the form toolbar. The system saves your changes to the physical inventory document.

## Automated Operations with Lot- and Serial-Tracked Items: To Count Items in a Physical Inventory

---

In this activity, you will learn how to perform automated counting of lot-tracked items during a physical inventory.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker, and you have been assigned to perform a physical inventory count by entering the barcodes of stock items and locations. You will count the quantities of coconuts in particular warehouse locations added to the physical inventory document, which your manager has provided to you.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Lot and Serial Tracking*
- *Advanced Physical Count*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *F3S1* and *F3S2*.
- A stock item on the [Stock Items](#) (IN202500) form: *COCONUTS*. For this stock item, the barcode has been specified on the **Cross-Reference** tab of the form.
- A physical inventory type on the [Physical Inventory Types](#) (IN208900) form: *CNCNT*.

Also, on the [Prepare Physical Count](#) (IN504000) form, the physical inventory document has been created, and it has the *Counting in Progress* status.

## Process Overview

As you count lot-tracked items within a physical inventory in this activity, you will scan the barcode of the physical inventory document; you will then scan the location barcode, the barcode of each item you find in this location, and the barcodes of the lot numbers that correspond to each item. When you have counted all items in all locations added to the physical inventory document, you will confirm the document.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

## System Preparation

Before you start performing the activity, launch the Acumatica ERP website, and sign in to a company with the *U100* dataset preloaded. To sign in as a warehouse worker, use the *perkins* login and the *123* password.

### Step 1: Entering the Counted Quantities of Items

Suppose that you have started counting coconuts. Do the following to enter the counted quantities into the system:

1. Open the *Scan and Count* (IN305020) form.
2. In the **Scan** box, enter 000002 (which is the reference number of the physical inventory count). The list of items that you should count is displayed on the **Count** tab.
3. Enter F3S1, which is the barcode of the first location.

Suppose that in this location, you find two boxes of coconuts with different lot numbers.

4. Enter CNBOX, which is the barcode that corresponds to a box of 5 pounds of coconuts.
5. Enter FR100895 to specify the lot number of the coconuts. The system adds 5 units of the *COCONUTS* item to the corresponding table row.
6. Enter CNBOX to add another box of coconuts with a different lot number.
7. Enter FR100751 to specify the lot number of the coconuts. The system adds 5 units of the *COCONUTS* item to the corresponding table row.

You have finished counting items in the *F3S1* location and can start counting items in the next location.

8. Enter F3S2, which is the barcode of the second location.

Suppose that in this location, you find one box of coconuts.

9. Enter CNBOX to add the box of coconuts.
10. Enter FR100598 to specify the lot number of the coconuts. The system adds 5 units of the *COCONUTS* item to the corresponding table row.

You have finished counting items in the *F3S2* location and need to confirm the counted data.

**Step 2: Reviewing the Quantities and Confirming the Entered Data**

After you have entered the quantities of all items in the physical inventory document, you need to review the quantities and confirm the entered data. Do the following:

1. While you are still viewing the *000002* physical inventory document on the [Scan and Count](#) (IN305020) form, review the lines of the table on the **Count** tab. They should have the settings indicated in the following table.

Line Nbr.	Location	Inventory ID	Lot/Serial Number	Physical Quantity
1	F3S1	COCONUTS	FR100751	5
2	F3S1	COCONUTS	FR100895	5
3	F3S2	COCONUTS	FR100598	5

2. On the form toolbar, click **Confirm** to confirm the entered data. The system confirms the data and clears the physical inventory document number. The form is ready for a new count.
3. On the [Physical Inventory Count](#) (IN305000) form, open the physical inventory document for which you have performed count. In the **Physical Quantity** column, make sure all counted quantities are shown (see the screenshot below).

Physical Inventory Review NOTES ACTIVITIES FILES NOTIFICATIONS

← SAVE & CLOSE ↶ ↷ K < > >| FINISH COUNTING COMPLETE PI ACTIONS ▾

---

Reference Nbr.: 000002 Total Physical Qty.: 15.00  
 Warehouse: WHOLESALE - Wholesale Ware Total Variance Qty.: 0.00  
 Status: Counting In Progress Total Variance Cost: 0.00  
 Freeze Date: 1/29/2020  
 Description: Physical inventory for coconuts

[PHYSICAL INVENTORY DETAILS](#) [ADJUSTMENT INFO](#)

---

⌂ + × ADD |←| |↕| All Records

Status	Line Nbr.	Inventory ID	Description	Location	Lot/Serial Number	Expiration Date	Book Quantity	Base Unit	Physical Quantity
Entered	1	COCONUTS	Coconuts 1 lb	F3S1	FR100751	2/10/2020	5.00	LB	5.00
Entered	2	COCONUTS	Coconuts 1 lb	F3S1	FR100895	2/19/2020	5.00	LB	5.00
Entered	3	COCONUTS	Coconuts 1 lb	F3S2	FR100598	2/1/2020	5.00	LB	5.00

**Figure: Physical inventory count**

You have successfully counted coconuts in the warehouse locations and entered data into the system.

## (Optional) Lesson 12: Mobile Operations

---

The activities in this lesson illustrates how automated warehouse operations are performed in Acumatica mobile application.

### Counting in Physical Inventory: Process Activity (Mobile)

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In this activity, you will learn how to perform automated counting during physical inventory on the Scan and Count screen of the Acumatica mobile app, which corresponds to the [Scan and Count](#) (IN305020) form in Acumatica ERP, by using your mobile device.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

#### Story

Suppose that you are a warehouse worker and you are assigned to perform a physical inventory count by scanning the barcodes of stock items and locations with your mobile device, by using the Acumatica mobile app. You will count the quantities of orange jam in particular warehouse locations added to the physical inventory document, which your manager has provided to you.

#### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Advanced Physical Count*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *L1R3S1*, *L1R3S2*, and *L1R3S3*.
- The following stock items on the [Stock Items](#) (IN202500) form: *ORJAM08*, *ORJAM32*, and *ORJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

- A physical inventory type on the [Physical Inventory Types](#) (IN208900) form: *ORJCNT*.

Also, on the [Prepare Physical Count](#) (IN504000) form, the physical inventory document you will use has been created, which has the *Counting in Progress* status.

## Process Overview

In this activity, as you count stock items within physical inventory by using the Scan and Count screen of the Acumatica mobile app, you will scan the barcode of the physical inventory document and then scan the location barcode and the barcodes of each item you find in this location. You will correct the quantities of items and add extra lines for items that you find in a location. When you have counted all items in all locations added to the physical inventory document, you will confirm the document.

## System Preparation

Before you start counting stock items, you need to perform the following instructions:

1. Make sure that you have installed the Acumatica mobile app on your mobile device.
2. Launch the app.
3. Enter the URL and optional name of the Acumatica ERP instance with the *U100* dataset preloaded (for example, <https://your.acumatica.site.com>), and tap **Next**.
4. Enter the credentials of the user account you will use in this activity: the *perkins* login and the *123* password.
5. Tap **Sign In** to enter the site.

## Step 1: Entering the Counted Quantities of Items

Suppose that you are starting to count orange jam in the locations listed in the physical inventory document. In the Acumatica mobile app on your mobile device, do the following to enter the counted quantities in the system:

1. On the main menu of the mobile app, tap the **Warehouse Management > Scan and Count** tile to view the Scan and Count screen.
2. Scan the 000001 barcode (which is the reference number of the physical inventory document). Notice that the number is displayed in the **Reference Nbr.** box on the top pane of the screen.
3. At the bottom of the screen, tap **Review** to view the list of items that you should count; return to the Scan and Count screen.
4. Scan the L1R3S1 location barcode.

Suppose that in this physical location, you find two boxes of orange jam in 8-ounce jars, and two boxes and two units of orange jam in 32-ounce jars.

5. Scan the OJ08B item barcode twice to add two boxes of the *ORJAM08* item to the document.

6. Scan the *OJ32B* item barcode twice to add two boxes of the *ORJAM32* item to the document.
7. Scan the *OJ32* item barcode two times to add two units of the *ORJAM32* item to the document.

You have completed the entry of item quantities in the *L1R3S1* location and can start entering quantities in the next location.

8. Scan the *L1R3S2* location barcode.

Suppose that in this location, you find three boxes of orange jam in 32-ounce jars and two jam jars.

9. Scan the *OJ32B* item barcode three times to add three boxes of the *ORJAM32* item to the document.
10. Scan the *OJ32* item barcode two times to add two units of the *ORJAM32* item to the document.

You have finished entering item quantities in the *L1R3S2* location and can start entering quantities in the next location.

11. Scan the *L1R3S3* location barcode.

Suppose that in this location, you find one box of orange jam in 96-ounce jars.

12. Scan the *OJ96B* item barcode to add one box of the *ORJAM96* item to the document.

You have finished entering item quantities in the *L1R3S3* location, which was the last location in your physical inventory document.

### Step 2: Correcting the Quantities in the Physical Inventory Document

Suppose that you have realized that you scanned one box of the *ORJAM32* item in the *L1R3S2* location twice by mistake, and now you need to correct the quantity in the document. Do the following in the mobile app:

1. While you are still viewing the Scan and Count screen with the *000001* physical inventory document opened, scan the *L1R3S2* location barcode.
2. At the bottom of the screen, tap **Remove** to switch to Remove mode.
3. Scan the *OJ32B* item barcode. The system removes one box of the *ORJAM32* item from the document.

You have corrected the quantity of the *ORJAM32* item in the *L1R3S2* location.

### Step 3: Adding an Extra Line to the Physical Inventory Document

Suppose that in the *L1R3S3* location, you have found one jar of the *ORJAM08* item, which is not in the physical inventory document. To add this item to the document, do the following in the Acumatica mobile app:

1. While you are still viewing the Scan and Count screen with the 000001 physical inventory document opened, scan the L1R3S3 location barcode.
2. Scan the OJ08 item barcode. The system adds a new row for the L1R3S3 location and the ORJAM08 item to the document.

You have added the extra item to the physical inventory document. Now you will review the counted quantities and confirm the entered data.

#### Step 4: Reviewing the Quantities and Confirming the Entered Data

Now that you have entered the quantities of the counted items in the physical inventory document, you will review the quantities and confirm the entered data. Do the following in the Acumatica mobile app:

1. While you are still viewing the 000001 physical inventory document on the Scan and Count screen, tap **Review**, and make sure that the settings shown on the screen correspond to the settings in the following table.

Location	Inventory ID	Physical Quantity
Line 1, Rack 3, Shelf 1 (L1R3S1)	ORJAM08	20
Line 1, Rack 3, Shelf 1 (L1R3S1)	ORJAM32	22
Line 1, Rack 3, Shelf 2 (L1R3S2)	ORJAM32	22
Line 1, Rack 3, Shelf 3 (L1R3S3)	ORJAM96	10
Line 1, Rack 3, Shelf 3 (L1R3S3)	ORJAM08	1

2. In the top right corner of the screen, tap **More > Confirm** to confirm the entered data. The system confirms the data and clears the physical inventory document number. The form is ready for a new count.

You have successfully counted orange jam in the warehouse locations and entered data in the system.

## Item and Storage Lookup: Process Activity (Mobile)

In this activity, by using the Acumatica mobile app, you will learn how to search for information about stock items on the Item Lookup screen, which corresponds to the [Item Lookup](#) (IN202520) form of Acumatica ERP, and for information about items stored in a particular location on the Storage Lookup screen, which corresponds to the [Storage Lookup](#) (IN409020) form of Acumatica ERP.



The following activity is based on the U100 dataset. If you are using another dataset, or if any system settings have been changed in U100, these changes can affect the

workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

## Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. When you walk around the warehouse you find items and boxes that have been inappropriately placed on the floor or on tables. One of your work tasks is to find out what are these items and where they should be stored in the Acumatica mobile app, so that you can move the items to the appropriate storage.

## Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Multiple Warehouse Locations*
- *Warehouse Management*
- *Inventory Operations*

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*.
- The following warehouse locations on the [Warehouses](#) form: *MAIN*, *L1R3S2*, *L2R3S2*, and *L3R3S2*.
- A stock item on the [Stock Items](#) (IN202500) form: *APJAM32*. For this stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

## Process Overview

In this activity, you will look up an item by scanning the item barcode on the Item Lookup screen of the Acumatica mobile app. You will scan the item barcode and view information about the item, such as the location and availability.

You will also search for a list of the items stored in a particular location by using the Storage Lookup screen, where you will scan the location barcode and view the list of items, with the on-hand quantity for each item.

## System Preparation

Before you start looking up items, you need to perform the following instructions:

1. Make sure that you have installed the Acumatica mobile app on your mobile device.
2. Launch the app.
3. Enter the URL and optional name of the Acumatica ERP instance with the *U100* dataset preloaded (for example, <https://your.acumatica.site.com>), and tap **Next**.

4. Enter the credentials of the user account you will use in this activity: the *perkins* login and the *123* password.
5. Tap **Sign In** to enter the site.

### Step 1: Looking Up an Item by Scanning the Item Barcode

Suppose that as you are walking through the warehouse, you notice a box standing on the floor near some racks; the box has 10 apple jars, each 32 ounces. You do not see other warehouse workers nearby, so you decide to find out what this box contains and where it should be placed. In the Acumatica mobile app on your mobile device, do the following:

1. On the main menu of the mobile app, tap the **Warehouse Management > Item Lookup** tile to view the Item Lookup screen.
2. Scan the *AJ32B* item barcode (which is the barcode affixed to the box).
3. At the bottom of the screen, tap **Review**. The Inventory Summary screen is opened. (This screen corresponds to the *Inventory Summary* (IN401000) form in Acumatica ERP.)

On this screen, you can see that the item is stored in the following locations: *MAIN*, *L1R3S2*, *L2R3S2*, and *L3R3S2*. The *MAIN* location is the receiving location far from the place where you found the box. Most likely, the box was taken from the racks with sorted items. You know that the box contains 10 jars, so this box can be stored in either the *L1R3S2* location or the *L3R3S2* location. As you can see on the screen, the *L2R3S2* location contains only 8 jars of this item, so the box definitely is not from this location.

Now you need to find out which of the locations (*L1R3S2* or *L3R3S2*) contains less jam than the quantity that is recorded in the system.

### Step 2: Looking Up Items Stored in a Location

Suppose that you have counted the quantities of boxes and jars of the *APJAM32* item in the *L1R3S2* and *L3R3S2* locations and found out that the *L1R3S2* shelf contains one box of 10 jars and 3 single jars; the *L3R3S2* contains one box of 10 jars and 6 single jars. To find out if the *L1R3S2* or *L3R3S2* location contains less jam than the quantity that is recorded in the system, do the following in the Acumatica mobile app:

1. On the main menu of the mobile app, tap the **Warehouse Management > Storage Lookup** tile to view the Item Lookup screen.
2. Scan the *L1R3S2* location barcode.
3. At the bottom of the screen, tap **Review**. The Storage Summary screen is opened, where you can see that the on-hand quantity of the *APJAM32* item is *13*, which corresponds to one box of 10 jars and 3 separate jars. So the box you have found is not from this location.
4. Scan the *L3R3S2* location barcode.
5. At the bottom of the screen, tap **Review**. On the Storage Summary screen, you can see that the on-hand quantity of the *APJAM32* item is *26*, which corresponds to two boxes of

10 jars each and 6 separate jars. You see only one box in this location, so the box you found should be placed in this location.

## Picking and Packing Operations: Process Activity (Mobile)

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In the following activity, you will learn how to perform the picking and packing of items for a shipment by using the Pick, Pack, and Ship screen of the Acumatica mobile application, which corresponds to the [Pick, Pack, and Ship](#) (SO302020) form of Acumatica ERP.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker of the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to prepare a shipment with the help of the Acumatica mobile app. In your organization, the pick and pack workflow is used, which means that you go through the warehouse locations and pick the items listed in the shipment pick list. Then you go to the packing line and pack the picked items into boxes.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Fulfillment*

On the **Warehouse Management** tab of the [Sales Orders Preferences](#) (SO101000) form, the **Display the Pick Tab** and the **Display the Pack Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations are configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APJAM96*, *ORJAM96*, *LEMJAM96*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a sales order for the *COFFEESHOP* customer has been entered in the system on the [Sales Orders](#) (SO301000) form, and a shipment document has been prepared for this order on the [Shipments](#) (SO302000) form.

## Process Overview

In this activity, in the Acumatica mobile app, you will open the Pick, Pack, and Ship screen (which corresponds to the *Pick, Pack, and Ship* (SO302020) form in Acumatica ERP), switch to Pick mode and scan the number of the shipment from the pick list. Then you will pick the items and scan their barcodes and quantities. After you finish picking items, you will switch to Pack mode on the same screen and scan the barcode of the box to which you pack the items. Then you will scan the item barcode and quantity of the items being packed into the box. After you finish packing the items, you will confirm the shipment.

## System Preparation

Before you start the automated picking and packing operations, you need to perform the following instructions:

1. Make sure that you have installed the Acumatica mobile app on your mobile device.
2. Launch the app.
3. Enter the URL and optional name of the Acumatica ERP instance with the *U100* dataset preloaded (for example, *https://your.acumatica.site.com*), and tap **Next**.
4. Enter the credentials of the user account you will use in this activity: the *perkins* login and the *123* password.
5. Tap **Sign In** to enter the site.

## Step 1: Picking Items for Shipping

To pick items for shipping, do the following in the Acumatica mobile app on your mobile device:

1. On the main menu of the mobile app, tap the **Warehouse Management > Pick, Pack, and Ship** tile to view the Pick, Pack, and Ship screen.
2. On the top pane, make sure that Pick mode is in use.
3. Scan the 000030 barcode, which is the reference number of the shipment for which you are picking items. The system loads the shipment lines and shows the reference number of the shipment on the top pane of the screen.
4. At the bottom of the screen, tap **Review** to review the shipment lines.
5. Scan the L3R2S2 barcode to select the location from which the item is picked.
6. Scan the AJ08 barcode to select the item being picked.
7. Set the quantity of the item to 12 as follows:
  - a. At the bottom of the screen, tap **Set Qty** to change the quantity of the current line.
  - b. Enter 12. The system specifies 12 as the **Picked Quantity**. To review the entered quantity, tap **Review**, and then tap the document line with the *Apple jam 8 oz.* item.



In this activity, you are specifying the quantity in Quantity Editing mode to save time. In a production environment, warehouse workers would instead scan the barcode of each item included in the document.

8. Scan the L2R1S3 barcode to select the location from which the item is picked.
9. Scan the OJ32 barcode to select the item being picked.
10. Set the quantity of the item to 6. The system specifies 6 as the **Picked Quantity** and displays a message in the notification area indicating that the shipment has been picked.
11. Tap **Review** to review the picked quantities.

You have picked the items for the shipment, and now you can proceed with packing the items.

### Step 2: Packing Items for Shipping

To pack items, do the following in the Acumatica mobile app:

1. While the Pick, Pack, and Ship screen is still opened on your mobile device, at the bottom of the screen, tap **Change Mode > Pack** to switch to Pack mode. Notice that the shipment is still selected and its reference number is shown on the top pane.
2. Scan the MEDIUM barcode to select the box for packaging the shipment.
3. Scan the AJ08 barcode to select the item being packed.
4. Set the quantity of the item to 12 as follows:
  - a. At the bottom of the screen, tap **Set Qty** to change the quantity of the current line.
  - b. Enter 12. The system specifies 12 as the **Picked Quantity**. To review the entered quantity, tap **Review**, and then tap the document line with the *Apple jam 8 oz.* item.
5. Scan the OJ32 barcode to select the item being picked.
6. Set the quantity of the item to 6. The system specifies 6 as the **Packed Quantity** and displays a message in the notification area indicating that the shipment is packed in full.
7. Tap **Review** to review the packed quantities of items.
8. Tap **OK** to confirm the package.
9. Enter 10 to specify the weight, and tap **OK** to confirm the package.
10. In the top right corner of the screen, tap **More > Confirm Shipment** to confirm the shipment.

You have successfully picked and packed the items of the shipment.

## Receiving and Putting Away Operations: Process Activity (Mobile)

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In the following activity, you will learn how to perform the receiving and putting away of items on the Receive and Put Away screen of the Acumatica mobile app, which corresponds to the [Receive and Put Away](#) (PO302020) form in Acumatica ERP.



The following activity is based on the *U100* dataset. If you are using another dataset, or if any system settings have been changed in *U100*, these changes can affect the workflow of the activity and the results of the processing. To avoid any issues, restore the *U100* dataset to its initial state.

### Story

Suppose that you are a warehouse worker in the wholesale warehouse of the SweetLife Fruits & Jams company. Your warehouse manager gives you a task to receive the purchased fruits (70 pounds of apples and 50 pounds of oranges) in the warehouse with the help of the Acumatica mobile app. In your organization, the receive and put away workflow is used, which means that you receive the purchased items at a receiving location of the warehouse, and then go through the warehouse locations and put away the items in the locations where the fruits are stored. Also suppose that you put away the apples and part of the oranges in one fruit location, and the rest of the oranges in another fruit location.

### Configuration Overview

In the *U100* dataset, the following features have been enabled on the [Enable/Disable Features](#) (CS100000) form, where they are in the *Inventory and Order Management* group of features:

- *Warehouse Management*
- *Receiving*

On the **Warehouse Management** tab of the [Purchase Orders Preferences](#) (PO301000) form, the **Display the Receive Tab** and **Display the Put Away Tab** check boxes are selected.

The following entities, which you will use in this activity, have been predefined in the system:

- A warehouse on the [Warehouses](#) (IN204000) form: *WHOLESALE*. On the **Locations** tab of the form, multiple warehouse locations reflecting the warehouse structure have been configured.
- The following stock items on the [Stock Items](#) (IN202500) form: *APPLES* and *ORANGES*. For each stock item, barcodes have been specified on the **Cross-Reference** tab of the form.

Also, a purchase order to the *ALLFRUITS* vendor has been entered on the [Purchase Orders](#) (PO301000) form, and a purchase receipt has been prepared for this order on the [Purchase Receipts](#) (PO302000) form.

## Process Overview

In this activity, you will open the Receive and Put Away screen in the Acumatica mobile app, switch to Receive mode, and scan the number of the purchase order. Then you will receive the items and scan their barcodes and quantities. After you finish receiving items, you will switch to Put Away mode on the same form, scan the barcodes of the warehouse locations to which the items are being put away, scan the item barcodes, and correct the quantities (if needed). After you finish putting away items, you will release the transfer receipt.

## System Preparation

Before you start the automated receiving and putting away operations, you need to perform the following instructions:

1. Make sure that you have installed the Acumatica mobile app on your mobile device.
2. Launch the app.
3. Enter the URL and optional name of the Acumatica ERP instance with the *U100* dataset preloaded (for example, *https://your.acumatica.site.com*), and tap **Next**.
4. Enter the credentials of the user account you will use in this activity: the *perkins* login and the *123* password.
5. Tap **Sign In** to enter the site.

## Step 1: Receiving Items in the Receiving Location

To record the receipt of items in the warehouse, do the following in the Acumatica mobile app on your mobile device:

1. On the main menu of the mobile app, tap the **Warehouse Management > Receive and Put Away** tile to view the Receive and Put Away screen.
2. On the top pane, make sure Receive mode is in use.
3. Scan the *000019* barcode, which is the reference number of the purchase receipt for which you are receiving items. The system loads the purchase receipt lines and shows the reference number of the purchase receipt on the top pane.
4. Scan the *MAIN* barcode to select the location to which you are receiving the items.
5. Scan the *AP1LB* barcode to select the item being received.
6. Set the quantity of the item to *70* as follows:
  - a. At the bottom of the screen, tap **Set Qty** to change the quantity of the current line.
  - b. Enter *70*. The system specifies *70* as the received quantity.



In this activity, you are specifying the quantity in Quantity Editing mode to save time. In a production environment, warehouse workers would instead scan the barcode of each item included in the document.

7. Scan the `OR1LB` barcode to select the next item being received.
8. Set the quantity of the item to `50`. The system inserts `50` as the received quantity.
9. At the bottom of the screen, tap **Review** to view the items that have been added to the receipt.
10. In the top right corner of the screen, tap **More > Release Receipt**. The system releases the purchase receipt and generates the inventory receipt transaction to record the receipt of items to the *MAIN* location of the warehouse.

You have received the items for the purchase receipt, and now you can proceed with putting away the received items in the storage locations.

### Step 2: Putting Away the Received Items in the Storage Locations

To record that the received items are being put away in the appropriate locations, do the following in the Acumatica mobile app:

1. While you are still viewing the Receive and Put Away screen on your mobile device, at the bottom of the screen, tap **Change Mode > Put Away** to switch to Put Away mode.
2. Scan the `000019` barcode, which is the reference number of the purchase receipt, again; you had scanned it in Step 1.
3. Scan the `F1S2` barcode to select the location to which the items are being put away.
4. Scan the `AP1LB` barcode to select the item to be put away in this location. The system specifies `1` as the put away quantity. On the top pane, the **Transfer Nbr.** box shows the reference number of the inventory transfer transaction that the system automatically created to record the movement of items from the receiving location to the storage locations.
5. Set the quantity of the item to `70` as follows:
  - a. At the bottom of the screen, tap **Set Qty** to change the quantity of the current line.
  - b. Enter `70`. The system specifies `70` as the put away quantity, indicating that 70 pounds of apples have been put away on the second shelf of the first fruit location.
6. Scan the `OR1LB` barcode to select the item being put away.
7. Set the quantity of the item to `30`. The system inserts `30` as the put away quantity, indicating that 30 pounds of oranges have been put away on the second shelf of the first fruit location.
8. Enter `F2S2` to select another location to which the rest of the oranges will be put away.
9. Enter `OR1LB` to select the item being put away.

- 10.** Set the quantity of the item to *20*. The system specifies *20* as the put away quantity, indicating that 20 pounds of oranges have been put away on the second shelf of the second fruit location. Now all items from the purchase receipt have been put away in the appropriate storage locations.
- 11.** At the bottom of the screen, tap **Review** to view the list of items in the transfer. For the *ORANGES* item, notice that the system shows *<SPLIT>* as the destination location, indicating that the items have been put away in multiple locations.
- 12.** In the top right corner of the screen, tap **More > Release Transfer** to release the transfer.

You have successfully received the items to the receiving location and put away the items in the appropriate locations.

## Working Modes and Supported Commands

This topic lists the commands that can be used in each working mode.



In any working mode, you enter a command or barcode by typing it in the **Scan** box and pressing Enter. In production systems, you will scan the appropriate barcodes rather than manually entering them.

**Table: Commands for Switching Working Modes**

These commands, which can be used in any mode, are used for switching to different working modes.

Command	Description of Performed Operation
@receive	Switches to Receive mode.
@putaway	Switches to Put Away mode.
@pick	Switches to Pick mode.
@pack	Switches to Pack mode.
@ship	Switches to Ship mode.
@inissue	Switches to Scan and Issue mode.
@inreceive	Switches to Scan and Receive mode.
@intransfer	Switches to Scan and Transfer mode.
@count	Switches to Scan and Count mode.
@item	Switches to Item Lookup mode.
@storage	Switches to Storage Lookup mode.

**Table: Common Commands**

These commands, which can be used in any modes, are used for performing processing actions.

Command	Description of Performed Operation
*cancel	Clears the unconfirmed lines and returns to the initial step of the mode (such as scanning a document number or a warehouse).
*ok	Confirms the line that is currently being processed, or confirms your selections in a dialog box.
*qty	Enables Quantity Editing mode for a confirmed line.
*remove	Activates Remove mode, in which the user removes items.

Command	Description of Performed Operation
*reset	Clears the unconfirmed lines and returns to the first step in the mode, keeping the current document selected.
*save	Saves your progress on the current operation.

**Table: Receive Mode Commands**

These commands are used for performing actions specific to Receive mode.

Command	Description of Performed Operation
*release*receipt	Releases the currently processed purchase receipt.
*complete*polines	Releases the purchased receipt that is being processed and completes all its lines, regardless of whether they were received in full.

**Table: Put Away Mode Commands**

This command, which is specific to Put Away mode, is used for releasing the inventory transfer.

Command	Description of Performed Operation
*release*transfer	Releases the inventory transfer that has been prepared for the operation of putting away items.

**Table: Commands Specific to Pick Mode**

These commands, which can be used in Pick mode, give you the ability to perform actions specific to picking.

Command	Description of Performed Operation
*confirm*pick	Confirms the pick list that is currently being processed.
*confirm*shipment	Confirms the shipment that is currently being processed.

**Table: Cart Tracking Commands**

These commands, which can be used in any mode, give you the ability to perform actions specific to cart tracking.

Command	Description of Performed Operation
*cart*in	Enables Cart Loading mode.
*cart*out	Enables Cart Unloading mode.

**Table: Command Specific to Scan and Issue Mode**

This command, which is specific to Scan and Issue mode, is used for releasing the inventory issue.

Command	Description of Performed Operation
*release*issue	Releases the inventory issue document that has been prepared for the operation that has been performed.

**Table: Command Specific to Scan and Receive Mode**

This command, which is specific to Scan and Receive mode, is used for releasing the inventory receipt document.

Command	Description of Performed Operation
*release*receipt	Releases the inventory receipt document that has been prepared for the operation that has been performed.

**Table: Command Specific to Scan and Transfer Mode**

This command, which is specific to Scan and Transfer mode, is used for releasing the inventory transfer document.

Command	Description of Performed Operation
*release*transfer	Releases the inventory transfer document that has been prepared for the operation that has been performed.

**Table: Command Specific to Scan and Count Mode**

This command, which is specific to Scan and Count mode, is used for confirming the physical inventory document.

Command	Description of Performed Operation
*confirm*document	Confirms the physical inventory document prepared for the operation being performed.