# Oracle Warehouse Management Cloud

## User Guide

**Release 20D**

Oracle Warehouse Management Cloud
User Guide

Release 20D

Part Number: F34577-04



# Documentation Accessibility

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# Contents

# Preface

Oracle® Warehouse Management Cloud User Guide, Release 20D

Part No. F34577-04

This guide describes in detail how to configure and use Oracle Warehouse Management (WMS) Cloud. All functionality unless specifically noted is available in Oracle Warehouse Management Enterprise Edition Cloud. Please direct any functionality questions to *My Oracle Support*.

## Change History

| Date | Document Revision | Summary of Changes |
|---|---|---|
| 11/9/2020 | -06 | In Inventory Screens, added Lock Codes - Background and Lock Code Priority detail. Added Batch Lock Codes to Lot Management. In Waves, updated Create a Task Creation Template and Task Types. |
| 11/4/2020 | -05 | Updated Printers section. |
| 9/28/2020 | -04 | Updates for 20D. Updated Put to Light / Sortation section. Added Sort and Receive, and Replenishment to Dynamic locations, and Handling Multiple Batches and Expiry Dates in Receiving topics. Updated Repack topics in Outbound section. |
| 8/11/2020 | -03 | Added note about Allow reserve partial pick flag in Creating Wave Templates and Location Master topics. Updated Cycle Count topic. Revised Creating Cycle Count Tasks with Task Creation Templates topic. |
| 7/29/2020 | -02 | Updated Printers section in Extra Configuration section. |
| 7/1/2020 | -01 | Updates for 20C. Added (corresponding/desired/appropriate supported language) to Creating Users topic. Added Formatting Rules for Inventory Attributes, Validating Formatting Rules topics. Added Material Handling Equipment (MHE) section with several associated topics. Added "Company Parameter Configuration impacting Cross-Dock Functionality" in Cross Dock Management topic. Updated Parcel Manifest Configuration. Updated Pack and Hold Functionality. |

# Using Applications

## Additional Resources

- **Community:** Use *Oracle Cloud Customer Connect* to get information from experts at Oracle, the partner community, and other users.
- **Guides and Videos:** Go to the *Oracle Help Center* to find guides and videos.
- **Training:** Take courses on Oracle Cloud from *Oracle University*.

## Conventions

The following table explains the text conventions used in this guide.

| Convention | Meaning |
| --- | --- |
| **boldface** | Boldface type indicates user interface elements, navigation paths, or values you enter or select. |
| `monospace` | Monospace type indicates file, folder, and directory names, code examples, commands, and URLs. |
| > | Greater than symbol separates elements in a navigation path. |

# Contacting Oracle

## Access to Oracle Support

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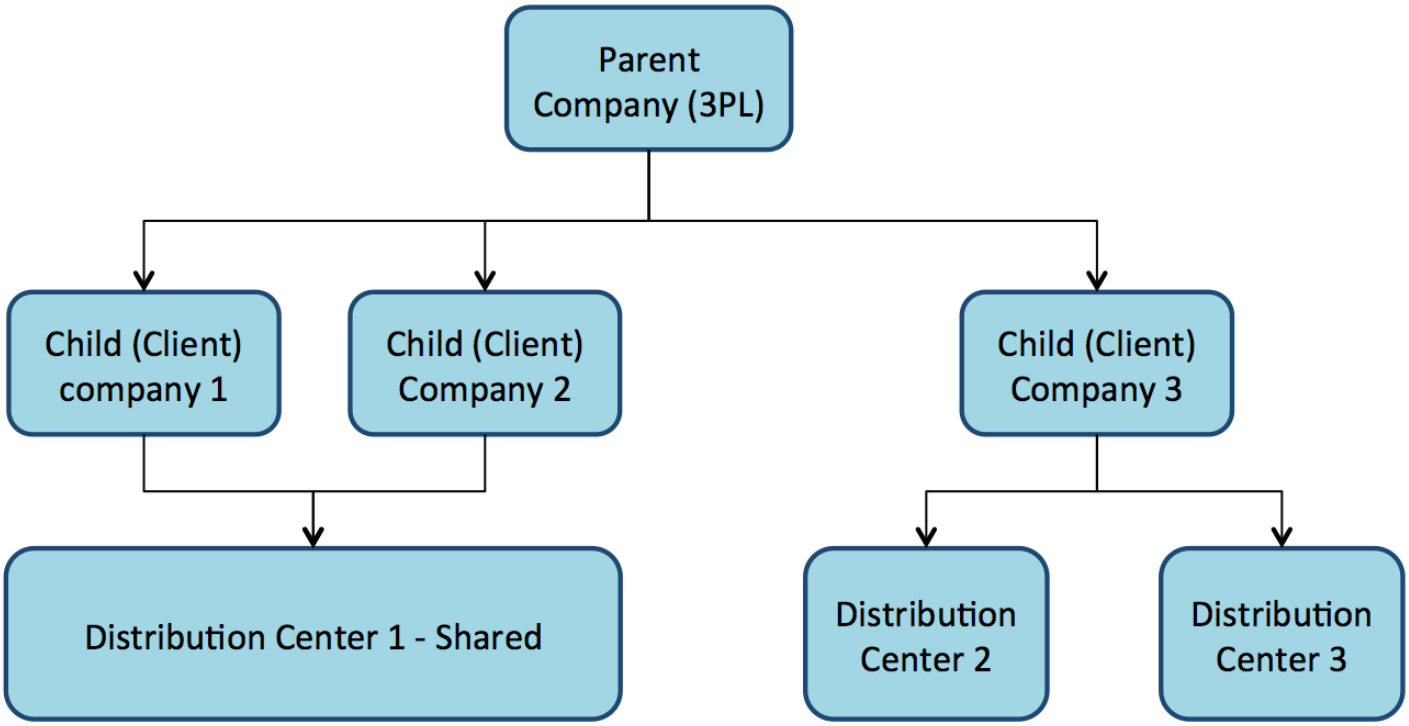
# 1 System Overview

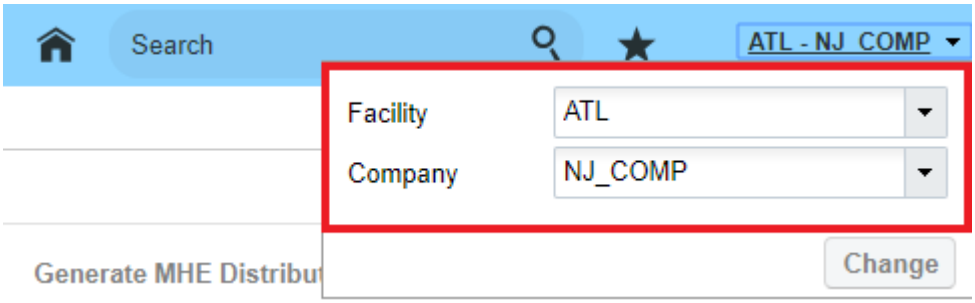
## Parent Child Company Hierarchy

In WMS, companies are divided into parent and child companies. This structure exists in order to help 3PLs view and manage their clients' inventory separately. Depending on how many clients and how many warehouses the 3PL has, views can be managed accordingly:


Parent Company (3PL)
Child (Client) company 1
Child (Client) Company 2
Child (Client) Company 3
Distribution Center 1 - Shared
Distribution Center 2
Distribution Center 3

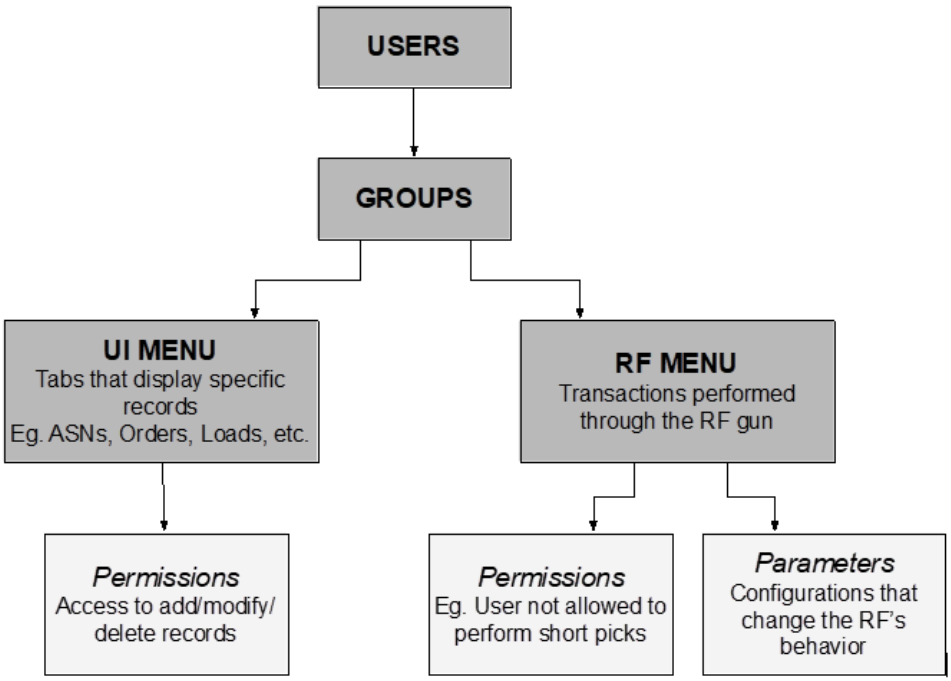
To toggle a specific Distribution Center (DC) view for a company, select the choices from the two drop-down menus located at the top right of the UI screen.

In the following screen, the first drop-down denotes a facility (DC), while the second drop-down denotes the companies in the environment:




# User Menu Configuration

The Oracle WMS Cloud organizes the user structure in the following way:

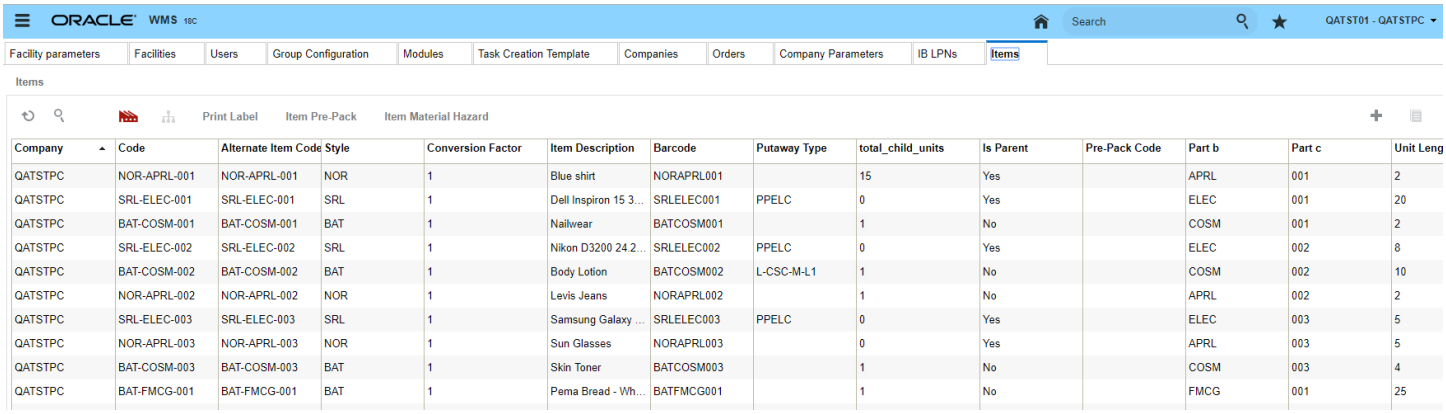



## Users, Groups and Menus

Users are separated into Groups based on their operational purpose in the warehouse. Every user within a Group will share the same UI and RF menus. Within each menu, users can configure permissions (and Parameters for RF Menus).

**What is a UI menu?**

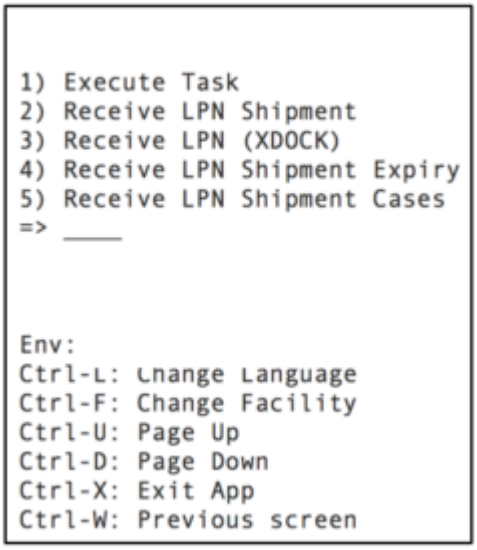
The UI menu is a series of screens that are accessible to the user in WMS via the browser. See a screenshot of a UI screen below:



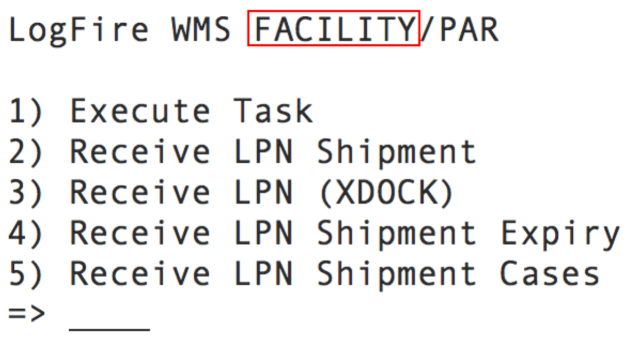

| Company | Code | Alternate Item Code | Style | Conversion Factor | Item Description | Barcode | Putaway Type | total_child_units | Is Parent | Pre-Pack Code | Part b | Part c | Unit Leng |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QATSTPC | NOR-APRL-001 | NOR-APRL-001 | NOR | 1 | Blue shirt | NORAPRL001 | | 15 | Yes | | APRL | 001 | 2 |
| QATSTPC | SRL-ELEC-001 | SRL-ELEC-001 | SRL | 1 | Dell Inspiron 15 3... | SRLELEC001 | PPELC | 0 | Yes | | ELEC | 001 | 20 |
| QATSTPC | BAT-COSM-001 | BAT-COSM-001 | BAT | 1 | Nailwear | BATCOSM001 | | 1 | No | | COSM | 001 | 2 |
| QATSTPC | SRL-ELEC-002 | SRL-ELEC-002 | SRL | 1 | Nikon D3200 24.2... | SRLELEC002 | PPELC | 0 | Yes | | ELEC | 002 | 8 |
| QATSTPC | BAT-COSM-002 | BAT-COSM-002 | BAT | 1 | Body Lotion | BATCOSM002 | L-CSC-M-L1 | 1 | No | | COSM | 002 | 10 |
| QATSTPC | NOR-APRL-002 | NOR-APRL-002 | NOR | 1 | Levis Jeans | NORAPRL002 | | 1 | No | | APRL | 002 | 2 |
| QATSTPC | SRL-ELEC-003 | SRL-ELEC-003 | SRL | 1 | Samsung Galaxy ... | SRLELEC003 | PPELC | 0 | Yes | | ELEC | 003 | 5 |
| QATSTPC | NOR-APRL-003 | NOR-APRL-003 | NOR | 1 | Sun Glasses | NORAPRL003 | | 0 | Yes | | APRL | 003 | 5 |
| QATSTPC | BAT-COSM-003 | BAT-COSM-003 | BAT | 1 | Skin Toner | BATCOSM003 | | 1 | No | | COSM | 003 | 4 |
| QATSTPC | BAT-FMCG-001 | BAT-FMCG-001 | BAT | 1 | Pema Bread - Wh... | BATFMCG001 | | 1 | No | | FMCG | 001 | 25 |

## What is an RF menu?

The RF menu is the series of transactions that are made with the RF gun on the warehouse floor. These screens, or modules, perform processes such as Receiving, Putaway, Picking, and Loading. See a screenshot of an RF menu in the following figure.




*When using the RF gun, the user must make sure that the RF is in the correct facility. You can view the facility at the top right of the RF menu:




To change facilities, press Ctrl-F and type in the Facility code.

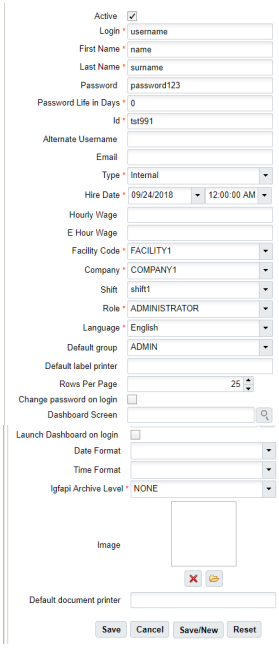
# Creating Users

You can create new users through the “Users” screen. Here, you can define the following:

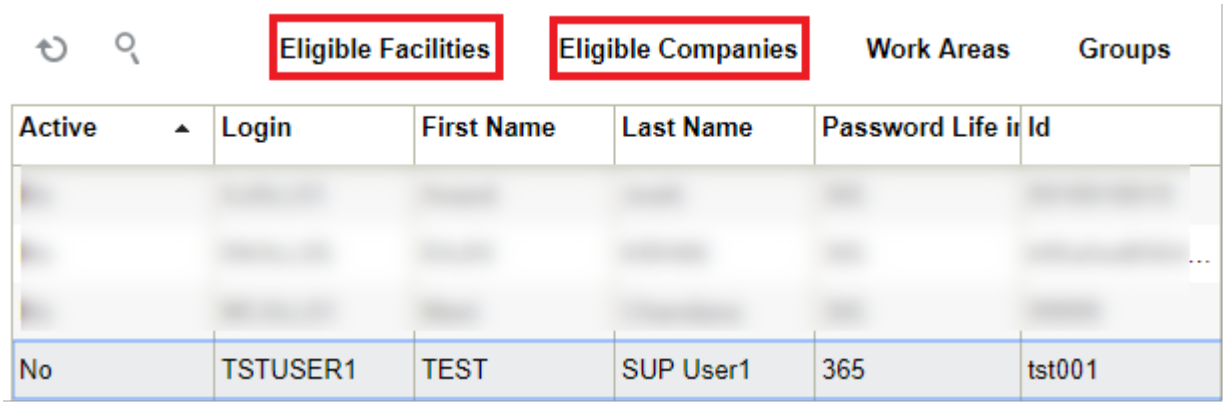
- Username and password
- The Facilities and Companies the user will have access
- The user’s role (Administrator, Management, Supervisor, etc.)
- The user’s default Group (UI and RF Menus)
- The user’s Language (corresponding/desired/appropriate supported language)
- The user’s default printer
- The user’s fixed Equipment Type

# How to create new users:

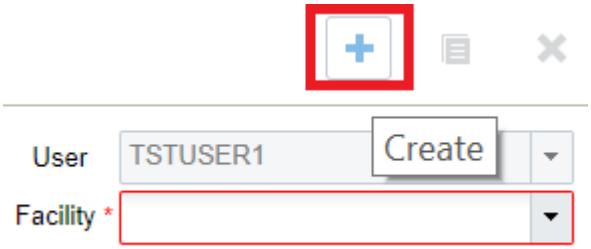
1. Go to the “Users” screen.
2. Click ‘Create’ ( ➕ ) and populate the necessary fields:




3. Click **Save**.
4. To configure the Facilities and Companies that the user has access to, select user and click the Eligible Facilities and Eligible Companies buttons.

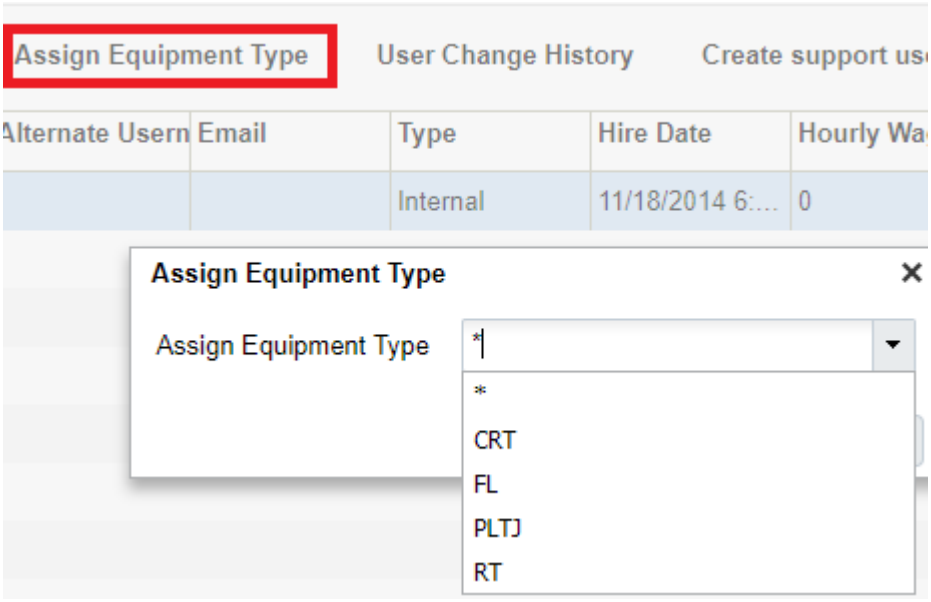



5. This will take you to a new screen displaying all of the records the user currently has access to. Click ‘Create’ ( ➕ ) to add new Facilities or Companies:




6. When finished, click 'Back' to return to the main screen.
7. To assign Equipment Types to the user, from the user screen, select the user, select an Equipment Type from the drop-down menu, and click "Assign Equipment Type".

> **Note:** Equipment Types must be defined first in the "Equipment Types" screen before assigning them to users.




# Configuring Menus for Users

This section describes how to configure Menus for users. See the following topics for more details:

*Related Topics*

- Adding Group Menus
- Adding Screens
- Adding Screens to Different Menus
- Assigning Menus to Groups
- Assigning Groups to Users
- Additional: Creating and Assigning Facilities and Companies to Users

# Four Steps to Add Group Menus

**There are four steps to add Group menus**

1. Adding Screens
2. Adding Screens to different Menus
3. Assigning Menus to Groups
4. Assigning Groups to Users

# Adding Screens

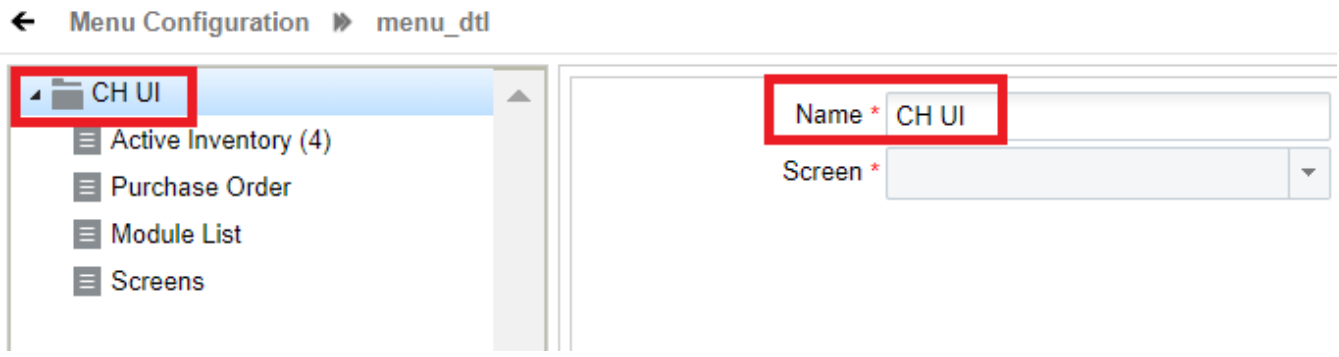
**Adding Screens**

1. Go to the “Screens” UI screen.
2. Click “Generate Screens”.
3. Select all the necessary screens for the Group (e.g. ASNs, Appointments, Loads, etc.). Here the user will add both UI and RF screens. Click “**Save**”.

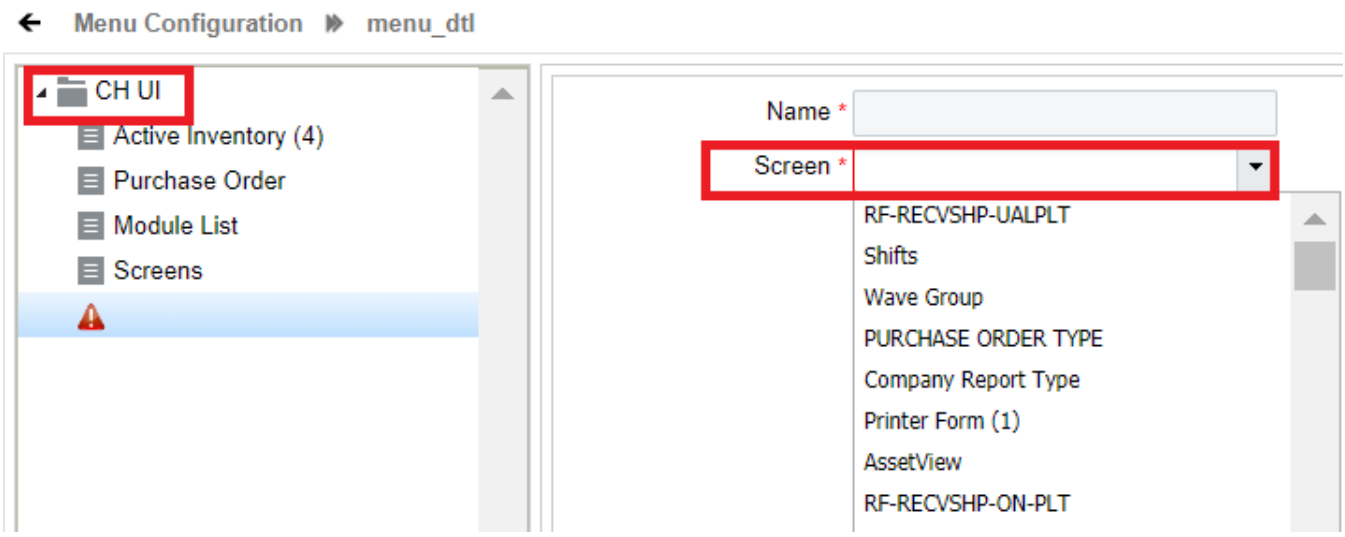
> **Note:** For RF menus, for RF menus, extra configuration might be required (RF module parameters). To modify its parameters, select the RF screen and click on the Details button.

# Adding Screens to Different Menus

1. Go to the “Menu Configuration” screen.
2. Create a new Menu (one for the UI and one for the RF).
3. To begin adding Screens to the menu, select the menu and click on Details.
4. In this new window, the user will be able to separate screens into different folders. To name a folder, select the folder and type in the name in the field to the right.




5. To add a screen within the folder, select the folder first, click on “Insert Screen”, and pick the screen to add from the drop-down menu.




6. Repeat steps 4-5 until all the screens are added.
7. Press “Save”.

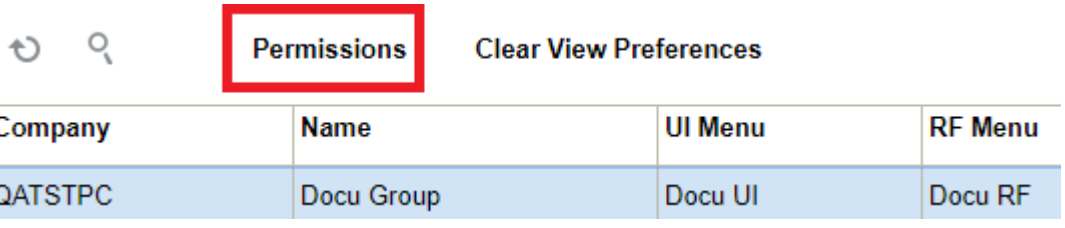
**Note:** For RF menus, extra configuration might be required (RF module parameters). To modify its parameters, select the RF screen and click on the Details button.

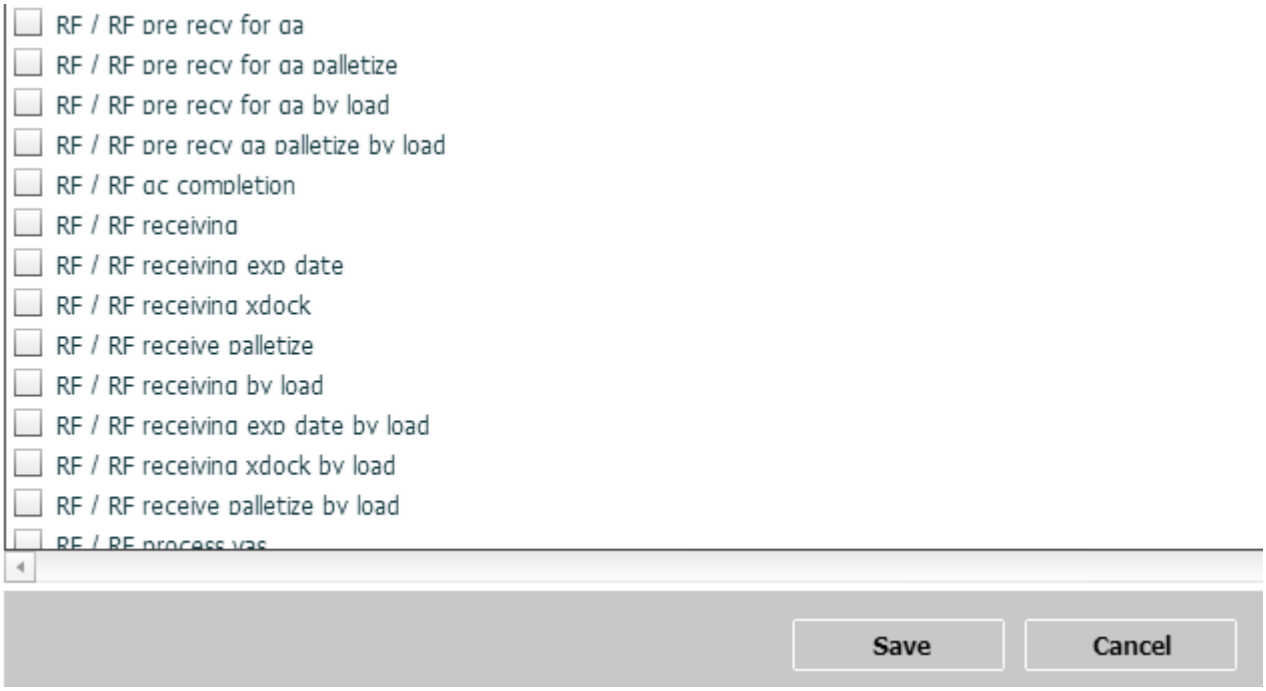
# Assigning Menus to Groups

Once you set up the Menus, you can these menus to the Groups.

1. Go to the “Group Configuration” screen
2. Create a new Group with the Create ( + ) button.
3. Type in the Group Name, and select the UI/RF menus from the drop-down menus.
4. Click “**Save**”.

**Note:** Users can also assign specific permissions to a Group by clicking the “Permissions” button. This will display a list of additional permissions that the group can have access to. To provide access, check the activity.






# Assigning Groups to Users

Now that you have created Groups, you must now add the Users to each Group.

1. Go to the “Users” screen.
2. Select the user to assign the Group to.
3. Click on “Groups”.
4. Using the Create ( ✚ ) button, add the Group(s) to assign the user the Group.

**Note:** If the user is assigned to multiple groups, the user can toggle between different groups by clicking the gear button at the top right, hovering the mouse over the “View” menu, and selecting the Group name.

# Additional: Creating and Assigning Facilities and Companies to Users

After user and group setup is complete, you must create facilities and companies in WMS.

## Step 1: Creat Companies

1. Go to the “Companies” screen.
2. Click the Create ( ✚ ) button.
3. Populate the company’s information such as the Code, Name, and Address. Note that the first company will be the parent company in the environment by default. To verify this, see the “Parent Company” column.
4. Click “**Save**”.

## Step 2: Create Facilities

Facilities are controlled at the company level. This means, that every company has its own set of facilities. This link is defined in the "Parent Company" column in the "Facilities" screen. By default, all parent and child company facilities are displayed.

1. Go to the "Facilities" screen.
2. Click the Create ( ) button.
3. Populate the facility's information such as the Code, Name, and Address.

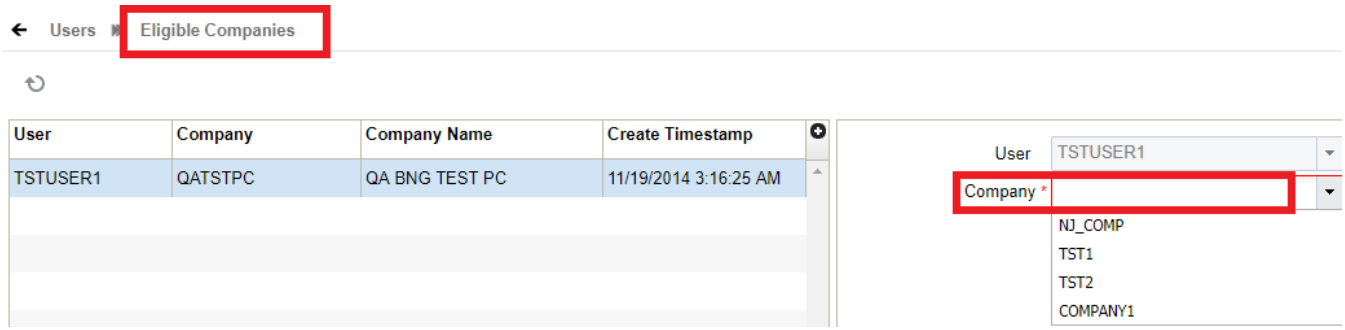
**Functional field description:**

- Default ship via code: This field is used when 'ship via' codes are activated through the company's "PACKING_ROUTING_MODE" parameter. The system will default to this ship via value if the order header does not have a ship via code specified.
- Parent Company: Denotes the company that the facility belongs to.
- Accept Transfer Shipment: If checked and if this facility is a warehouse in WMS, this facility will accept ASNs from other facilities configured in the environment.

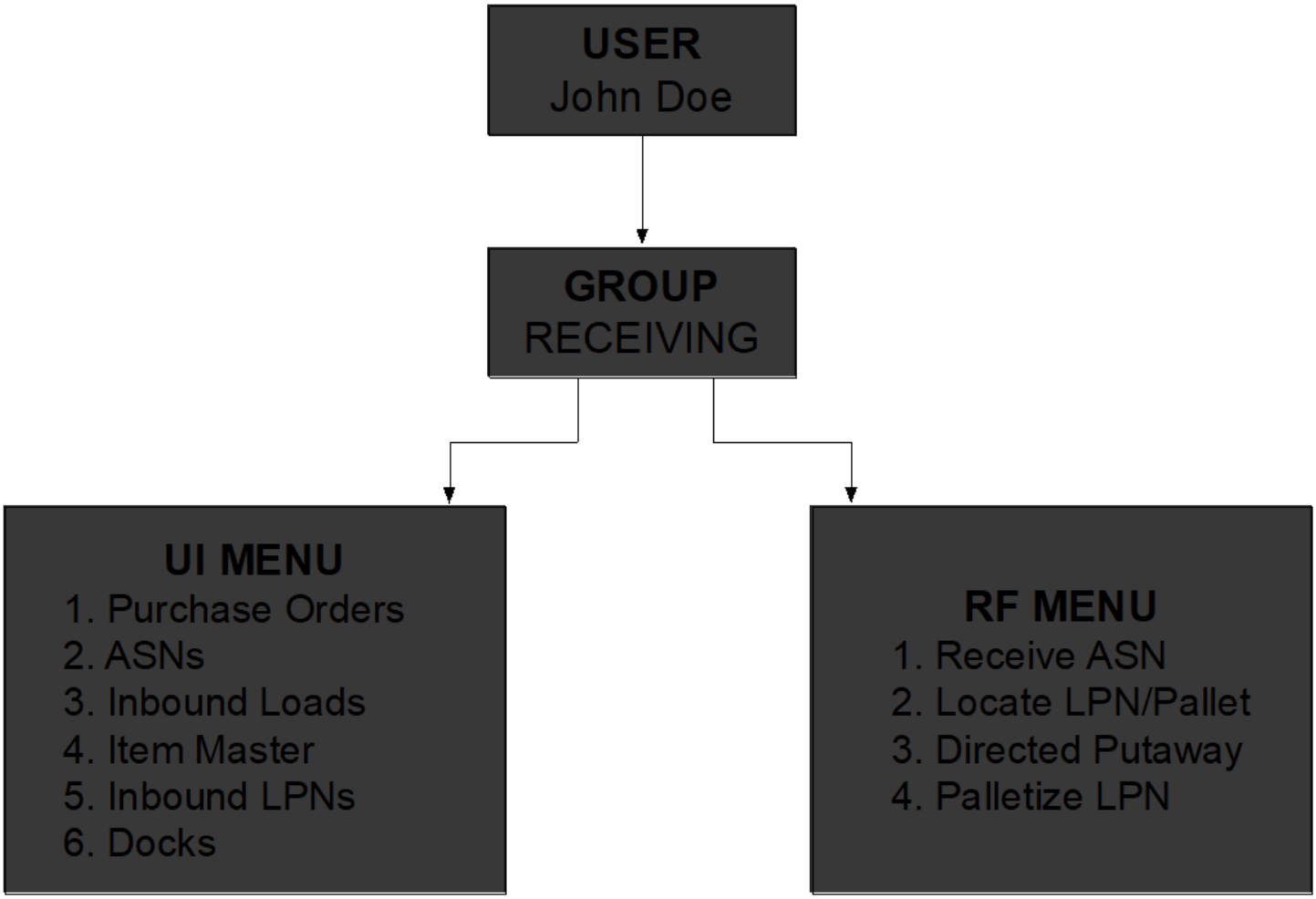
## Step 3: Assign Facilities to Users

Once you have created the Companies and Facilities, the next step is to assign them to users. This step defines the list of companies and facilities that you will have access to.

1. Go to the "Users" screen.
2. Select the user to modify.
3. Click on "Eligible Facilities".
4. Using the Create ( ) button, add the Facilities that this user will have access to.
5. Repeat steps three and four for adding Companies (using the "Eligible Companies" button).

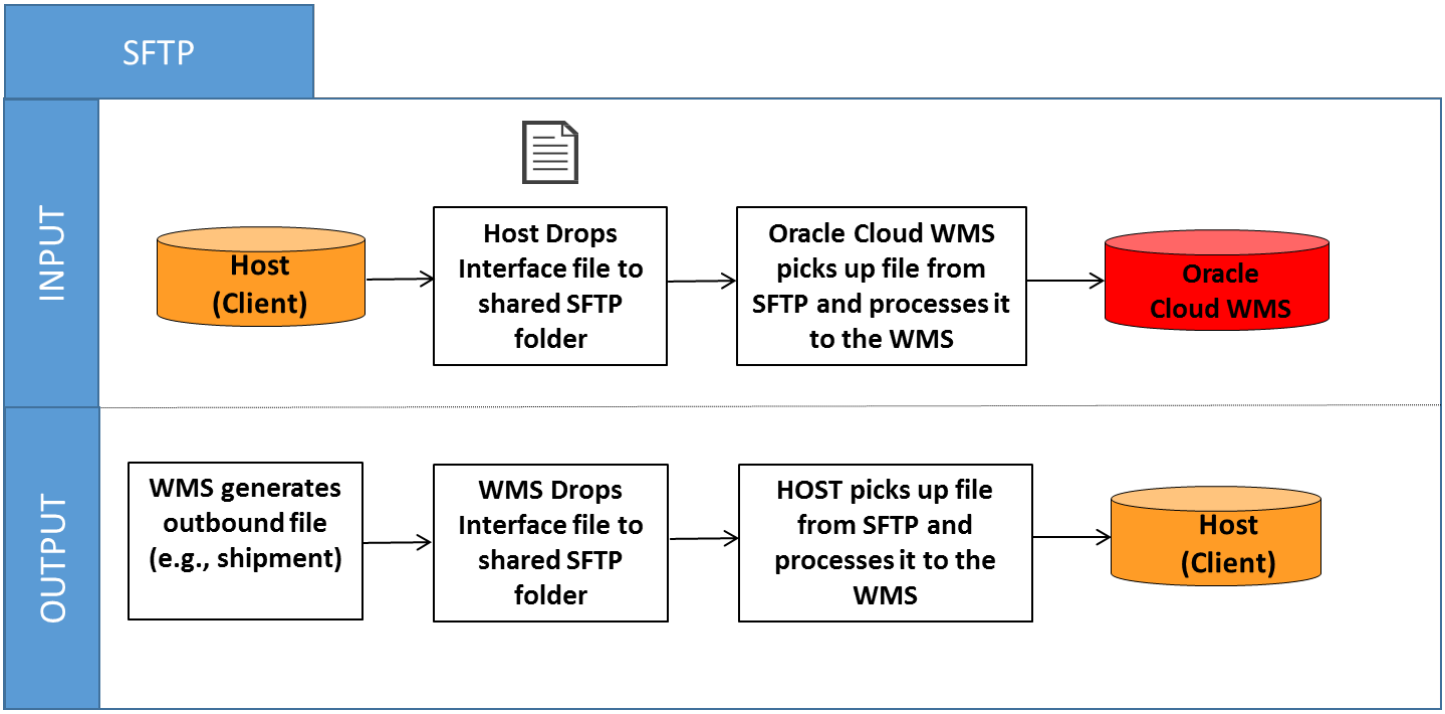


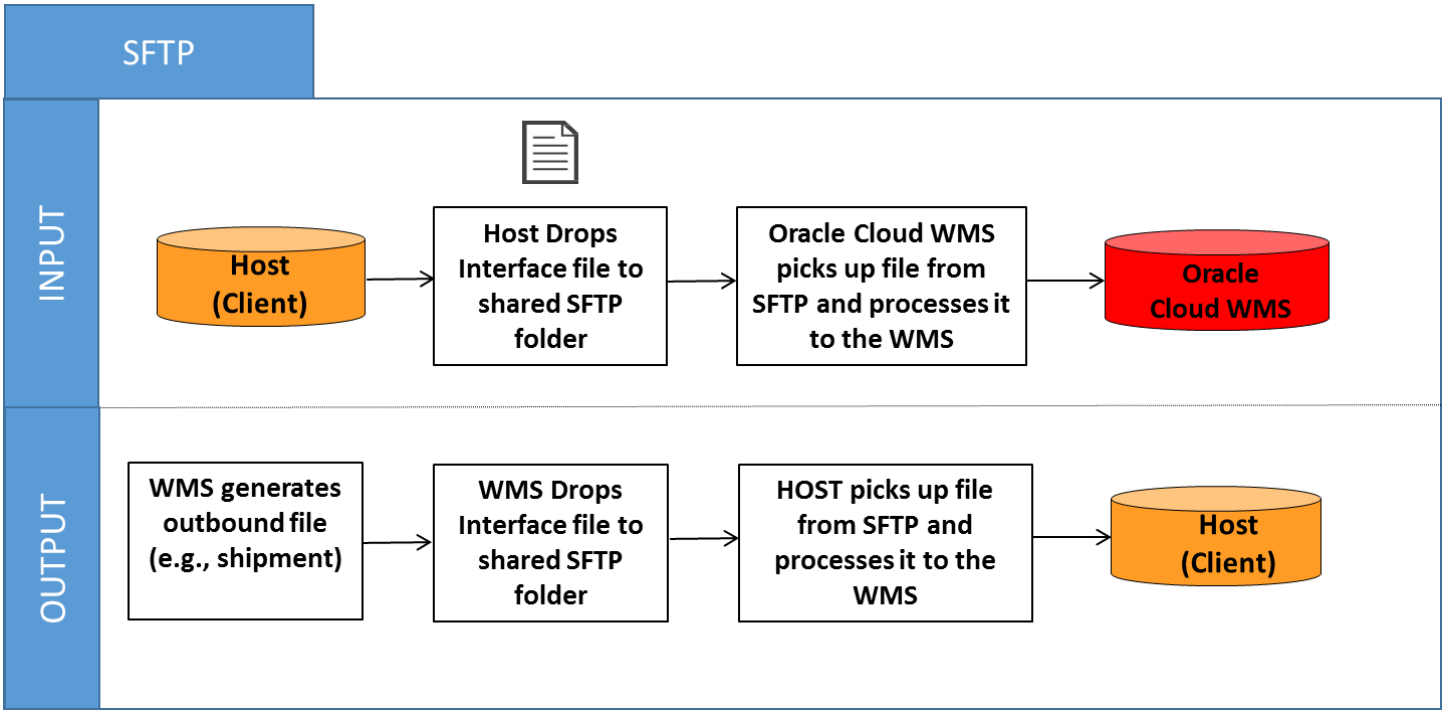

The following is an example of a User/Group set up:




# System Integration Framework

Oracle WMS Cloud uses the following methods for processing interface files into and out of WMS:


SFTP
INPUT
Host (Client)
Host Drops Interface file to shared SFTP folder
Oracle Cloud WMS picks up file from SFTP and processes it to the WMS
Oracle Cloud WMS
OUTPUT
WMS generates outbound file (e.g., shipment)
WMS Drops Interface file to shared SFTP folder
HOST picks up file from SFTP and processes it to the WMS
Host (Client)




# Supported Formats

Oracle WMS Cloud supports the following formats (both inbound/outbound) with interfaces:

- Flat files
- XML files
- CSV files
- XLS files
- EDI files (translated through a 3rd party application)
- MHE messages (translated through a 3rd party application)
- FedEx web services
- UPS web services

# Input Interfaces

- Purchase order
- Item

- Item (facility specific)
- Item barcode
- Item pre-pack
- Inbound shipment
- Order
- Vendor
- Appointment
- Store
- Locations
- Route
- Price label
- Ship to company
- Site
- Asset
- Cubiscan
- Point of sale

# Output Interfaces

- ASN verification
- Parcel Manifest shipment confirmation
- LTL Shipment confirmation
- Inventory Summary
- Inventory History

> **Note:** For more details on each interface, please refer to the “Oracle WMS Cloud Interface File Formats” file.

# Uploading Interface files with WMS

If you are manually preparing the input interface file via Excel, it is important to follow following best practices:

1. The filename must start with the phrase as specified in the Input File Formats document (e.g. the filename must begin with “ORR” for uploading Order files).
2. You must populate the columns specified as ‘required’ in the interface specification document.
3. For Purchase Order, Order, and Inbound Shipment interfaces, the user must populate [H1] for every distinct header record [H2] for each of its detail records.
4. The user must populate the correct sequence in the ‘seq_nbr’ field (i.e. no duplicate values).

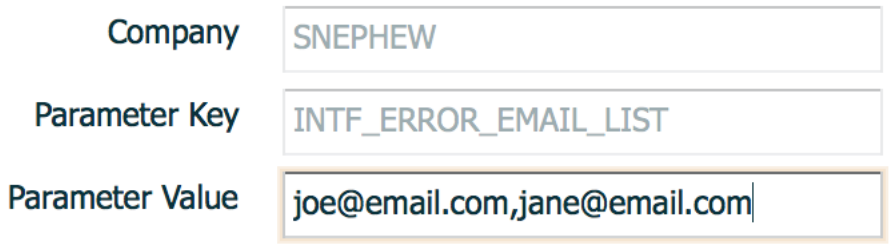
# Setting Email Notifications for Failed Interfaces

Users can set up email notifications for interfaces that fail to process into Oracle WMS Cloud. The email notification will provide the following information:

- The interface file that failed.
- Error message – the reason why the file failed.

Complete the following steps to set up the email notification:

1. Go to the “Company Parameters” screen.
2. Select “INTF_ERROR_EMAIL_LIST” parameter and click Edit.
3. In the “Parameter Value”, populate the emails that will receive the error notifications. Separate multiple emails without spaces between emails.



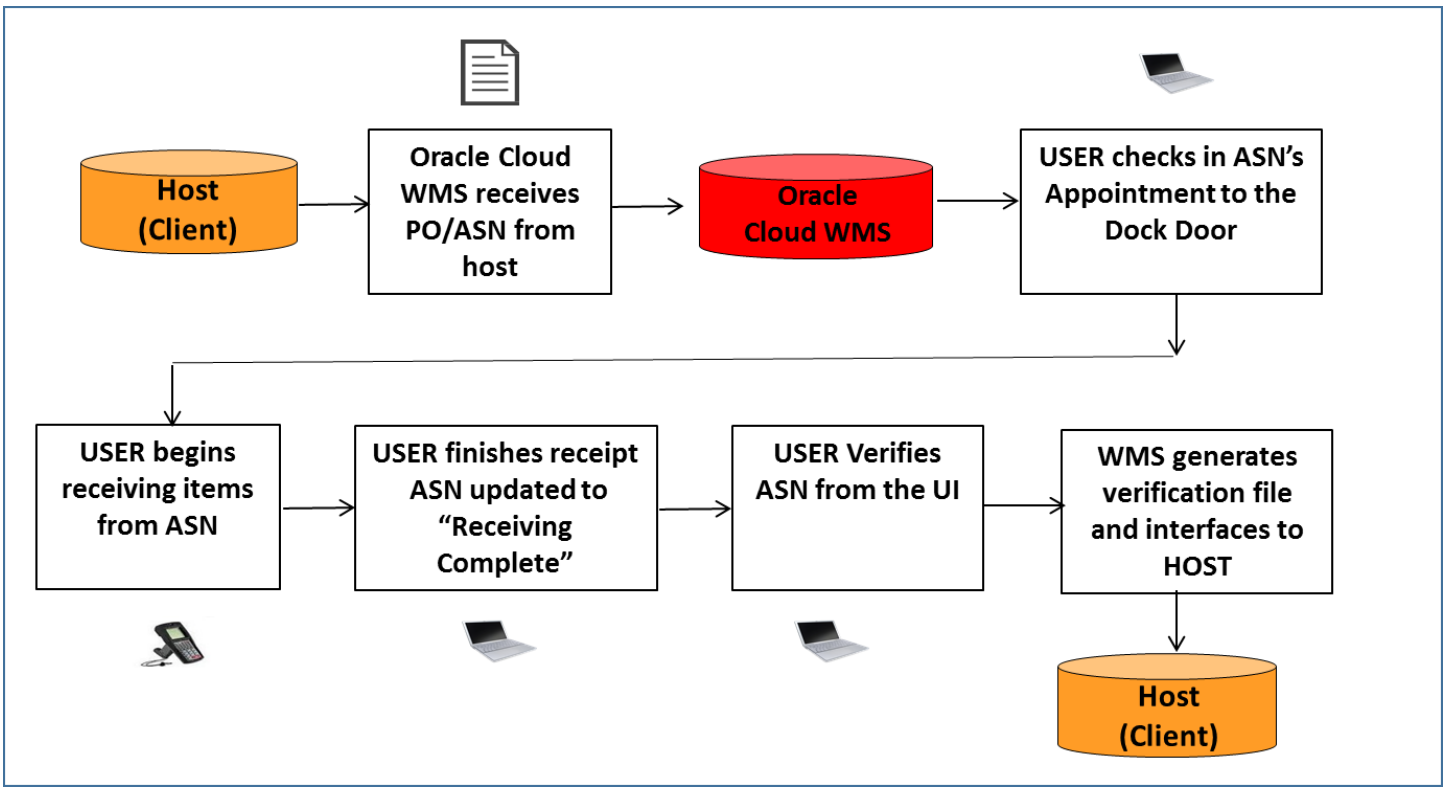
# 2 Inbound

## Inbound

The inbound process in Oracle WMS Cloud is composed of the following:

- Purchase Order
- Advanced Shipment Notice (ASN)
- Appointment

In this setup, only the ASN is required for receiving merchandise into the warehouse. Once ASNs are in Oracle WMS Cloud, operators will use the RF gun to receive items. The following diagram summarizes the receiving process in the Oracle WMS Cloud:



# Purchase Orders (PO)

Purchase orders are records that keep track of merchandise that are issued from the vendor. To view POs, go to the "Purchase Orders" screen.

*Related Topics*

- Purchase Order Flow
- PO Quantity Updates
- Manual Purchase Order (PO) creation
- Creating Purchase Orders through Interfaces (UI)
- Purchase Order (PO) Integration into Oracle WMS Cloud

## Purchase Order Flow

PO's are not required for receiving merchandise in Oracle WMS Cloud.

| Purchase Order Field | Definition |
|---|---|
| Created | The PO has been created, but not yet received. |
| In Receiving | PO has started receiving process, but is not complete. |
| Received | All of the PO's contents have been fully received. |
| Cancelled | The PO has been cancelled. |

## PO Quantity Updates

The "Received Qty" and "Shipped Qty" fields in the Purchase Order screen are updated based on the merchandise received via ASNs. The following examples describe the different events for which the quantities are updated.

Example:

Consider Purchase Order "PO_001", which has three items:

| Purchase Order | Status | Item | Description | Ordered Qty | Received Qty | Shipped Qty |
|---|---|---|---|---|---|---|
| PO_001 | Created | THK3 | THK ITEM 3 | 75 | 0 | 0 |
| PO_001 | Created | THK2 | THK ITEM 2 | 125 | 0 | 0 |
| PO_001 | Created | THK1 | THK ITEM 1 | 50 | 0 | 0 |

For each scenario, the PO records (received and shipped quantities) will update accordingly:

Case 1: User creates a new ASN, "ASN_001", for items THK1 (25 units) and THK2 (100 units).

| PO | Inbound Shipment | Item | Description | Shipped Qty | Received qty |
|---|---|---|---|---|---|
| PO_001 | ASN_001 | THK2 | THK ITEM 2 | 100 | 0 |
| PO_001 | ASN_001 | THK1 | THK ITEM 1 | 25 | 0 |

Result: The PO's "Ordered Qty" and "Shipped Qty" fields are updated.

| Purchase Order | Status | Item | Description | Ordered Qty | Received Qty | Shipped Qty |
|---|---|---|---|---|---|---|
| PO_001 | Created | THK3 | THK ITEM 3 | 75 | 0 | 0 |
| PO_001 | Created | THK2 | THK ITEM 2 | 125 | 0 | 100 |
| PO_001 | Created | THK1 | THK ITEM 1 | 50 | 0 | 25 |

Case 2: 25 units of item THK1 from ASN_001 is cancelled.

Case 3: 25 units of item THK1 from ASN_001 are shipped, but not received. User verifies this ASN.

Result (for both cases 2 & 3):

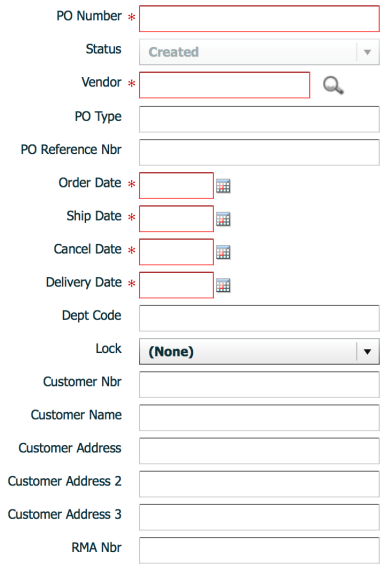
1. The "Shipped Qty" from the ASN detail line for "THK1" will be decreased from 25 to 0.
2. The PO's "Shipped Qty" is subtracted to reflect this change.
3. The PO's "Ordered Quantity" are added to reflect this change.

| Purchase Order | Status | Item | Description | Ordered Qty | Received Qty | Shipped Qty |
|---|---|---|---|---|---|---|
| PO_001 | Created | THK3 | THK ITEM 3 | 75 | 0 | 0 |
| PO_001 | Created | THK2 | THK ITEM 2 | 125 | 0 | 100 |
| PO_001 | Created | THK1 | THK ITEM 1 | 50 | 0 | 0 |

As the figure suggests, the "Shipped" and "Ordered" quantities for THK1 are decreased as soon as the corresponding ASN details are cancelled.

# Manual Purchase Order (PO) creation

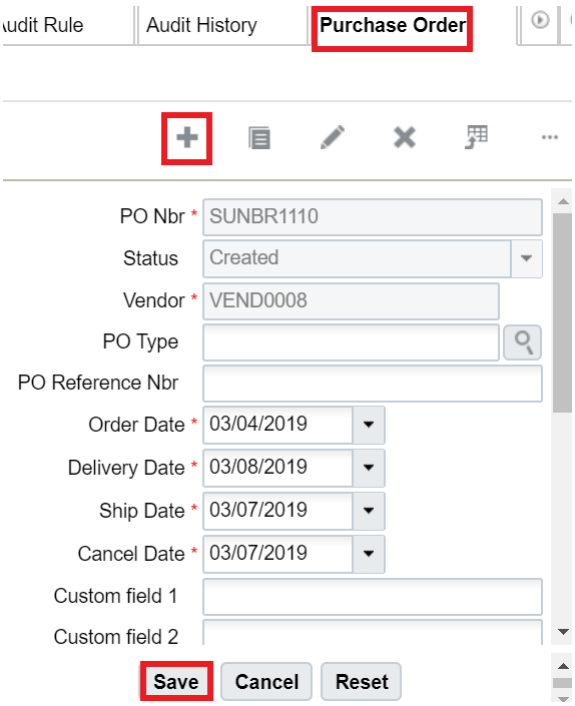
1. Go to the 'Purchase Order' UI screen and click the Create ( ) button.
2. Populate all of the applicable fields.




| Fields | Description |
|---|---|
| PO Number | The Purchase Order number |
| Vendor | The Vendor code in the PO |
| Order Date | Date when the purchase order was created |
| Ship Date | Date when the purchase order was shipped |
| Cancel Date | Date when the purchase order will be considered cancelled |
| Delivery Date | Date when the purchase order will be delivered |

3. Click "**Save**".
4. After the PO header is created, users can now add the items that are included in this PO. To add items, select the PO record and click the Detail button. This will open a new window displaying the PO's details.


5. Click the Create ( + ) button to add detail records and populate the applicable fields.

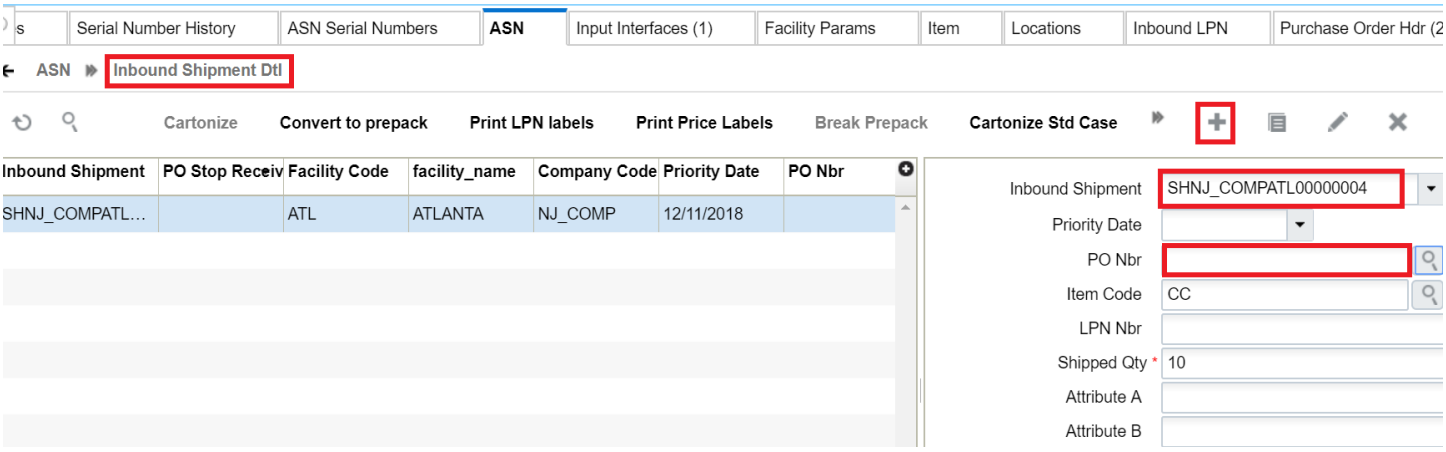



**Note:** If the PO contains more than one item, click the 'Save/New' button to add additional items

# Create IB Shipment

If your Purchase Order contains Inventory Attributes on its details, and you create an Inbound Shipment using the action button Create, the same attributes will be propagated to the corresponding Inbound Shipment.

In the Create/Edit/Copy Panes of the Inbound Shipment Detail UI, if you add a PO using one of those panes, the application will copy the inventory attributes (a-g) from the PO to the inbound shipment.



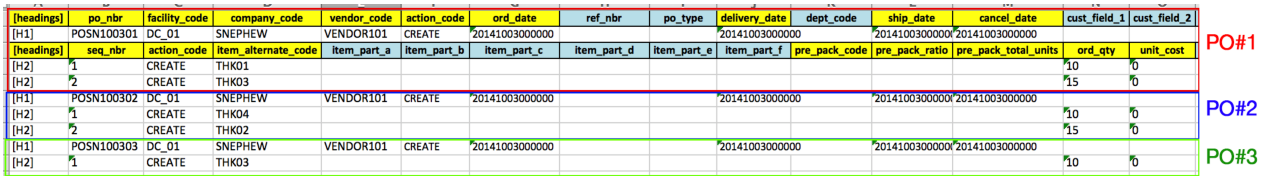

# Creating Purchase Orders through Interfaces (UI)

You can create Purchase Orders through an Oracle WMS Cloud Excel template.

Step 1: Preparing the Input Interface file:

- Below rules must be followed in order to correctly use the Oracle WMS Cloud interface:
  - The filename must start with the letters “POS”.
  - Populate the “required” columns in the interface specification document.

- Populate [H1] for every distinct Order number and [H2] for its details (see figure below).The user must populate the correct sequence in the 'seq_nbr' field (i.e. no duplicate values).

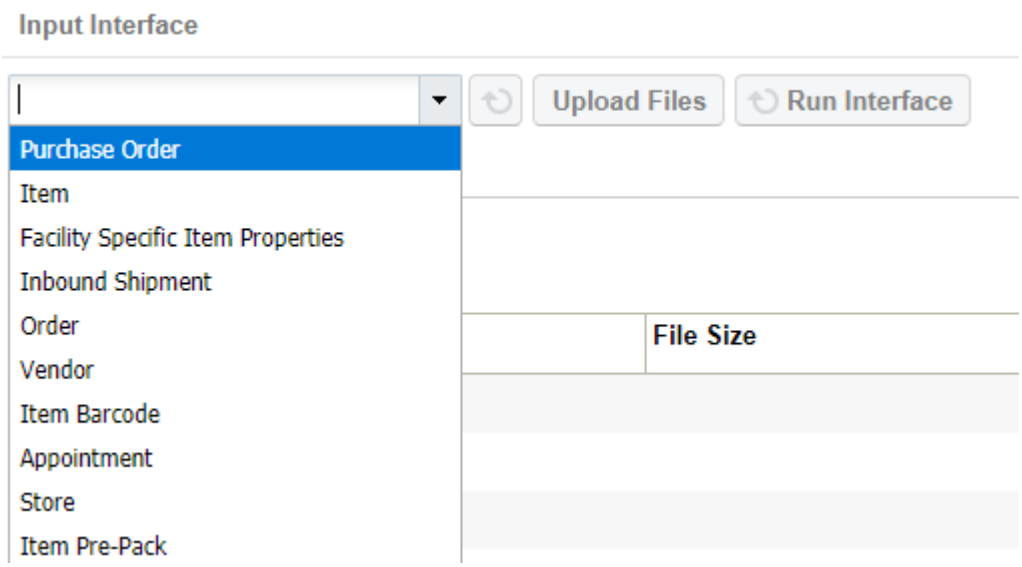


| [headings] | po_nbr | facility_code | company_code | vendor_code | action_code | ord_date | ref_nbr | po_type | delivery_date | dept_code | ship_date | cancel_date | cust_field_1 | cust_field_2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [H1] | POSN100301 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | PO#1 |
| [headings] | seq_nbr | action_code | item_alternate_code | item_part_a | item_part_b | item_part_c | item_part_d | item_part_e | item_part_f | pre_pack_code | pre_pack_ratio | pre_pack_total_units | ord_qty | unit_cost | |
| [H2] | 1 | CREATE | THK01 | | | | | | | | | | 10 | 0 | |
| [H2] | 2 | CREATE | THK03 | | | | | | | | | | 15 | 0 | |
| [H1] | POSN100302 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | PO#2 |
| [H2] | 1 | CREATE | THK04 | | | | | | | | | | 10 | 0 | |
| [H2] | 2 | CREATE | THK02 | | | | | | | | | | 15 | 0 | |
| [H1] | POSN100303 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | PO#3 |
| [H2] | 1 | CREATE | THK03 | | | | | | | | | | 10 | 0 | |

The figure above is an example of a file that creates three different POs. Users can create multiple POs within the same POS file by using the "headings" column to differentiate one PO record from another. A '[H1]' value denotes a new PO Header record, while a '[H2]' value denotes a new PO Detail record.

Step 2: Uploading the Interface file into Oracle WMS Cloud

1. Go to the "Input Interface" screen.
2. Use the drop-down to select the appropriate interface to process:




3. Click on “Upload Files” and navigate to the file you wish to upload.
4. When the screen displays the file, click “Run Interface”.
5. The system will return a message dialog that the file has been successfully processed.

## Purchase Order (PO) Integration into Oracle WMS Cloud

A third method to interface records into WMS is through a shared SFTP directory.

1. The host system drops the “POS” file into the shared directory (typically an “input” folder).
2. When the file is dropped, Oracle WMS Cloud will automatically detect the file and process it into Oracle WMS Cloud.

   If a file fails for some reason, it is automatically moved into the “error” folder.

# Inbound Shipments

An Advanced Shipment Notification (ASN) is a record that keeps track of pending deliveries to the facility. In Oracle WMS Cloud, ASNs are required for receiving inventory.

| ASN | Status |
|---|---|
| In Transit | The ASN has been created but not yet received. |
| Receiving Started | Receiving for the ASN has started but not completed. |
| Receiving Complete | The ASN has been fully received. |
| Verified | The ASN has been received. (Receipt Confirmation is generated and sent) |

**Important caveat about editing ASNs**

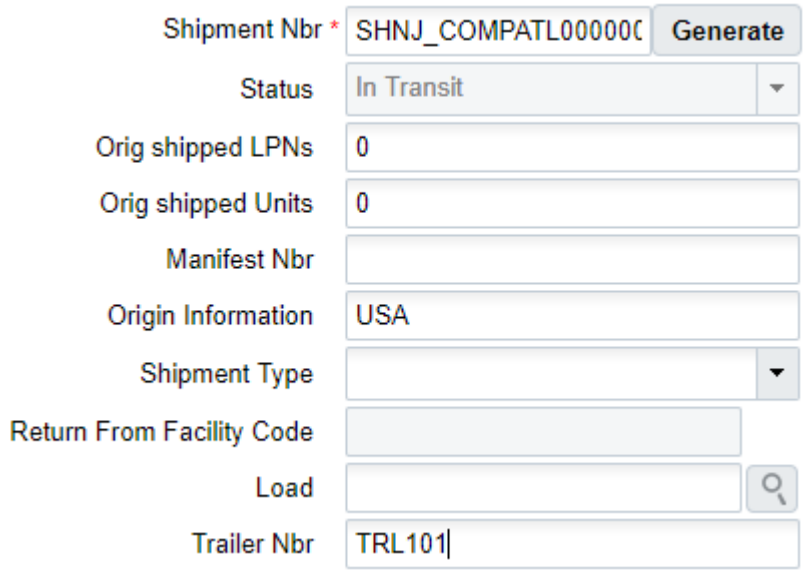
ASNs can only be modified while in "In Transit" status. After an ASN has started receiving, its details cannot be modified (ex. adding items, updating quantities).

The ASN record will specify the items and quantity being received into the warehouse. There are four methods to create ASNs in the Oracle WMS Cloud:

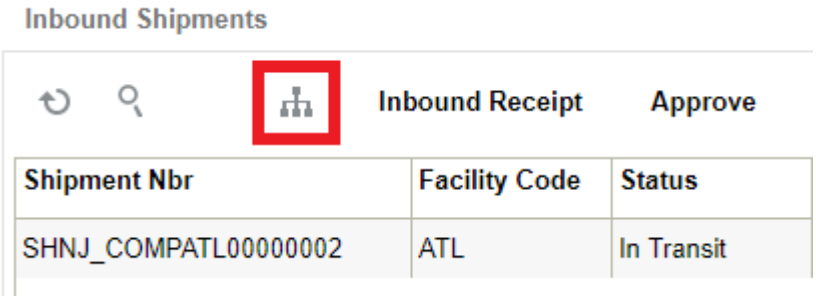
1. Creating ASNs manually from the "ASNs" screen.
2. Uploading ASN interfaces manually from the UI.
3. Interfacing with a host system to automatically process ASNs.
4. Creating ASNs from existing PO records.

# Creating ASNs Manually (UI)

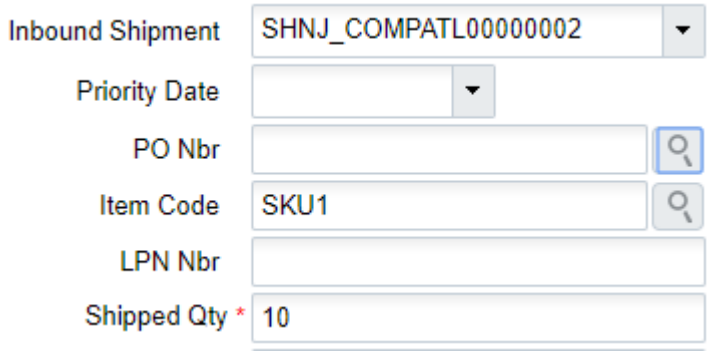
1. Go to the "Inbound Shipments" screen and click the Create button ( + ) to create an ASN header.
2. Populate the appropriate information for the ASN record.




3. Click "**Save**".
4. Now that the ASN header is created, the next step is to add the items that are expected for this ASN. To add items, select this ASN and click on the Details button.



5. In the details screen, click the Create button ( ) to create SKUs within the ASN.
6. To add a new item, either manually populate the Item Code into the “Item” field or select it from a list displayed by clicking the magnifying glass button.




7. When the item and quantity are entered, click “**Save**”. Users can also use the “Save New” button to save the current record and continue adding new records without closing the ‘create’ tab.

# Creating ASN through Interfaces (UI)

You can also create ASNs through an Oracle WMS Cloud Excel template.

Step 1: Preparing the Input Interface file:

To correctly use the Oracle WMS Cloud interface, follow the rules below:

- The filename must start with the letters “ISS” (for hierarchical files).
- Populate the “required” columns specified in the interface specification document.
- Populate [H1] for every distinct ASN number and [H2] for its details (see figure below).
- Populate the correct sequence in the ‘seq_nbr’ field (i.e. no duplicate values).

| [headings] | shipment_nbr | facility_code | company_code | trailer_nbr | action_code | ref_nbr | shipment_type | load_nbr | manifest_nbr | trailer_type | vendor_info | origin_info | shipped_date | cust_field_2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [H1] | ASN1 | DC_01 | SNEPHEW | TRL1 | CREATE | | XDOCK | | | | VENDOR | US | 20141002 | | ASN#1 |
| [headings] | seq_nbr | action_code | lpn_nbr | lpn_weight | lpn_volume | item_alternate_code | item_part_a | item_part_b | item_part_c | item_part_d | item_part_e | item_part_f | invn_attr_a | shipped_qty | |
| [H2] | 1 | CREATE | | | | THK01 | | | | | | | | 10 | |
| [H1] | ASN2 | DC_01 | SNEPHEW | TRL2 | CREATE | | DOMESTIC | | | | VENDOR | US | 20141002 | | ASN#2 |
| [H2] | 1 | CREATE | LPNXD100212 | | | THK02 | | | | | | | | 10 | |
| [H2] | 2 | CREATE | LPNXD100212 | | | THK03 | | | | | | | | 10 | |

The figure above is an example of a file that will create two different ASNs. Users can create multiple ASNs within the same ISS file by using the “headings” column to differentiate one ASN record from another. A ‘[H1]’ value denotes a new ASN Header record, while a ‘[H2]’ value denotes a new ASN Detail record.

Step 2: Uploading the Interface file into Oracle WMS Cloud

1. Go to the “Input Interface” screen.
2. Use the drop-down to select the appropriate interface to process:
3. Click on “Upload Files” and navigate to the file you want to upload.
4. When the screen displays the file, click “Run Interface”.
5. The system will return a message dialog notifying that the file has been successfully processed.

# ASN Integration with Oracle WMS Cloud

A third method to interface records into Oracle WMS Cloud is through a shared SFTP directory.

1. Host system drops the “ISS” file into the shared directory (usually an “input” folder).
2. When the file is dropped, Oracle WMS Cloud will automatically detect the file and process it into WMS.
   If a file fails to process, it is automatically moved to the “error” folder.

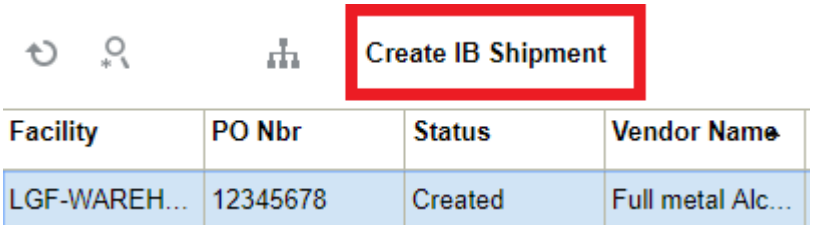
# Creating ASNs from existing PO records

Users can also create ASNs from the PO header and detail screens through the “Create IB Shipment” button.

## From the PO Header Screen

This method should be used when the entire PO will be consolidated into a single ASN record.

1. Go to the “Purchase Orders” screen.
2. Select the PO record.
3. Click the “Create IB Shipment” button.



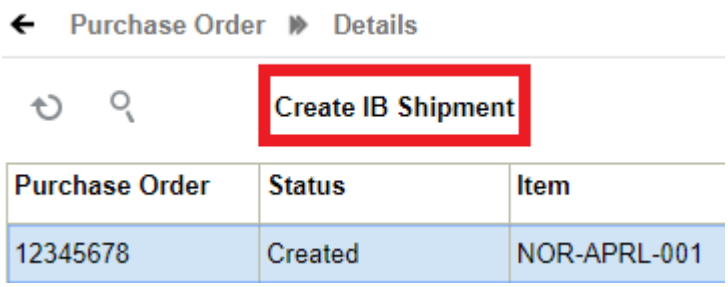

4. The system will return a message saying “Successfully created IB Shipment [ASN Number] from PO”. The ASN number created by the system is based on a sequence counter from the “IB Shipment” record in the “Sequence Counters” screen.

## From the PO Detail Screen

Similarly, users can also create ASNs for specific Items in the PO’s Detail screen.

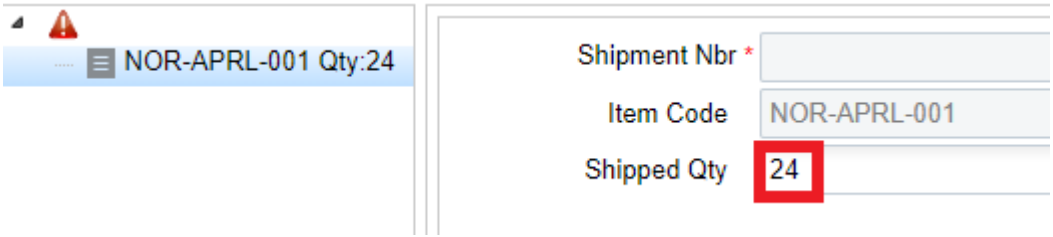
1. Go to the “Purchase Orders” screen.

2. Select the PO record and click on its Details.
3. Select the specific Item lines that are used for the new ASN and click the “Create IB Shipment” button.

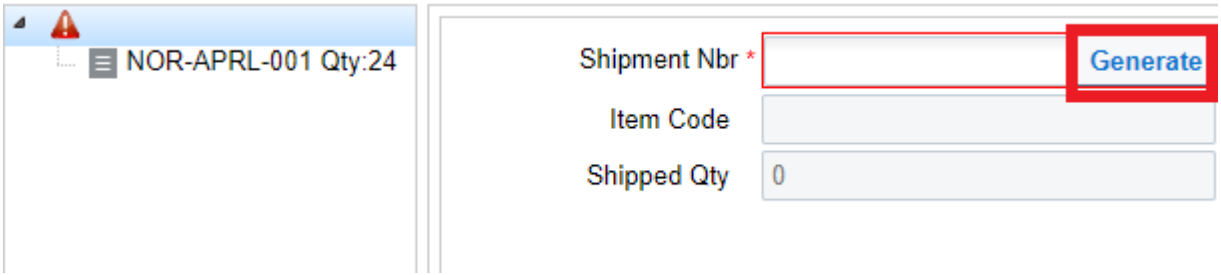



> **Note:** the “Shipped Qty” will be zero until there are ASNs created for them.

4. Click this button to open a new window where you can define the quantity shipped for each ASN Item. To edit the Item’s quantity, select the Item record and modify the value in the “Shipped Qty” field.




5. When finished, select the folder icon (see figure below) and either click the “Generate” button for a system-generated ASN number or manually populate the desired ASN number. Click “Save” to create the ASN.



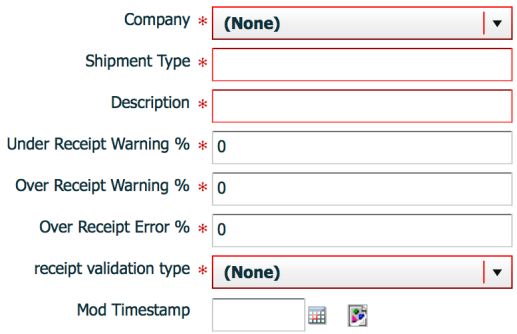

> **Note:** The system will not allow user to create a shipment if the PO detail has the Stop Receiving flag set to yes.

# Shipment Types

ASN Types are ASN attributes that distinguish between different types of Inbound Shipments. Users can configure ASN types to handle extra validation during receipt.

## Creating Shipment Types

1. Go to the “Shipment Types” screen and click the Create button.
2. Check the appropriate flags for the ASN Type.




| ASN Field | Description |
|---|---|
| Company | The child company in which this ASN type is used. |
| Shipment Type | The unique ASN/Shipment type code. |
| Description | Description of the ASN type. |
| Under Receipt Warning % | Field used to determine when the system should throw a warning message when an ASN item is under-received below the configured percentage. This warning message is displayed during ASN verification. |
| Over Receipt Warning % | Used to display a warning message when the user over-receives the ASN detail by above the defined % value. The user may choose to override this message. |
| Over Receipt Error % | Used to display an error message when the user over-receives the ASN detail by the defined %. The user cannot override this message. |
| Receipt Validation Type | If this field is selected, users can configure at what level the validation (from three previous fields) is required, whether at the PO, ASN or both. |
| Mod Timestamp (optional) | Field used to record when the ASN Type was last updated. |
| Capture Returns Information | This is a flag that needs to be checked if an ASN for a return shipment is created. |

For fields d, e, and f, the value entered is NOT the cut off point for triggering the warning/error messages.

- For under receipt, the RF will only trigger the warning message if receiving BELOW the inputted value.
- For over receipt, the RF will only trigger the warning/error message if receiving ABOVE the inputted value.

**EXAMPLE**

- ASN ships 100 units of ITEM1.
- Under Receipt Warning % = 10%.
- Over Receipt Warning % = 10%.
- Over Receipt Error % = 20%.

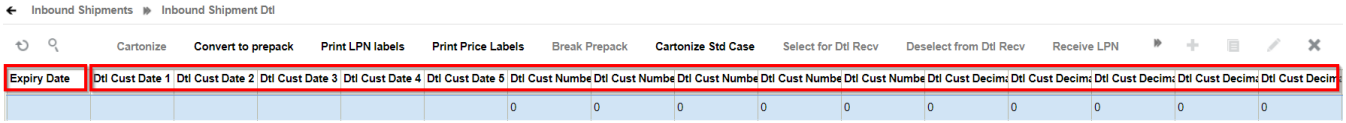
**RESULTS:**

- If the user receives 89 units, the RF will display an under-receipt warning message.
- If the user receives 110 units, the RF will **not** display an over-receipt warning message.
- If the user receives 111 units, the RF will display an over-receipt warning message.
- If the user receives 120 units, the RF will **not** display an over-receipt error.

## Inbound Shipment Details Screen

You can view data and details from your inbound shipments in the **Inbound Shipment Detail** UI.

1. Go to the “Inbound Shipment” screen
2. Click on the Shipment.
3. Click on the Detail button to view the **Inbound Shipment Detail**UI.



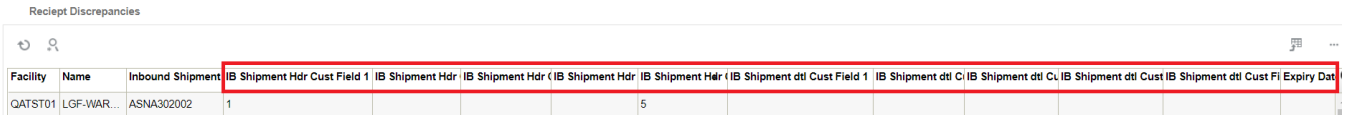

4. The **Inbound Shipment Detail** UI lists the following custom fields:

| Fields | Description |
|---|---|
| Expiry Date | Displays the expiry date |
| Dtl_cust_date_1 to Dtl_cust_date_5 | Displays the selected date |
| Dtl_cust_number_1 to Dtl_cust_number_5 | Displays the custom number |
| Dtl_cust_decimal_1 to Dtl_cust_decimal_5 | Displays custom decimal integer number |
| Dtl_cust_short_text_1 to Dtl_cust_short_text_12 | Displays short description provided by the user |
| Dtl_cust_long_text_1 to Dtl_cust_long_text_3 | Displays a long description.<br><br>Note: Long text supports up to 1000 characters. |

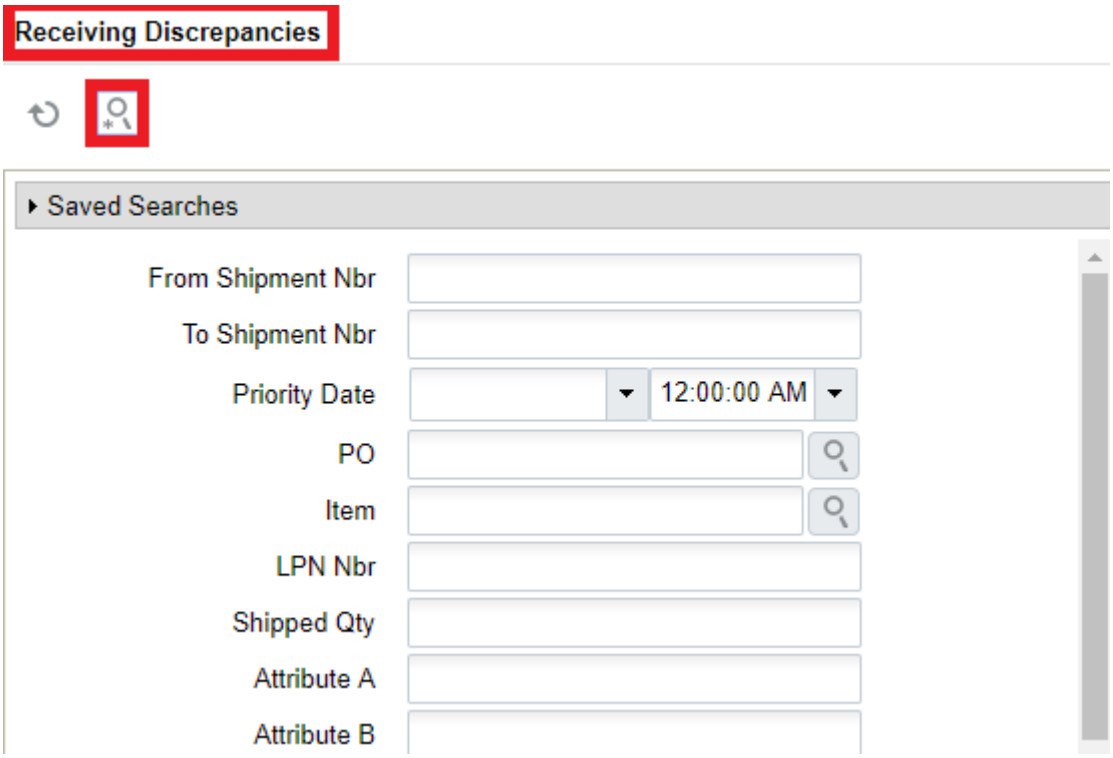
### Receiving Discrepancies UI

The Receiving Discrepancies screen displays the IB shipment header and custom field details information:

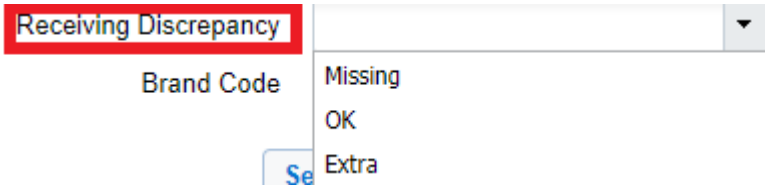
1. Add the “Receiving Discrepancies” module to your screen.
2. Launch the UI.
3. Select the IB shipment and scroll through the page to view the custom field information.




The **Receiving Discrepancies** UI also allows you to search by various shipping and receiving criteria and view discrepancies in your Inbound Shipments. From Receiving Discrepancies, click **Search**. Fill in your desired search criteria.




Towards the bottom of the Search option, you can click on the Receiving Discrepancies drop-down to filter Receiving Discrepancies.




You can filter by OK, Missing, and Extra. These criteria are defined below:

| Filter (Drop-Down) Criteria | Definition |
|---|---|
| OK | Receiving quantity and shipped quantity are the same |
| Missing | received_qty < shipped_qty |
| Extra | received_qty > shipped_qty |

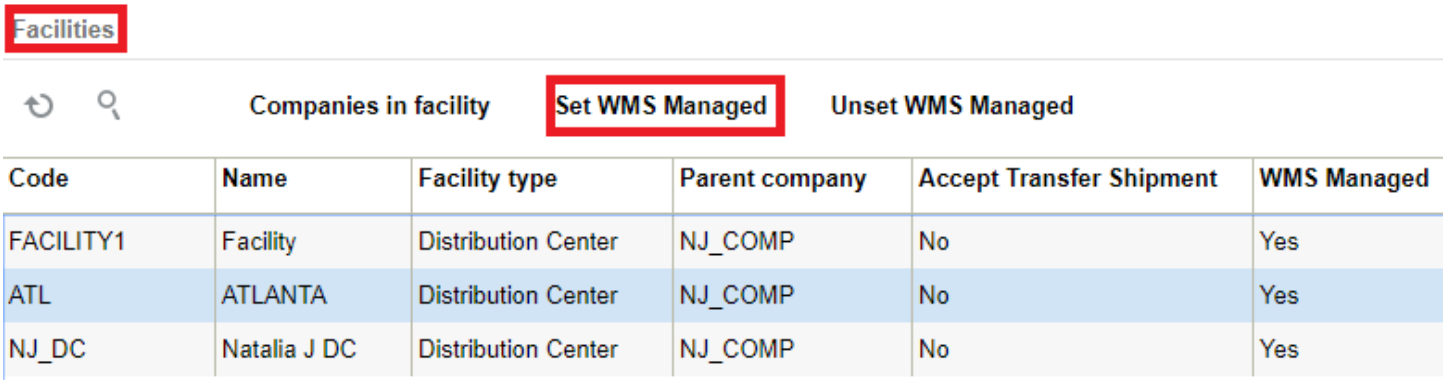
# Transfer Inventory between WMS Managed Facilities

Currently, you can transfer inventory between WMS Managed Facilities. An option is available in the Facility UI that allows you to automatically create an ASN (Transfer Inbound Shipment) for the destination facility. The origin facility must have the following items set in order for the system to create an Inbound Shipment in the destination facility:

- Facility parameter CREATE_FACILITY_TRANSFER_SHIPMENT_FOR_ALL must be Yes.
- Company parameter DEFAULT_TRANSFER_IBSHIPMENT_TYPE must be populated with a valid IBSHIPMENT Type.

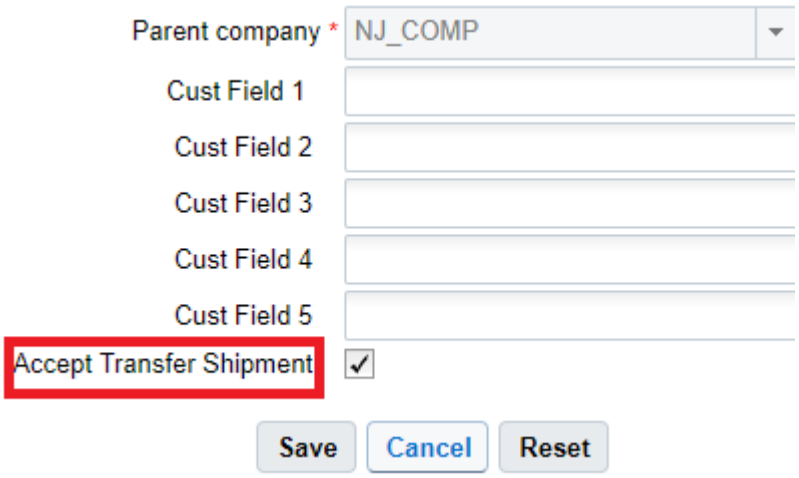
The destination facility must have the following settings:

In the Facility UI, the destination facility must be set as WMS Managed:




| Code | Name | Facility type | Parent company | Accept Transfer Shipment | WMS Managed |
|---|---|---|---|---|---|
| FACILITY1 | Facility | Distribution Center | NJ_COMP | No | Yes |
| ATL | ATLANTA | Distribution Center | NJ_COMP | No | Yes |
| NJ_DC | Natalia J DC | Distribution Center | NJ_COMP | No | Yes |

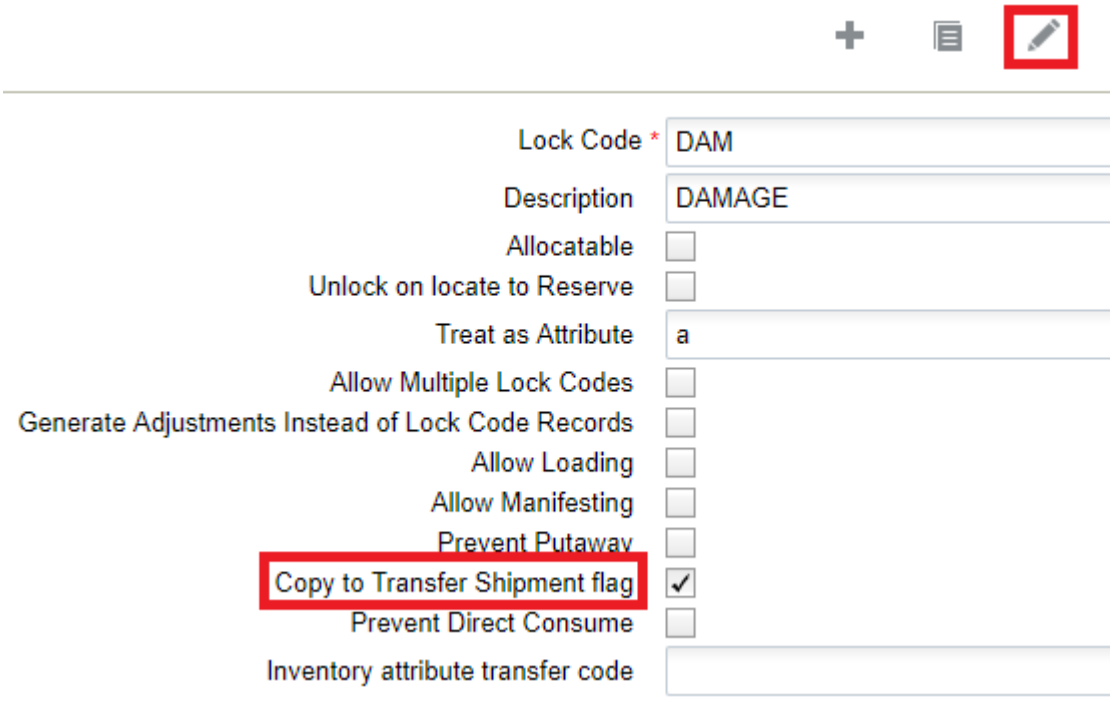
The destination facility must also have the Accept Transfer Shipment flag checked. Select your facility and click Edit to check the Accept Transfer Shipment flag and add any other details:



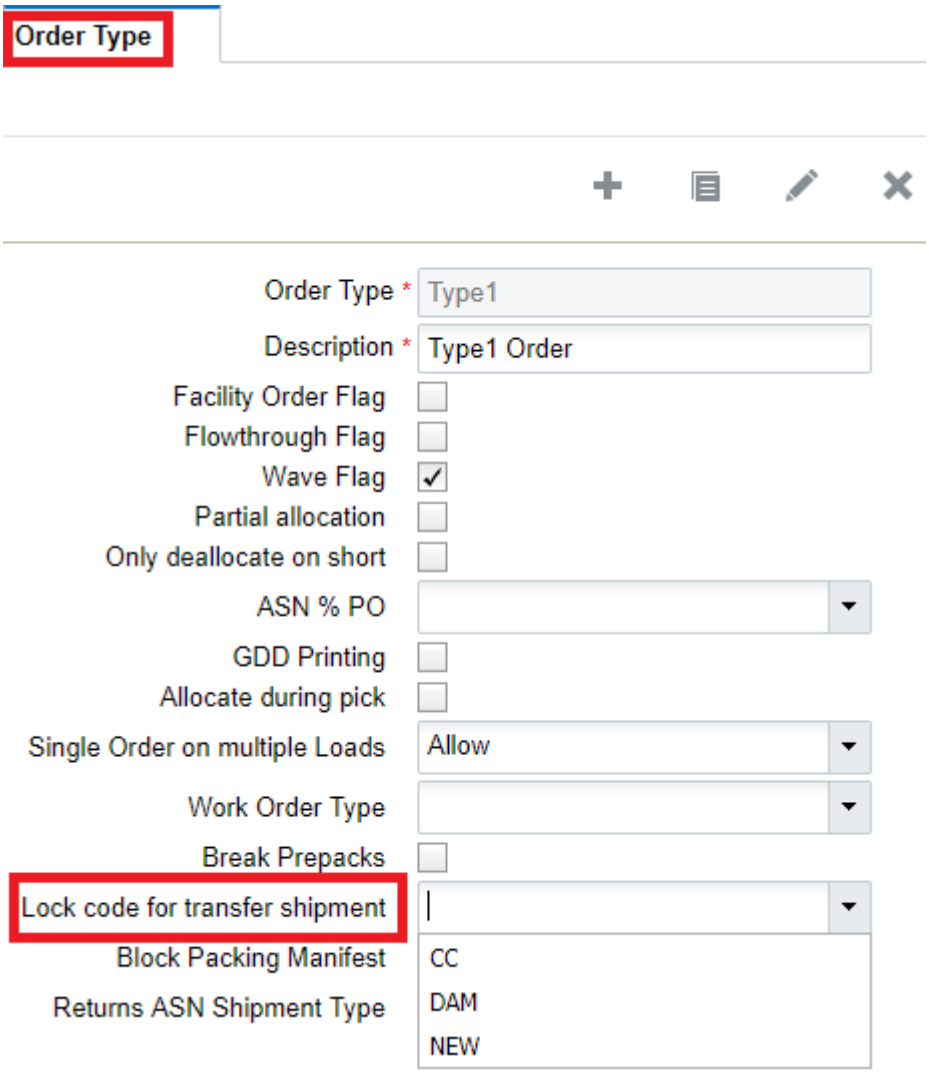

The following information can be transferred during the ASN Creation:

- As part of ASN Creation, the carrier code from the outbound load is copied over to the carrier code on the Inbound Load that is created.
- As part of the ASN Creation transfer shipment creation logic, custom field values from the corresponding order detail are copied over to the custom fields on the inbound shipment detail. The DEFAULT_TRANSFER_IBSHIPPMENT_TYPE parameter determines whether to copy the custom field values from the order detail to the corresponding inbound shipment.
- As part of ASN creation, if the corresponding order's order type has "transfer lock code" populated and the lock code has the Copy to Transfer Shipment flag set to Yes on the Lock UI, WMS will copy the lock code from transfer lock code to the lock code column on the inbound shipment detail.

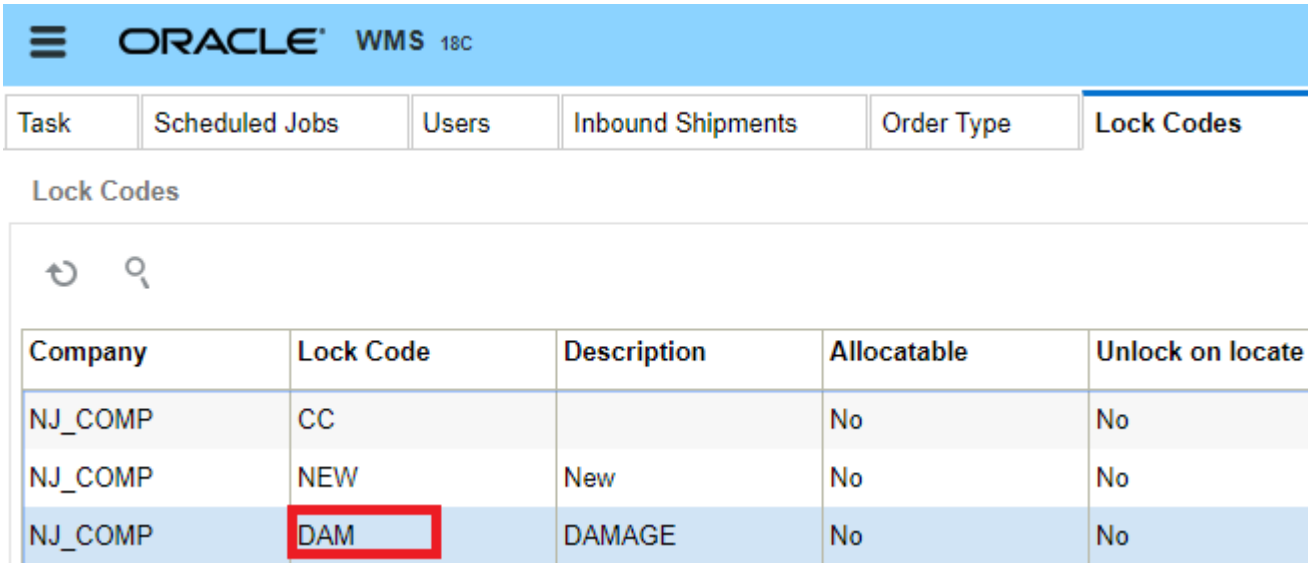
To set up lock codes for transfer shipments, first go to the Lock Code UI, and check the "Copy to Transfer Shipment flag".



From the Order Type UI, the “Lock code for transfer shipment” drop-down allows you to set up lock codes for transfer shipments.




Once you select a Lock code for a transfer shipment, (for example, DAM Lock Code for damaged items) you can view this from the Lock Codes UI:




| Company | Lock Code | Description | Allocatable | Unlock on locate |
|---|---|---|---|---|
| NJ_COMP | CC | | No | No |
| NJ_COMP | NEW | New | No | No |
| NJ_COMP | DAM | DAMAGE | No | No |

## Transfer Lock Codes from OBLPN to the IB Shipment

Oracle WMS Cloud allows you to copy the lock codes from outbound LPNs to the corresponding inbound LPN's created in target distribution centers. For example, you may want to copy the lock codes that indicate the condition of certain items when you transfer them to other distribution centers so that shipping to end customers can be controlled.

In company parameters, the **Parameter Value** needs to be set to **yes** to enable copying of lock codes.

## Priority Date Tracebility for Transfer Shipments

In transfer shipments, the OBLPN Priority date is transferred into the receiving IBLPN. This allows the warehouse to maintain the correct information about the inventory. The Priority date determines which LPNs are allocated first when the allocation method is FEFO. The Priority date is populated with either the value entered by expiry date first or it is populated with the manufacturing date. If neither the expiry or manufacturing date are determined, then the system will populate the current date as the priority date.

## Priority Date copied to Inventory during Receiving

Some WMS users may transfer shipments from one facility into another facility. Priority date is used for determining which LPNs will be allocated first when the allocation method is FEFO. To improve efficiency in allocation, the priority date from inbound shipment detail is copied over to the inventory priority date during receiving.

## RF Modify/Cancel OBLPN

In certain scenarios, you might stop shipping a container by performing RF Modify Cancel OBLPN or decrease the actual quantity being shipped. To prevent any issues occurring during allocation, when an OBLPN is modified using the RF Modify/Cancel transaction, the priority date will get copied to the newly created IBLPN.

## Update OBLPN's Status to Delivered for Facility Transfers

Oracle WMS Cloud supports the auto-creation of IB Shipments (ASNs) when shipping a Load to a facility that is managed within WMS. These IB Shipments are generated with the shipped OBLPNs as IBLPNs. When these IBLPNs are received at the ship-to facility, Oracle WMS Cloud updates the corresponding OBLPNs to 'Delivered' status at the origin facility. This provides additional traceability as users at the origin facility can now see when their shipments have been

received. The transactions that already supported reusing OBLPNs in ‘Shipped’ status will also support reusing OBLPNs in ‘Delivered’ status.

## Receiving new LPNs on Facility Transfer Shipments

Currently, during cartonized shipment receiving, if you scan an LPN that is not in WMS, you are taken into blind LPN receipt mode (SKU level receiving). The screen parameter, newlpn-xfer-shp-behavior in RF receiving transactions, controls the behavior of receiving if a blind LPN is encountered while receiving facility transfer shipments.

During receiving, if you scan a blind LPN, Oracle WMS Cloud checks to see if the shipment is a facility transfer shipment (if the origin_facility_id is populated in the ib_shipment, then the shipment is a facility transfer shipment).

- If the shipment is not a facility transfer shipment, the system defaults to the current functionality where you are taken into SKU level receiving mode.
- If the shipment is a facility transfer shipment, the system checks the value of the screen parameter newlpn-xfer-shp-behavior:
  - If newlpn-xfer-shp-behavior is set as Allow/Null, the system defaults to the current functionality where you are taken into SKU level receiving mode.
  - If newlpn-xfer-shp-behavior is set as “Fetch LPN Info from source”:
    - The system will get origin facility information based on origin_facility_id on ib_shipment.
    - Next, the system will query the origin facility to see if an outbound LPN exists in the origin facility with the LPN_NBR equal to the scanned LPN and the status of the LPN is either Packed, Loaded, or Shipped.
      - If the LPN is not found in the origin facility, you are taken into SKU level receiving mode.
      - If the LPN is found in the origin facility, an IB Shipment Dtl is created in the receiving facility with details from the origin facility and you can receive the LPN just like cartonized LPN receiving (without scanning details).
    - If a valid email ID is configured in the facility parameter ALERT_NEW_LPN_ON_FACILITY_TRANSFER_SHIPMENT, the message “Unexpected LPN <Scanned LPN Nbr> was received by user <user> on shipment <scanned shipment_nbr>” is emailed to the configured ID.
    - If the email ID is invalid (does not pass basic checks of ‘@’, ‘.’ etc) or if the email ID is null, the transaction continues to process without failing.
  - If allow-newlpn-fac-xfer-shp is set as “Fetch LPN Info and Reconcile”:
    - If the facility where the LPN is scanned is the same as the OBLPN's Ship To facility, the OBLPN's status is updated to 'Delivered.'
    - If the facility where the LPN is scanned is different from the OBLPN's Ship To facility and the status is 'Packed' or 'Loaded,' the OBLPN's status is updated to 'Shipped.'
    - If the OBLPN is assigned to a Load and the status is 'Packed' or 'Loaded,' the system will un-assign the LPN from the load or perform unload updates if the LPN is in 'Loaded’ Status.
  - If allow-newlpn-fac-xfer-shp is set as “Do Not Allow”, you are not allowed to receive the LPN. The error message “Invalid LPN Nbr” displays.

# Creating an ASN after a Return

If you are receiving inventory back in your facility, this feature allows you to find the return inventory in the system and create an ASN in the returned facility, so that you can account for the correct inventory. There are two ways to receive

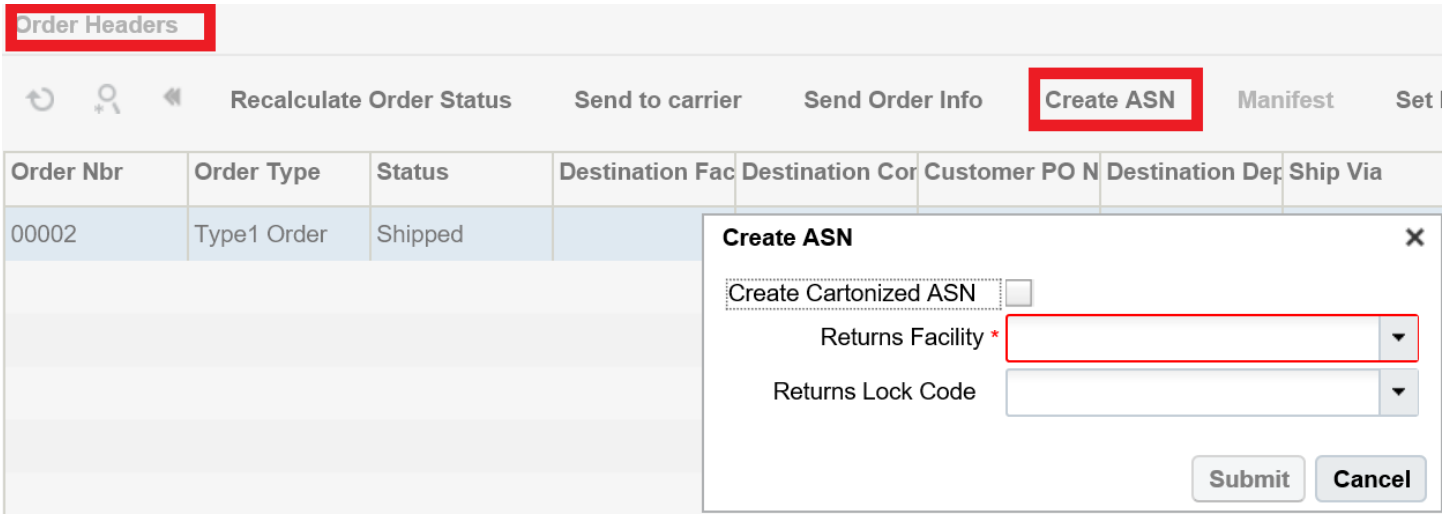
returned inventory, via the Order Headers UI (where you can return the whole order) or from the OBLPN UI (where you can return one or multiple LPNs).

### Return Whole Orders from Order Headers UI

You can receive returns from inventory that was shipped from your current facility or from a different facility from the Order Headers UI. You can search for the \shipped order , select it, and create an ASN so that later you can receive this inventory in your return facility.

This feature requires a group permission such as 'order hdr/Create ASN ' for this button so that only users with sufficient access can select it. By default, only users with an ‘ADMINISTRATORS’ or ‘MANAGEMENT’ role have access to this button. All other users will have to get the corresponding group permission enabled to be able to select this button.

To create an advanced shipment notice (ASN) for returns, go to the Order Header Screen and click “Create ASN.”



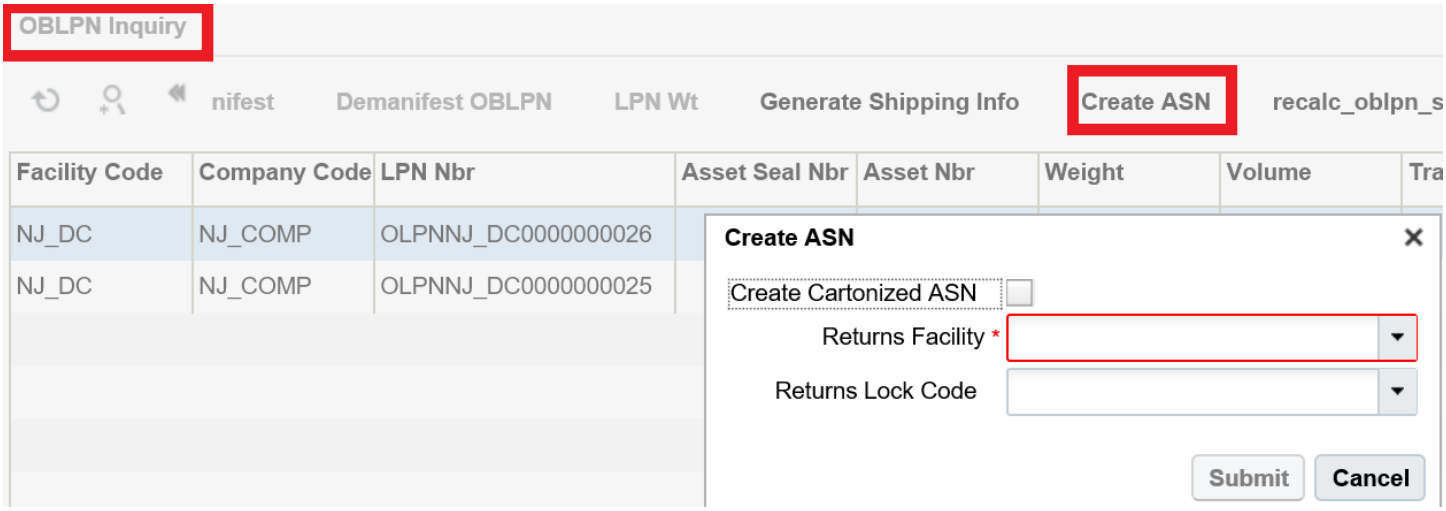

| Create ASN Fields | Description |
|---|---|
| Create Cartonized ASN | The system will generate a cartonized ASN. |
| Returns Facility | Drop down with list of Facilities |
| Returns Lock Code | Drop down with list of Lock Codes which will be transferred to your newly created ASN |

The **Create ASN** button is only enabled if the order is in Shipped status. Once you select Create ASN, the Create ASN window appears. When you select Create Cartonized ASN, the system will generate a cartonized ASN. For more details

about Cartonized ASNs. You can select the return facility from the Returns Facility (required field) drop-down. The ASN will be created from the facility you select. The Returns Lock Code drop-down gives you the option to assign your inventory Lock Code which will be transferred to your newly created ASN.

### Return Items from the OBLPN Inquiry UI

If you need to return a specific inventory from your order, you can do this from the OBLPN Inquiry UI via the Create ASN button. You can access the Create ASN action button by selecting one or more OBLPNs. However, when you select one or more OBLPNs which are not in shipped status, then **Create ASN** will be disabled. The same logic applies for creating an ASN from the OBLPN Inquiry as it does from the Order Headers UI.

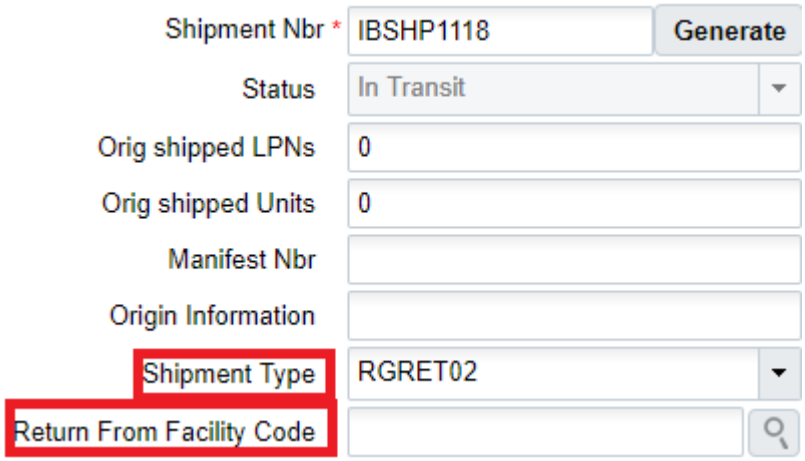



### Viewing your ASN

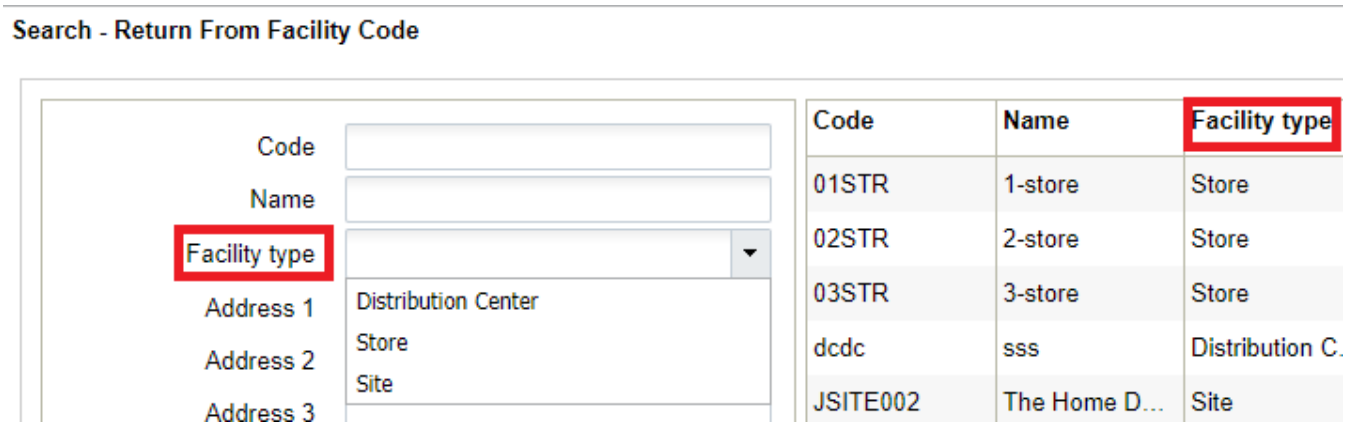
To view your newly created ASN, you will need to change your facility to your return facility. If your return inventory had an inventory attribute, this information is copied to your new ASN.

### Capturing the shipment Origin

1. The “Return From Facility Code” field (on the create pane of the Inbound Shipment UI), features an advanced look up option to find the customer, distribution center, or store from where the shipment was returned.



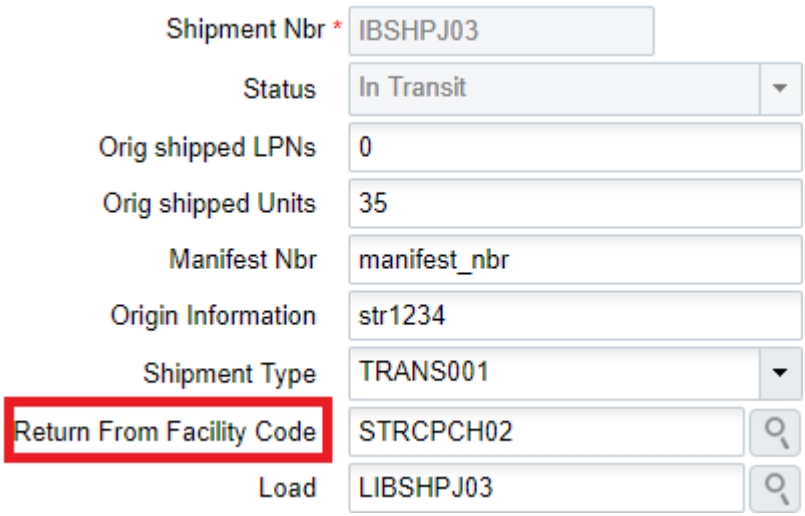

2. "Return From Facility Code" is enabled only if the Shipment Type on the shipment has "Capture Returns Information" configured as **Yes** in the **Shipment Type** UI. In this example, Shipment Type **RGRET02** has been configured with "Capture Returns Information" as **Yes**, which has enabled the "Return From Facility Code" field).
3. Once you select the advanced look up option, the following screen appears, and displays a facility type of "DC", "Store", or "Site". Depending on where the shipment is returned from, choose the appropriate facility type. If the return shipment is from a customer, then choose "Site" as the facility type.




4. The system will not allow the creation of an ASN if the selected Shipment Type has "Capture Returns Information" configured as **Yes**, but the "Return From Facility Code" value has not been captured.
5. When the Shipment Type has "Capture Returns Information" configured as **No**, and you populate "Return From Facility Code", then the system removes the "Return From Facility Code" value before it creates a new ASN.
6. When an ASN for return shipment is verified, the return facility information is included in the Shipment Verification file.
7. When an inbound shipment is created from a Purchase Order (Header or Detail view), the Shipment Type for the shipment is determined from the PO Type of the Purchase Order. If the determined Shipment Type has "Capture Returns Information" configured as **Yes**, then the system prevents the Inbound Shipment from being created because return information is required.
8. When an ASN is interfaced into WMS with a Shipment Type that has "Capture Returns Information" configured as **Yes**, the system validates if the field "returned_from_facility_code" is populated in the input file/msg.
    a. If this field is not populated, the system does not allow the ASN to be interfaced and displays the error message "Cannot Create Inbound Shipment, Return facility Information is required".

b. If this field is populated but the facility code is invalid, then the system does not allow the ASN to be interfaced and displays the error message “Invalid return from facility code”.

9. When a Transfer Shipment is created for a load that is shipped from one facility to another, if the determined Shipment Type has “Capture Returns Information” configured as **Yes**, then the “return from facility code” is populated on the Transfer Shipment.




# OBLPNs Dispatch Leftovers

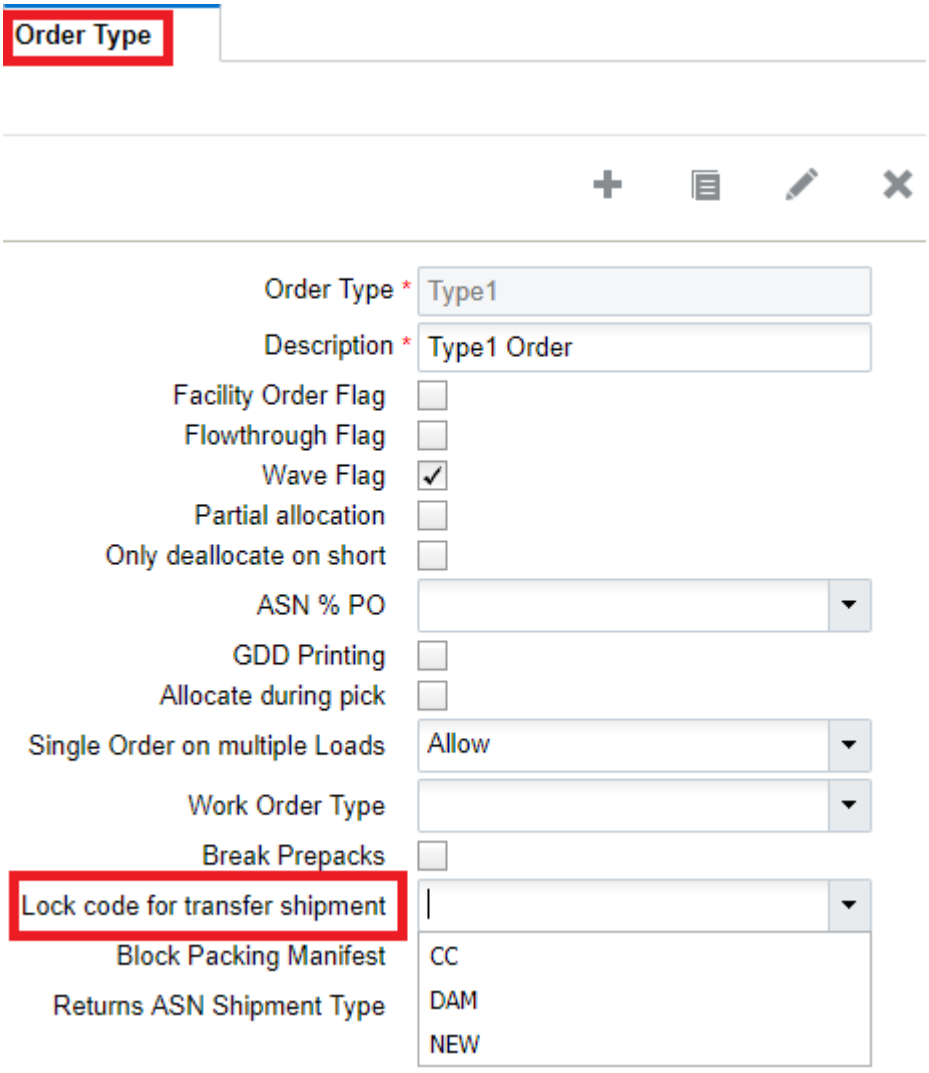
Previously, when an unanticipated LPN was received in the destination facility as part of a transfer shipment, an alert was sent via e-mail.

You can now create ship load files for the corresponding outbound LPN which has been wrongly shipped. The new value “Fetch LPN Info and Reconcile” has been added to the **newlpn-xfer-shp-behavior** screen parameter. Some of the key differences with the new value are:

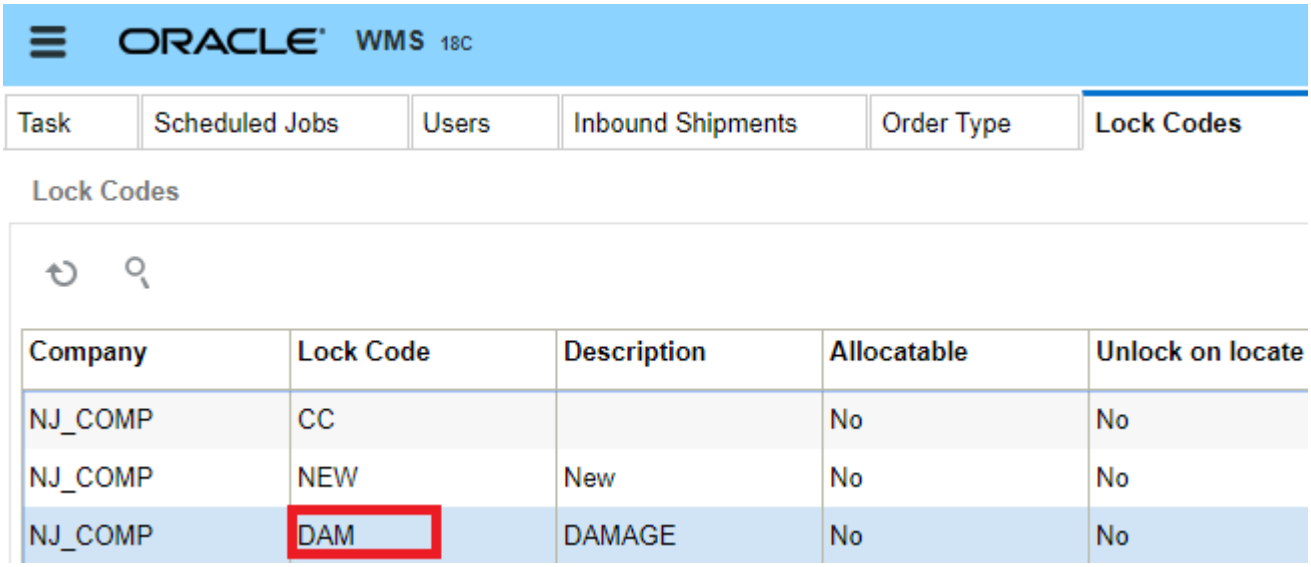
- If the facility where the LPN is scanned is the same as the OBLPN's Ship To facility, the OBLPN's status is updated to 'Delivered.'
- If the facility where the LPN is scanned is different from the OBLPN's Ship To facility and the status is 'Packed' or 'Loaded,' the OBLPN's status is updated to 'Shipped.'
- If the If the OBLPN is assigned to a Load and the status is 'Packed' or 'Loaded,' the system will un-assign the LPN from the load or perform unload updates if the LPN is in 'Loaded’ Status.

# Lock Codes for Inbound Shipments

From the Order Type UI, the “Lock code for transfer shipment” drop-down allows you to set up lock codes for transfer shipments.




Once you select a Lock code for a transfer shipment, (for example, DAM Lock Code for damaged items) you can view this from the Lock Codes UI:



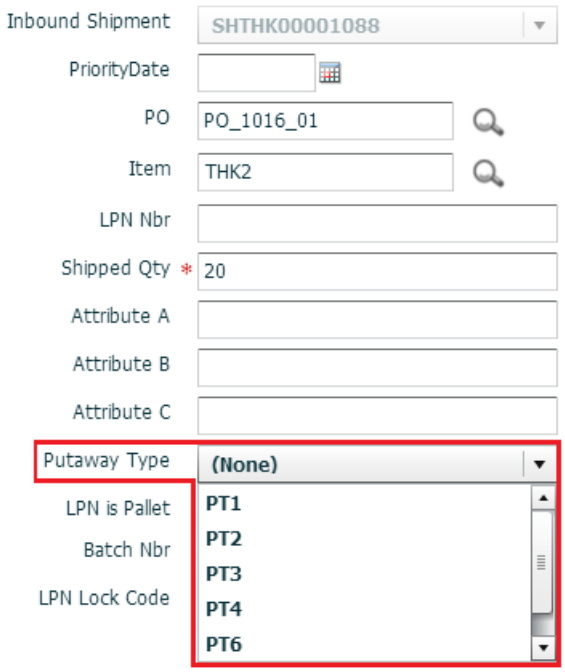

| Company | Lock Code | Description | Allocatable | Unlock on locate |
|---|---|---|---|---|
| NJ_COMP | CC | | No | No |
| NJ_COMP | NEW | New | No | No |
| NJ_COMP | DAM | DAMAGE | No | No |

**Note:** The lock code should have the *Copy to Transfer Shipment flag* set to yes for the DAM lock code to appear on the ASN once it is created.

# Assigning Putaway Types in Inbound Shipment Detail records

Oracle WMS Cloud provides the ability to assign a putaway types to ASN details. This is useful for situations where the item's putaway type for that ASN is different from its default putaway type according to the Item Master.

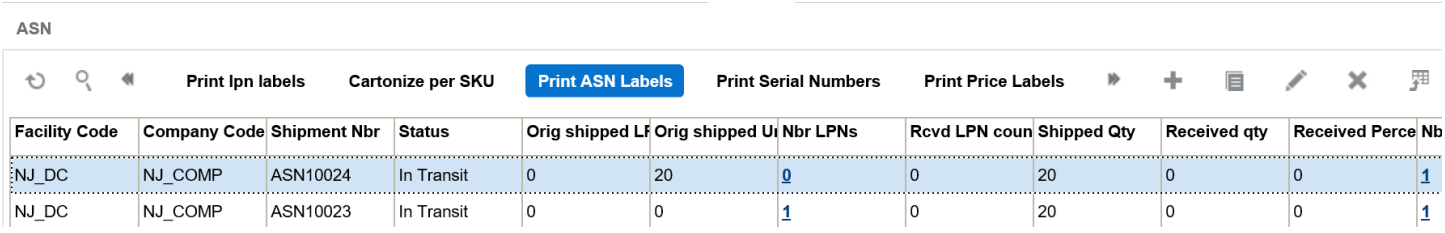
1. Go to the "Inbound Shipments" screen and select an ASN. Click on its Details.
2. In the Inbound Shipment Dtl screen, select the records that will have the putaway types modified.
3. Click on the Edit button.




4. Select the appropriate putaway type from the “Putaway Type” drop-down menu.
5. Click ‘Save’.

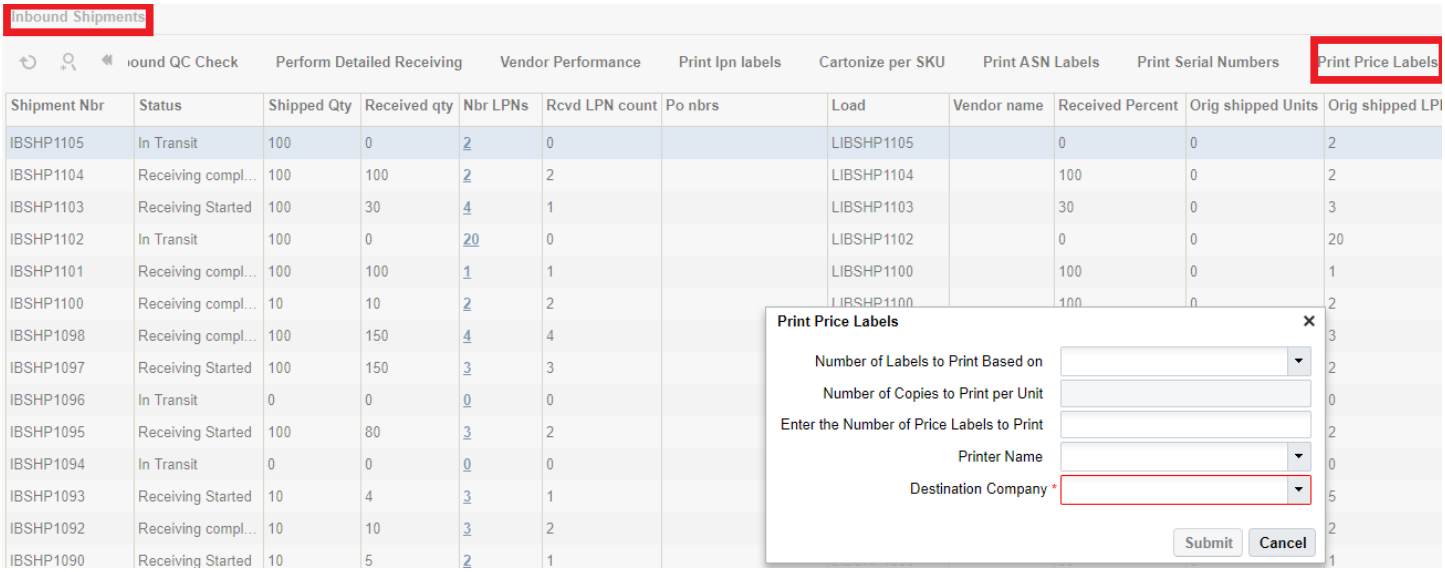
# Printing ASN Label

You have the option to Print an ASN Label from the Inbound Shipment UI. You can use this action button to print the label according to the default label/document printer you define.



# Printing Price Label for Inbound Shipment

Oracle WMS Cloud allows you to Print Price Labels from the Inbound Shipments screen. To set up the option to print price labels, you must configure the item price label view and label template view.



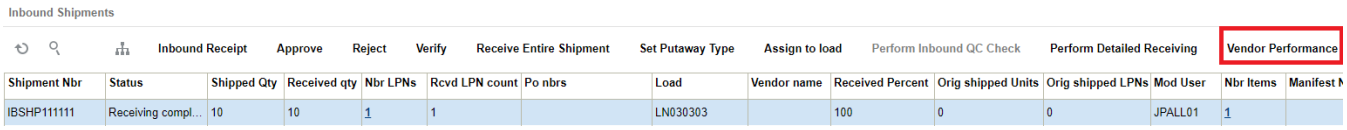

| Print Price Labels | Description |
|---|---|
| Company | The child company in which this ASN type is used. |
| Number of Labels to Print Based on | Use the Shipped or Received quantity to determine the number of labels. |
| Number of Copies to Print per Unit | the number of copies to print per unit. |
| Enter the Number of Price Labels to Print | Numner of Price Labels to print. |
| Printer Name | Printer name available for the user. |

| Print Price Labels | Description |
|---|---|
| Destination Company | Destination Company on the label. |

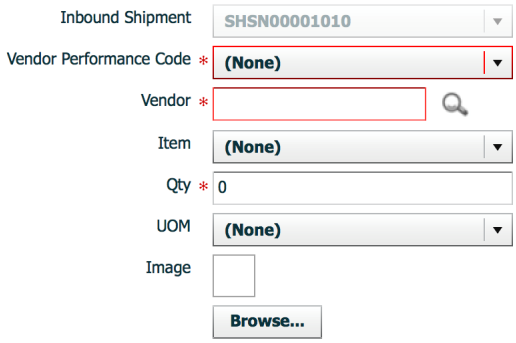
# Vendor Compliance

Oracle WMS Cloud provides the ability to track vendor compliance for each ASN. This allows you to capture any compliance issues that may occur during receiving.

1. Go to the “Inbound Shipments” screen.
2. Select the ASN that has a compliance issue, and click ‘Vendor Performance’




3. Click the Create button to add a new vendor performance record.
4. Select the appropriate vendor performance code. Note that vendor performance codes must first be configured in the “Vendor Performance Codes” screen.

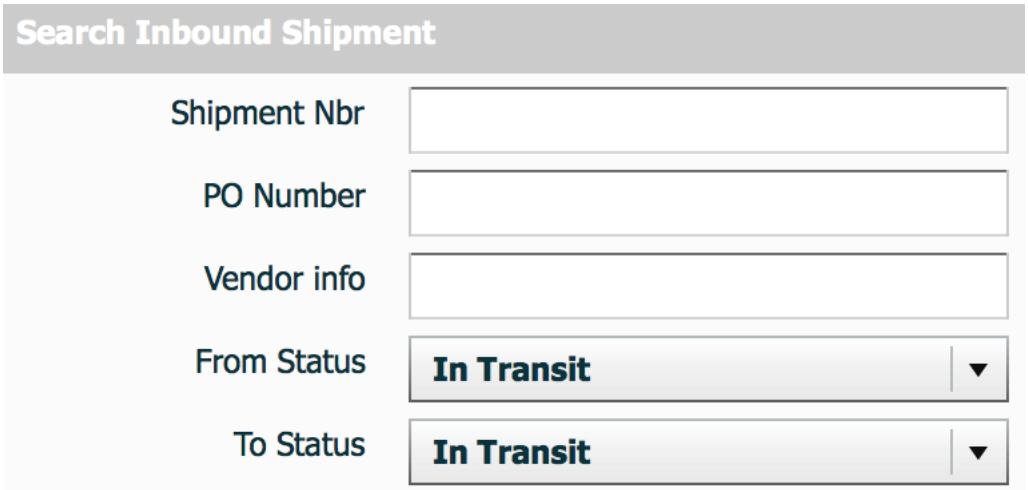



5. Click “Save”.

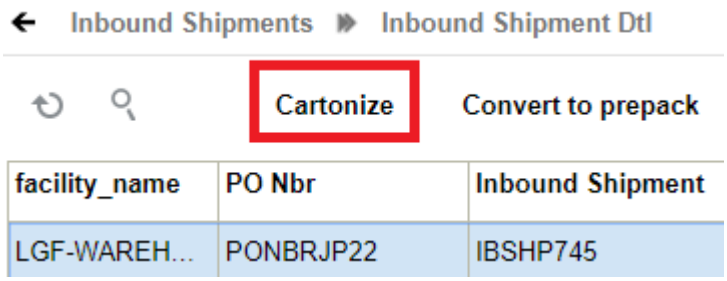
# Pre-Receiving: Cartonization

Users can cartonize ASNs prior to receiving. This is an alternative to SKU level receiving which typically requires the user to scan a blind LPN. This process will assign pallets/full cases an LPN through the UI.

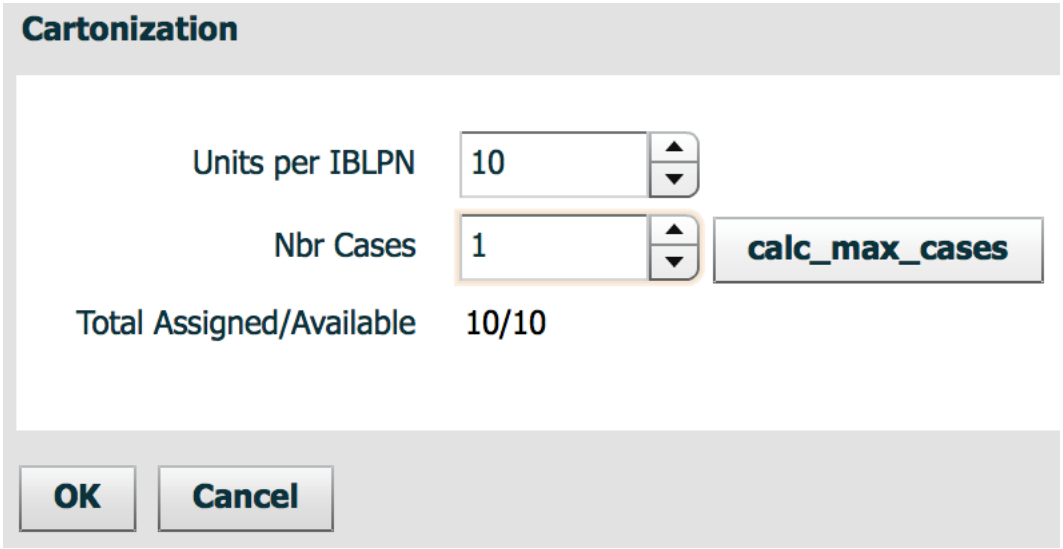
1. To display open ASNs, use the search icon to search ASNs by status ‘In Transit’ or by any other relevant search criteria.




2. Once the ASNs records are displayed, select the ASN record being received, and click on the ASN details button (). The ASN details will display the items and quantities that are included in that ASN record.
3. Select the ASN details that will be cartonized and click “Cartonize.”




4. In the pop-up screen, in the field ‘Units per IBLPN’, enter the quantity for the pallet or full case received for the selected detail. In the ‘Nbr Cases’ field, enter the number of pallets or full cases received with the same quantity. If there is only one pallet or one full case received with the specified quantity, enter ‘1’ in the ‘Nbr Cases’ field.

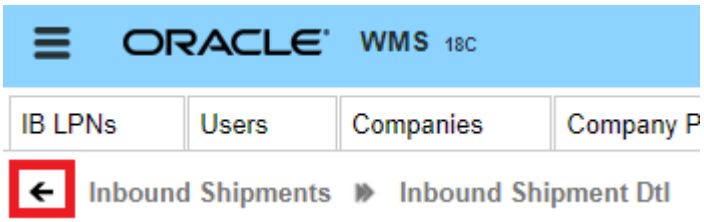



5. After you press OK, Oracle WMS Cloud creates a record for each LPN that is cartonized. Note that the system uses an internal sequence counter for the LPNs.

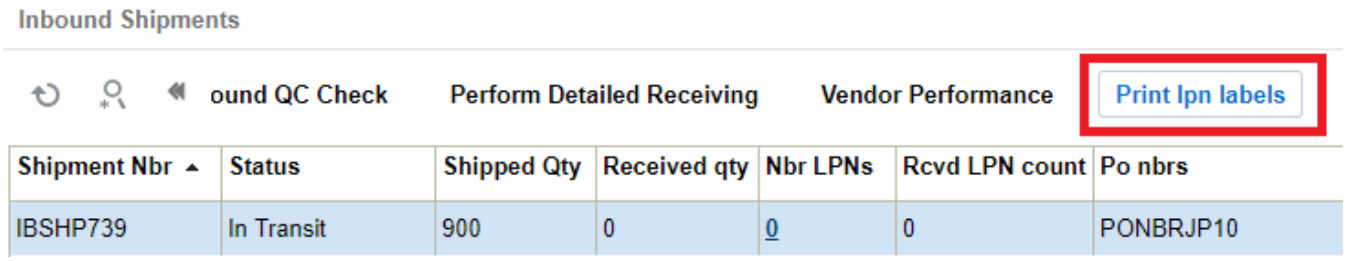
> **Note:** To change this sequence counter format, go to the "Sequence Counters" screen and modify the record that has the "Counter Description" = "Blind LPNs".

## ASN Header

1. Once all ASN details are cartonized, go back to the 'ASN Header' screen by clicking on the 'Back' button.




2. To print the cartonized LPN labels, select the ASN and click on "Print LPN Labels".




# Pre-Receiving – Cartonizing based on Standard Case Quantity

Oracle WMS Cloud also provides the ability to cartonize based on the standard case quantity of the item found on the item master. In order to cartonize based off this value, follow the steps below.

1. Go to the "Inbound Shipment" screen.
2. Select the ASN that will be cartonized based off of the standard case quantity, and click on the ASN detail button.


3. Assign LPNs to ASN details for each pallet or full case by selecting an ASN details by clicking on the "Cartonize Std Case" button.
4. Oracle WMS Cloud will then cartonize the ASN detail line selected based off of the standard case quantity found in the item master.

**Example:**

| Item | Description | Shipped Qty | Received qty | LPN Nbr |
|---|---|---|---|---|
| THK5 | THK ITEM 5 | 25 | 0 | |

Suppose an ASN Detail contains a shipment for Item THK5, quantity 25. In the Item Master, THK5 has the "Standard Case Quantity" defined as 5.

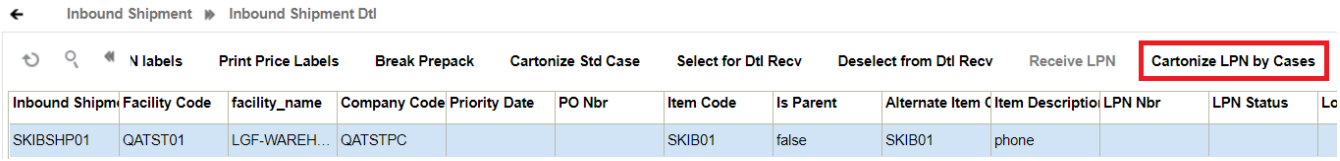
Clicking the "Cartonize Std Case" button will generate 5 LPNs of 5 units each:

| Item | Description | Shipped Qty | Received qty | LPN Nbr |
|---|---|---|---|---|
| THK5 | THK ITEM 5 | 5 | 0 | CSTHK00001217 |
| THK5 | THK ITEM 5 | 5 | 0 | CSTHK00001216 |
| THK5 | THK ITEM 5 | 5 | 0 | CSTHK00001215 |
| THK5 | THK ITEM 5 | 5 | 0 | CSTHK00001214 |
| THK5 | THK ITEM 5 | 5 | 0 | CSTHK00001213 |

# Cartonizing LPN by Cases

Oracle WMS Cloud allows you to cartonize LPNs based on cases for the item found on the item master. In order to cartonize LPN by cases, do the following:

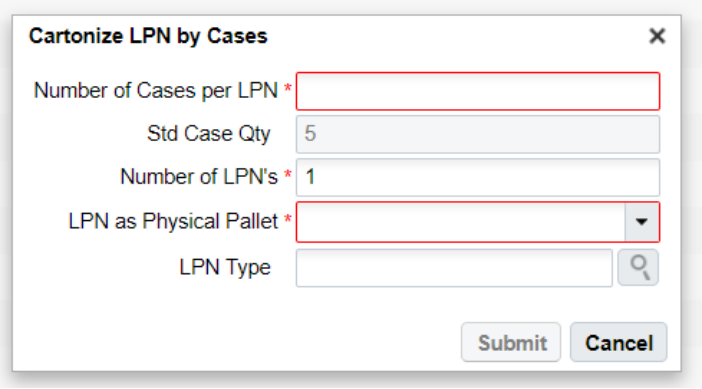
1. From the "Inbound Shipment" screen, select the IB Shipment from which you want to cartonize the LPN.
2. Click Details. The Inbound Shipment Detail page opens.




3. Select the shipment details and click the "Cartonize LPN by Cases" button.

> **Note:** By default, the Group permission is disabled for user roles with SUPERVISOR, GUARD, EMPLOYEE, and MANAGEMENT to perform action cartonizing. Therefore, users performing this action should be assigned to a group that has the "IB Shipment / Can Cartonize" permission check enabled for that group. Otherwise, the action button is disabled.

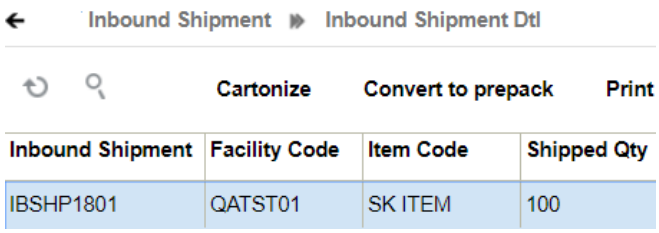
4. A pop-up window "Cartonize LPN by Cases" is displayed for you to specify the quantity for the items to be cartonized by cases in each LPN.




5. After you enter the quantity, click **Submit**. Once you submit, the "Cartonization successful" message displays.

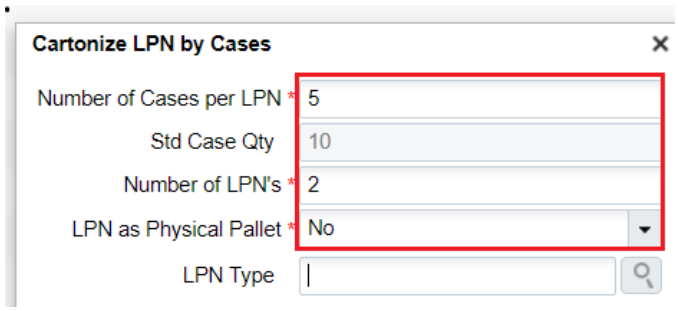
| Field Parameter | Description |
|---|---|
| Number of Cases per LPN | Enter the number of cases you want to be cartonized per LPN. |
| Std Case Qty | Displays the Standard Case Quantity defined at the master level for an item. |
| Number of LPNs | Enter the number of LPNs. |
| LPN as Physical Pallet | Click the drop-down box to select either one of the following options:<br>o Yes: Consider an LPN as a Physical Pallet<br>o No: Do Not consider an LPN as a Physical Pallet |
| LPN Type | Select an appropriate LPN Type. |

**Example:**

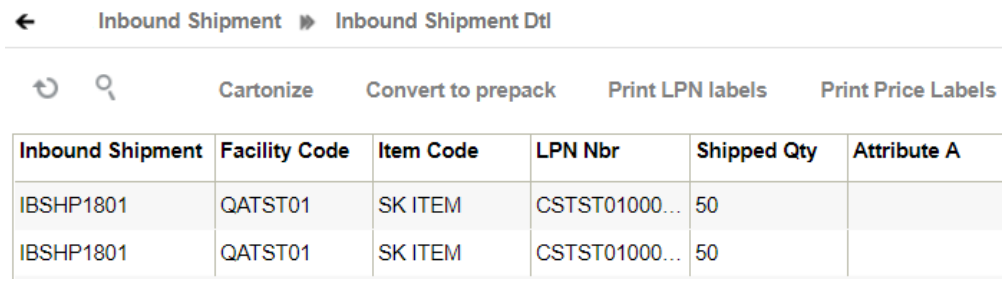



Suppose an IB Shipment Detail contains a shipment for Item **SK ITEM**, quantity 100. In the Item Master, SK ITEM has the "Standard Case Quantity" defined as 10.

Click the "Cartonize LPN by Cases" button and the system prompts you to define cases per LPN as shown in the figure below:




The system calculates the number of cases to be cartonized per LPN against the Standard Case Quantity and displays the following:




| Inbound Shipment | Facility Code | Item Code | LPN Nbr | Shipped Qty | Attribute A |
|---|---|---|---|---|---|
| IBSHP1801 | QATST01 | SK ITEM | CSTST01000... | 50 | |
| IBSHP1801 | QATST01 | SK ITEM | CSTST01000... | 50 | |

The system creates two LPNs that have a Shipped Quantity of 50 for SK ITEM.

# Pre-Receiving – Consolidating multiple ASN details into a single LPN

You can use the “Cartonize” button to consolidate multiple ASN detail records for the same item into a single LPN number.

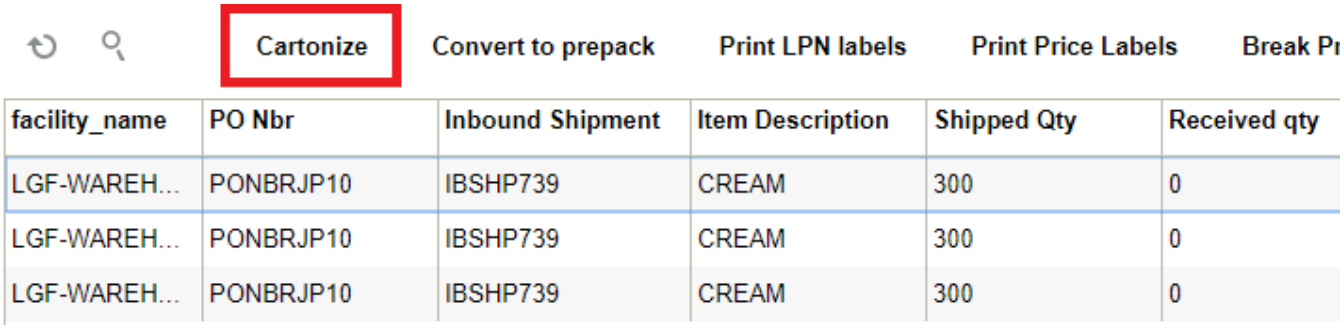
Consider the example below, which contains three ASN details for the same item.



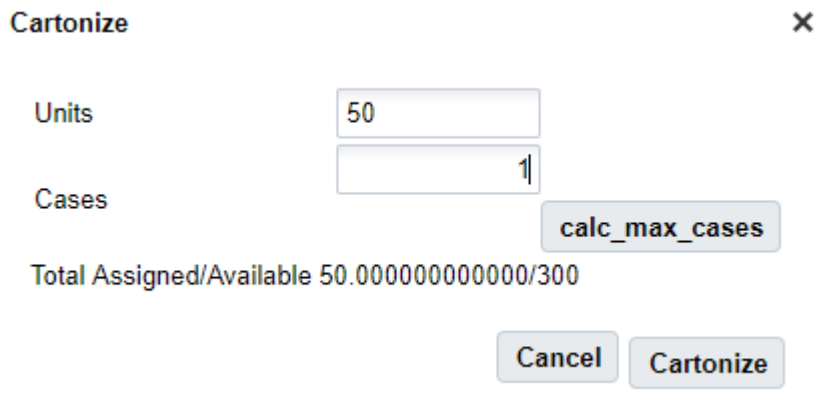

| facility_name | PO Nbr | Inbound Shipment | Item Description | Shipped Qty | Received qty |
|---|---|---|---|---|---|
| LGF-WAREH... | PONBRJP10 | IBSHP739 | CREAM | 300 | 0 |
| LGF-WAREH... | PONBRJP10 | IBSHP739 | CREAM | 300 | 0 |
| LGF-WAREH... | PONBRJP10 | IBSHP739 | CREAM | 300 | 0 |

Suppose you want to generate one LPN number and assign them to all three records.

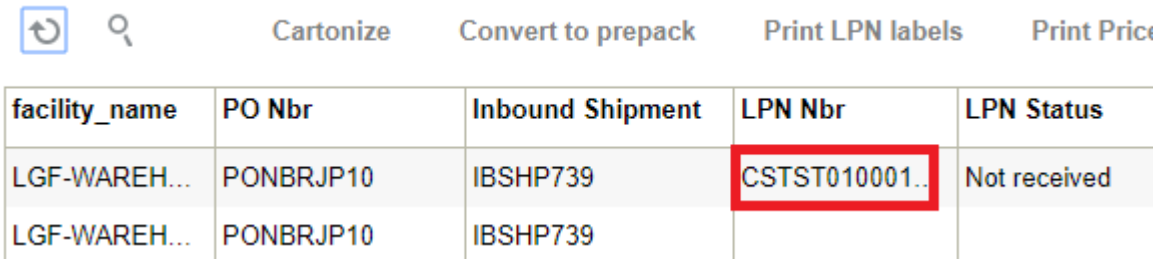
1. Select **one** of the ASN details for that Item click “Cartonize”.



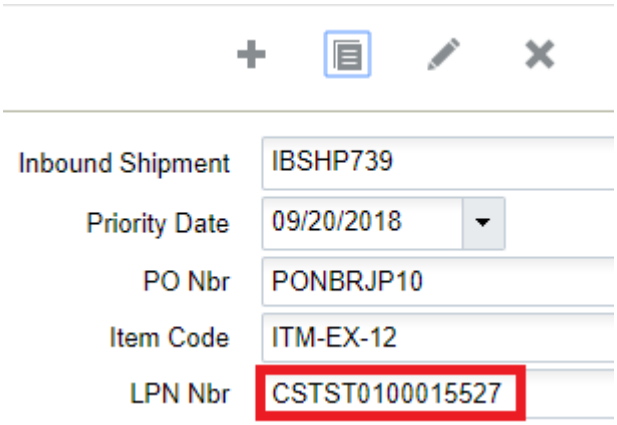

2. In the pop-up screen, in the ‘Units’, enter the quantity of that ASN detail (in this case 50). In the ‘Nbr Cases’ field, enter ‘1’.




Doing so will generate an LPN number for the selected record.




3. Now you must assign this LPN to the remaining records. Copy (Ctrl+C) the LPN that was generated and select the next ASN record. Click Edit ().
4. Paste (Ctrl+V) the LPN to the “LPN Nbr” field.

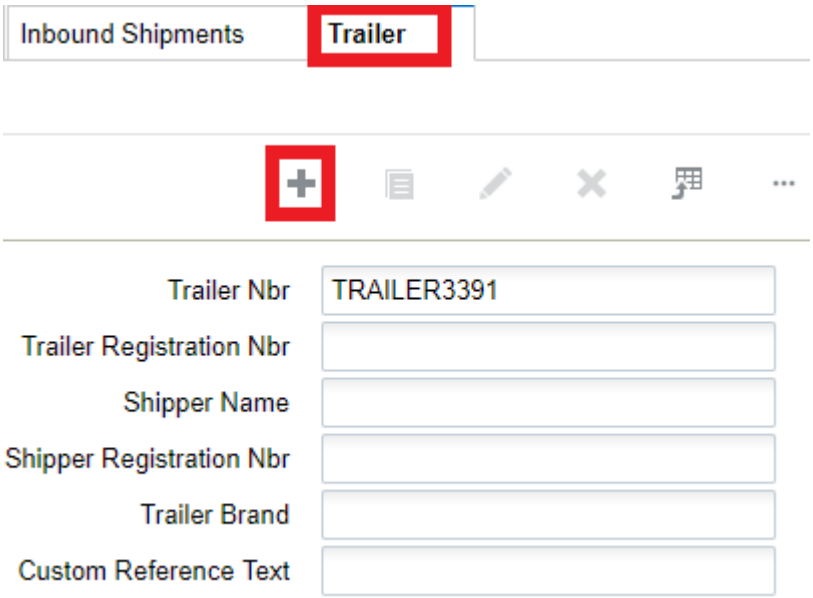



5. Click “Save” and repeat for the remaining records that need to be consolidated.

# Trailer UI

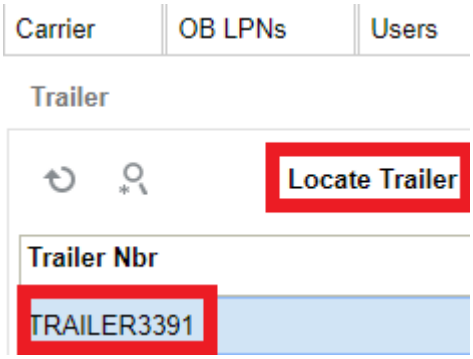
The Trailer UI allows you to define information associated with the trailer, such as associated orders. The Trailer UI also allows you to locate trailers to the yard.

To add a trailer, go to the Trailer UI and click Create ().

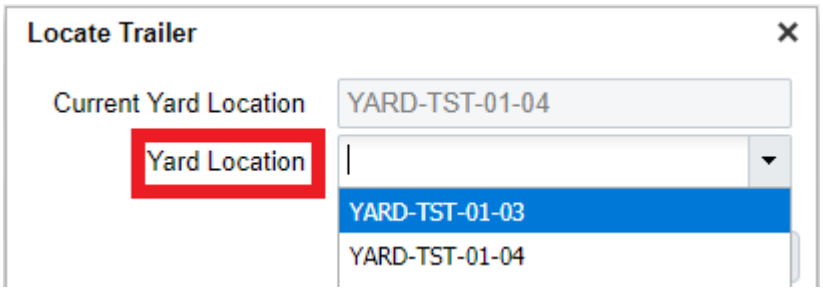



You can add custom reference text for the trailer if needed.

To Locate a trailer to the yard, from the Trailer UI, select the Trailer Nbr and click the **Locate Trailer** button.




Once you click Locate Trailer, the following dialogue opens. The current Yard Location will be populated if there is an existing yard location for the trailer. From the Yard Location drop-down, you can select a new yard location.



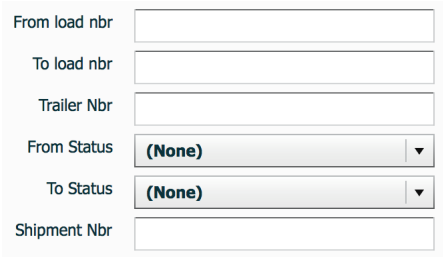

The Locate Trailer button allows you to locate trailers from the Trailer UI, Appointment UI, IB Load, and OB Load screens.

**Note:** When you try to locate a trailer to the yard location where the current number of trailers is equal to the max units for the selected yard location, the message "Capacity not available in Yard Location selected" displays.

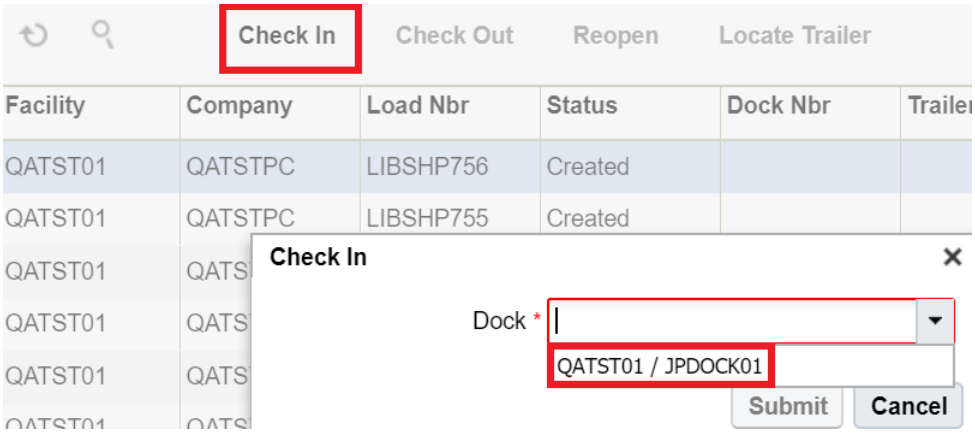
# Checking in a Load

A load number is automatically generated for all ASNs. This value will be stored in the 'Load' field in the 'ASNs' UI screen. Inbound Loads are assigned to the dock door for receiving.

1. Go to the "IB Loads" screen, and look for the Load Number of the ASN being received. You can use the magnifying glass () to filter by shipment number.




2. Select the load being received and check it in to a dock: Click on the drop-down menu next to 'Check In' button, and select the Dock Number. Click on 'Check In' to check in the load to the selected load.



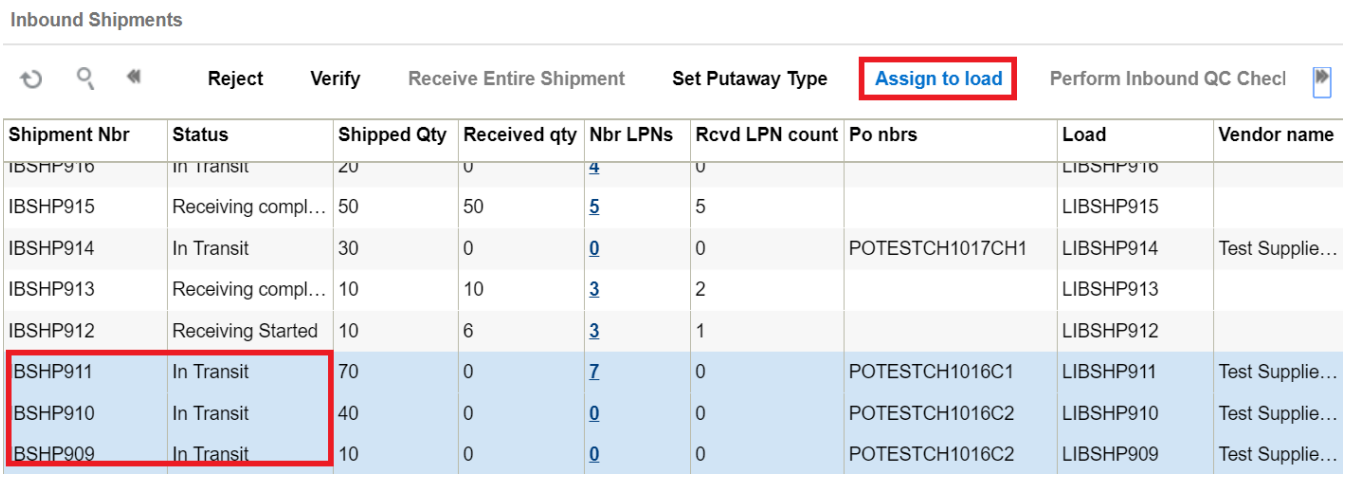

After user checks in a Load, the system will update the dock location on trailer.

# Assigning Multiple ASNs to the Same Load

Oracle WMS Cloud supports the ability to receive multiple ASNs to the same load. If this is the case, the ASNs must be consolidated by Load Number.

To assign multiple ASNs to the same load, follow these steps:

1. Go to the “Inbound Shipment” screen.
2. Select the ASNs that will be consolidated by Load Number.
3. Click the “Assign to load” button.




| Shipment Nbr | Status | Shipped Qty | Received qty | Nbr LPNs | Rcvd LPN count | Po nbrs | Load | Vendor name |
|---|---|---|---|---|---|---|---|---|
| IBSHP916 | In Transit | 20 | 0 | 4 | 0 | | LIBSHP916 | |
| IBSHP915 | Receiving compl… | 50 | 50 | 5 | 5 | | LIBSHP915 | |
| IBSHP914 | In Transit | 30 | 0 | 0 | 0 | POTESTCH1017CH1 | LIBSHP914 | Test Supplie… |
| IBSHP913 | Receiving compl… | 10 | 10 | 3 | 2 | | LIBSHP913 | |
| IBSHP912 | Receiving Started | 10 | 6 | 3 | 1 | | LIBSHP912 | |
| BSHP911 | In Transit | 70 | 0 | 7 | 0 | POTESTCH1016C1 | LIBSHP911 | Test Supplie… |
| BSHP910 | In Transit | 40 | 0 | 0 | 0 | POTESTCH1016C2 | LIBSHP910 | Test Supplie… |
| BSHP909 | In Transit | 10 | 0 | 0 | 0 | POTESTCH1016C2 | LIBSHP909 | Test Supplie… |

4. Populate the Load number the ASNs will be modified to in the “Load Nbr” field. Click “OK”.

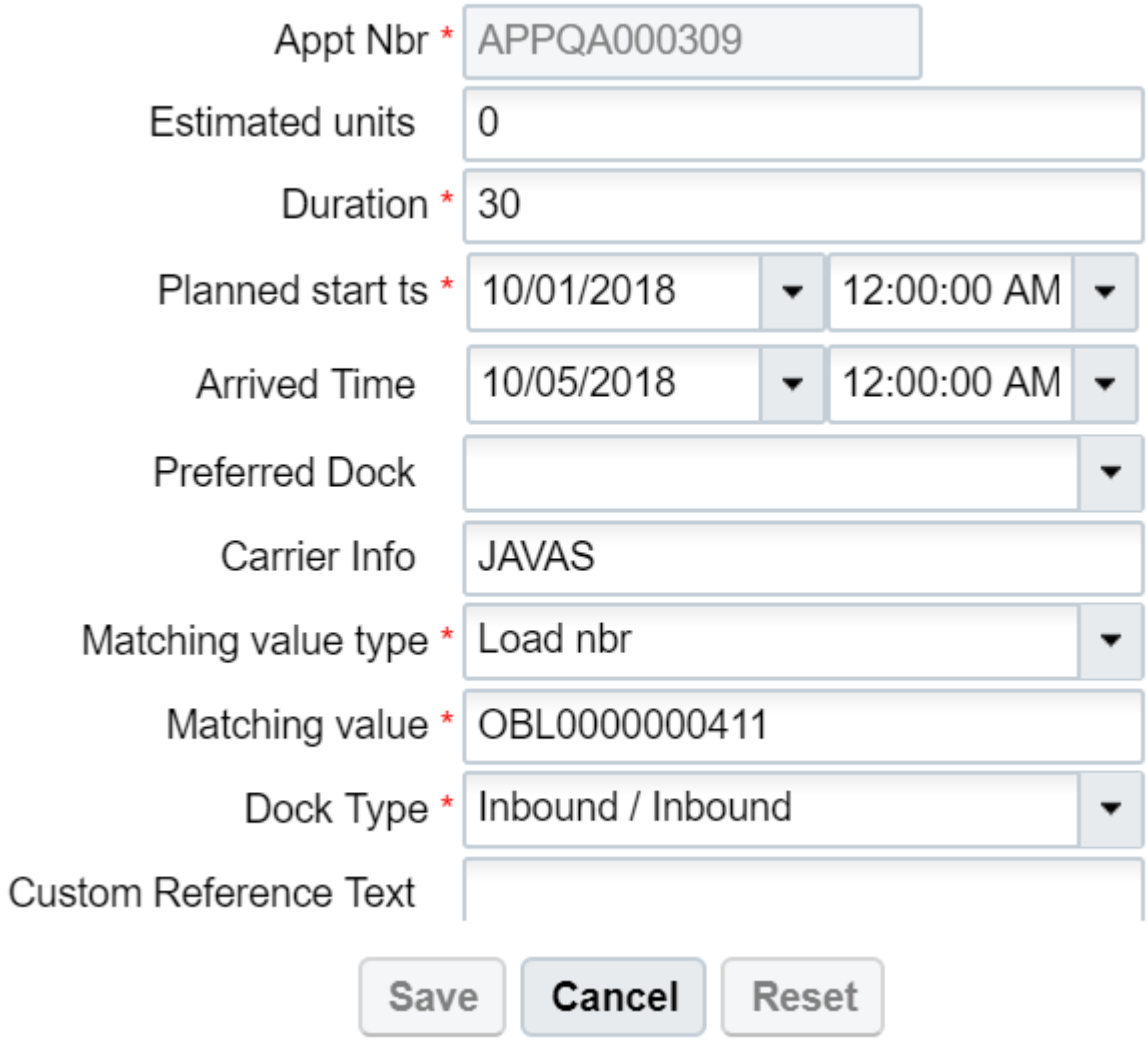
# Appointments

Users can alternatively use Appointments for receiving ASNs into Oracle WMS Cloud. Appointments are useful for tracking the time discrepancies in various metrics such as planned and actual arrival time and the lead-time from the trailer’s check-in time to the receipt of the first LPN into the system.

Additionally, Appointments are also used (instead of Inbound Loads) as a way of checking-in Loads into the Oracle WMS Cloud for receiving.

## Creating Appointments

1. Go to the “Appointment” screen.
2. Click the Create button and populate the necessary fields.

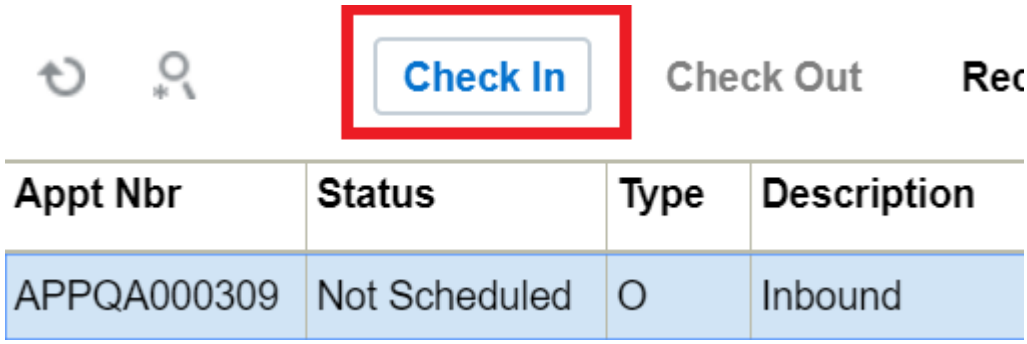



Description of fields:

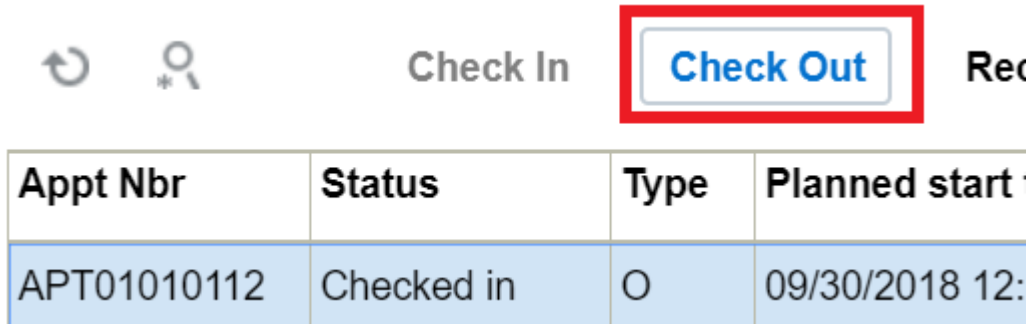
- **Appt Nbr:** Appointment Number
- **Estimated units:** The estimated units in the ASN.
- **Duration:** Estimated time taken to receive. There is no time measurement here, so it is up to the user to decide whether to use it in minutes or hours.
- **Planned start ts:** The Planned start date (and time, if specified).
- **Arrived Time:** The date and time in which the trailer actually arrived to the warehouse.
- **Preferred Dock:** The preferred Dock for receiving (not functional).
- **Carrier Info:** The trailer's carrier information.
- **Matching value type:** The preferred field used for matching the ASN with the Appointment.
- **Matching value:** The value for field specified in the previous field.**Dock Type:** The dock type that will be used for receiving.

3. Click "Save".

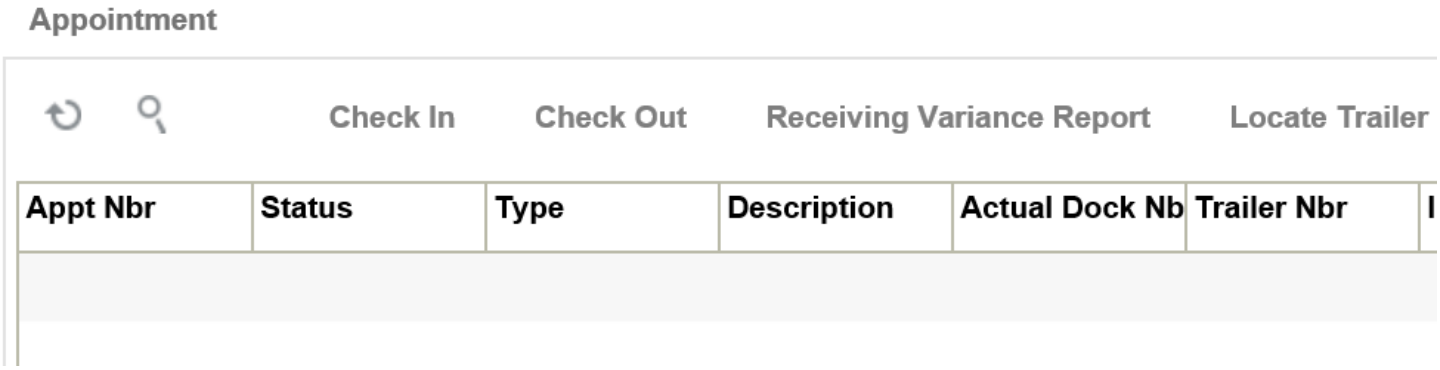
4. Once the Appointment is created, you can check-in the Appointment by selecting the record, choosing a Dock Door from the drop-down and clicking “Check In”.




5. Now the Appointment is ready for receiving. Go to the “Receive ASN” RF.
6. In the “Dock:” prompt, scan the Dock Door from step 4. Begin receiving.
7. When all the ASNs have been fully received, do not forget to check the Appointment out of the Dock Door from step 4. Go to the “Appointment” screen and click “Check Out”.




From the Appointment screen, you can perform the following Actions:




- **Check in** – Check in Appointment. Updates the dock location on the Trailer when the matching value type of the appointment is Trailer nbr, and the matching value is a trailer nbr that exist in the Trailer UI.
- **Check Out** – Check out Appointment
- **Receiving Variance Report** – Downloads the receiving variance report for this appointment

- **Locate Trailer** – Allows you to locate trailer to a yard location. This option is enabled when the matching value type of the appointment is Trailer nbr, and the matching value is a trailer nbr that exist in the Trailer UI.

# Sort and Receive

To support direct to consumer business, warehouses are adopting strategies to fulfill orders as quickly as possible. The Sort and Receive Option can help you meet the growing demands of fulfilling orders raised online by end customers.

Typically, Sort and Receive is done before Receiving and Receive and Sort (inbound sorting is done after receipt). Sort and Receive is typically used to separate contents of an LPN in a Shipment by sku, Purchase Order (PO), or some special criteria. The Sort and Receive option helps you to scan each unit of the ASN and determine how to sort the item based on Rules Configured. You can examine each item and sort it according to the configurable rules to different totes. You also get an opportunity to mark the item being received as damaged or not.

## Sort and Receive Process

Once inventory is physically unloaded, floor users sort individual skus into respective totes (Inbound LPNs) based on user-defined rules. Floor users can use the RF Option to sort and receive each individual unit of a Sku received into the warehouse. Floor users can get the advantage of receiving individual skus into separate totes simultaneously.

Let's say you want to sort and receive inventory inside your warehouse. The following are the high-level steps you should follow:

1. First, the Warehouse receives a sku level ASN from the host system or the Warehouse creates it in Oracle WMS Cloud.
2. The warehouse gets ready to Sort and Receive Inventory.
3. Use the RF Sort and Receive option to receive skus into different totes.
4. Scan the Receiving Station, shipment, and SKU.
5. If system is unable to figure out the appropriate shipment detail or if there is an ambiguity, the system prompts for Inventory Attributes, Batch Number or Expiry date to figure out the appropriate detail.
6. Sort and Receive Rules are triggered to find the appropriate tote the SKU Needs to be placed into.
7. If there is no tote available, create a new Tote/Inbound LPN.
8. If there is a tote available, the system prompts for the tote.
9. For the tote, the current inventory goes up by 1.
10. Note: The inventory is fulfilled in a LPN based on the Break rule you create.
11. Once the tote becomes full, end the tote and status of the Inbound LPN goes to "Received", Inventory History Records are sent.

# UI Sort and Receive

The Sort and Receive module is available via UI and RF. The Sort and Receive Config (SortReceiveHdrView) header provides you an ability to outline the pattern in which you want to sort and receive the SKU in your warehouse.

## Sort and Receive Rule Header

The Sort and Receive Configuration screen allows you to create criteria columns for each Receiving Station:

**Note:** you can create, edit, or delete Sort and Receive rules. Options to Add/Edit/Delete are available based on your group permissions for the screen. To view or enable, go to **Group Configuration** UI > Click **Permissions** to view/ enable the available permissions for Sort and Receive and to set group permissions.

When you click **Create**, the following screen displays:

| Fields | Description |
|---|---|
| Receive Station | Enter the receiving station from where you want bring the items from. |
| Criteria 1* | Define the rule by selecting from the drop-down box. |
| Criteria 2 | You can define an additional criteria by selecting from the drop-down box. |
| Condition | NON_EMPTY_FIRST: Value configured in the criteria field 1. If the value is blank then try to match the value from criteria field 2 next to get to corresponding Tote. |
| | MATCH_EITHER: Value from criteria field 1 or value from criteria field 2 is verified to get a corresponding Tote. If either one of the column value matches then the corresponding Tote is fetched |
| | MATCH_ALL[s1] : Value from criteria field 1 column and value from criteria field 2 is matched to get a corresponding Tote or Inbound Container. |
| Break Rule | Select the Break rule from the drop-down box. For more information, See Sort Break Rule section. |
| Close LPN Location | Enter the drop location to where you want to locate your items to. |

## Receiving Station Location Type

When you Sort and Receive, usually there will be sort stations with totes. You can configure the sort stations in the application as locations. The Location Type “Receiving Station” allows you to differentiate these locations from others. When you create or edit a Location from the Locations UI, you will see **Receiving Station** as an existing Location Type option.

## Configure Sort Criteria

For every Receiving Station, you can configure the sort criteria to determine the tote being sorted into. If Receive Sort Rules are not configured, then Sort and Receive will not be able to determine the tote, and placing the scanned item into the tote becomes user directed.

Sort and Receive allows you to configure two candidate columns (criteria fields) from the Inbound Shipment detail along with the Break Rule. You can configure both the criteria fields or the first criteria field. If both the criteria fields are configured, while determining the inbound tote, the system looks into the first criteria field for matching against the appropriate Inbound Shipment detail. If a match is found then the appropriate tote is picked, if not then the second criteria value is matched. If both the criteria fields are configured the intention is not to match both the fields together.

## Sort Break Rule

The Sort Break Rule screen allows you to configure break values for closing the totes. Totes that you are sorting to will have capacity in terms of weight/volume or number of units. For a tote, if the associated break criteria value is reached, you will be prompted to end the tote. The following section details how to configure a Sort Break Rule. It isn’t mandatory

to configure a Sort Break Rule. If a Sort Break Rule isn't configured, the system does not do any validations for closing the tote. You will have to end the tote manually through the RF Program.

Some of the typical columns exposed for configuring the Break Rules are based on the tote's weight, volume, number of distinct skus, or number of orders.

You can configure as many Break Rules as you like.

## Sort Break Rule Header

The **Break Rules** screen allows you to create break rules and associate the rule details with the criteria you specify.

Figure 4: Sort Break Rule Header

For an individual rule, you can configure more than one of the above columns. While doing Sort and Receive if any one of the thresholds are reached, the system prompts you to close the tote.

1. Go to Sort and Receive UI > Click **Break Rules**
2. Click (**+**) to create a new rules

| Fields | Description |
|---|---|
| Break Rule | Displays the name of the rule |
| Criteria | Select the type of criteria:<br>• Weight<br>• Volumn<br>• Sum(curr_qty)<br>• Count(distinct(item_ID))<br>• Count(distinct(cust_field_1)) |
| Value | Define the value for the selected criteria. |

In the following example, the Break Rules detail screen shows the break criteria configured based on the number of distinct items (2), weight (200), and current quantity (5.)

Figure 5: Sort Break Rule Detail

In the above example, if the Inbound Tote that is getting sorted reaches a weight of 200 or the count of distinct itemsreaches 2 or the sum of the current quantity is 5. Next, You are prompted to close the tote. If multiple attributes are configured and any one of the break criteria is met, the Inbound Tote being sorted will be closed or prompted to close.

# RF Sort and Receive

The RF Module for Sort and Receive is 'rf.inbound.cwrfsortandrecv.' The following are the parameters for RF Sort and Receive:

Figure 6: RF Sort and Receive Parameters

| Parameter | Parameter Choice | Description |
|---|---|---|
| qty-entry-mode | None\|Sku Scan\|Sku Qty | **When the parameter is set to 'SKU Qty'**, users are required to scan SKU and quantity to sort and receive<br><br>**When the parameter is set to 'SKU Scan' or none,** users need to scan the SKU alone, which in turn sorts whole inventory of the scanned SKU into a tote.<br><br>**Default value**- Blank (acts as Sku Scan) |
| scan-shipment-load | None\|Scan Load\|Scan Shipment | This parameter allows you to scan the shipment number or the Load number depending on whether they want to receive by shipment or the Load.<br><br>**Default value-** Blank ( acts as Scan Shipment)<br><br>**When the parameter is set to 'Scan Shipment' or none**,you need to scan the shipment number in order to proceed with the Sort & Receive transaction.<br><br>**When the parameter is set to 'Scan Load'**, you need to scan the Load number before scanning the SKU code |
| allow-inv-exp-override | None\|Allow Inventory Expiry Check Override | This parameter allows you to block the receiving of expired LPNs.<br><br>**When the parameter is set to 'Allow Inventory Expiry Check Override'**,the system allows you to receive LPNs with expired inventories within the product life days.<br><br>**When the parameter is set to none**, the system will not allow you to receive expired inventories.<br><br>**Default Value:** Blank |
| allow-rem-exp-override | None\|Allow % Remaining Expiry Check Override | **When configured to 'Allow % Remaining Expiry Check Override'** , inbound SKUs with an expiry date earlier than inventory already present in the warehouse for the same SKU can be received.<br><br>**When not configured(blank value)**, inbound SKUs with an expiry date prior to inventory already present in the warehouse for the same SKU cannot be received.<br><br>**Default Value**: Blank |
| capture-date-type | None\|Prompt for expiry date\|Prompt for manufacture date | For lot controlled inventory, this parameter determines if the RF prompts for the |

| Parameter | Parameter Choice | Description |
|---|---|---|
| | | manufacture date or the expiry date. Accurate Product Shelf Life data is required for manufacture date (Active only for Items managed with Expiry Date).<br><br>**Default value-** Blank |

Use the RF to scan the sku in the ASN and the system will run the sortation rules and take you to one of the receiving stations based on whichever rule fires. Next, you can put the sku into an existing LPN or open a new LPN. As soon as the break condition is reached, the LPN will be ended and received. Then a new LPN can be scanned.

The initial RF Sort and Receive screen looks like [NJ1] the following:

Figure 7: RF Sort and Receive

If the SKU is a batch or Expiry tracked item, the RF Sort and Receive prompts for the batch number and expiry date:

Figure 8: RF Sort and Receive

When you select a Sort and Receive rule for the pack station, you can drill down to see the matching values populated for the criteria fields selected and the corresponding tote present for each unique combination of the criteria fields. When you close the tote records, the corresponding tote will be deleted.

Figure 9: Sort and Receive Rule Details

When you are performing sort and receive on Receive Station “RS-09-09-09” and the scanned sku corresponds to the Inbound Shipment detail whose Criteria 1 value is “Item barcode” then the system puts the SKU to existing or new LPN “RVSPLPN01”. If you scan a sku that corresponds to Inbound Shipment detail where there is no matching record, the system prompts for a new LPN. Once you confirm the sku to a new tote or LPN, a new record displays for the scanned tote against the Pack Station.

# Receiving

There are two main types of receiving in Oracle WMS Cloud:

- Receive by ASN (RF-Text: *Recv {lpn} Shipment*)
- Receive by Load (RF-Text: *Recv {lpn} Load*)

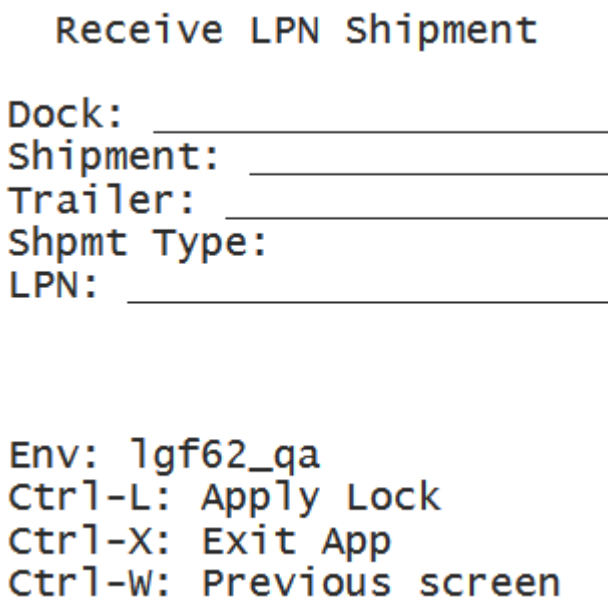
*Related Topics*

- Receive by ASN
- Receive by Load

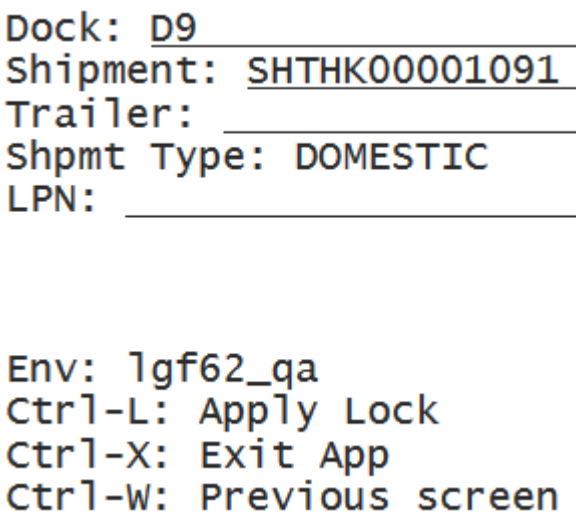
## Receive by ASN

The first type of receiving is an RF module that prompts the user to scan the ASN. To add this RF option, go to “Screen Configuration”, click the Create button and select “**RF-Text: *Recv {lpn} Shipment”.*** Add a name for your screen name.

1. Go to the “Receive LPN Shipment” RF module.




2. If the ASN's Load Number is checked into a dock, scan the dock number. Otherwise, skip the "Dock" field by pressing Tab.
   a. If the Dock is scanned, the system will automatically populate the ASN in that dock.
   b. If the trailer number is included in the ASN record, it will automatically be populated.
   c. If this field is blank, skip it by pressing Tab.




3. Scan the LPN that will be received.
   a. If this is a smart LPN (ASN is cartonized), the system will recognize the LPN's contents and display a message. Press Ctrl-A to proceed.

```
LPN contents Proceed ?
Shipment Type: DOMESTIC
SKU THK2 Qty: 50

Ctrl-A: Accept
Ctrl-W: Do not accept
```

b. If this is a blind LPN, the system will prompt the user to scan the Item and quantity.

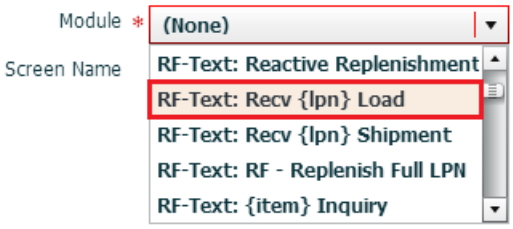
```
Shipment: SHTHK00001091
Trailer:
LPN: LPN1120_02
SKU: _____
Qty: _____



Env: lgf62_qa
Ctrl-E: End LPN
Ctrl-L: Apply Lock
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

When all of the LPN's contents have been scanned, press Ctrl-E to close the LPN. In the IBLPN screen, this LPN is created in "Located" status.

In scenarios where your supplier does not send Advanced Shipment Notifications (ASNs) when shipping inventory to your warehouses, you can configure the RF Receiving LPN Shipment transaction and set the screen parameter mode to: blind receiving. The Blind Receiving mode allows you to receive inventory, and it will not prompt you to scan a PO nor ASN to initialize receiving. This mode will just prompt you to scan a blind LPN.

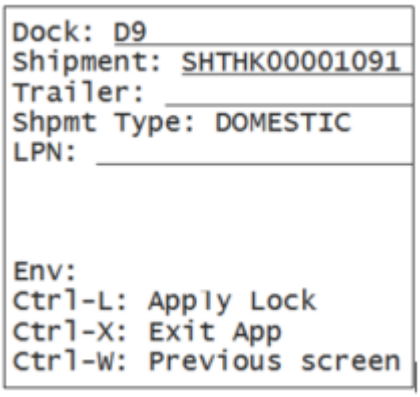
## Receive by Load

The alternative method is receiving through Loads. You can use this option for scenarios where a Load has multiple ASNs. To add this RF option, go to the "Screen Configurations" screen, click the Create button () and select "RF-Text: Recv {lpn} Load":

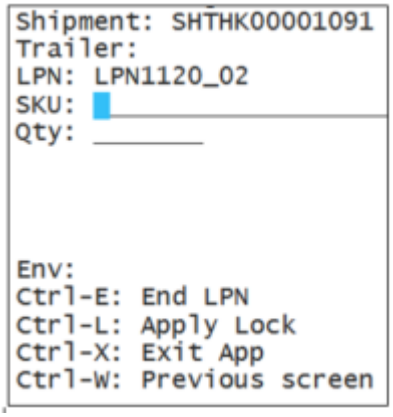



## RF receiving process

1. Go to the “Receive LPN Load” RF module.
2. If the ASN’s Load Number is checked into a dock, scan the dock number. Otherwise, skip the “Dock” field by pressing Tab.
3. If the Dock is scanned, the system will automatically populate the ASN in that dock.
4. If the trailer number is included in the ASN record, it will automatically be populated. If this field is blank, skip it by pressing Tab.




5. Scan the LPN that will be received.
6. If this is a smart LPN (ASN is cartonized), the system will recognize the LPN’s contents and display a message. Press Ctrl-A to proceed.
7. If this is a blind LPN, the system will prompt the user to scan the Item and quantity.




8. When all of the LPN’s contents have been scanned, press Ctrl-E to close the LPN.
9. Select the ASN number to receive this LPN to.

```
Shipments:
1) SH00001050
2) SH00001052
```

10. Repeat steps four and five for subsequent LPNs.

# Receiving Parameters

The following section provides an overview of the Receiving parameters and their functionality.

## Receiving Shipments in Different Units of Measure

Users can receive merchandise in the following units of measure (UOM):

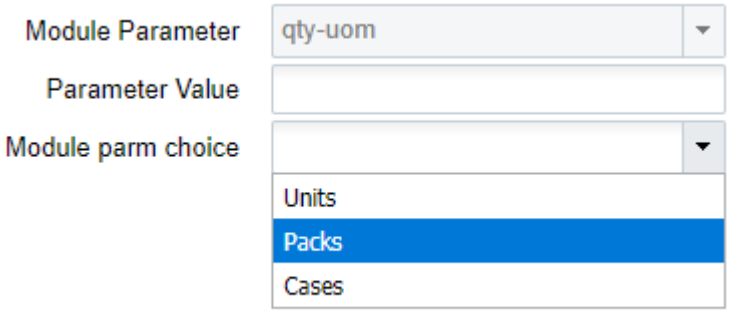
1. SKU Level Receipt (scan each)
2. Inner Pack Level Receipt (scan packs)
3. Cases Level Receipt (scan cases)
4. Pallet Receipt (palletize LPNs during receiving)

## Case Level Receipt

The receiving module can be configured to receive in multiple units of measure: cases, packs, and units.

**Configuration Steps**

1. Go to the “Screen Configurations” screen.
2. Select the RF Recv [lpn] Load and click on Details (). This will display all the parameters for this RF module.
3. Select the parameter “qty-uom” click Edit ().
4. In the “Module parm choice” drop-down menu, select the desired UOM.




### Receiving

1. Go to the RF module that was configured for cases or packs receipt.
2. Scan the Dock and LPN to begin receiving.

```
Shipment: SHTHK00001092
Trailer:
LPN: LPN1120_03
SKU: THK6
Pack Qty: 5
Qty: (pk=1)
```

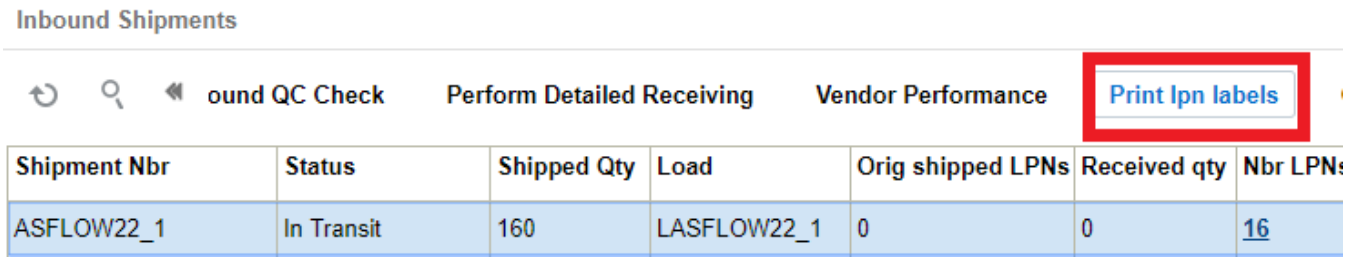
3. Scan the item. In the “Qty:” field, input the amount in terms of the configured UOM. Depending on which UOM you have chosen the standard case or pack quantity will be displayed above the “Qty:” field. This allows the user to compare the physical case/pack quantity against the systemic standard before receiving. In this case, inputting “1” will result in receiving five units of Item “THK5”.

> **Note:** The “Standard Case Quantity” or “Standard Pack Quantity” for this Item must be defined in the Item Master.

## Receiving for Cartonized Shipments

Oracle WMS Cloud also allows ‘smart receiving’, which is when LPNs are defined in the ASN prior to receipt:

1. Go to the “Inbound Shipments” screen.
2. Select the ASN and click on “Print LPN Labels”. This will print all the cartonized LPNs in the ASN.




3. Enter the RF module for receiving.
4. Scan the LPN; the system will recognize the LPN’s contents and ask the user to confirm its contents. Press Ctrl-A to proceed.

```
LPN contents Proceed ?
Shipment Type: DOMESTIC
SKU THK2 Qty: 50

Ctrl-A: Accept
Ctrl-W: Do not accept
```

## Receiving unanticipated LPNs for Fully Cartonized Shipments

You can scan an LPN, (that is different from the anticipated LPN) while receiving through RF Recv by Shipment. When you scan an unanticipated LPN, Oracle WMS Cloud displays a warning message “**Shipment detail doesnot have this LPN listed**.” You can accept the message if you want to proceed receiving with the unanticipated LPN. You have the flexibility to set the customized message as an error, warning, or disable the message.

**Note:** If your shipment type is set to Populated with Over Receipt error is either blank 0% or greater than 0% and Receive sku not on the shipment is set to yes and the entered quantity is more than the (total shipped quantity / total received quantity) for the SKU, you will get an error message, and you will not be able to receive this LPN as part of this shipment.

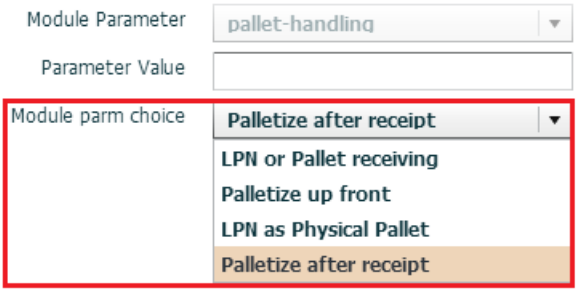
## Configuration for Palletization during Receipt

For receiving flows with palletization, the receiving RF module must be configured appropriately. There are four types of palletization during receipt:

- LPN or Pallet level receiving
- Palletize up front (before scanning LPN)
- Palletize at end (after scanning LPN)
- Receive LPN as physical pallet (the LPN is treated as a pallet in the system)

**To Configure on the UI**

1. Go to the “Screen Configuration” screen.
2. Select the receiving RF module (rf.inbound.cwrfrecvlpnshpmt) click on Details ().
3. This will open a window with all the RF module’s parameters. Select parameter pallet-handling and click Edit ().
4. Click on the “Module parm choice” drop-down menu and select the appropriate palletization mode.




## Update LPNs to QC Status

The screen parameter ‘consider-mark-for-qc-flg’, allows you to perform quality check-related operations from the IB Shipments screen. In order to receive inventory that has been mark for quality control using the Received Entire Shipment functionality, you need to have ‘consider-mark-for-qc-flg’ set to yes. You can set this parameter from Screen Configuration -> IB Shipment View. If the parameter is set to no, receiving the entire shipment will fail.

When ***consider-mark-for-qc-flg*** is set to 'Yes', the system exhibits the following:

- The ***‘Receive Entire shipment’*** action button will mark the LPN status as ‘Quality Check’ if the shipment details has quality check as ‘Yes’.

A corresponding IHT activity 72 gets generated for each detail present in an LPN on the Inventory History when an LPN has a ‘Quality Check’ status.

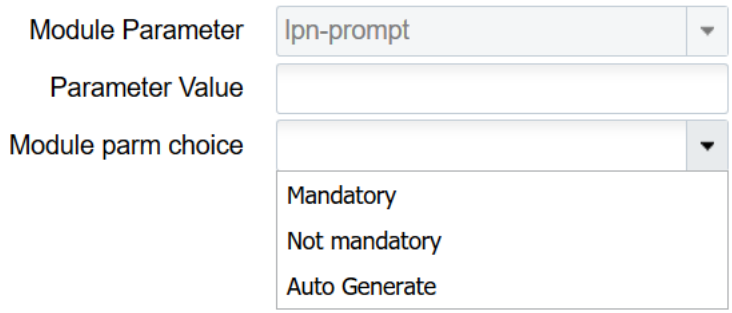
**Note:** This functionality only works when the IB shipment detail is marked for QC. This functionality only works in the RF.

# Auto Generate Inbound LPN Nbr

The receiving modules ***Receive by Load*** and ***Receive by Shipment*** can be configured to auto generate Inbound LPN Nbrs for blind LPN receiving.

## Configuration Steps

1. Go to the “Screen Configurations” tab.
2. Select the RF receiving module and click on Details (). This will display all the parameters for the selected RF module.
3. Select the “lpn-prompt” parameter. Click Edit ( )
4. From the “Module parm choice” drop-down, select the desired option.




You can configure the “lpn-prompt” screen parameter with one of the following options:

- **Mandatory**: LPN prompt is displayed and you have to be enter/scan an LPN Nbr while receiving blind LPNs.
- **Not mandatory**: LPN prompt is displayed. However you have the option to either enter/scan an LPN Nbr OR tab out of the prompt without entering LPN Nbr. If an LPN Nbr is not entered, system auto generates the LPN Nbr.
- **Auto Generate**: LPN prompt is not displayed. LPN Nbr is auto generated by the system. If this parameter is not configured, system will default to the behavior described for the option **Mandatory** above.

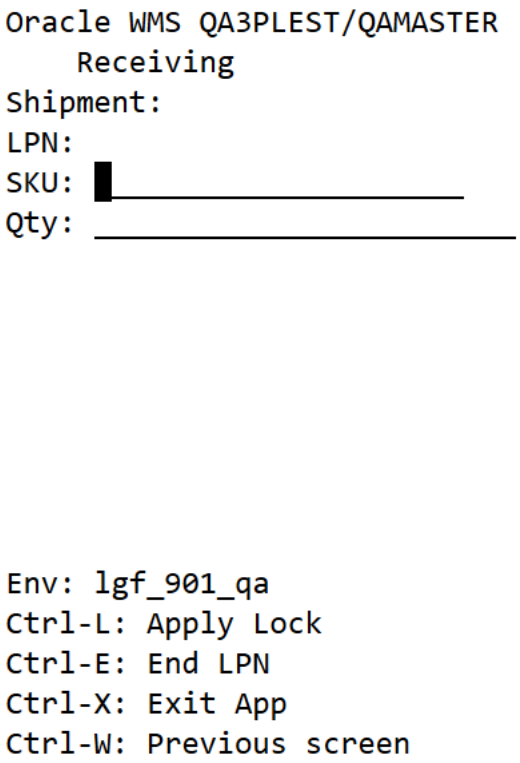
# Screen Flow when lpn-prompt is configured as Auto Generate

1. Select the RF Shipment/RF Load module which has “lpn-prompt” configured as **Auto Generate.** TheLPN Prompt is not displayed.
   a. When “lpn-prompt” is configured as **Auto Generate**, it is mandatory to enter the Shipment Nbr/Load Nbr.
   b. If the shipment’s load is checked in to a dock door, then the dock door can be entered. Once the dock door is entered, the Shipment Nbr on that dock is automatically populated.
   c. If the screen parameter “pallet-handling” is configured as **Palletize upfront**, then scan/confirm the pallet nbr. The system takes you to the next screen.
2. On the next screen, the system prompts for SKU and Qty. The LPN field remains blank.

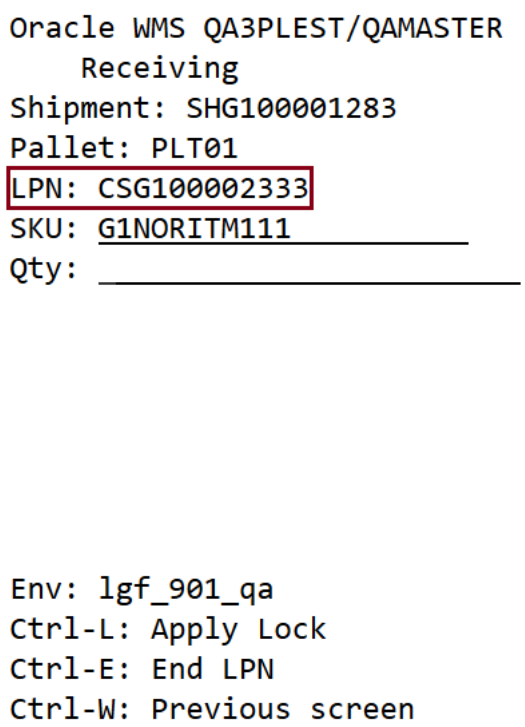
```
Oracle WMS QA3PLEST/QAMASTER
    Receiving
Shipment: SHMSTRG00001020
LPN:
SKU: _____________________
Qty: ________________________
```

```
Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-E: End LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

a. When “lpn-prompt” is configured as **Auto Generate** and “mode” is configured as **Blind ASN Receiving**, the system brings you to this screen when it invokes the RF Shipment/RF Load option. The first screen is not displayed. Note the blank Shipment field in the screenshot below:




3. Once you scan the first SKU, the system generates an LPN Number based on the BLIND_LPN_NBR sequence counter. The auto generated LPN Nbr is displayed on the screen until the LPN is ended. If the screen parameter “mode” is set to **by-sku-qty,** you are prompted for qty. If “mode” is set to **by-sku-scan**, you are prompted for the next SKU to be scanned.




4. When the LPN is completed, an alert message with the auto generated LPN Nbr is displayed. This message can be enabled/disabled in the message configuration view.
    a. If the screen parameter “single sku management” is configured as **assume single sku/restrict multi sku** and “mode” is configured as **by-sku-qty**, then LPN is automatically ended after entering the first SKU and qty
    b. If the screen parameter “single sku management” is configured as **assume single sku/restrict multi sku** and “mode” is configured as **by-sku-scan**, then LPN is automatically ended after entering the first SKU.
    c. If the screen parameter “single sku management” is not set, **ctrl+E** is used to end LPN after receiving all the SKUs into the LPN.
    d. If the screen parameter “pallet-handling” is configured as **Palletize after receipt**, then you are prompted for a pallet nbr after LPN is ended. In this case the alert message is displayed after entering the pallet nbr.
5. After ending an LPN, the screen remains on the SKU prompt. In order to scan a new shipment/Load, you have to press Ctrl+W to return back to Shipment/Load prompt screen.

**Note:** If the screen parameter “pallet-handling” is configured as **LPN or Pallet receiving**, then the LPN Prompt will be displayed even if “lpn-prompt” is configured as **Auto Generate.**

# Screen Flow when lpn-prompt is Configured as Not Mandatory

1. Select the RF Shipment/RF Load option which has “lpn-prompt” configured as **Not Mandatory.** TheLPN Prompt is displayed.

```
Oracle WMS QA3PLEST/QAMASTER
    RecvShpmnt NotManLPN

Dock: _____________________
Shipment: _____________________
Trailer: _____________________
Shpmt Type:
LPN: _____________________




Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

2. When “lpn-prompt” is configured as **Not Mandatory**, it is mandatory to enter the Shipment Nbr/Load Nbr.
    a. If the shipment’s load is checked in to a dock door, enter the dock door. This will automatically populate the Shipment Nbr on that dock.
3. After you enter the Shipment/Load Nbr, you can choose to scan the LPN Nbr or skip it. On the next screen, the system prompts for SKU and Qty. If the LPN was scanned on screen 1, it is displayed on this screen. Otherwise the LPN field remains blank.

```
Oracle WMS QA3PLEST/QAMASTER
    Receiving
Shipment: SHMSTRG00001020
LPN:
SKU: _____________________
Qty: _________________________
```

```
Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-E: End LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

4. After scanning the first SKU, the system generates an LPN Number based on the sequence counter BLIND_LPN_NBR, if the LPN Nbr was not scanned on the first screen.
    a. If the LPN is scanned on screen 1 and if the screen parameter “pallet-handling” is configured as **LPN or Pallet receiving**, then the system assumes that an LPN is being received and generates an LPN Number based on sequence counter BLIND_LPN_NBR.

# Behavior of Ctrl+E when lpn-prompt is Configured as Auto Generate

In the RF Shipment/RF Load modules, when the screen parameter “lpn-prompt” is configured as **Auto Generate** and “pallet-handling” is configured as **Palletize up front**, the Ctrl+E key on the SKU scan screen assumes different roles as described below:

1. On the first screen, after entering the inbound shipment and pallet nbr, you are taken to the SKU scan screen.

```
Oracle WMS QA3PLEST/QAMASTER
   RecvShpmnt AutoGenLPN

Dock: _____________________
Shipment: _____________________
Trailer: _____________________
Shpmt Type:
Plt:_____________________

Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-E: End Pallet
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

2. On the SKU scan screen, the Ctrl-E key will activate “End Pallet”.
    - If you hit Ctrl-E, the system displays the message “End pallet <plt nbr>?”

      If you accept the message, the system ends the pallet and takes you back to the first screen and prompts you for a Pallet.
    - If you scan a SKU, an LPN nbr will be auto-generated. The Ctrl-E control key is now displayed as End LPN.

```
Oracle WMS QA3PLEST/QAMASTER
    Receiving
Shipment: SHG100001279
Pallet: PLT01
LPN: CSG100002317
SKU: G1ITM201
Qty:
```

```
Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-E: End LPN
Ctrl-W: Previous screen
```

- If you press Ctrl-E, the system displays the message “Nothing to receive.”
- If you enter the quantity, press tab/enter and then Ctrl-E, to end the LPN. The LPN field is now blank and Ctrl-E is displayed as End Pallet.

In general, in the SKU prompt screen if the pallet number is populated and the LPN is blank, then Ctrl-E is displayed as End Pallet. If the pallet number is populated and LPN is populated, then Ctrl-E is displayed as End LPN.

# Prompt for Batch, Expiry, Inventory Attributes, and Serial Numbers

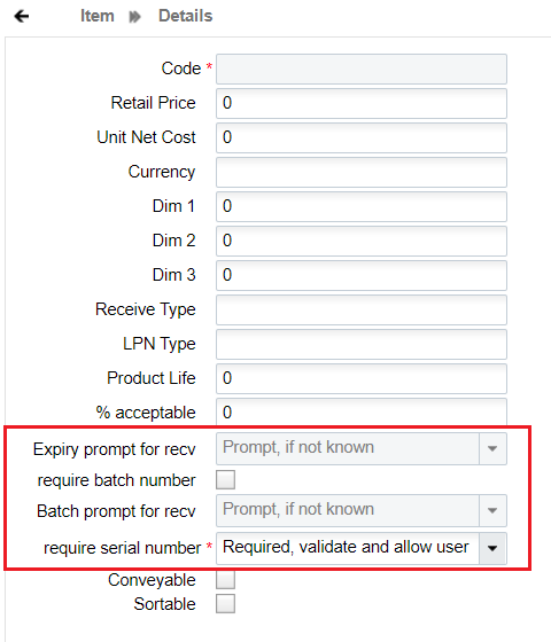
You can configure prompting of Batch number and Expiry date prompt during receiving, if present on the Shipment detail. These configurations are also available at **Item level** UI where you can define batch or expiry date prompt even if it is mentioned in the shipment detail.

You can also control prompt for multiple batch/expiry/attribute/serial numbers for all the details present in a non-cartonized and cartonized ASN type configurations.

## Item Level Configuration

An item level configuration provides you with an option for prompting the batch/expiry prompt, even if the batch/expiry is present on the shipment detail. You can also override the batch number/ expiry date during receiving, if shipment detail is defined with batch number & expiry date based on the prompt behavior.

You can define the Item level configuration provided via **Item Details** UI and **Item Interface** Input File.



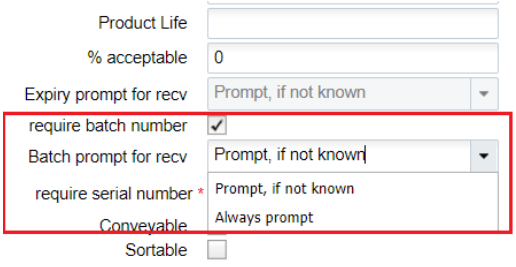

The batch/expiry prompt during receiving configuration is supported via **RF Receive lpn Shipment** (rf.inbound.cwrfrecvlpnshpmt) & **RF Receive lpn load** (rf.inbound.cwrfrecvlpnload) screen.

> **Note:** By default, the "Batch prompt for recv " and "Expiry prompt for recv " fields are set to "**Prompt, if not known**" value for all the existing and new items. These configurations are applicable only for batch/expiry tracked items. For all the non-batch/expiry tracked items, these fields are disabled.

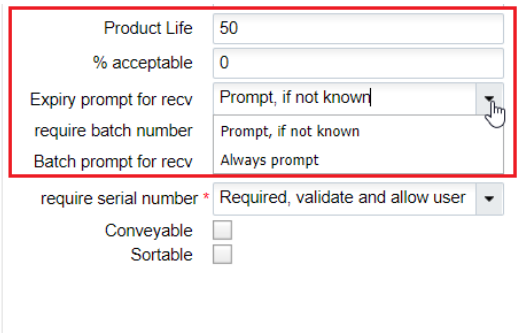
## Item Configuration via Item Detail UI

Two drop-down fields are introduced on the **Item Detail** UI. By default, these fields are disabled.

- To enable and configure **Batch prompt for recv**",
  - Go to **Item** UI > **Details**.
  - Click **Edit** . Check "**require batch number**" flag for "**Batch prompt for recv**" to enable.




- To enable and configure "**Expiry prompt for recv**",
  - Go to **Item UI** > **Details**.
  - Click **Edit** and enter the "**Product life**" with a non-zero value for "**Expiry prompt for recv** to enable.




These new fields have the following values:

- **Prompt, if not known**: Prompts for batch number/expiry date only if the system cannot determine the batch/expiry/attribute from the ASN detail.
- **Always prompt**: Prompts for the batch number/ expiry dates even if the details are present on the shipment details.

> **Note:** By default, the **"Batch prompt for recv"** and **"Expiry prompt for recv"** drop down is set to "**Prompt, if not known"** value for all the batch/expiry.

## Item Interface Configuration via Interface

In the interface file, go to the following two columns:

- "**batch_handling_receiving**" – Prompt, if not known (1), Always prompt(2)
- "**expiry_handling_receiving**" – Prompt, if not known (1), Always prompt(2)

| DI | DJ |
|---|---|
| **batch_handling_receiving** | **expiry_handling_receiving** |
| 1 | 1 |

> **Note:**

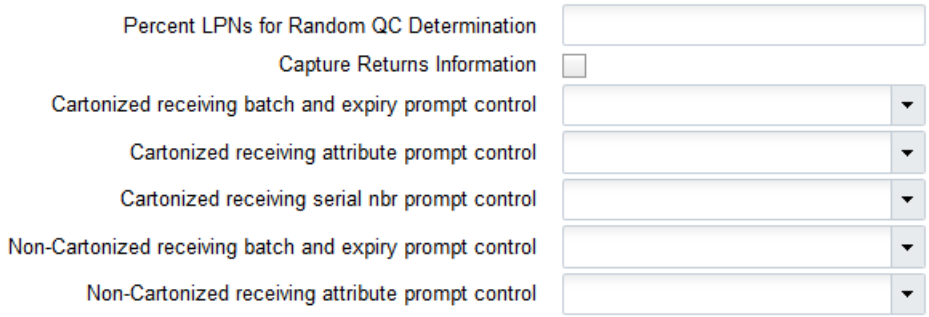
- Specify value **1** for Prompt, if not known and value **2** for Always prompt in the interface file.
- The system supports only numeric value.
- By default, the **"batch_handling_receiving"** and **"expiry_handling_receiving"** drop down is set to 1 **('Prompt, if not known)** for batch/expiry and non-batch/non-expiry tracked items.
  - > **Note:** On providing any numeric value other than 1 or 2 for the batch_handling_receiving" and "expiry_handling_receiving, the system defaults the value to 1 (Prompt, if not known) behavior.
  - > **Note:** If these columns are blank for a non-batch/expiry tracked item, the system assume the default value as 1 (**Prompt, if not known**). However, this behavior will not impact the Non batch/expiry tracked SKUs.
- These columns support Excel, PSV, XML (Input interface & Init stage interface) format.

## Introducing Shipment Type Configuration

You can configure the prompt control behavior for Batch number, Expiry date, Inventory attribute, and Serial numbers (for cartonized) at the individual shipment type level for cartonized and non-cartonized ASNs via on the **Shipment type** UI.

However, these configurations are applicable only for batch/expiry/inventory attribute/serial number tracked items. Non-batch/expiry/inventory attribute/serial number tracked items are not affected by the shipment type flags.

> **Note:** ASN type configurations take precedence over item detail UI level configurations. For Cartonized receiving to prompt, users need to either set the Item level configuration for batch and expiry to Always Prompt or define the ASN type configuration "**Cartonized receiving batch and expiry prompt control** to **Always prompt**".




**Advantages of prompt control are Shipment level are:**

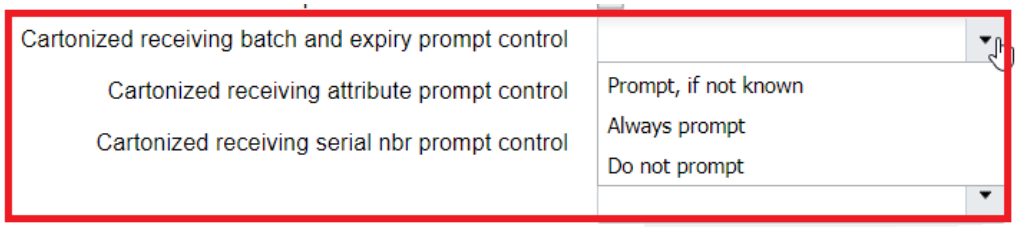
- You can configure different behavior for vendor shipment and likewise configure the transfer shipments without changing any RF screens or updating the item.
- You can define the prompts at Shipment type level flags to apply all the batch/exp/inventory attribute/serial tracked SKUs present on an IB Shipment.
- You can configure separate receiving flags for cartonized and non-cartonized ASNs to control prompt behavior at an individual receiving level.

### Configuration Fields for Cartonized ASN

You can choose whether to prompt for multiple batch/expiry/Attribute/serial for a single SKU within an LPN for a cartonized ASN via **Shipment type** UI

To configure the cartonized receiving for batch, expiry and inventory attribute prompt controls:

1. Go to **IbShipmentTypeView** screen and **Create** button.
2. Enter the shipment details and populate the desired prompt control:
3. Three drop-down fields are available on the create shipment type UI along with their values:



a. Cartonized receiving batch & expiry prompt control: Blank/ Prompt, if not known/Always prompt/ Do not prompt.
b. Cartonized receiving Attribute prompt control: Blank/Prompt, if not known/Always prompt/ Do not prompt.
c. Cartonized receiving Serial prompt control: Blank (Default behavior)/ Prompt, if not known/Always prompt/ Do not prompt.

If the field is blank, the system honors item level configuration. i.e., Prompt, if not know. However, when Cartonized Receiving for Batch number & Expiry Number /Attribute /Serial prompt control is set to Prompt, if not known or Always prompt or Do not prompt, the system does not honor any of the item property configurations for batch/expiry dates/ inventory attribute.

> **Note:** If user scans a batch number that does not match with the batch number present on the LPN (Other than blank value), then system display the message, "Batch number is not present in the LPN".

> **Note:** If a user scans an Expiry date which is not matching with the Expiry date present on the LPN (Other than blank value) then system displays the message, “Expiry date is not present in the LPN".

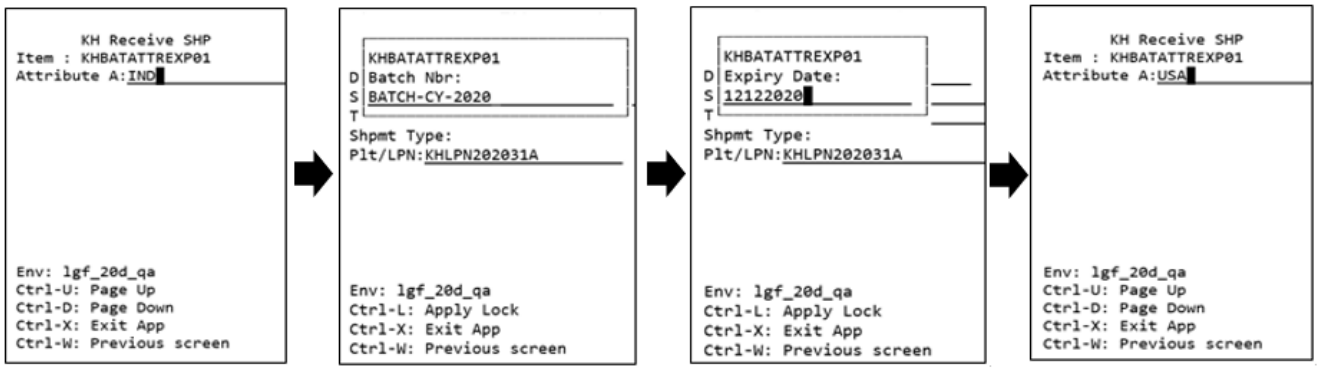
4. Click **Save**.

Example: Cartonized ASN - Screen flow for batch/expiry/inventory attribute/serial tracked SKU

In a cartonized receiving flow, the system will retain the LPN on the anticipated detail after receiving an unanticipated detail for the same SKU. In detail receiving of cartonized shipment, the system will now retail the LPN on the anticipated detail after user scans and receives an unanticipated detail (Such as batch/exp/inv attribute) form the same SKU

On receiving a cartonized shipment having multiple batch/expiry/inventory attributes for the same SKU in a single IBLPN, the system loops through each detail individually.

Let’s say, you have the following ASN:




| ASN | LPN | SKU | Shipped Qty | Received Qty | Attribute | Batch number | Expiry Date |
|---|---|---|---|---|---|---|---|
| ASN001 | LPN001 | SKU01 | 100 | 0 | IND | BATCH-CY-2020 | 12122020 |
| ASN001 | LPN001 | SKU01 | 100 | 0 | USA | BATCH-CY-2021 | 09122020 |

1. The system loops through the first detail by scanning the LPN, the inventory attribute (IND), then batch (BATCH-CY-2020), expiry date (12122020).

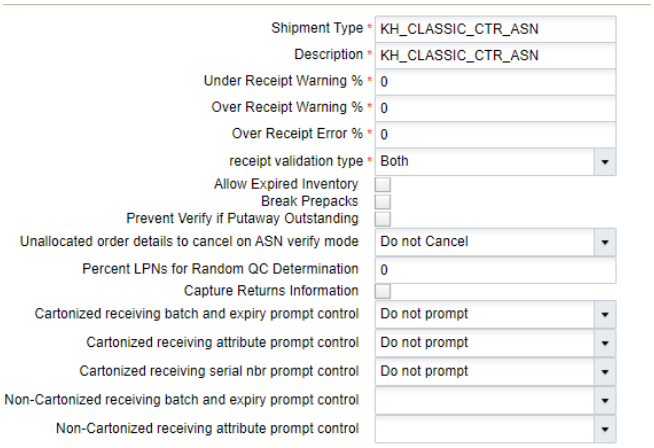
2. The system moves to the second detail (without ending LPN), scans the inventory attribute (USA), then batch (BATCH-CY-2021), expiry date (09122020).

Example: Cartonized ASN - Screen flow for batch/expiry/inventory attribute/serial tracked SKU = Do Not Prompt (Classical Cartonized)

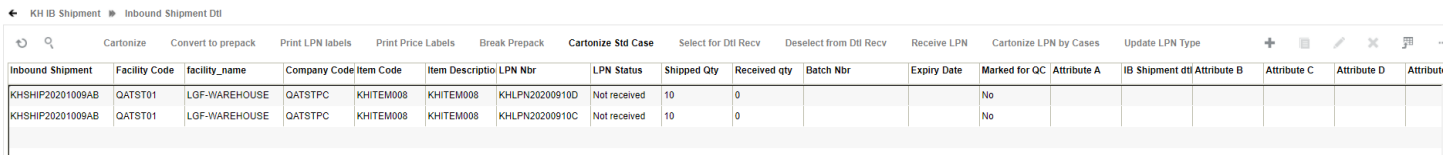
This is a classical receiving behavior and the flag is available on the Shipment type UI to restrict prompting of batch/expiry/inventory attribute/Serial for a single SKU within an LPN, but the system fetches the batch/expiry/attributes from the ASN detail, and the serial numbers are fetched from the IB shipment serial number table.

> **Note:** When configuring the shipment type to **Do Not Prompt**, users need to populate the batch, expiry date, inventory attribute, and serial numbers on the respective details. Otherwise, the system will not be able to perform RF Receiving and will prompt the users to perform detailed receiving.

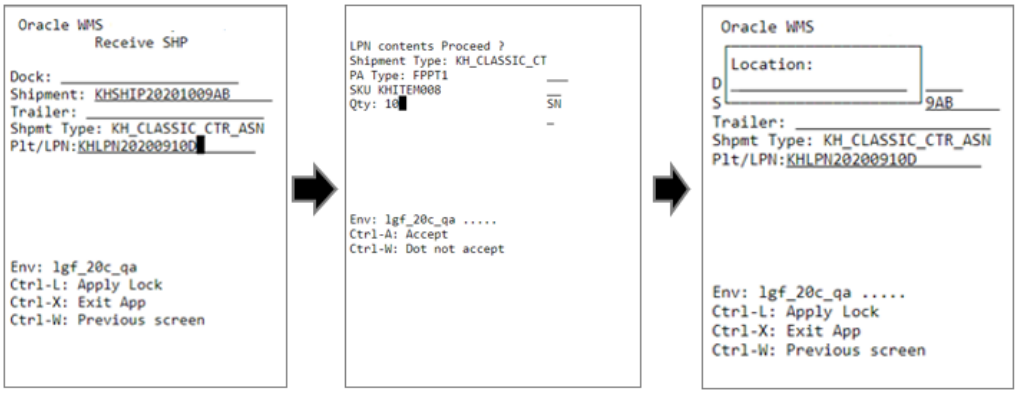
Let's say, you have the following prompt control configured:




When Cartonized ASN - Screen flow for serial tracked SKU = Do Not Prompt:

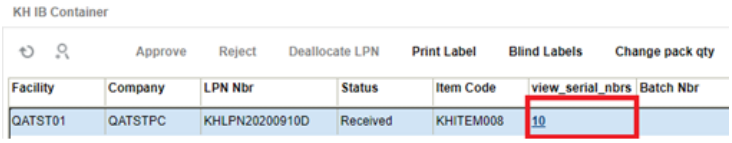



After scanning the SKU, the system doesn't prompt for serial number:

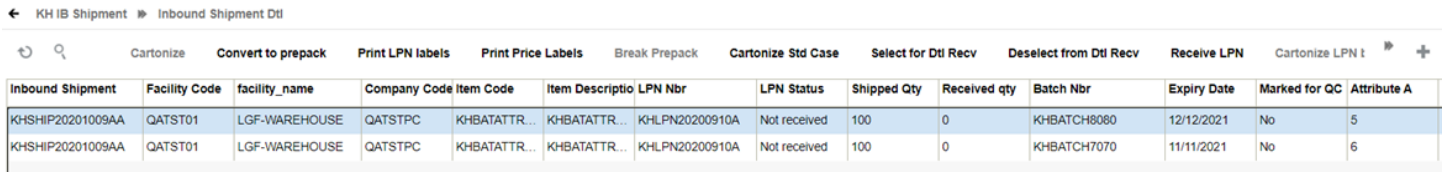




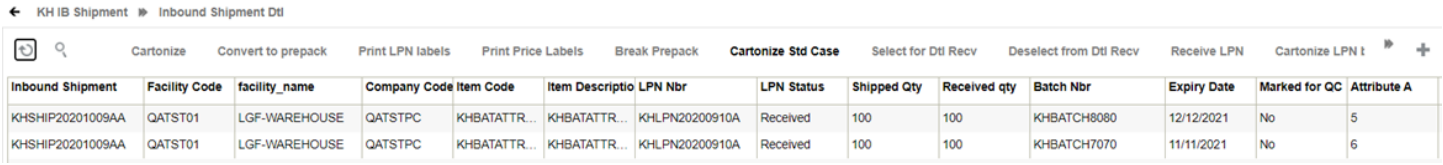
You can view the asscoiated serial number from the IB Container UI. Clock on the numbered hyperlink from the view_serial_nbs colume.




When Cartonized ASN - Screen flow for batch/expiry and inventory attribute = Do Not Prompt




After receiving, the system updates in the following manner:


KH IB Shipment » Inbound Shipment Dtl

Cartonize | Convert to prepack | Print LPN labels | Print Price Labels | Break Prepack | Cartonize Std Case | Select for Dtl Recv | Deselect from Dtl Recv | Receive LPN | Cartonize LPN t

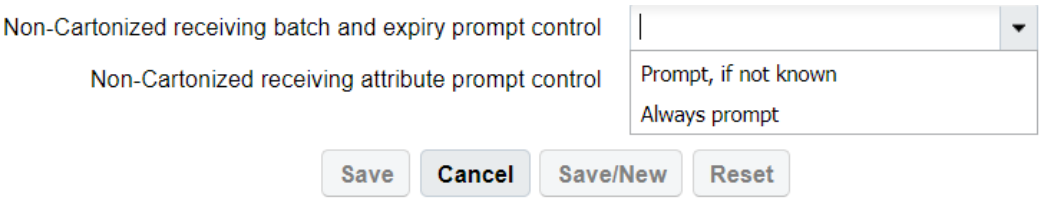
| Inbound Shipment | Facility Code | facility_name | Company Code | Item Code | Item Descriptio | LPN Nbr | LPN Status | Shipped Qty | Received qty | Batch Nbr | Expiry Date | Marked for QC | Attribute A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KHSHIP20201009AA | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTR... | KHBATATTR... | KHLPN20200910A | Received | 100 | 100 | KHBATCH8080 | 12/12/2021 | No | 5 |
| KHSHIP20201009AA | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTR... | KHBATATTR... | KHLPN20200910A | Received | 100 | 100 | KHBATCH7070 | 11/11/2021 | No | 6 |

## Configuration Fields for Non-Cartonized ASN

To configure the non-cartonized receiving for batch, expiry and inventory attribute prompt controls:

1. Go to **IbShipmentTypeView** screen and **Create** button.
2. Enter the shipment details and populate the desired prompt control:
   - Non-Cartonized receiving batch & expiry prompt control: Blank (Default behavior)/ Prompt, if not known/Always prompt.
   - Non-Cartonized receiving attribute prompt control: Blank (Default behavior)/ Prompt, if not known/ Always prompt.

   > **Note:** If the fiels is set to Blank, the system honors the item level configuration.

   
   Non-Cartonized receiving batch and expiry prompt control

   Non-Cartonized receiving attribute prompt control

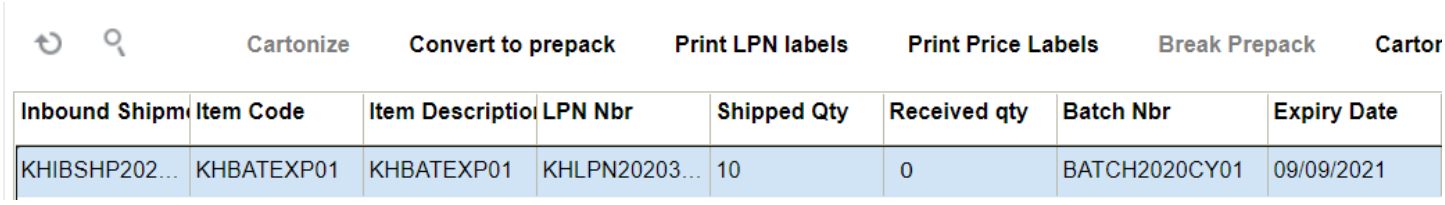
   Prompt, if not known
   Always prompt

   Save | Cancel | Save/New | Reset
3. Click **Save**.

   > **Note:** When Non-Cartonized Receiving for Batch number & Expiry Number /Attribute prompt control is set to **Prompt, if known** or **Always prompt**, the system does not honor any of the item property configurations for batch/expiry dates/ inventory attribute.

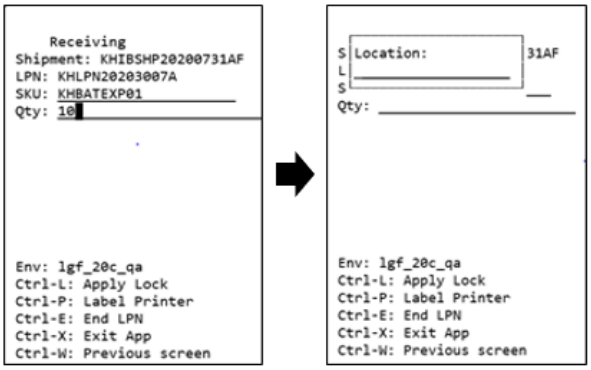
Example: Prompt for batch/expiry date for single SKU for non-cartonized shipment at Item level configuration

Let's say, you have the following ASN to be received:

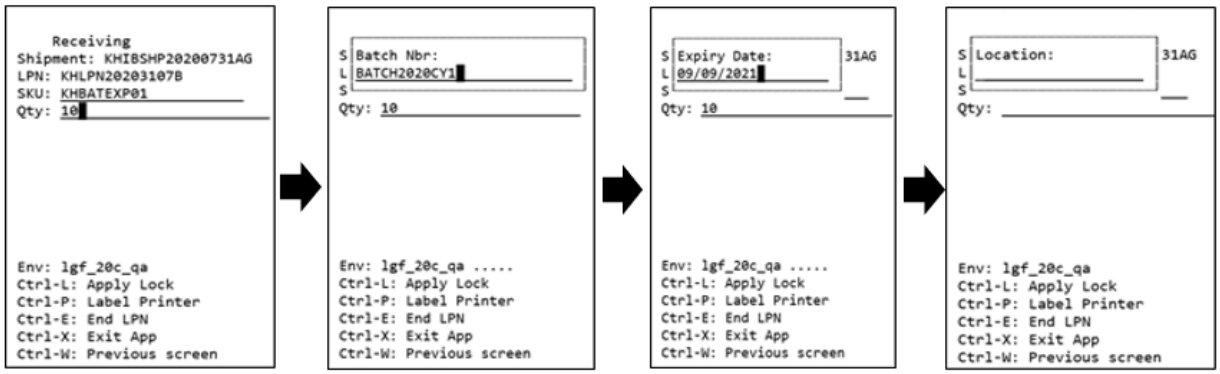

Cartonize | Convert to prepack | Print LPN labels | Print Price Labels | Break Prepack | Cartor

| Inbound Shipm | Item Code | Item Descriptio | LPN Nbr | Shipped Qty | Received qty | Batch Nbr | Expiry Date |
|---|---|---|---|---|---|---|---|
| KHIBSHP202... | KHBATEXP01 | KHBATEXP01 | KHLPN20203... | 10 | 0 | BATCH2020CY01 | 09/09/2021 |

When Non-Cartonized receiving batch/expiry date prompt control = **Prompt, if not know:**



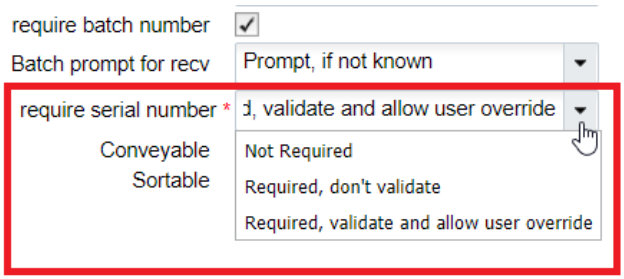

When Non-Cartonized receiving batch/expiry date prompt control= **Always prompt**




**Note:** On scanning an existing batch with batch master populated with an expiry date, the system will not prompt for Expiry date even if the expiry date prompt control is set to Always Prompt (either at item level or shipment type).

Non-Cartonized Receiving for Serial number prompt control

1. Go to **Item** UI > **Details**. Click **Edit**.
2. Enable the "**required serial number**" drop-down at item's level configuration with values:

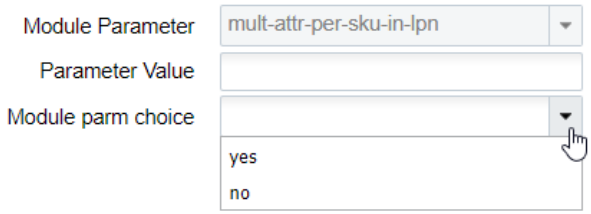



Example: Receive Multiple Inventory attribute /Batch/expiry/inventory attribute for the same SKU in a Single IBLPN for non-cartonized shipment

To allow multiple inventory attribute, you need to enable the screen parameter "**mult-attr-per-sku-in-lpn**" in the **Recv {lpn} Shipment/Recv {lpn} Load** module for the batch number/ expiry date that allows receiving inventories with different batch/expiry of the same SKU in a single/multiple IBLPN.

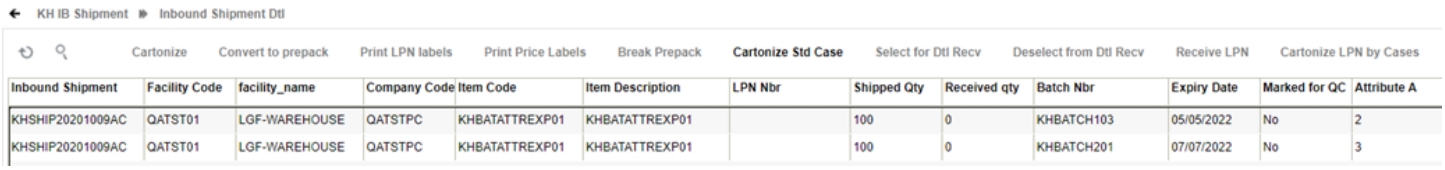
The system honors prompt configuration for batch/expiry/inventory attribute defined either at the item level or at the non-cartonized ASN type UI in conjunction with the "mult-attr-per-sku-in-lpn" field.

> **Note:** This behavior is honored only if the respective items are batch tracked or expiry tracked or both or inventory attribute tracked.




1. Go to **Module** > **Recv {lpn} Shipment/ Recv {lpn} Load**
2. Select **mult-attr-per-sku-in-lpn** and Click **Edit**.
3. Choose the parameter from the drop-down menu:
    a. mult-attr-per-sku-in-lpn = **Yes** : Allows multiple Batch/Expiry/expiry/inventory attribute of the same SKU into a single/multiple IBLPN.
    b. mult-attr-per-sku-in-lpn = **No**: Does not allow multiple Batch/Expiry into a single IBLPN (existing behavior) or during upfront palletization.
4. Click **Save**.

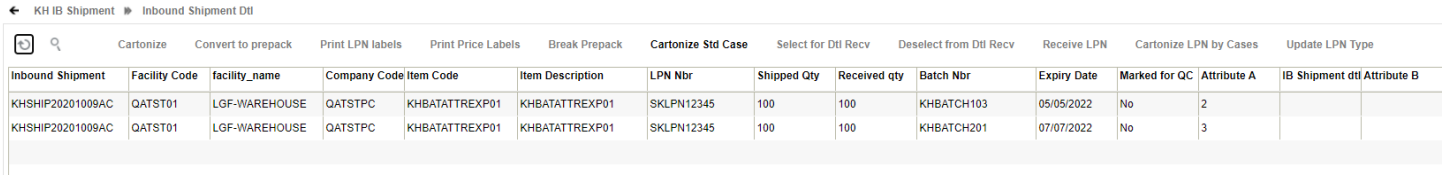
Let's say you have the following ASN configured:




| Inbound Shipment | Facility Code | facility_name | Company Code | Item Code | Item Description | LPN Nbr | Shipped Qty | Received qty | Batch Nbr | Expiry Date | Marked for QC | Attribute A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KHSHIP20201009AC | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTREXP01 | KHBATATTREXP01 | | 100 | 0 | KHBATCH103 | 05/05/2022 | No | 2 |
| KHSHIP20201009AC | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTREXP01 | KHBATATTREXP01 | | 100 | 0 | KHBATCH201 | 07/07/2022 | No | 3 |

The system scans through the SKU 1 (attribute, batch and expiry) and without ending the LPN, the system loops through remaining SKUs with the same hierarchy.

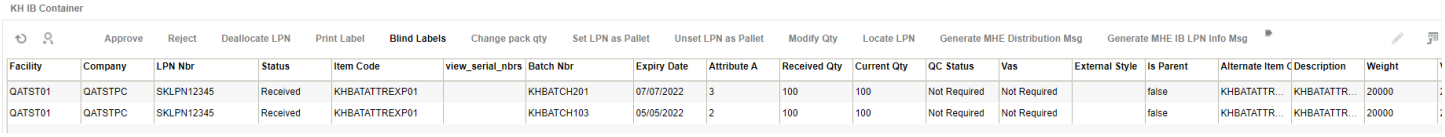

Upon scanning all the SKUs in the LPN and performing CTRL+E, the system receives the SKUS and updates the shipments details in the following manner:



KH IB Shipment » Inbound Shipment Dtl

Cartonize | Convert to prepack | Print LPN labels | Print Price Labels | Break Prepack | Cartonize Std Case | Select for Dtl Recv | Deselect from Dtl Recv | Receive LPN | Cartonize LPN by Cases | Update LPN Type

| Inbound Shipment | Facility Code | facility_name | Company Code | Item Code | Item Description | LPN Nbr | Shipped Qty | Received qty | Batch Nbr | Expiry Date | Marked for QC | Attribute A | IB Shipment dtl | Attribute B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KHSHIP20201009AC | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTREXP01 | KHBATATTREXP01 | SKLPN12345 | 100 | 100 | KHBATCH103 | 05/05/2022 | No | 2 | | |
| KHSHIP20201009AC | QATST01 | LGF-WAREHOUSE | QATSTPC | KHBATATTREXP01 | KHBATATTREXP01 | SKLPN12345 | 100 | 100 | KHBATCH201 | 07/07/2022 | No | 3 | | |



KH IB Container

Approve | Reject | Deallocate LPN | Print Label | Blind Labels | Change pack qty | Set LPN as Pallet | Unset LPN as Pallet | Modify Qty | Locate LPN | Generate MHE Distribution Msg | Generate MHE IB LPN Info Msg

| Facility | Company | LPN Nbr | Status | Item Code | view_serial_nbrs | Batch Nbr | Expiry Date | Attribute A | Received Qty | Current Qty | QC Status | Vas | External Style | Is Parent | Alternate Item C | Description | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | SKLPN12345 | Received | KHBATATTREXP01 | | KHBATCH201 | 07/07/2022 | 3 | 100 | 100 | Not Required | Not Required | | false | KHBATATTR... | KHBATATTR... | 20000 |
| QATST01 | QATSTPC | SKLPN12345 | Received | KHBATATTREXP01 | | KHBATCH103 | 05/05/2022 | 2 | 100 | 100 | Not Required | Not Required | | false | KHBATATTR... | KHBATATTR... | 20000 |

## Warning and Error Conditions

The following table depicts warning or error messages that are displayed when performing RF Receiving transaction:

| On Receiving | Warning/ Error Conditions | Warning /Error Messages |
|---|---|---|
| Non-Cartonized Shipments | On scanning a batch number /expiry date that does not match with the batch number /expiry date present on the shipment.<br><br>**Note:** These messages do not appear if the ASN detail is not populated with batch/expiry date and user scans batch/expiry for the detail. | For batch number: Batch number does not match the SKU-shipment combination"<br><br>For expiry date: “Expiry Date does not match the SKU-shipment combination"<br><br>**Note:** By default, these messages are enabled for the respective facilities. Users can disable the batch number/expiry date warning message or can configure as an error message from the Edit Facility message configuration UI. |
| Cartonized Shipment | When Cartonized Receiving for Batch number & Expiry Number /Inventory Attribute/ Serial number prompt control = **Do not Prompt**<br><br>If an SKU (batch/expiry/attribute/serial tracked) has either of the batch/expiry/attributes is missing in the ASN detail, or if the serial numbers are not available in the IB shipment serial number entity. | "The system cannot determine the %attributes% of the SKU. Please perform Detail receiving"<br><br>**Note:** The messages will be specific to the attribute that is missing. The system captures the first attribute that is missing in the sequence.<br><br>For example, if the Cartonized receiving Attribute prompt control is set to "Do not Prompt" and any of the inventory attribute detail is missing, the system should throw the "System cannot determine the inventory attributes of the SKU. Please perform DTL receiving" irrespective of the other cartonized receiving flags for batch/expiry or serial number |
| | If the Shipment type flags for Cartonized ASN have mixed prompt control properties (For example, the Batch/Expiry flag is set to "Do not Prompt", inventory attribute prompt control is set to "Always Prompt").<br><br>If the Shipment type flags for Cartonized ASN are set to Do not prompt or flags have prompt controls set to a combination other than Do not prompt, then this warning messages do not appear. | Warning Message: ASN type has some attributes set to do not prompt and some to prompt, receiving might fail". |
| | On scanning an LPN having multiple details with multiple batches/expiry/inventory attribute and serial number combination for a single SKU, and system prompts users to perform detail receiving of the particular detail in cartonized ASN. | Error message: "Multiple attr-serial number combination found on LPN for the same SKU. Please perform dtl receiving". |
| | On scanning a batch number /expiry date that does not match with the batch number /expiry date present on the LPN.<br><br>**Note:** These messages do not appear if the ASN detail is not populated with batch/expiry date and user scans batch/expiry for the detail. | "Scanned Attribute- SKU combination is not present in the LPN".<br><br>**Note:** By default, these messages are enabled for the respective facilities. Users can disable the batch number/expiry date warning message or can configure as an error message from the Edit Facility message configuration UI. |

# Scanning a new LPN in Cartonized Shipments

If all the lines of a shipment detail are cartonised, you have the option to scan or enter an LPN number that is not listed on shipment detail. This is possible in both receiving modules ***Receive By Load*** and ***Receive by Shipment*** , by configuring the “Shipment detail does not have this LPN listed” message as required:

- If the message is configured with “Enabled Flag” as **Yes** and “Auto Reject Flag” as **No**, then this message is displayed as a warning message, when you scan an LPN that is not listed on the shipment. On accepting the msg, screenflow would be similar to SKU Level receiving/detail receiving where you can continue by scanning the SKU and qty.
- If the message is configured with “Enabled Flag” as **Yes** and “Auto Reject Flag” as **Yes**, then the message is displayed as an error message. In other words, you will not be allowed to scan an LPN that is not listed on the shipment. This is also the default behavior.
- If the message is configured with “Enabled Flag” as **No**, then you will be allowed to scan an LPN that is not listed on the shipment. No message is displayed and the screenflow is similar to SKU Level receiving/detail where you can continue to scan the SKU and quantity.

In the above scenarios where you are allowed to proceed further to enter SKU and quantity, the validation of the quantity will depend on the Shipment Type and the screen parameter “rcv_sku_not_onshipment” for the RF option used:

- When the Shipment Type has “Over Receipt error = 0%” And “rcv_sku_not_onshipment” = **No**.

  If you enter qty that is more than the (total shipped quantity - total received qty) for the SKU in the shipment, WMS throws the error message "Qty exceeds over receipt error level".

  If “rcv_sku_not_onshipment” = **Yes**, then the error message is displayed for SKUs that are on the shipment.
- When the Shipment Type has “Over Receipt error = blank” And “rcv_sku_not_onshipment” = **No**.

  If you enter a quantity that is more than the (total shipped quantity - total received quantity) for the SKU in the shipment, WMS throws the error message "Cannot receive more than shipped qty for %SKU%".

  If “rcv_sku_not_onshipment” = **Yes**, then the error message is displayed for SKUs that are on the shipment.
- When the Shipment Type has “Over Receipt error > 0%” And “rcv_sku_not_onshipment” = **No**.

  If you enter a quantity that is more than the {(total shipped qty+overreceipt quantity)- total received quantity} for the SKU in the shipment, WMS throws the error message "Qty exceeds over receipt error level".

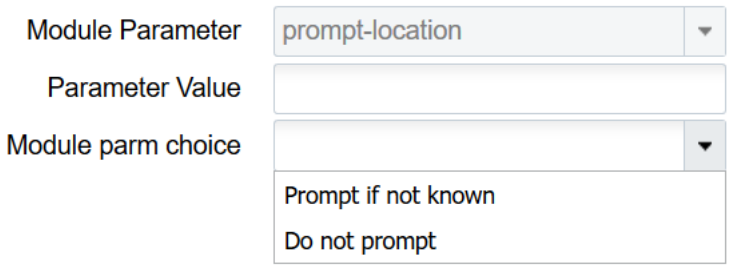
  If “rcv_sku_not_onshipment” = **Yes**, then the error message is displayed for SKUs that are on the shipment.

# Prompt Location

You can configure the receiving modules ***Receive by Load*** and ***Receive by Shipment*** to prompt for location after receiving is complete.

## Configuration Steps

1. Go to the “Screen Configurations” view.
2. Select the RF receiving module and click on Details (). This displays all the parameters for the selected RF module.
3. Select the “prompt-location” parameter. Click Edit ().
4. From the “Module parm choice” drop-down, select the desired option.




The screen parameter “prompt-location” can be configured with one of the following options:

- **Prompt if not known**: Location prompt will be displayed
- **Do not prompt**: Location prompt will not be displayed
- If this parameter is not configured, system will default to the behavior described for the option **Prompt if not known** above.

# Prompt-location screen flows

1. In the RF Receive by Shipment or RF Receive by Load modules, when you configure the screen parameter “prompt-location” as **Do not prompt**, the location prompt is not displayed after receiving is complete.
2. In the RF Receive by Shipment or RF Receive by Load modules, when the screen parameter “prompt-location” is configured as **Prompt if not known**, location prompt is displayed after receiving is complete. You can enter a reserve, active, or dock location or skip entering any location by using **Ctrl+W** or **Ctrl+X**.
   a. Location prompt is not displayed after receiving is complete:
      i. If a dock door is scanned at the beginning of receiving. Instead the LPN will be located to the scanned dock door.
      ii. If the shipment/load is associated to an appointment that has been checked into a dock. Instead the LPN will be located to the dock door where the shipment/load was checked in through appointment.
      iii. If the screen parameter “next-screen-to-launch” is configured as **rf.inbound.cwrfibsortlpn** (Inbound Sorting).
      iv. If cross dock is enabled in the receiving module, and cross dock completes successfully.
   b. After receiving an LPN, if the QC Status of LPN is Marked for QC, then location display is driven by the screen parameter “qc-handling-mode”.
      i. If the screen parameter “qc-handling-mode” is configured as **Mark for QC prompt QC locn**, the QC location prompt is displayed.
      ii. If the screen parameter “qc-handling-mode” is configured as **Mark for QC do not prompt QC locn**, the location prompt is not displayed.
   c. If you enter an active location, the system throws the error “Cannot putaway to location type A” if:

i. Flow through allocation (MHE) is enabled and flow through allocation is successful.
ii. You have received Pallet through “Palletize Upfront” or “Palletize after receipt” or “LPN or Pallet receiving.”

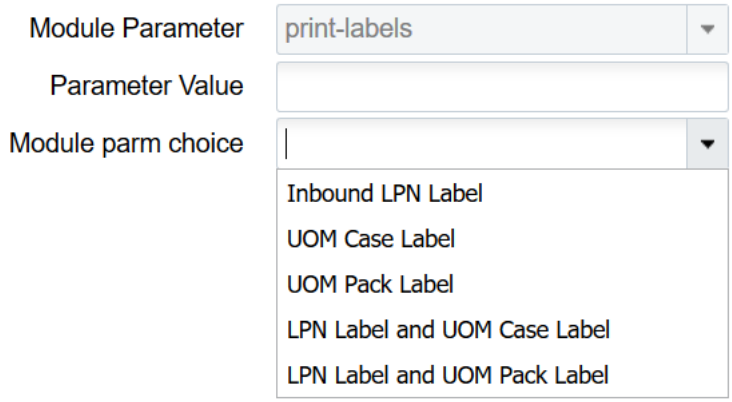
In the above two scenarios, you only have the option to enter a Reserve or Dock location.

# Print LPN and Case Labels

You can configure the receiving modules ***Receive by Load*** and ***Receive by Shipment*** to print inbound LPN labels or case labels after receiving is complete.

## Configuration Steps

1. Go to the “Screen Configurations” view.
2. Select the RF receiving module and click **Details**. This will display all the parameters for the selected RF module.
3. Select the parameter “print-labels”. Click **Edit**.
4. In the “Module parm choice” drop-down menu, select the desired option.




Screen parameter “print-labels” can be configured with one of the following options:

- **Inbound LPN Label**: Inbound LPN label will be printed based on the label template configuration.
- **UOM Case Label**: Case label will be printed. This is applicable when UOM is configured to receive in cases.
- **UOM Pack Label**: Pack label will be printed. This is applicable when UOM is configured to receive in packs.
- **LPN Label and UOM Case Label**: Prints both LPN and Case labels.
- **LPN Label and UOM Pack Label**: Prints both LPN and Pack labels.
- If this parameter is not configured, no labels will be printed.

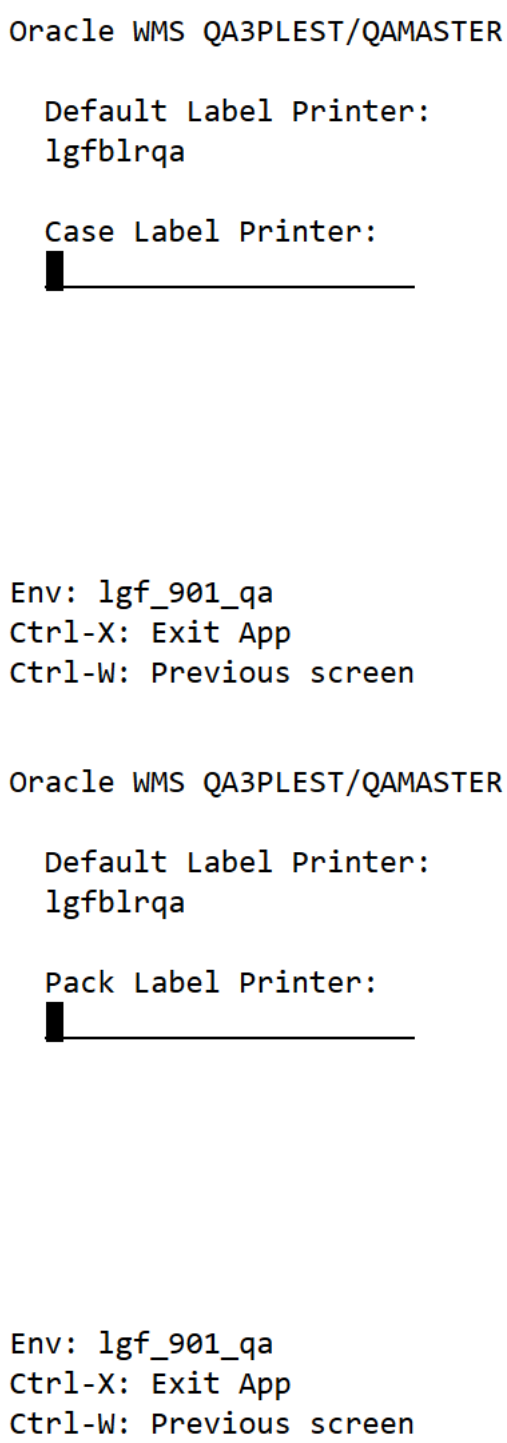
# Ctrl Key for Printing

1. When the screen parameter “print-labels” is configured with one of the supported values in the receiving modules ***Receive by Load*** or ***Receive by Shipment*** , then the first screen (Shipment/Load screen) and the second screen (SKU scan screen) displays the **Ctrl-P** key to initiate printing. The **Ctrl- P** key will only display if “print-labels” is configured.

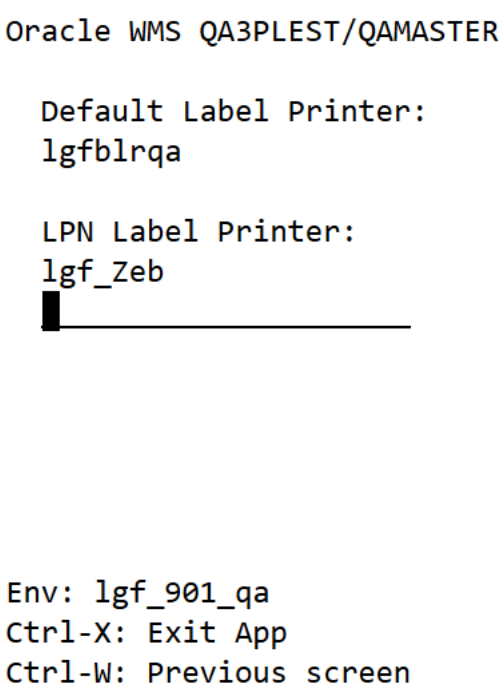
```
Oracle WMS QA3PLEST/QAMASTER
      RecvShpmnt Print

Dock: _____________________
Shipment: _____________________
Trailer: _____________________
Shpmt Type:
LPN: _____________________




Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-P: Label Printer
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

2. When you press the **Ctrl-P** key, you are presented with a screen that displays the default printer (if configured) for the user. Depending on the configuration of the “print-labels” screen parameter, there will be prompts for LPN, Case, Pack, LPN and Case, AND LPN and Pack as illustrated by the following figures:

```
Oracle WMS QA3PLEST/QAMASTER

  Default Label Printer:
  lgfblrqa

  LPN Label Printer:
  _____________________




Env: lgf_901_qa
Ctrl-X: Exit App
Ctrl-W: Previous screen
```




3. After you enter a printer on the Label Printer prompt, the system remembers to print on this printer until you exit out of the receiving option. You can press **Ctrl-P** again to see the selected printer at the Printer prompt. You also have the option to select a different printer on this screen.




4. If printer is not selected in any of the above scenarios, the default printer will be used to print labels. If a default printer has not been configured, then labels will not be printed.

# Printing LPN Labels

When you configure the screen parameter “print-labels” as **Inbound LPN Label**, depending on different screen parameters, labels will be printed as described below:

- In general, an LPN Label is printed after each LPN is received.
- If the screen parameter “pallet-handling” is configured as **Palletize after receipt**, an LPN label is printed after each LPN is received on the pallet.
- If the screen parameter “pallet-handling” is configured as **LPN or Pallet receiving** and if a pallet is received, then LPN labels are printed for all LPNs on the pallet after successful receipt of the pallet.
- If the screen parameter “pallet-handling” is configured as **Palletize Upfront**, and if the pallet has more than one LPN, then LPN label is printed after each LPN is received on the pallet.
- If the receiving option is configured to cross dock, an LPN label is printed as soon as the LPN is marked as received (LPN Status changes to received).
- If the screen parameter “prompt-location” is configured as **Prompt if not known**, then the LPN Label is printed before the location is prompted.
- If the screen parameter “lpn-prompt” is configured as **Auto Generate**, then an LPN Label is printed after each LPN is received.
- If the screen parameter “lpn-prompt” is configured as **Auto Generate** and the screen parameter “single sku management” is configured as **assume single sku/restrict multi sku** and “mode” is configured as **by-sku-scan**, since the system creates an LPN after scanning the first SKU, an LPN Label is printed after the LPN is received.

- Labels will be printed even if the LPN has been marked for QC.

# Printing Case/Pack Labels

- When the screen parameter “print-labels” is configured as **UOM Case Label** or **UOM Pack Label**, case/pack labels will be printed after each LPN is received. The number of case/pack labels printed will depend on the number of cases/packs within the LPN.
- When the screen parameter “print-labels” is configured as **LPN Label and UOM Case Label** and the screen parameter “qty-uom” is configured as **Cases**, LPN and case labels will be printed after each LPN is received. The number of case labels printed will depend on the number of cases within the LPN.
- When the screen parameter “print-labels” is configured as **LPN Label and UOM Pack Label** and the screen parameter “qty-uom” is configured as **Packs**, LPN and pack labels will be printed after each LPN is received. The number of pack labels printed will depend on the number of packs within the LPN.
- If the inventory quantity is not the integral multiplier of the Case Qty/Pack Qty, then the number of case/pack labels will be equivalent to the round down value. For example, if inventory qty is 115 and case qty is 10, then 11 case labels will be printed.
- Depending on different screen parameters, labels will be printed as described below:
    - In general, LPN Label and case/pack labels are printed after each LPN is received.
    - If the screen parameter “pallet-handling” is configured as **Palletize after receipt**, LPN label case/pack labels are printed after each LPN is received on the pallet.
    - If the screen parameter “pallet-handling” is configured as **LPN or Pallet receiving** and if a pallet is received, then LPN and case/pack labels are printed for all LPNs on the pallet after successful receipt of the pallet.
    - If the screen parameter “pallet-handling” is configured as **Palletize Upfront**, and if the pallet has more than one LPN, then the LPN and case/pack labels are printed after each LPN is received on the pallet.
    - If the screen parameter “prompt-location” is configured as **Prompt if not known**, then LPN and case/pack labels are printed before the location is prompted.
    - If the screen parameter “lpn-prompt” is configured as **Auto Generate**, then LPN and case/pack labels are printed after each LPN is received.
    - If the screen parameter “lpn-prompt” is configured as **Auto Generate** and the screen parameter “single sku management” is configured as **assume single sku/restrict multi sku** and “mode” is configured as **by-sku-scan**, since the system creates an LPN after scanning the first SKU, LPN and case/pack labels are printed after the LPN is received.
    - Labels will be printed even if the LPN is marked for QC

# Label Templates

- LPN labels are printed based on the base label format (Inbound_Container_label). If an Inbound_Container_Label has been customized using label designer and configured through the label template under Label Type “IB Container”, then the LPN Label will be printed in the format specified in the template.

- Case labels will be printed based on the base label format (UOM_Case_Label). If a UOM_Case_Label has been customized using label designer and configured through the label template under Label Type “UOM Case Label”, then the case label will be printed in the format specified in the template.
- Pack labels will be printed based on the base label format (UOM_Pack_Label). If UOM_Pack_Label has been customized using label designer and configured through label template under Label Type “UOM Pack Label”, then the pack label will be printed in the format specified in the template.

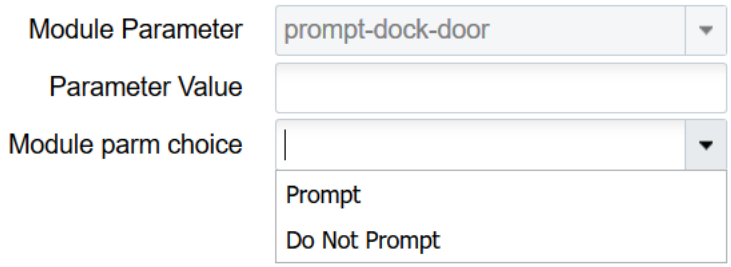
# Prompt Dock Door

The Dock Door prompt in the receiving modules ***Receive by Load*** and ***Receive by Shipment*** is optional and can be configured as required.

**Configuration Steps**

1. Go to the “Screen Configurations” view.
2. Select the RF receiving module and click **Details**. This will display all the parameters for the selected RF module.
3. Select the parameter “prompt-dock-door”. Click **Edit**.

From the “Module parm choice” drop-down, select the desired option.




You can configure the screen parameter “prompt-dock-door” with one of the following options:

- **Prompt**: Dock door prompt is displayed. You have the option to either scan the dock door or skip it and directly enter the Shipment/Load nbr.
- **Do Not Prompt**: Dock door prompt is not displayed. You are taken to the Shipment/Load prompt directly. The received LPNs remain in received status. However if the Shipment/Load was checked into a dock door before receiving, then the LPNs will be located to the dock door after receiving.

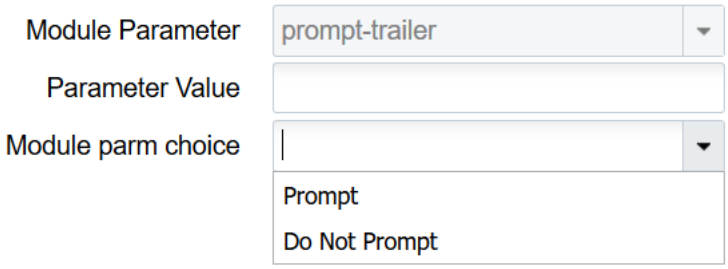
# Prompt Trailer

The Trailer prompt in the receiving modules ***Receive by Load*** and ***Receive by Shipment*** is optional and can be configured as required.

**Configuration Steps**

1. Go to the “Screen Configurations” view.
2. Select the RF receiving module and click **Details**. This will display all the parameters for the selected RF module.
3. Select the parameter “prompt-trailer”. Click **Edit**.

From the “Module parm choice” drop-down, select the desired option.




The screen parameter “prompt-trailer” can be configured with one of the following options:

- **Prompt**: Trailer prompt is displayed. You have the option to either scan the trailer or skip it.
- **Do Not Prompt**: Trailer prompt is not displayed. In this case, even if the screen parameter “validate-trailer-on-load” is configured as **Validate Trailer**, the trailer number will not be validated. However, the trailer nbr associated with the shipment will be copied to the **Received Trailer Number** field of the received LPNs.

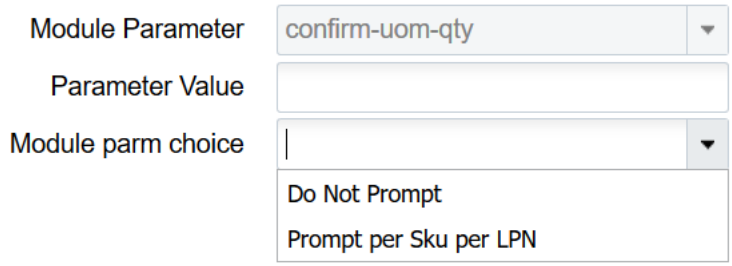
# Prompt Case/Pack Qty

The receiving modules ***Receive by Load*** and ***Receive by Shipment*** allow you to change the standard case/pack quantity of SKUs while receiving.

**Configuration Steps**

1. Go to the “Screen Configurations” view.
2. Select the RF receiving module and click **Details**. This will display all the parameters for the selected RF module.
3. Select the parameter “confirm-uom-qty”. Click **Edit**.

From the “Module parm choice” drop-down, select the desired option.

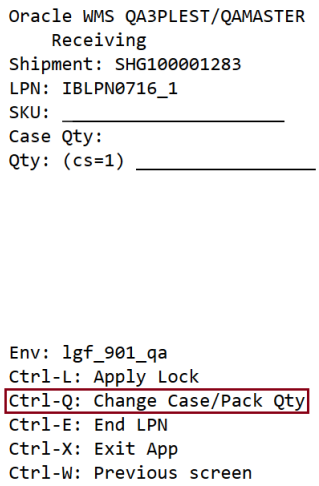



Screen parameter “confirm-uom-qty” can be configured with one of the following options:

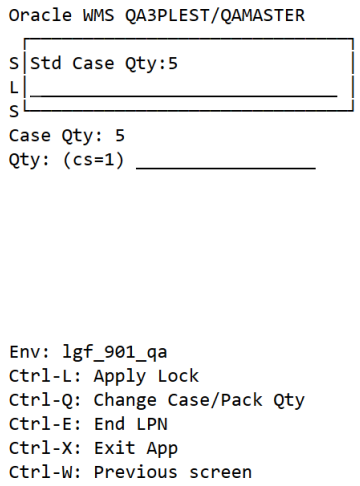
- **Do Not Prompt**: Case/Pack qty field cannot be edited. The **Ctrl Q: Change Case/Pack qty** key is available on the SKU scan screen and can be used to change case/pack qty.
- **Prompt per SKU per LPN**: Case/Pack qty field is editable. By default, the item’s standard case/pack qty is displayed which can be changed on this screen. **Ctrl Q** key will not be available on the SKU scan screen.

# Screen Flow when confirm-uom-qty is Configured as Do Not Prompt

1. When the screen parameter “qty-uom” is configured as **Cases** or **Packs** and the screen parameter “confirm-uom-qty” is configured as **Do Not Prompt**, the Ctrl Q key is displayed on the SKU scan screen.




2. This key is functional only after a SKU is scanned on the screen. After a SKU is scanned and Ctrl Q is invoked, a pop up is displayed on the screen. This pop-up shows the current std case/pack qty of the scanned SKU as configured in item master. The pop up also has the option to change the std case/pack qty of the SKU.




3. If the std case/pack qty is changed on the pop-up, the new value is displayed as the case/pack qty on the SKU scan screen.

```
Oracle WMS QA3PLEST/QAMASTER
    Receiving
Shipment: SHG100001283
LPN: IBLPN0716_1
SKU: G1NORITM111 _________
Case Qty: 6
Qty: (cs=1) _________________
```

```
Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-Q: Change Case/Pack Qty
Ctrl-E: End LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

a. The new std case/pack qty will be applicable for the SKU in the LPN and subsequent LPNs throughout the receiving session until you exit from the receiving module.
b. During the same session, you have the option to change the case/pack qty for the same SKU in a different LPN.
c. You cannot change the case/pack qty of a SKU in the same LPN twice. If you attempt to change it a second time, the message “SKU already scanned with case/pack qty X is displayed.”
d. If you receive the first SKU without using Ctrl-Q, then the std case/pack qty from item master is used and will be applicable for the SKU in the LPN and subsequent LPNs. In general, once a std/pack qty has been used for a SKU in an LPN, it cannot be changed in the same LPN.

> **Note:**
>
> - If the std case/pack qty is changed on the receiving SKU scan screen, it does not reflect back on item master.
> - Ctrl-Q is not displayed in the SKU scan mode.

# Screen Flow when confirm-uom-qty is Configured as Prompt per Sku per LPN

1. When the screen parameter “qty-uom” is configured as **Cases** or **Packs** and the screen parameter “confirm-uom-qty” is configured as **Prompt per Sku per LPN**, the case/pack qty is editable on the SKU scan screen.

```
Oracle WMS QA3PLEST/QAMASTER
    Receiving
Shipment: SHG100001283
LPN: IBLPN0716_3
SKU: G1NORITM111
Case Qty: 5
Qty: (cs=1)
```

```
Env: lgf_901_qa
Ctrl-L: Apply Lock
Ctrl-E: End LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

2. After scanning the SKU, the case/pack qty field is populated with std case/pack qty from item master. If you change the case/pack qty, the new value is retained for the SKU for the LPN. You will not be allowed to change the std case/pack qty of the SKU for the same LPN.
3. If you scan a SKU that has std case/pack qty configured as 0 in item master, you will be allowed to change the case/pack qty with a value greater than 0.
4. You are allowed to change the case/pack qty even in SKU scan mode. If you change the case/pack qty, the new value is retained for the SKU for the LPN. You will not be allowed to change the std case/pack qty of the SKU for the same LPN.
5. If the SKU is batch/expiry/attribute tracked, then you will be able to edit the case/pack qty after capturing all the inventory attributes.

## Exceptions – Receiving with Lock Codes

Users can also choose to apply lock codes to LPNs during receiving (ex. LPN is damaged).

**Adding Lock Codes to LPNs in the RF**

1. Enter the receiving RF module.
2. Press Ctrl-L to apply a lock code to the LPN **that you are about to receive** (any subsequent LPNs will not be affected). The RF will prompt for a lock code that populates a lock code that is configured for the parent company.

```
Dock: D9
Shipment: SHTHK00001091
Trailer:
Shpmt Type: DOMESTIC
LPN:
```

```
Env: lgf62_qa
Ctrl-L: Apply Lock
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

**Caveats:**

1. Make sure that the applied lock code is configured in the parent company.
2. For cross-dock flows, make sure that the lock code has the “Allocatable” flag set to YES.

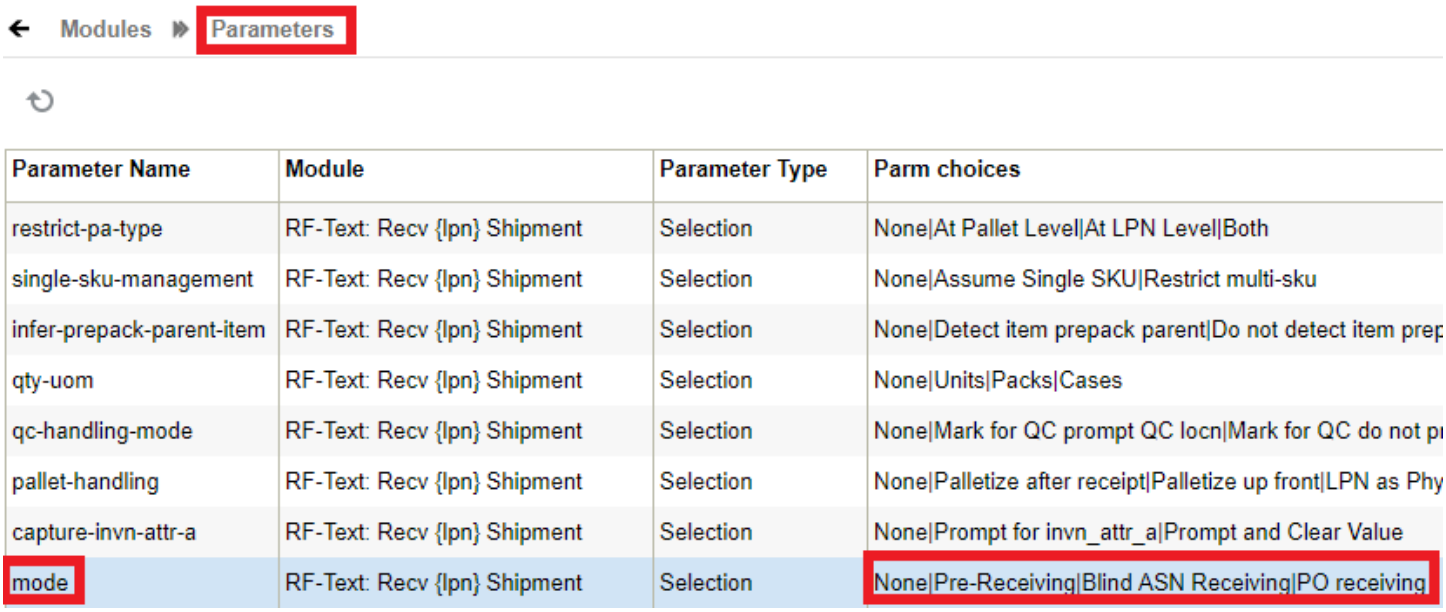
If an ASN has Pallet information, the system associates this information with the IBLPN, and there is a record on the Pallet UI and Pallet History.

If the ASN or PO has inventory attributes, this information is passed over to the LPNs received via Receive Entire Shipment.

# PO Based Receiving

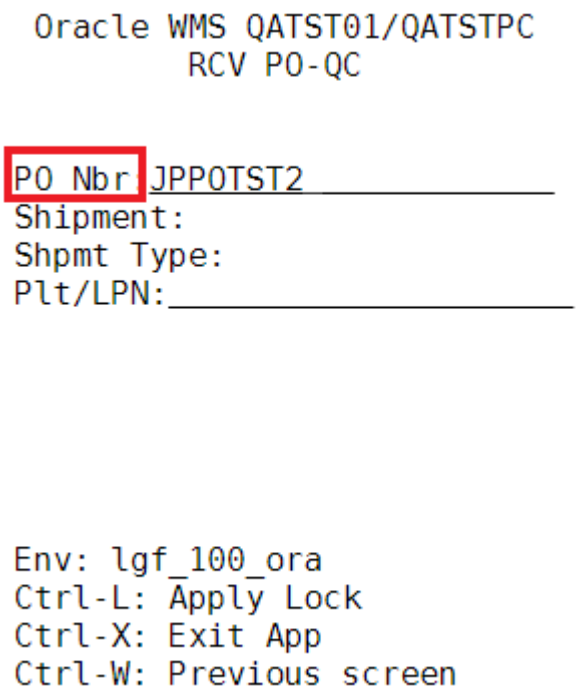
You may want the option to receive inventory against Purchase Orders (POs) without the need of an ASN.

The option 'PO receiving' allows you to do this. You can enable PO receiving from the mode parameter in the **RF Receive IB Shipment** screen.



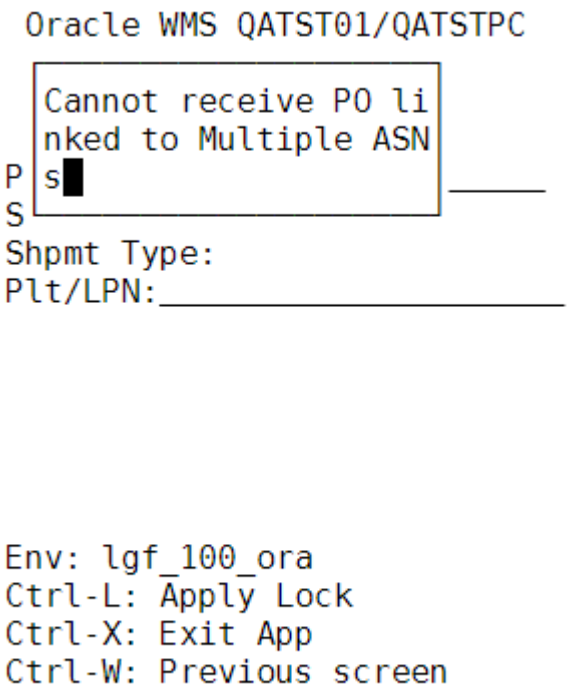

| Parameter Name | Module | Parameter Type | Parm choices |
|---|---|---|---|
| restrict-pa-type | RF-Text: Recv {lpn} Shipment | Selection | None\|At Pallet Level\|At LPN Level\|Both |
| single-sku-management | RF-Text: Recv {lpn} Shipment | Selection | None\|Assume Single SKU\|Restrict multi-sku |
| infer-prepack-parent-item | RF-Text: Recv {lpn} Shipment | Selection | None\|Detect item prepack parent\|Do not detect item prep |
| qty-uom | RF-Text: Recv {lpn} Shipment | Selection | None\|Units\|Packs\|Cases |
| qc-handling-mode | RF-Text: Recv {lpn} Shipment | Selection | None\|Mark for QC prompt QC locn\|Mark for QC do not pr |
| pallet-handling | RF-Text: Recv {lpn} Shipment | Selection | None\|Palletize after receipt\|Palletize up front\|LPN as Phy |
| capture-invn-attr-a | RF-Text: Recv {lpn} Shipment | Selection | None\|Prompt for invn_attr_a\|Prompt and Clear Value |
| mode | RF-Text: Recv {lpn} Shipment | Selection | None\|Pre-Receiving\|Blind ASN Receiving\|PO receiving |

When the 'PO receiving' option is enabled, the transaction prompts you to scan a PO Number to initiate receiving.

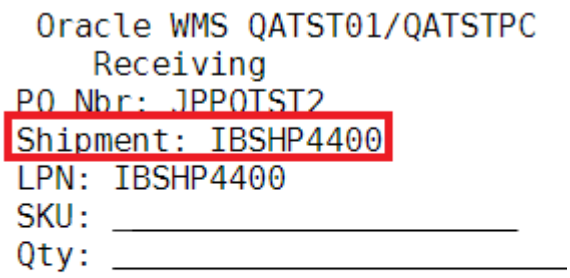



Once you scan the PO Number:

- If the PO is linked to multiple Inbound Shipments, the screen will provide an error message and will not allow you to proceed with receiving.



- If the PO is linked to an unverified Inbound Shipment, you can receive against the inventory in that Inbound Shipment, which is equal to the PO's inventory.
- If the PO is not linked to an Inbound Shipment, the system auto-generates an Inbound Shipment in the background for the whole PO and allows you to receive. You should enable the 'Create ASN for PO Interface' flag should for the corresponding vendor.

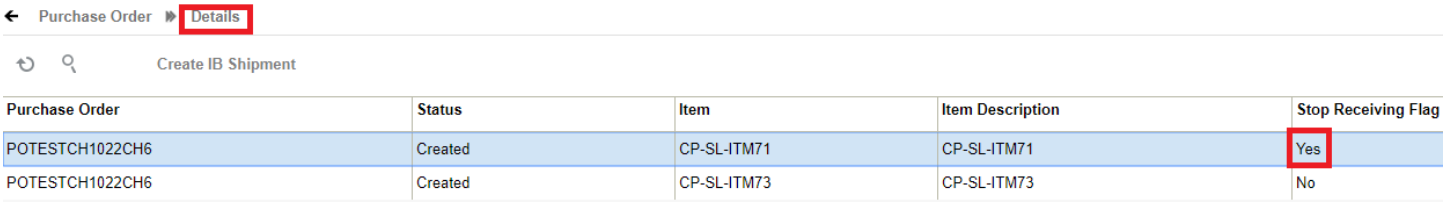



- If the PO is linked to a verified Inbound Shipment, the application auto-generates an Inbound Shipment for the quantity pending to be received. You should enable the 'Create ASN for PO Interface' flag for the corresponding vendor.

  Additionally, you can make appointments for specific PO Numbers so that you can check a PO Number into a Dock.
- When the Dock location is scanned during receiving with "mode" set to 'PO receiving' the system will auto-populate the PO Number.

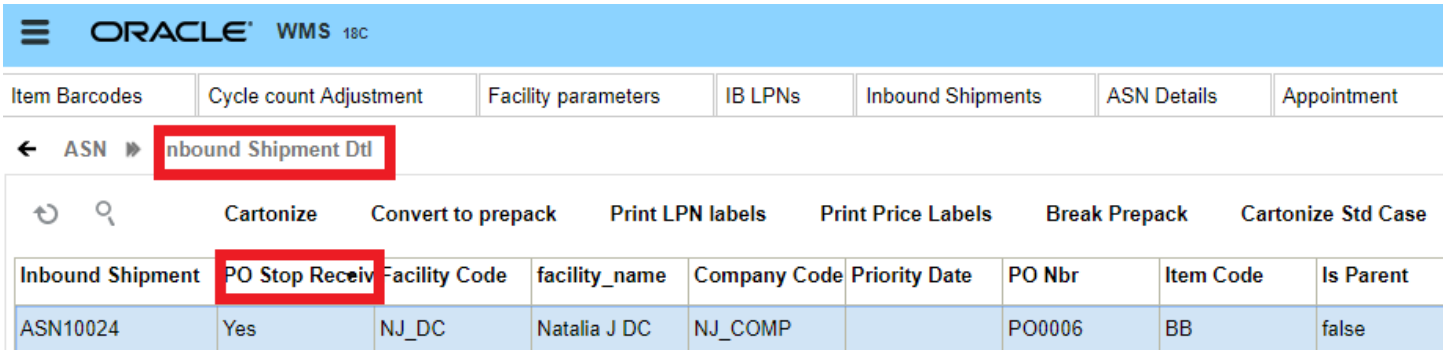
# Stop receiving against a Purchase Order Line

You have the option to prevent inventory from being received into a warehouse. You can prevent receiving by stopping receiving inventory against a given Purchase Order detail line. For example, a PO may have an item that has been recalled by the manufacturer. Rather than expending labor to receive and process the PO, you may prefer to not receive this item at all. The stop_recv_flg (in purchase order detail) allows you to prevent receiving inventory if the flag is set to yes. You can change this value on the purchase order detail using the Entity Update API. For more details about this API please refer to the Integration API documentation. Once you update this field using the API, you will be able to see that this field is set to yes on the Purchase Order Detail UI.

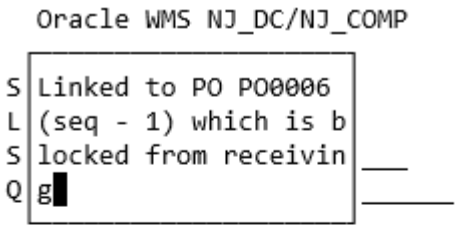


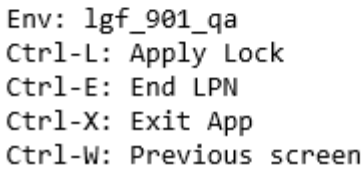

- The Purchase Order UI screen now shows the new field. You can search for it, but you cannot edit this field.
- You will not be able to create a shipment from the Purchase Order UI Screen if the shipment is linked to a Purchase Order detail with stop_recv_flg = Y.

In the Inbound Shipment UI, you will be able to see if there is a detail that is linked to a PO detail that has the PO Stop Receiving Flag set to Yes.




If you try to receive inventory that is linked to a Purchase Order detail that has the Stop Receiving Flag set to Yes, you will get the following error:




This error is enabled for cartonized, non-cartonized shipments, and pallets that contain items or LPNs linked to the marked Purchase Order detail line.

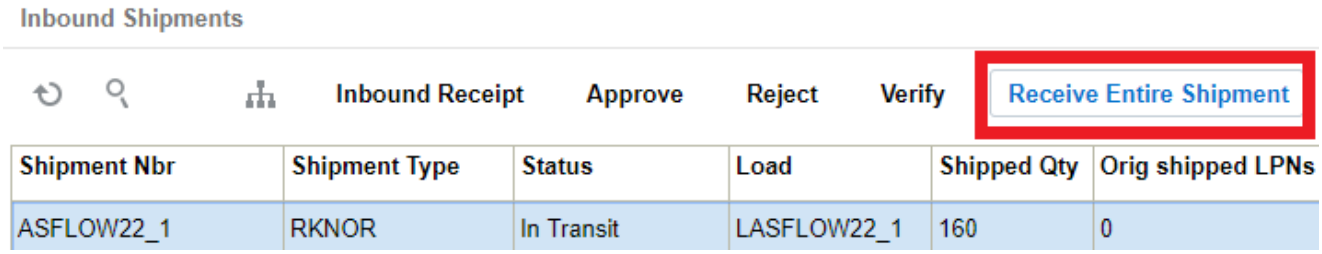
# Receiving ASNs without the RF

Oracle WMS Cloud provides the ability to receive an entire ASN without the use of the RF gun.

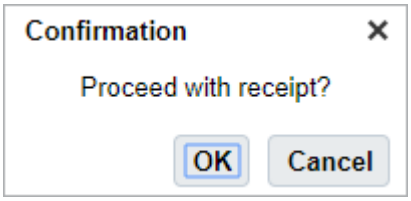
Pre-Condition: In order for this to work, the ASN must be fully cartonized (i.e. have all the LPN information provided in the ASN).

1. Go to the “Inbound Shipments” screen, select the ASN and click “Receive Entire Shipment”.

   **Note:** Ensure the ASN is cartonized prior to receiving the entire ASN.

2. Oracle WMS Cloud will display a confirmation message. Click “Yes”.




3. The ASN will be received based on the IB LPNs that are associated with the ASN.

**Note:**

- *If the ASN is checked-in prior to receiving, all IB LPNs are allocated to the associated location once receiving is complete. If the ASN has not been checked-in, Oracle WMS Cloud will not assign a location to the IB LPNs.*
- *If the ASN has Pallet information, the system associates this information to the IBLPN, and there will be an associated record on the Pallet UI, and Pallet History.*
- *If the ASN or PO has inventory attributes, this information is passed over to the LPNs received via Receive Entire Shipment.*

## Receive Entire Shipment

The Receive Entire Shipment button does the following validations:

- If a sku requires a batch and the shipment detail does not have a batch, that lpn will not be received.
- If a sku requires an expiry and the shipment detail does not have an expiry, that lpn will not be received.
- If a sku requires serial numbers and there are no serial numbers, the lpn will not be received (and even if there are serial numbers, if the item required serial number is set up to: Required, validate, and allow user to override, then the LPN can not be received.

If you want the system to skip those validations, you can set facility parameter SKIP_VALIDATION_FOR_RECV_ENTIRE_SHIPMENT to Yes.

If the ASN has Pallet information, the system associates this information to the IBLPN, and there will be an associated record on the Pallet UI, and Pallet History.

If the ASN or PO has inventory attributes, this information is passed over to the LPNs received via Receive Entire Shipment.

# Receiving Options

Oracle Warehouse Management Cloud optimizes the receiving process via various receiving options to receive the right product, in the right quantities, condition, weight, and dimensions all at the right time.

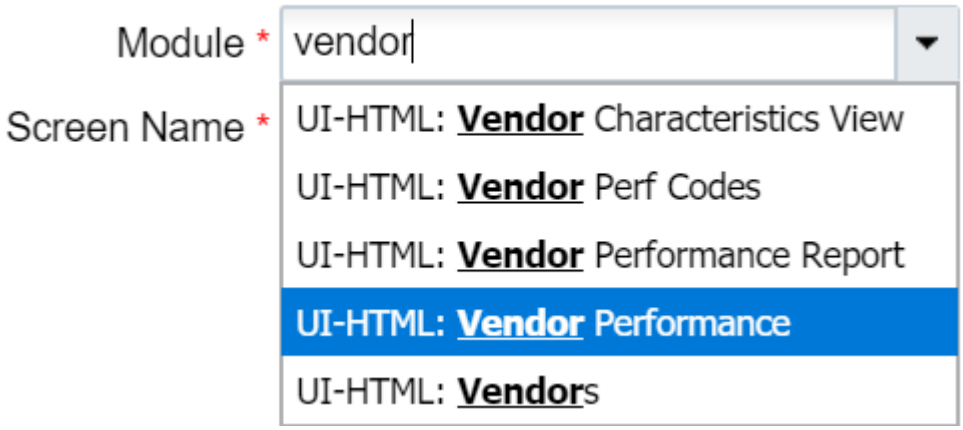
## System Directed Qaulity Control QC

Oracle WMS Cloud has the ability to flag SKUs during the receiving process for a quality control check. Items are flagged for QC based on the vendor that sent the PO and ASN.

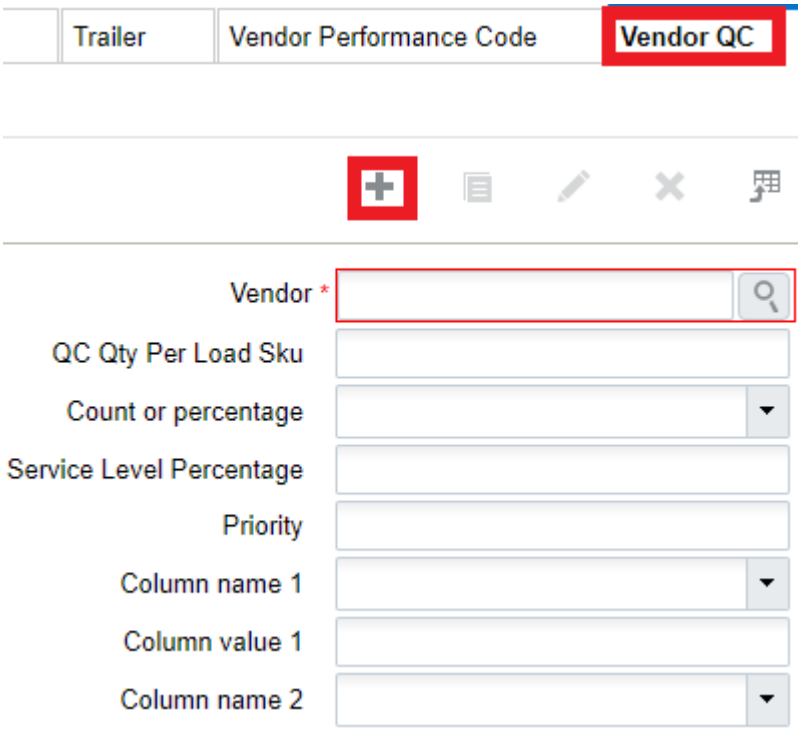
**Note:** *The quality control process requires the use of a Purchase Order.*

## Configuration

1. Make sure there are Vendors configured in the system. To do this, go to the “Vendors” screen.
2. From the “Screen Configuration” screen, search “Vendor Performance” in the module field to add the “Vendor QC” screen (called “Vendor Performance” in Oracle WMS Cloud):




3. Add this screen to the appropriate Menu
4. Go to the “Vendor QC” screen.
5. For each Vendor that requires QC validations, create a new record by clicking the Create button ().
6. For each Vendor QC record, populate the following fields:



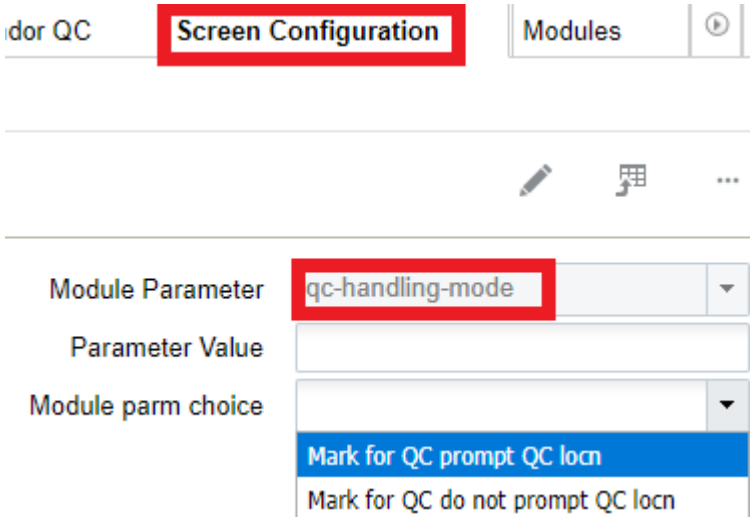
a. Vendor: Populate the Vendor that will be used for QC. Use the magnifying glass to display a list of Vendors currently in the system.
b. QC Qty Per Load SKU: Enter a value that will be checked for QC.
c. Count or percentage: Enter a “U” for count and “P” for percentage.
d. Service Level Percentage: Also known as ‘Reception Percent Level’, this parameter is used for advanced LPN distribution to ensure the inventory is evenly distributed to multiple stores.
e. Column_Name_1: Users will be presented with the following columns for configuring additional filter criteria:
   - Shipment.Shipment Type
   - Item.Putaway Type
   - Item Facility.Putaway Type
   - Item.Group Code
   - Vendor.Custom_Field_1 to 5
f. Column_value_1: Comparison value for the selected column in column_name_1. If no value is provided, the system will search for the corresponding column_name_1 with value =blank
g. Column_Name_2: Users will be presented with the following columns for configuring additional filter criteria:
   - Shipment.Shipment Type
   - Item.Putaway Type
   - Item Facility.Putaway Type
   - Item.Group Code
   - Vendor.Custom_Field_1 to 5
h. Column_value_2: Comparison value for the selected column in column_name_1. If no value is provided, the system will search for the corresponding column_name_1 with value =blank.

7. Click ‘Save’.

If you want to configure all of the inventory from a vendor to be marked for QC, then it should only configure the vendor, QC Qty Per Load SKU, and count or percentage fields. If you would like to be more specific on the inventory selected to be marked for QC, then from the Vendor QC UI, you can configure fields Column_Name 1 and 2 with the available values. This allows you more flexibility for the inventory sent to QC, as you could have the following set up:

- If we receive inventory from Vendor-1 for an item with Putaway type "ABC", then we would like to divert 30% of Received Inventory to the QC area.
- If we receive inventory from Vendor-1 for item with Putaway type "XYZ", then we would like to divert 75% of Received Inventory to the QC area.

8. Configure the RF modules that will be used in QC. First, enable the receiving RF module to recognize LPNs for QC.
   a. From the ‘Screen Configuration’ screen, select an RF receiving module that will capture QC and click on Details.
   b. If you have a Quality Control location, set the Module Parameter ‘qc_handling_mode’ to ‘Mark for QC prompt QC locn’. If you do not have a Quality Control location, select the parameter and click the ‘Edit’ button in order to update this parameter.



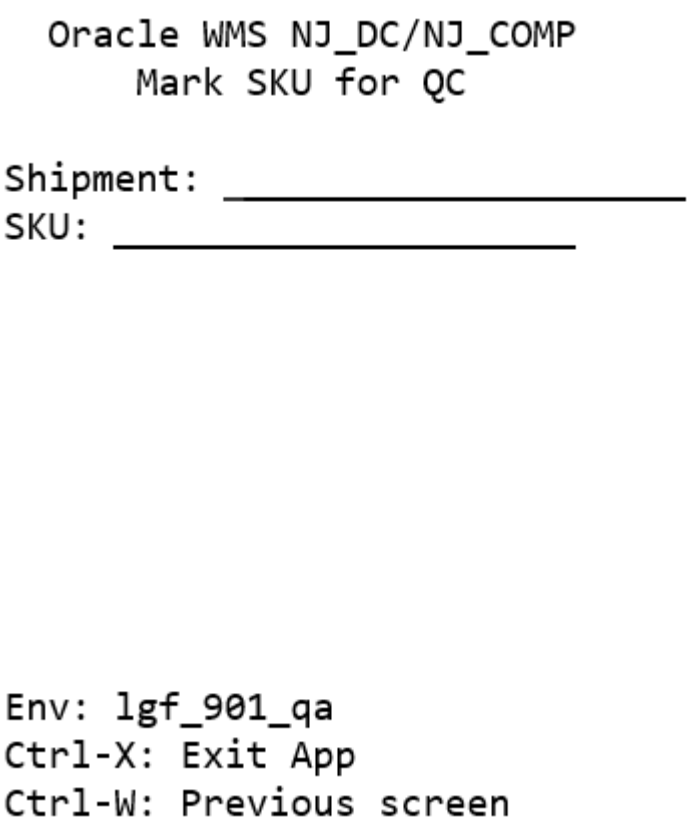

c. Click “Save”.

9. The **Mark LPN for QC** transaction allows you to randomly select LPNs from a shipment to be marked for quality control. You can use **Mark LPN for QC** for cartonized shipments, and users/supervisors can select the LPNs that they would like to designate for QC.

```
Oracle WMS NJ_DC/NJ_COMP
    Mark LPN for QC


LPN:
```

```
Env: lgf_901_qa
Ctrl-S: Mark For QC By SKU
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

If you need to do quality control for all of the inventory for a specific SKU, select the hot key Ctrl-S. Ctrl-S will mark the shipment detail for quality control. Once you select Ctrl-S, the **Mark SKU for QC** screen displays:



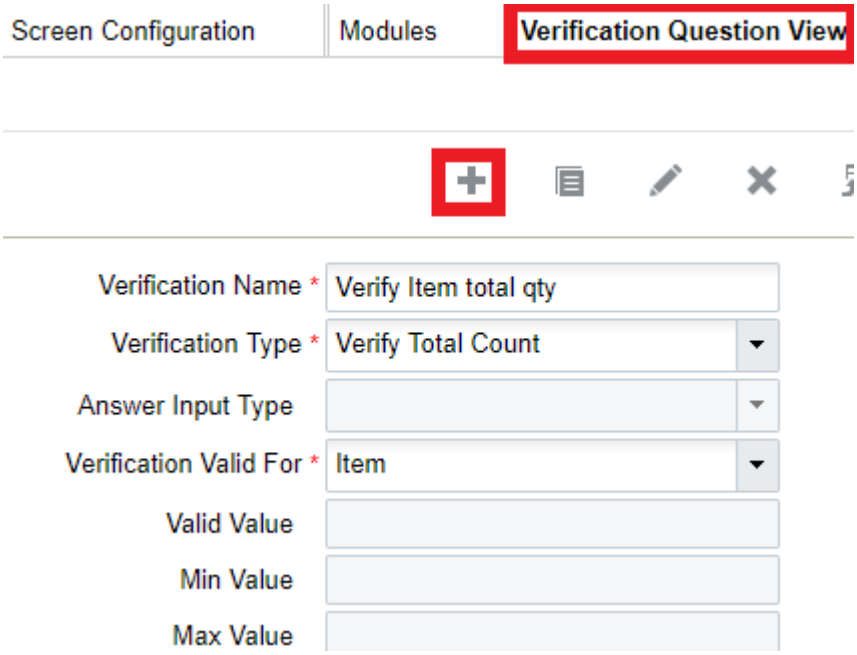

The **Mark SKU for QC** transaction does not support scanning an LPN which has already been received. If the LPN has already been marked for QC, the LPN is part of a shipment, and the status is Verified, the error “Scanned LPN is not valid for QC” displays.

If the LPN meets the criteria, the system displays the message “LPN% marked for QC”. The marked for qc flag on the inbound shipment detail for the corresponding LPN will be set to yes.

LPNs or inventory designated for QC will be marked “Yes” on the marked for qc flag in the Inbound Shipment detail.

> **Note:** The above settings and criteria apply as long as the receiving Screen parameter "Mode" is not Set to *Pre-Receiving*. If any of the detail for the Received LPN part of a Cartonized or non-cartonized Shipment has the *Marked for QC Flag* set to "yes", then the LPNs will be marked for QC without even considering the Vendor QC Configuration.

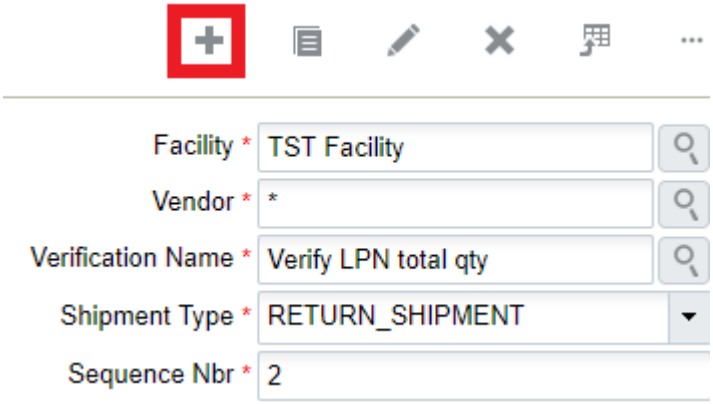
10. You can use the **Verification Questions UI** to set up Verification questions to use during RF QC Complete.




| Fields | Description |
|---|---|
| Verification Name | What you want to call your verification questions. |
| Verification Type | Allows you to verify total count, standard case, standard pack, or user-defined verification question. |
| Answer Input Type | Allows you to set the answer input type. The Answer Input Type options include the following:<br>o Yes/NO<br>o Text<br>o Date<br>o Decimal<br>o Integer<br>o Yes |
| Verification Valid From | Can be for Item or LPN. |
| Valid Value | Allows you to specify valid value. |
| Min Value | Allows you to specify minimum value. |
| Max Value | Allows you to specify maximum value. |

11. The verification question must be assigned to a vendor in order for the right questions to be asked during QC confirmation.

Next, go to the Verification Question Configuration UI and click **Create** to set up the Verification Question Configuration.

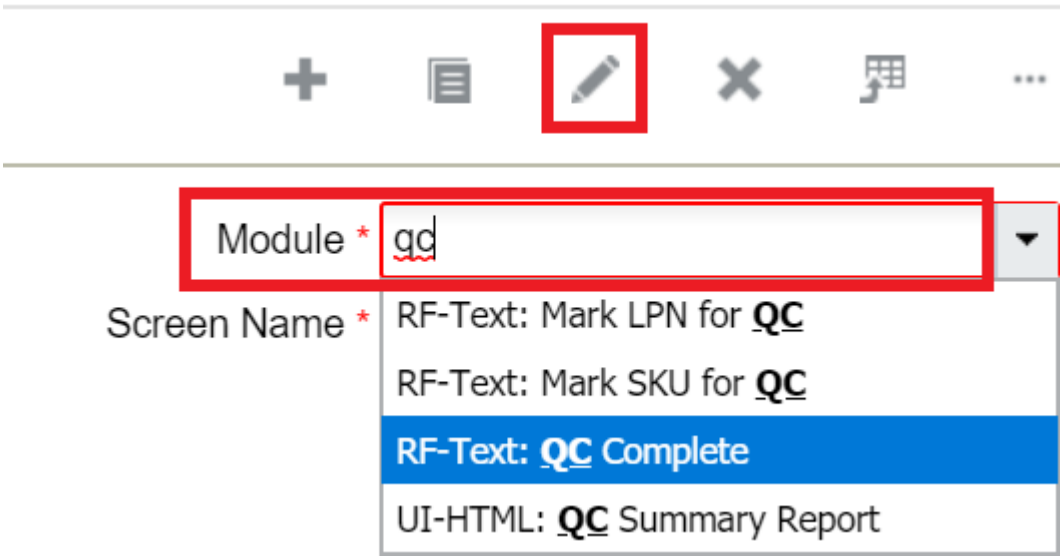



You can associate questions to the following items:

- Facility Type
- Vendor Type
- Verification Name
- Shipment Type
- Sequence Number

Questions will be displayed in the sequence set up in this screen.

12. Configure the RF module for processing the LPNs for QC.
    a. Go to the 'Screen Configuration' screen.
    b. Add a new RF screen with the Create button ().



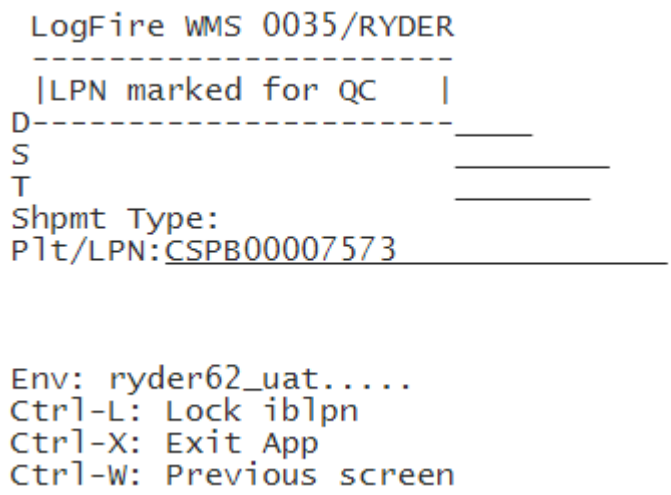

    c. Add this new RF screen to the appropriate Menu.

| Parameters | Description |
|---|---|
| qty-entry-mode | None/Sku-Qty/Sku-Scan |
| qty-uom | None/Units/Packs/Cases |
| distribute-lpn-transaction | Valid Transaction name to call distribute LPN when QC passes or the LPN is accepted |
| prompt-vendorperf-code | None/No/Yes |

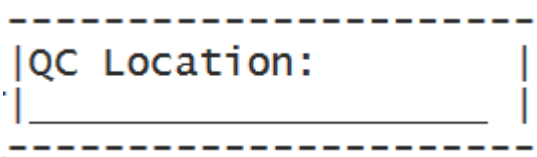
13. Create locations of type “Quality Check”. When an LPN is flagged for QC, it must be sent to a Quality Check location for processing.
    a. Go to the “Locations” screen.
    b. Add a new location by clicking the Create button ().
    c. Populate the necessary fields. Make sure that the “Type” is set to “QC”.
    d. Click “Save”.

## Receiving/QC Process:

1. During receiving, if the user receives an ASN from a Vendor that was flagged for QC, the LPN will be marked for QC. This is system driven, so the user will receive a message in the RF. Press Ctrl-A to proceed:



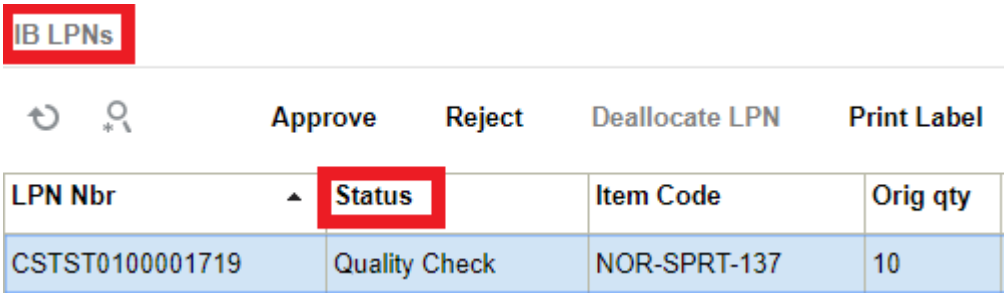

2. The RF will prompt the user to locate this LPN to a QC location. Move this LPN to a QC location and scan its location barcode.




You can configure RF receiving screens to prompt or not prompt for the QC location. You can do this by configuring the screen parameter **qc-handling-mode** in the receiving transaction.

> **Note:** If the screen parameter on the Receiving "mode" is set to "pre-receiving", the system always pushes the received inventory to QC Area irrespective of the configuration.

3. At that point, the LPN will be updated to status “Quality Check” in the “IBLPN” screen:




> **Note:** This will NOT add inventory to the warehouse until the LPN has been approved.

The IHT 72-Container Received Subject to QC is written when the received LPN gets marked for QC.

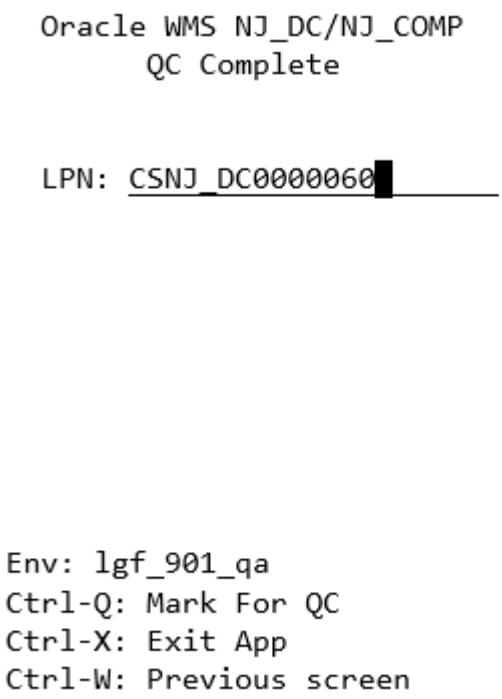
## Approving/Rejecting LPNs:

The LPN can be approved or rejected after it is received. If approved, the LPN’s status will change to “Located” and its contents are added to the facility’s inventory.

- Approving an LPN will update its status to “Received” and clear its current location.
- Rejecting an LPN will update it to status “Cancelled”.

# Processing LPNs from the RF:

1. Enter the “Process QC” RF module.
2. Scan the LPN that will be processed for QC.




User can make use of the control options to approve or reject LPNs.

3. Press **Ctrl-P** to mark the LPN to be ready for QC:

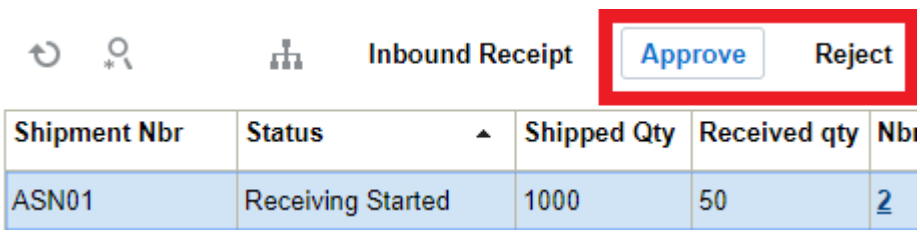
```
  Oracle WMS NJ_DC/NJ_COMP
  LPN Number:CSNJ_DC0000060
1) Is QTY correct



Option:_____



Env: lgf_901_qa
Ctrl-U: Page Up
Ctrl-D: Page Down
Ctrl-P: Accept LPN
Ctrl-R: Reject LPN
Ctrl-L: Item Info
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

You can answer all of the questions set up in the verification question view, and also use the control options to approve or reject LPNs.

4. Press Ctrl-P to approve and Ctrl-R to reject.
   a. If the user enters Ctrl-R to REJECT, the RF will display a confirmation message. Press Ctrl-A to proceed.
   b. If the user enters Ctrl-P to APPROVE, the RF will display a confirmation message. Press Ctrl-A to proceed.

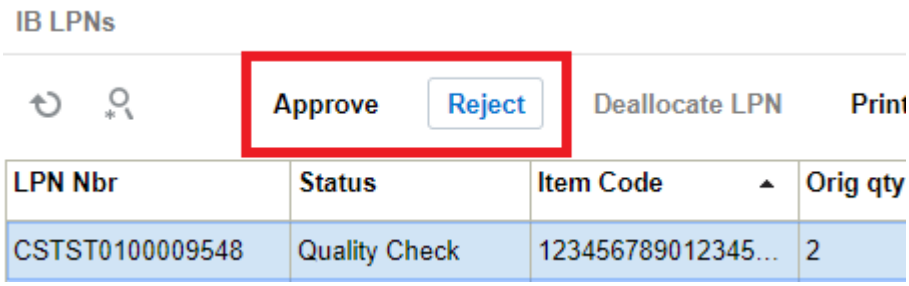
## Processing LPNs from the UI

1. From the Inbound Shipments screen, select the ASN with QC LPNs.
2. Clicki either “Approve” or “Reject.” This will affect ALL QC LPNs in the shipment.




3. From the IBLPN screen, select the IBLPN that is in “Quality Check” status.

4. Click either “Approve” or “Reject” to process it.

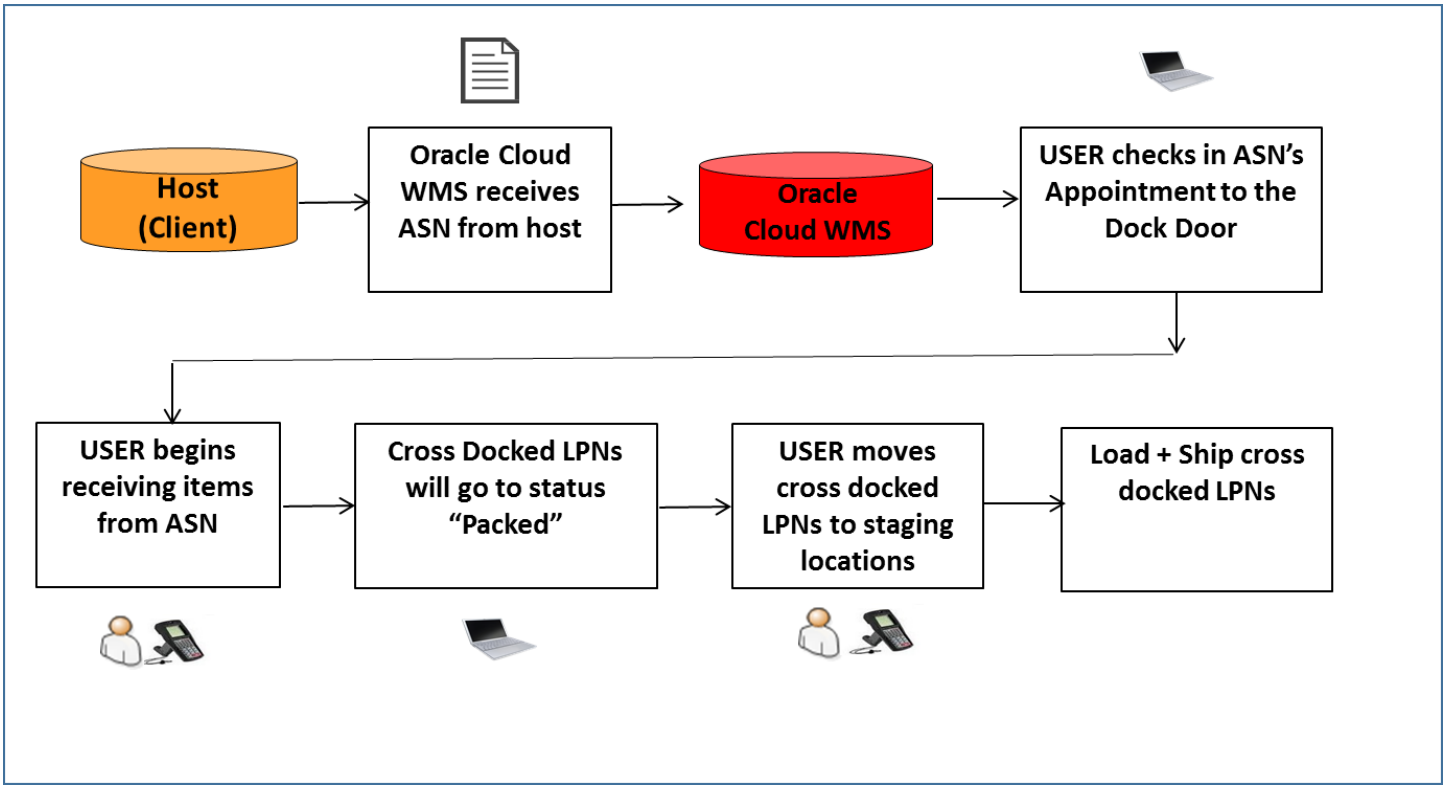



# Cross Dock Management

Oracle WMS Cloud has the ability to cross-dock inventory during the receiving process. Oracle WMS Cloud supports two different receiving methods:

1. Receive cross-dock with an existing order.
2. Receive cross-dock with an order automatically created for that LPN.

The diagram below represents a generic cross-dock flow using the Oracle WMS Cloud:




# Cross-Dock Configuration

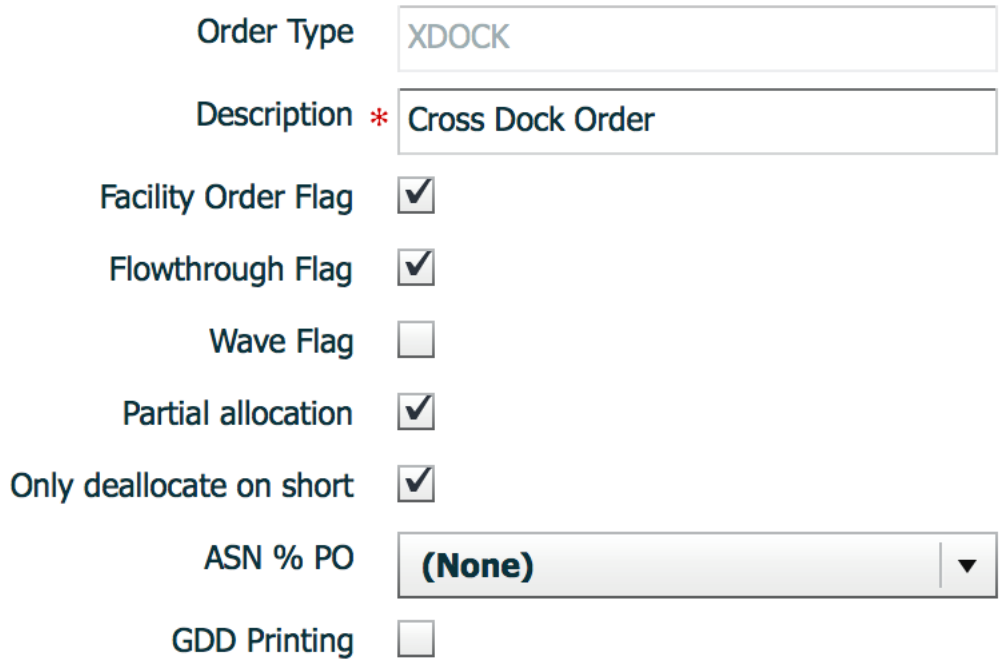
To allocate orders for cross-dock, two conditions must be met:

- The order must have the appropriate order type configured;
- The ordered SKU and quantity must exactly match the contents of the LPN being received.
- The ordered SKU detail must have the "Required LPN" field populated with the LPN number for the LPN being received.

Step 1: Create the Cross-Dock Order Type

Order types are used to differentiate between cross-dock and non cross-dock orders.

1. Go to the "Order Type" screen and click the Create button to create a new order type. Make sure that the "Flowthrough" and "Partial allocation" flags are checked.

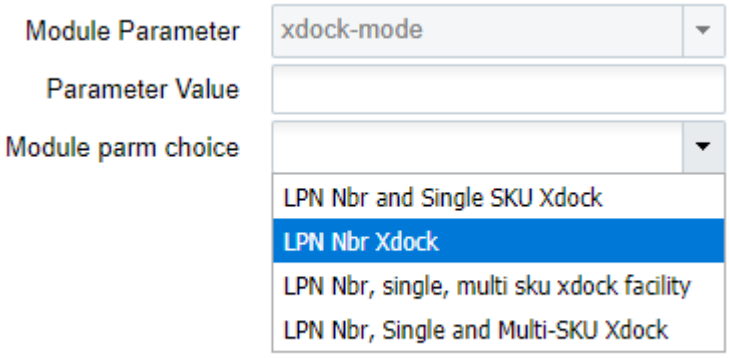



2. Click “Save”.

Step 2: Adding the RF Screen for Cross-Dock Receiving

The next step is to add a receiving RF module specific to Cross-Dock.

1. Go to “Screen Configuration”.
2. Click on “Generate Screens” and select one of the following:
   - “RF-Text: Recv {lpn} Load” if receiving via Loads.
   - “RF-Text: Recv {lpn} Shipment” if receiving via ASNs.
3. Press “Save” when you have finished.
4. Once the RF screens are added, the cross-dock specific functionality must be enabled within its parameters. To access the module’s parameters, select the module and click on Details.
5. Within the parameters, select the “xdock-mode” module parameter and click Edit. Select the appropriate cross-dock mode from the drop-down.




**Cross Dock Parameter Description**

- **None:** Cross dock functionality is disabled.
- **LPN Nbr, single or multi sku xdock**: Cross dock functionality is enabled for single and multi-SKU LPNs. Cross dock orders do not need to populate the "Required Container Number" in the Order detail record.
- **LPN Nbr Xdock**: Cross dock functionality is enabled for single and multi-SKU LPNs. It will only work if its cross dock orders have the "Required Container Number" populated in the Order detail record. *Auto creation of cross dock orders is not possible with this option.
- **LPN Nbr and single-SKU Xdock**: Cross dock functionality is enabled for single SKU LPNs. Cross dock orders do not need to populate the "Required Container Number" in the Order detail record.

6. Click "Save".

**Note:** Cross-dock functionality is supported through the below RF screens based on the configuration of the **xdock-mode** screen parameter.

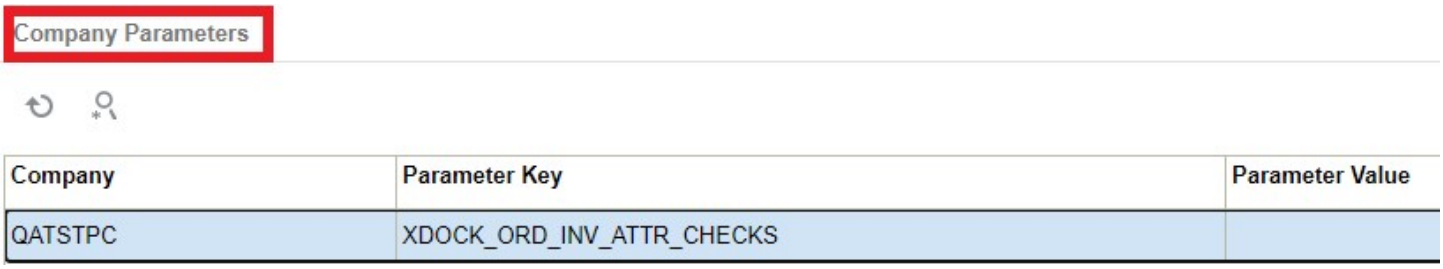
- RF Receive IB Shipment
- RF Receive IB Load
- RF Distribute LPN
- RF Putaway

## Company Parameter Configuration impacting Cross-Dock Functionality

| Company Parameter | Valid Values | Functionality | Additional Comments |
|---|---|---|---|
| **XDOCK_ORD_INV_ATTR_CHECKS** | • Blank(Not configured)<br>• EXACT | Controls if LPNs allocated through cross-dock should have inventory attributes matching that on order details.<br>• When left blank, the cross-dock allocation logic will ignore inventory attributes.<br>• When set to 'EXACT,' the LPN's inventory will have to match all the order detail inventory attribute values | From the Company Parameters UI, search for the XDOCK_ORD_INV_ATTR_CHECKS parameter key. Click Edit to set the parameter value |

| Company Parameter | Valid Values | Functionality | Additional Comments |
|---|---|---|---|
| | | for a successful cross-dock allocation. | |

From the **Company Parameters** UI, search for the **XDOCK_ORD_INV_ATTR_CHECKS** parameter key. Click **Edit** to set the parameter value.



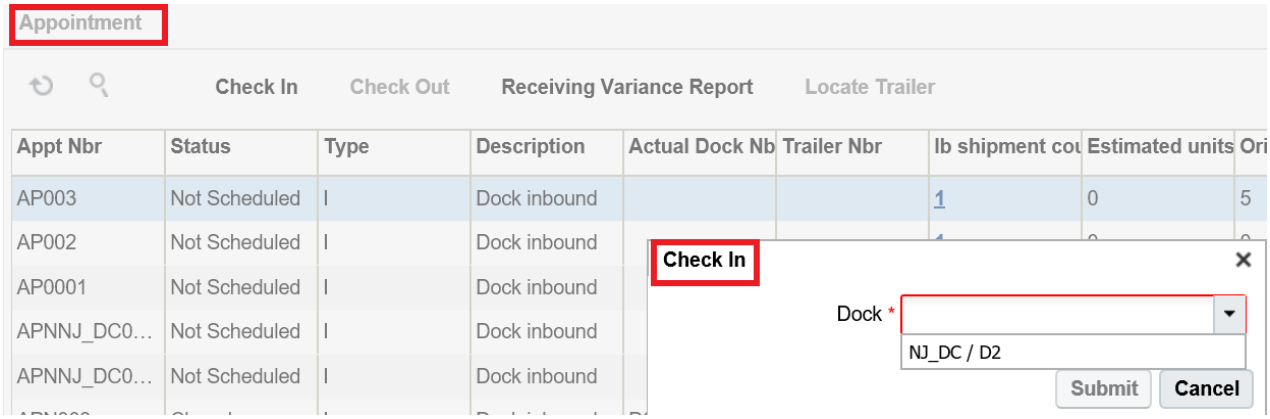

## Allocate a Multi-SKU LPN to more than one Order for the Same Destination

Also, with the Cross-Dock parameter (xdock-mode), you can allocate a multi-SKU LPN to multiple orders for the same destination if the company parameter **MULTISKU_LPN_XDOCK_ONE_ORDER_ONLY** is set to “No.”

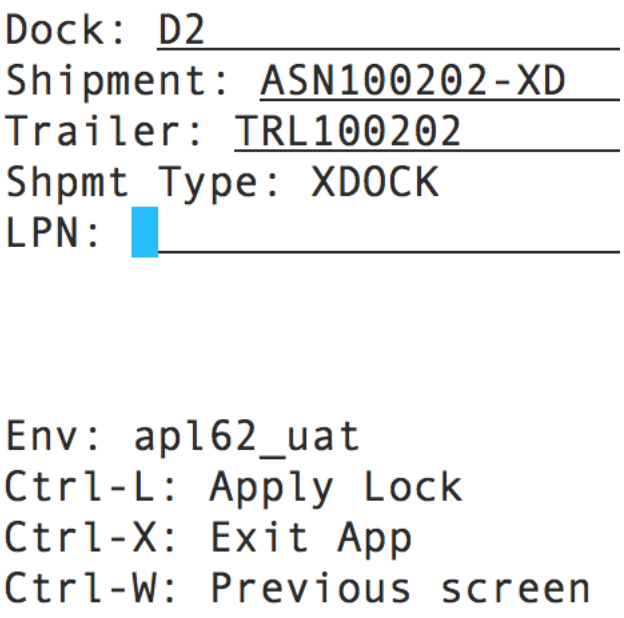
From the **Company Parameters** UI, search for the **MULTISKU_LPN_XDOCK_ONE_ORDER_ONLY** parameter key. Click **Edit** to set the parameter value.

## Executing Cross-Dock

1. Before the ASN can be received, it must be checked into a dock door.
    a. If you are using appointments, go to the “Appointment” screen, select the appointment, select a dock door from the drop-down, and click “Check In”.
    b. If appointments are not used, go to the “Inbound Loads” screen, select the Inbound Load, select an appointment, click “Check In”.
    c. Select a dock door from the drop-down, and click “Submit”.

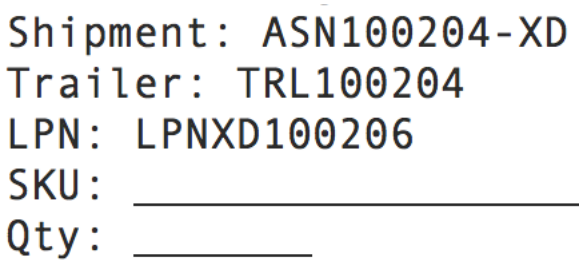



2. After the ASN is checked in, you may now receive merchandise with the RF. Go to the “Receive ASN XDock” RF module. Scan the dock door – the Shipment and Trailers, if specified, will auto-populate. If the trailer is not populated, the user must enter the trailer number and press tab to proceed.




3. Scan the LPN number.

a. If the LPN number is specified in the ASN, Oracle WMS Cloud recognizes the LPN's contents and displays a message. Press Ctrl-A to proceed.
b. If the LPN number is not specified in the ASN (blind receipt), the RF will then prompt the user for the SKU and quantity.




Enter the Item Code and quantity. Press Ctrl-E to close the LPN.

4. If everything was done correctly, the RF will display the message "XDock allocation succeeded". Press ctrl-A to proceed.

## Cross-Dock Receiving with Auto-Order Creation

If some information about the to-be-cross-docked LPN is known beforehand, there is an option to receive such shipments without having to manually create an order. This requires the use of the ASN interface with specific fields populated.

Step 1: Configure the Oracle WMS Cloud for cross-dock

To enable automatic creation of cross-dock orders during receipt, two facility parameters must be modified.

1. Go to the "Facility Parameters" screen.
2. Select parameter key "AUTOCREATE_XDOCK_ORDER_TYPE" and click edit. For the value, type in the cross-dock order type code. Click "Save".
3. Select parameter key "AUTOCREATE_XDOCK_SHIPMENT_TYPES" and click edit. For the value, type in the cross-dock shipment type code. Click "Save".
   a. If the shipment type has not been created, go to the "ASN Types" screen and use the Create button to create one.

| | |
|---|---|
| AUTOCREATE_XDOCK_ORDER_TYPE | XDOCK |
| AUTOCREATE_XDOCK_SHIPMENT_TYPES | XDOCK |

Step 2: Create the Cross-Dock ASN file

Open the "ISSR" interface file.

Populate the basic ASN information. See example below:

| [headings] | shipment_nbr | facility_code | company_code | trailer_nbr | action_code | ref_nbr | shipment_type | load_nbr | vendor_info | origin_info | shipped_date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [H1] | ASN100209-XD | DC_01 | SNEPHEW | TRL100209 | CREATE | REF | XDOCK | | VENDOR | US | 20141002 |
| **[headings]** | **seq_nbr** | **action_code** | **lpn_nbr** | **lpn_weight** | **lpn_volume** | **item_alternate_code** | **item_part_a** | **item_part_b** | **item_part_e** | **item_part_f** | **invn_attr_a** |
| [H2] | 1 | CREATE | LPNXD100212 | | | THK03 | | | | | |

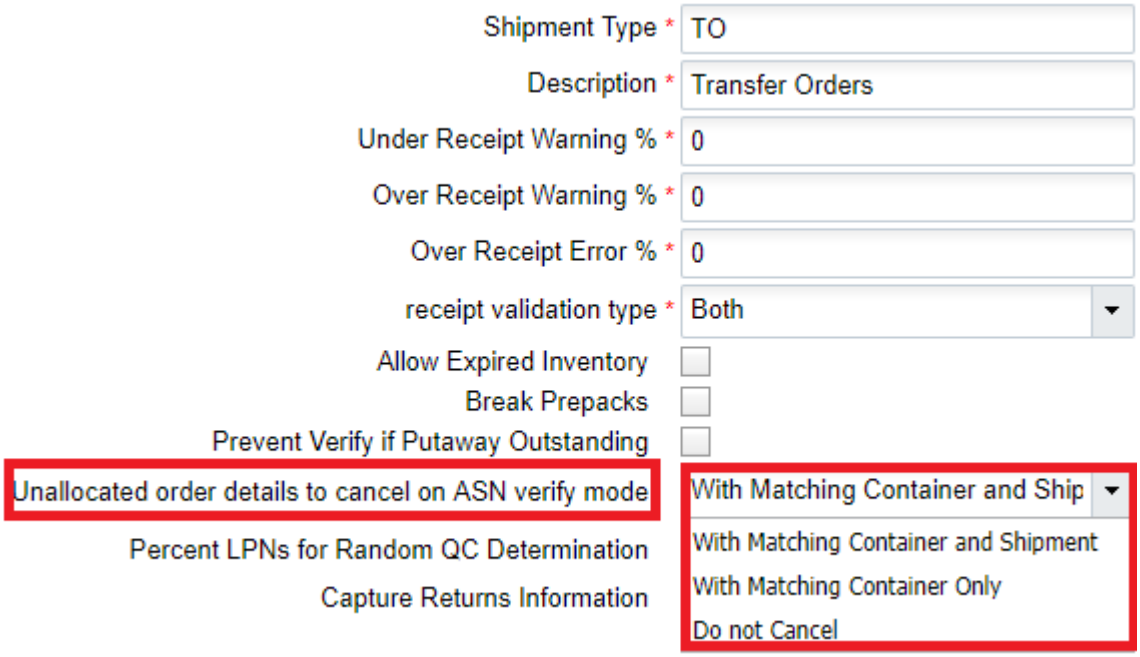
When creating the ASN file for cross-dock, three fields are required in order for this process to work:

1. Shipment_type (column H): the ASN type for cross-dock shipments.
2. lpn_nbr (column D): the LPN number for the cross-docked merchandise. If the LPN number is not known, this method will not work.
3. recv_xdock_facility_code (column AA): the facility (warehouse) that is receiving the ASN. Enter the appropriate facility code.

   Once the ISSR file is complete, upload it to Oracle WMS Cloud. From the “Input Interfaces” screen, select the “Inbound Shipment” from the drop-down.
4. Click “Upload Files”, select the ISSR file, and click OK.
5. Click “Run Interface” to process the file. If everything was done correctly, Oracle WMS Cloud will display the message “Interface completed”.
6. For receiving, receive this ASN like any other cross-dock flow. During RF receipt, the system will automatically create a cross-dock order for the received LPN.

## Cancel Orders after Shipment Verification

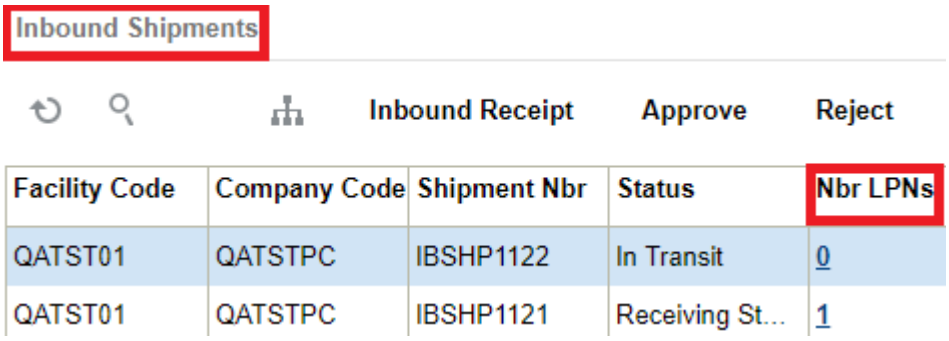
Oracle WMS Cloud allows you to cancel unallocated order details. You can cancel order details that have the “Required Container” field populated with the Inbound LPNs that were not received. This is controlled in the Shipment Type UI with the “Unallocated order details to cancel on ASN Verify” mode. The “Unallocated order details to cancel on ASN Verify” mode has the following options:



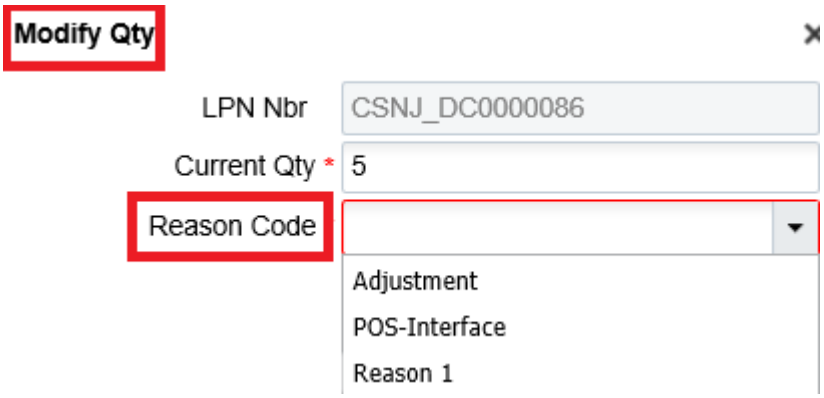

- **With Matching Container and Shipment:** When a shipment is verified, the application cancels unallocated order details that have the "Required Container" field populated with the Inbound LPNs that were not received, provided that the 'Shipment Number' order detail field is also populated.
- **With Matching Container Only:** When a shipment is verified, the application cancels unallocated order details that have the 'Required Container' field populated with the Inbound LPNs that were not received, regardless of whether the 'Shipment Number' order detail field is populated or not. This is useful for customers dealing with cross-dock orders that do not have the 'Shipment Number' order detail field populated.
- **Do Not Cancel:** No unallocated order details are cancelled.

# Modify Receiving quantity from IB Shipment UI

There are instances where you may need to modify the quantity of an IBLPN. For example, you may want to modify the quantity of a received IBLPN that is part of an inbound shipment that has not been completed. To do this, you can go to the "Nbr LPNs" (hyperlinked UI that is accessed from the IB Shipment UI).

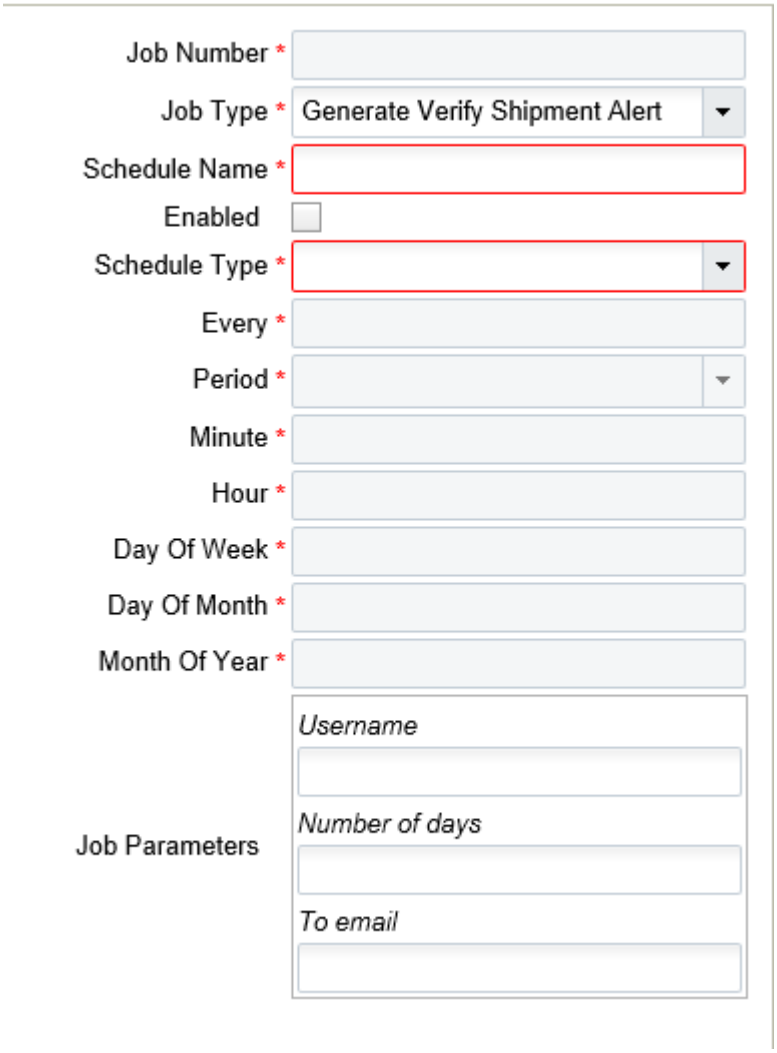


The “Modify Qty” allows you to change the ‘Current Qty’ of a particular inventory record withing an IBLPN. When you click “Modify Qty”, a pop-up displays with the ‘Current Qty’ of the selected inventory within the LPN and a ‘Reason Code’ drop-down field. The ‘Reason Code’ drop-down displays all the reason codes that are created for the corresponding company and parent company (if applicable).




# New Email Alert to Inform Inbound Shipments that need Verification

You can configure a scheduled job to send email alerts to remind users that they need to verify Inbound Shipments. This scheduled job is configurable in the Scheduled Job UI. The email will include information about the Inbound Shipments (ASNs) that have not been verified for an X period of time, where X is a configurable parameter at the scheduled job level. You can also set up the email addresses you want to send the alert to via the Scheduled Job UI.

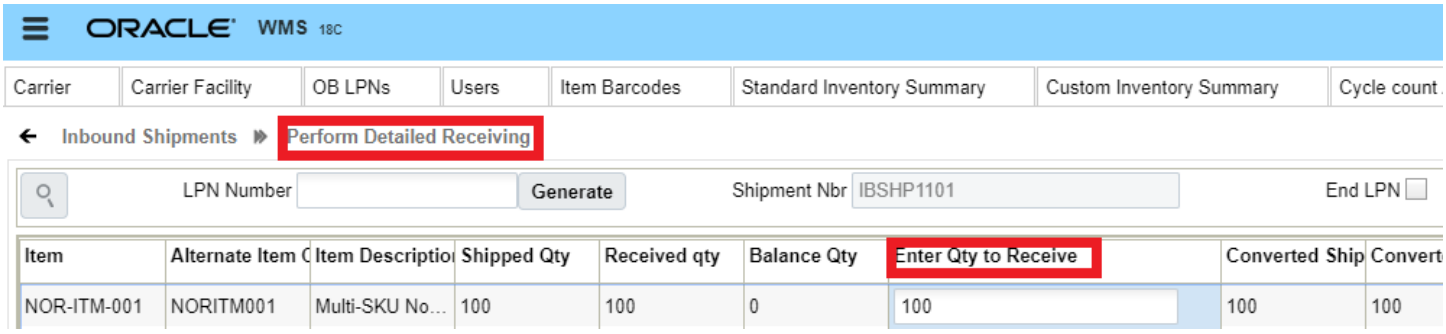



Email alerts must be sent to a valid user with a valid email. The number of days field specifies the number of days that receiving has started for shipments but has not been verified.

# Edit UI Screen to Receive Inventory from the UI

From the Inbound Shipments, Perform Detailed Receiving UI, you can enter the Receiving quantity in the **Enter Qty to Receive** field. This allows you to enter the quantity without having to select each record and then perform edit.

**Note:** the Detailed Receiving Option does not support performing receiving for batch number, expiry date tracked, or inventory attribute tracked items.




# Receive Cartonize Details from the ASN Detail Screen

From the Inbound Shipment Detail screen, users can now perform receiving on Cartonized details at LPN level. There is a button called 'Receive LPN' provide which is access controlled and will work with multiple LPNs selected the detail page. Appropriate validations are performed for enabling of the button. Currently it is only restricted to receive at LPN level and not at Pallet level.

The '*Receive LPN'* action button will not be disabled if a shipment detail has the quality check as yes. By default, the newly added screen parameter '*consider-mark-for-qc-flg*' is set to 'No' and the 'Receive Entire shipment' at the IB Shipment header level, will mark the LPN status as 'Received' even if the shipment details has quality check as 'Yes'. Also, receiving an LPN from the *'Receive LPN'* Action button in the IB shipment details screen will mark the LPN status as 'Received'.

- The ***'Receive LPN'*** Action button will mark the LPN status as 'Quality Check' if the shipment detail has quality check as 'Yes'.

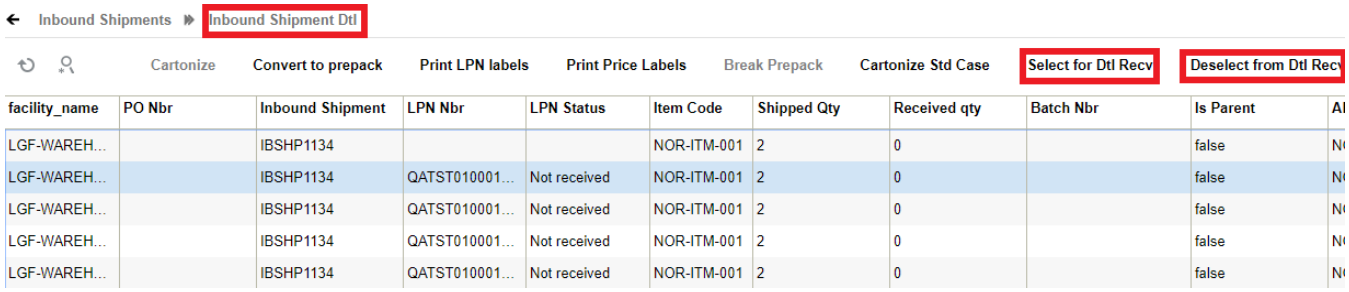
**Note:** This functionality only works when the IB shipment detail is marked for QC. This functionality only works in the RF.

# Detailed Receiving for LPNs in a Fully Cartonized Shipment

There are situations where you may need to enable detailed receiving for remaining LPNs in a shipment after you start receiving a shipment. In this case, you can do detail receiving for LPNs in a fully cartonised shipment. The action buttons "**Select for Dtl Recv**"or "**Deselect from Dtl Recv**" will get enabled in cases where the shipment status is > **In Transit**.

For example, if the vendor has sent LPN01 with 50 units for SKU1 and in reality, the vendor has sent in two different boxes (LPN01- 30 units and LPN02- 20 units), with this functionality, the vendor can still receive the shipment.

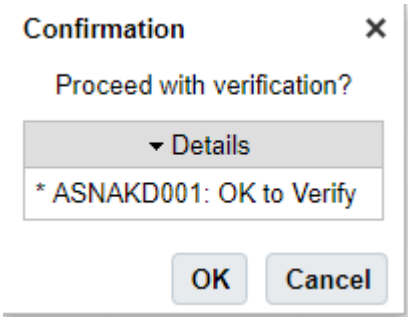
1. In the Inbound Shipment Detail, click the "Select for Dtl Recv" button to set Detail Receive Flag to True for all selected LPNs.
2. In the Inbound Shipment Detail, click the "Deselect for Dtl Recv" button to set Detail Receive Flag to False for all selected LPNs.



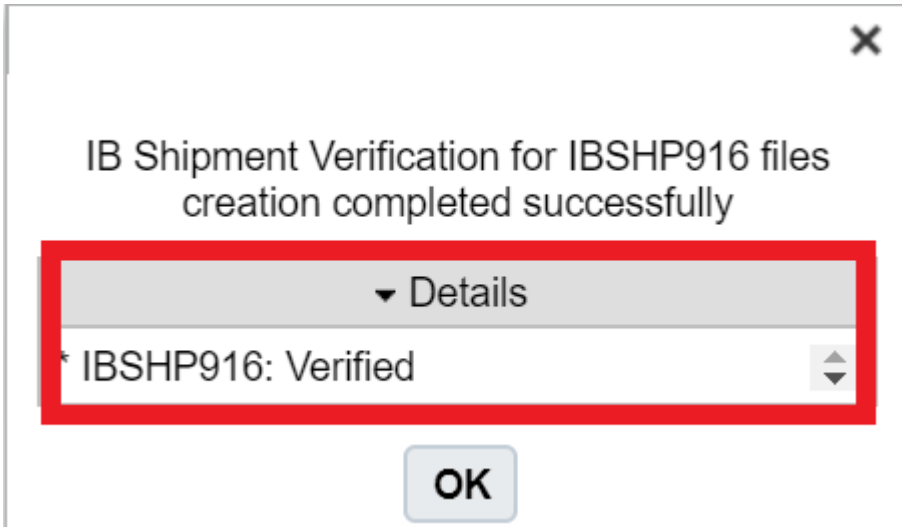

| facility_name | PO Nbr | Inbound Shipment | LPN Nbr | LPN Status | Item Code | Shipped Qty | Received qty | Batch Nbr | Is Parent | Al |
|---|---|---|---|---|---|---|---|---|---|---|
| LGF-WAREH... | | IBSHP1134 | | | NOR-ITM-001 | 2 | 0 | | false | N |
| LGF-WAREH... | | IBSHP1134 | QATST010001... | Not received | NOR-ITM-001 | 2 | 0 | | false | N |
| LGF-WAREH... | | IBSHP1134 | QATST010001... | Not received | NOR-ITM-001 | 2 | 0 | | false | N |
| LGF-WAREH... | | IBSHP1134 | QATST010001... | Not received | NOR-ITM-001 | 2 | 0 | | false | N |
| LGF-WAREH... | | IBSHP1134 | QATST010001... | Not received | NOR-ITM-001 | 2 | 0 | | false | N |

# ASN Verification

1. Once the ASN is completely received, operators will need to verify the receipt in order to send a verification file back to the host system. In order to send this verification file, perform the following steps:
   a. From the Inbound Shipments screen, select the ASN that requires verification and click 'Verify.'
   b. WM will display a pop-up screen to operations in order to confirm the verification process.



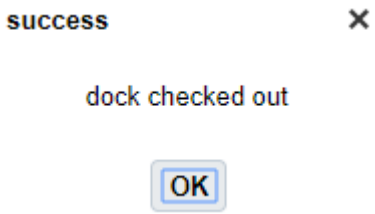

   c. Once you select "OK", WMS will verify the ASN, and create an output ASN verification file. If no is selected, WM will not verify the ASN, and the ASN can first be reconciled before the verification process (based on associated business processes.)




d. Oracle WMS Cloud will generate an ASN verification file – if integration is configured, Oracle WMS Cloud will drop the verification file to a shared SFTP directory (typically the 'output' folder).

# Checking Out a Load

After you are done receiving your inventory, you should check out your load. You can do this from the Appointment UI or Inbound Load UI. The Check Out button is only available if the load is checked in. You will receive a success message after check out, and the system will clear the location. Once the location is cleared, you can update your trailer to a Yard location via the Trailer UI.



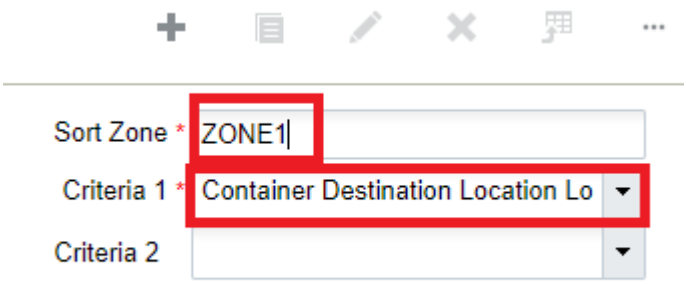

# Inbound Sorting

## UI Configuration

All IB Sorting configurations are made through the *Inbound Sorting* screen.

The Sorting feature is managed by Sort Zones. A Sort Zone is a group of drop locations that use the same sorting criteria. Only one location can be associated to one Sort Zone. However, the same sorting criteria can be used in multiple Sort Zones independently.

To setup Inbound Sorting click create to create a Sort Zone record on the “Inbound Sorting” screen. Enter a name for the Sort Zone and choose the sorting criteria in which the IBLPNs are sorted by.




The sorting criteria selections use the destinations calculated for “Directed Putaway” using the putaway type on the LPN and the configured “Putaway Priorities.”

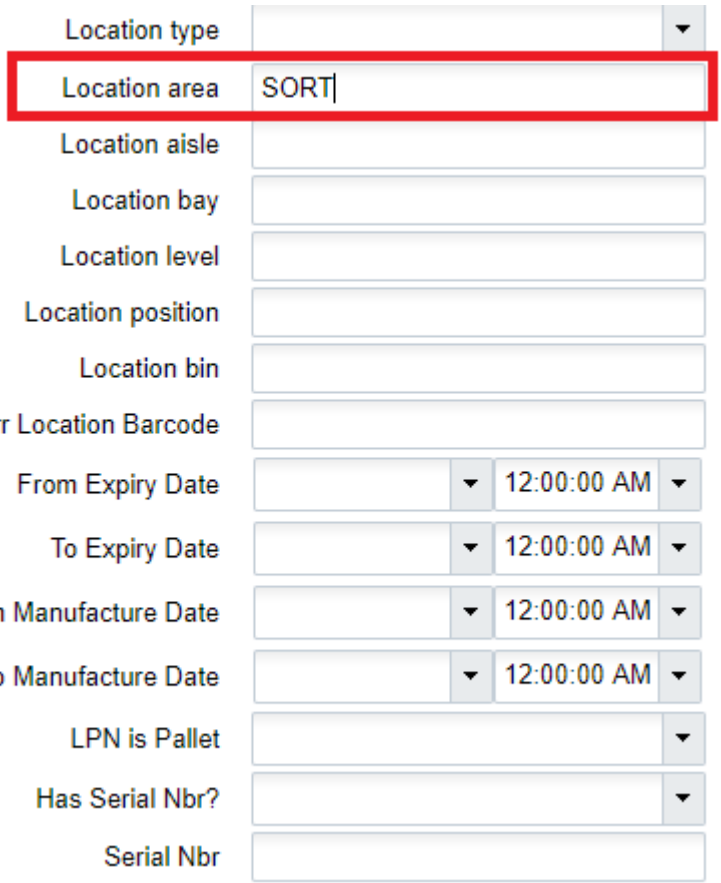
Select this newly created Sort Zone record and click on its details via the details button. This will open a new window, which displays the Location, Pallet and Criteria Value (Area, Aisle, Allocation Zone, Location Size-Type):

| Sort Zone | Location | Pallet | Criteria Value |
|---|---|---|---|
| 1 | SORT-1-1-1 | PLT_0527_03 | WHITE |
| 1 | SORT-2-1-1 | | CLEAR-E4 |
| 1 | SORT-3-1-1 | | |
| 1 | SORT-4-1-1 | | |
| 1 | SORT-5-1-1 | | |
| 1 | SORT-6-1-1 | | |
| 1 | SORT-7-1-1 | | |
| 1 | SORT-8-1-1 | | |
| 1 | SORT-9-1-1 | | |
| 1 | SORT-10-1-1 | | |

The Location column displays the Sort Locations that are configured for the Sort Zone. In the figure above, there are 10 sort locations configured for Sort Zone 1.

The Pallet column displays the current active pallet per the Sort Location. A pallet is considered 'active' when there is an open pallet with merchandise located at the Sort Location. There are a few points to consider when scanning a pallet to a Sort Location:

1. There may only be one active pallet in a Sort Location at a time. This active pallet is populated in the "Pallet" column.
2. When the pallet is closed (via the Ctrl-E option in the RF), the pallet value will disappear from the Pallet column, but its Criteria Value will remain.
    a. For example, in the figure above, location SORT-2 has no pallets but is assigned to criteria "CLEAR-E4". This means that the next CLEAR-E4 item scanned is directed to this location, but the user will have to scan a new pallet.
3. The Criteria Value is only cleared when all pallets for that criteria (Putaway Type) have been located out of the Sort Location.
    a. Users can search for pallets located in specific Sort Locations via the magnifying glass button in the "IB LPNs" screen:

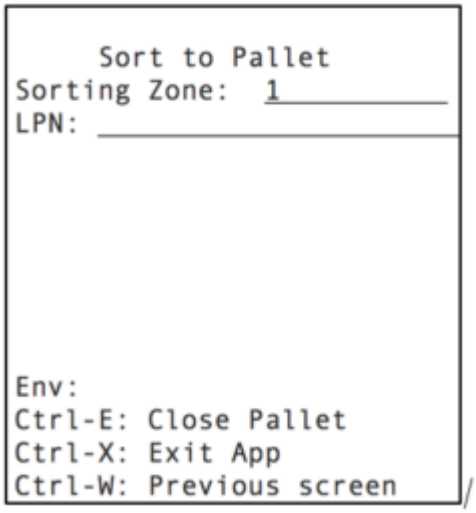



4. When an LPN (Serial Number) is scanned into a pallet, it will change to "Allocated" status. Its status will only reset to "Located" when its pallet is closed. This means that a pallet or LPN cannot be moved until its pallet is closed. The user can validate this by searching for the LPN and verifying its status and location via the "IBLPN" screen.

## Using the Sorting RF Module

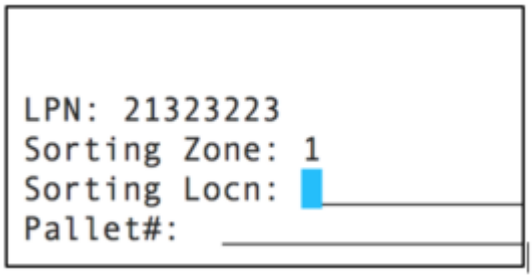
These are the steps to use the *Sort to Pallet* RF module:

Enter the RF module *Sort to Pallet.*



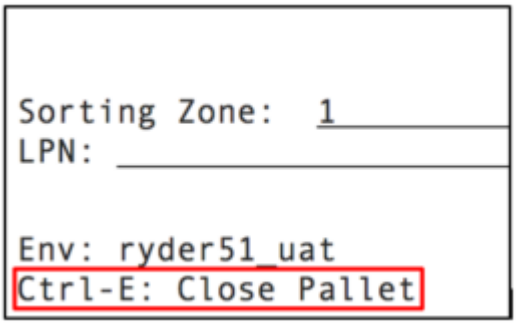

Enter the Sort Zone and scan the Item's Serial Number in the "LPN:" field.

If there are no active pallets with the Item's Putaway Type, the RF will not prompt for a Sort Location. In this case, the user must pick an empty Sort Location and scan a new pallet.




If there is an active pallet with the scanned Item's Putaway Type, the RF will direct the you to the Sort Location and Pallet Number. Scan the Pallet label to confirm Item movement.

Continue sorting into the active pallet until it is complete. When the pallet is complete, you must systematically close the pallet via the *Ctrl-E: Close Pallet* option. When the pallet message is prompted, scan the pallet that will be closed:




If done correctly, you are taken to the original RF display to continue sorting.

# Putaway

These topics give descriptions for APIs that complete actions related to putaway in the Warehouse.

*Related Topics*

- Putaway Priorities
- System Directed Putaway
- Creating Putaway Types

## System Directed Putaway

System Directed Putaway provides the ability for the system to determine the best location for inventory based on the following five components:

- The location's Max Units capacity
- The location's Max LPNs capacity
- The location's Max Volume capacity
- The location's Putaway Sequence value
- The location's Weight capacity

The putaway logic goes as follows:

1. WMS checks the IBLPN's Putaway Type (PT).
    a. If the IBLPN's PT field is empty, the system will look at the Item's default PT.
2. Look for locations that have a matching Location Size Type (based on the Putaway Type to Location Size Type pairing made in the "Putaway Priorities" screen).
3. Evaluate the location's putaway sequence.
4. Evaluate whether the location has space for the scanned LPN (checks for the location's "Max Units/LPNs/Volume", if specified).

During the putaway process, WMS uses the Putaway Type on the LPN and evaluates it against the Putaway Priority logic to determine the location that is used for putaway. The Putaway Priorities will control the sequence and how WMS determines a location. This sequencing is based on the following:

1. Putaway Type
2. Location Size Type
3. Location Type (Reserve or Active)
4. Putaway Method (Location sequence or Radial sequence)
5. FEFO flag (First Expiry First Out)
6. Putaway search modes:
7. Empty location
    a. Most empty by LPNs
    b. Most empty by volume
    c. Most empty by units
    d. Least empty by LPNs
    e. Least empty by volume
    f. Least empty by units

# Creating Putaway Types

Putaway Types **group similar products** based on how they need to be stored as inventory in the warehouse.

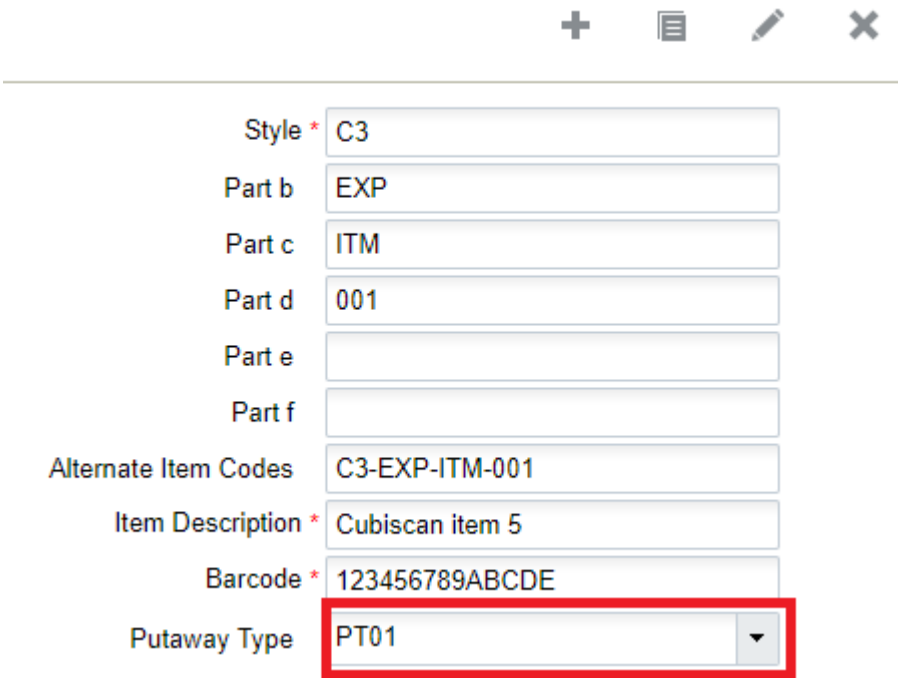
Example: Smartphones and Tablets can have Putaway Type “ELECTRONICS”.

1. The first step in setting up system directed putaway is to define the default putaway types.
2. Navigate to the ‘Putaway Type’ UI screen and click ‘Create’
3. Enter the following information for each putaway type:
   a. Putaway Type Code
   b. Description of the Putaway Type
4. Click ‘Save’.

Once all putaway types have been created/defined, the putaway types are defined at the item level or ASN level. This is dependent on business requirements and process flows.

If it is determined that the item level will be used, the following steps explain how to add a putaway type to an item.

1. From the “Items” screen, select the item that requires a putaway type defined, and click Edit ().
2. Scroll down until the ‘Putaway Type’ drop-down is visible. Click on the drop-down and select the applicable putaway type.




3. Once the putaway type has been selected, click the ‘Save’ button to save the changes made to this item.

> **Note:** If the item master is interfaced into WMS, the putaway type can be defined ahead of time. The field associated with the putaway type on the interface file is ‘putaway_type’.

# Creating Location Size Types

Locations in the warehouse are assigned to Location Size Types based on either the size or types of products they store.

For example:

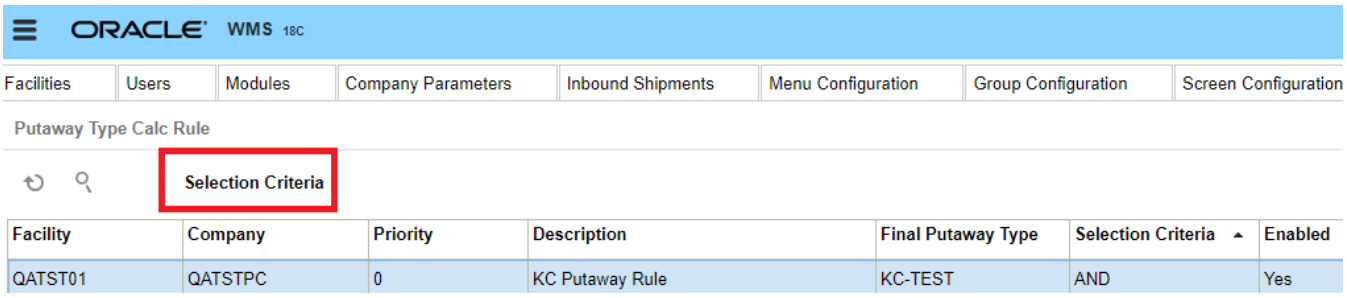
- Location A may be assigned type “BULK” for bulk pallet picking.
- Location B may be assigned type “MEDIA” for exclusively storing media items.

1. Create Location Size Types from the “Location Size Types” screen.
2. Once the sizes are created, assign them to individual locations. Go to the “Locations” screen.
3. Select a location and click “Edit”. Scroll down to the “Location Size Type” field and select the desired Location Size Type (from the ones created in step 1).

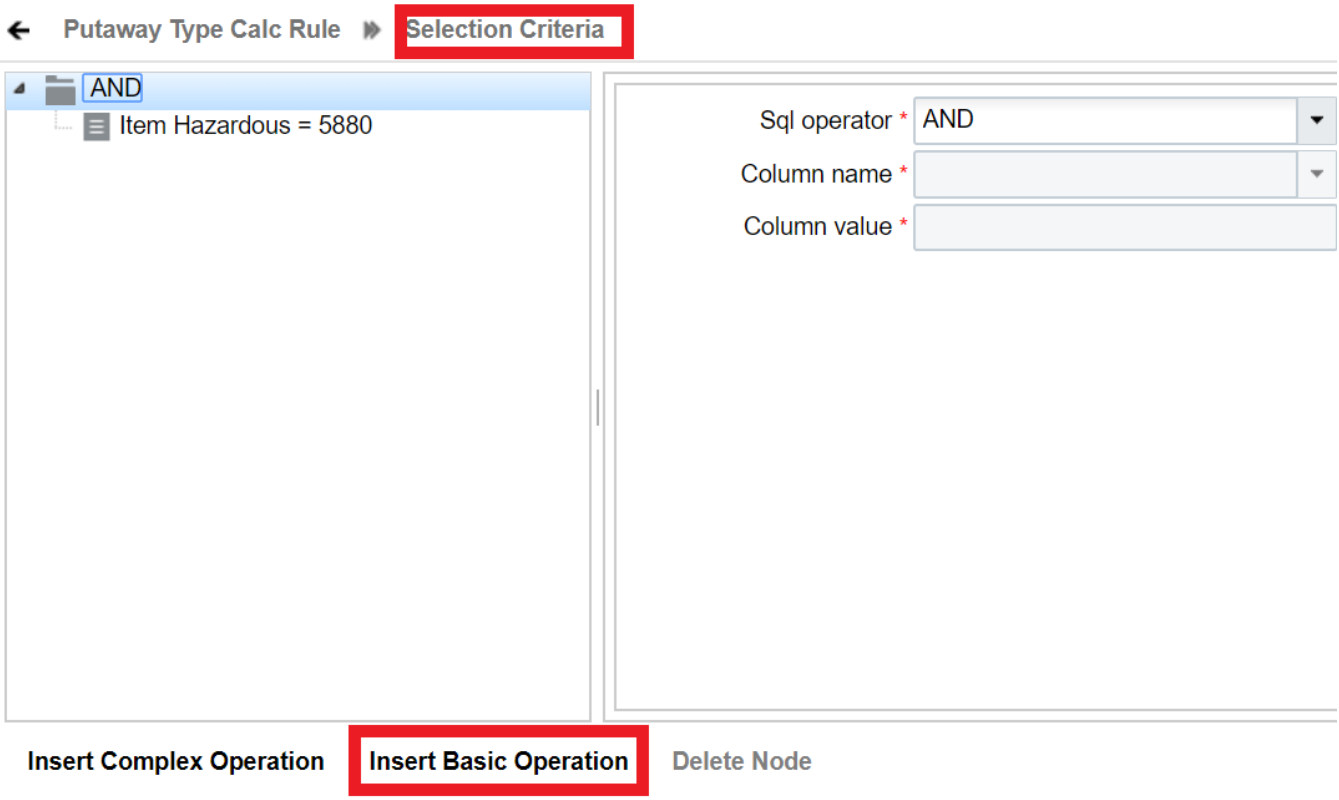
# Putaway Rules

Setting up Putaway Rules is an optional configuration. Rules provide the ability to override the SKU’s default Putaway Type based on criteria defined by the user.

1. Go to the “Putaway Type Calc Rule” screen. Click the ‘Create’ button to add a new putaway rule.
2. Fill out the following information for the new putaway rule:
    - Priority: This is the priority for how the rules are evaluated.
    - Description: A description of the putaway rule (e.g. Electronics)
    - Final Putaway Type: If the rule is applied, this will be the putaway type that is applied to the LPN.
    - Enabled: This determines if the rule is active or not
    - Once all applicable information is filled out, click the ‘Save’ button to save the newly created putaway rule.
3. Once the putaway rule has been created, the selection criteria must be created to define what the rule is searching for. Select the putaway rule and click the ‘Selection Criteria’ button.




4. The selection criteria screen allows you to define the criteria in order to apply the putaway type.

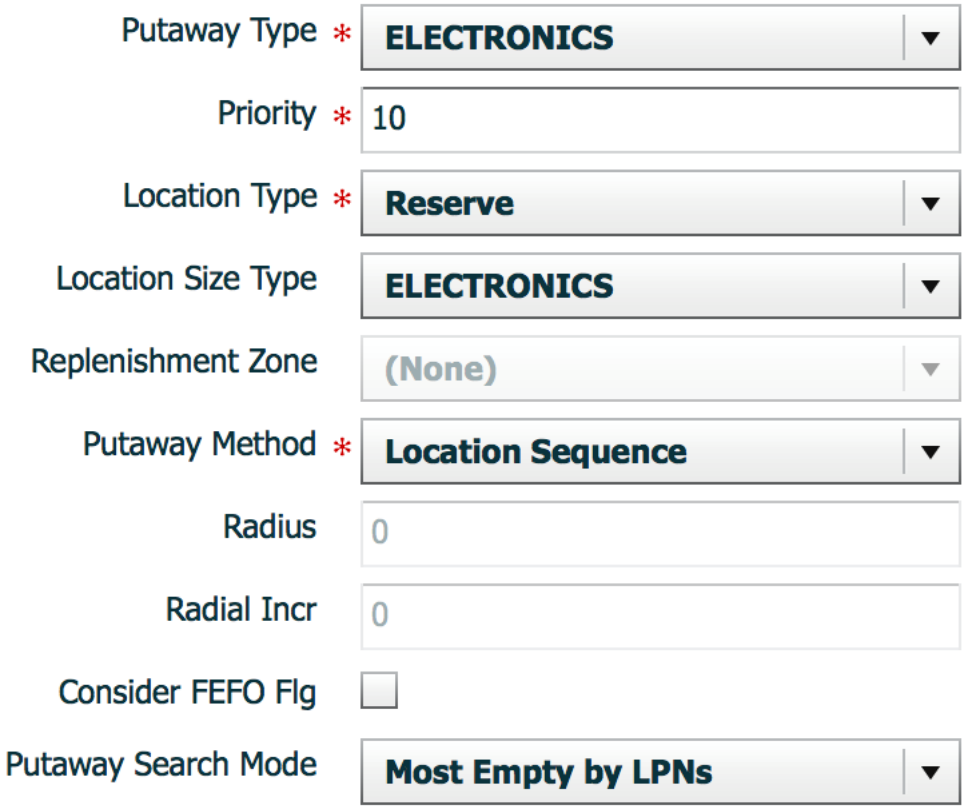



5. From the Selection Criteria details, click the 'Insert Basic Operation' button to add a new selection rule.
6. Fill out the following information to create a new selection rule:
   a. Sql operator: And, Or, <, <=, >, >=
   b. Column name: There are multiple Item Master fields to choose from. You will find **Item Hazardous** as an option under the Column Name drop-down.
   c. Column value: This will be the value based on the column name selection.
7. Click "Save".

# Putaway Priorities

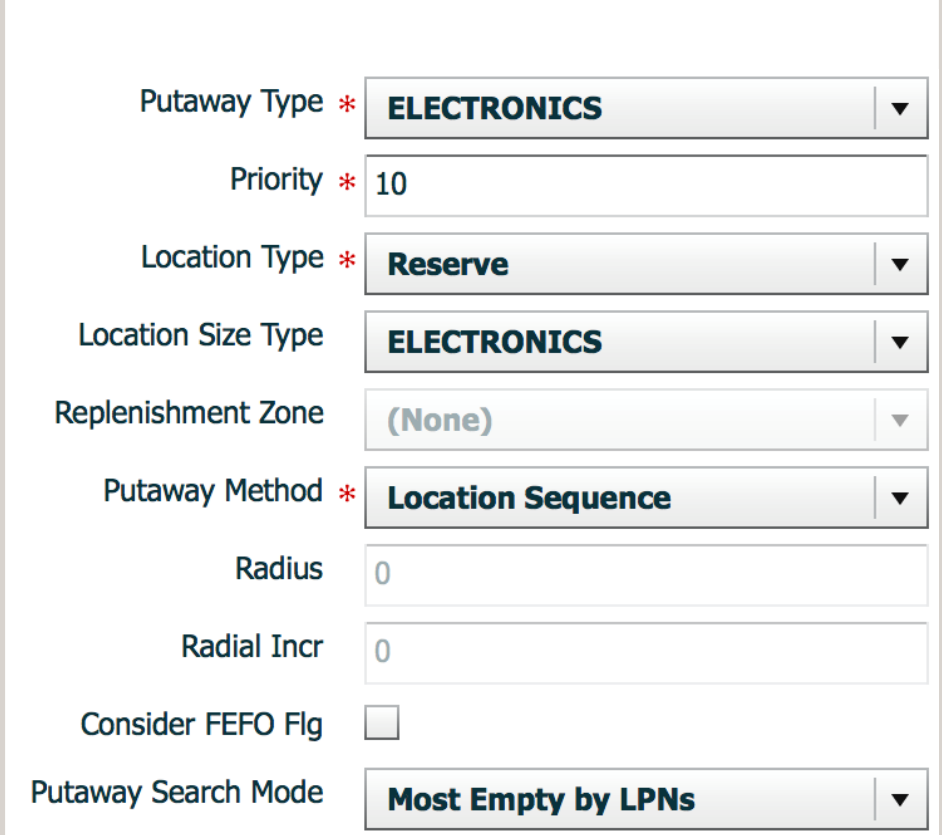
Putaway Priorities determine the **order** in which Putaway Types are triggered for putaway.

1. Go to the “Putaway Priorities” screen and click “Create”.
2. Fill out the following information to create a new Putaway Priority.




a. Putaway Type: The putaway type that will be used for the priority.
b. Priority: Determines the order of the putaway priority.
c. Location Type: The Location Type that is used in the logic – Reserve/Active.
d. Location Size Type: The Location Size Type that will pair with the previously selected Putaway Type.
e. Replenishment Zone: Only applies to active locations. This field defines the active location’s replenishment zone.
f. Putaway Method: The putaway method used: by Location Sequence or Radial.
g. Radius: If “Radial” is selected for the Putaway Method, this field is required. It defines the radius of locations that will be used during the putaway logic process.
h. Radial Incr: If “Radial” is selected for the Putaway Method, this field is required. It defines the increment radius value in which WMS will look for locations during putaway.
i. Consider FEFO flg: If checked WM will consider the expiration date when determining a location to putaway the inventory.
j. Putaway Search Mode: This defines how WM will determine a location for putaway.

- Sample Putaway Priority configuration




The above configuration translates to the following:

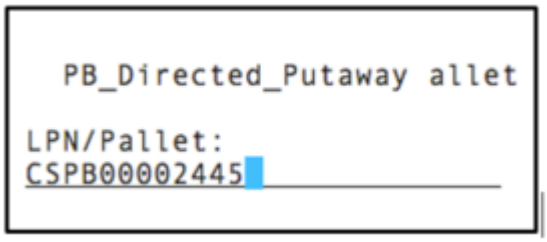
When an IBLPN of Putaway Type “ELECTRONICS” is scanned for putaway, WMS will look for all locations that have Location Size Type “ELECTRONICS” to putaway to. Out of these eligible locations, WMS will look for the location with the least amount of LPNs (“Most Empty by LPNs”). At the same time, these locations will ordered based on its “putaway sequence” value. If the locations have a max weight greater than zero, the system will validate the location weight with the IBLPN weight .

3. Click “Save” .

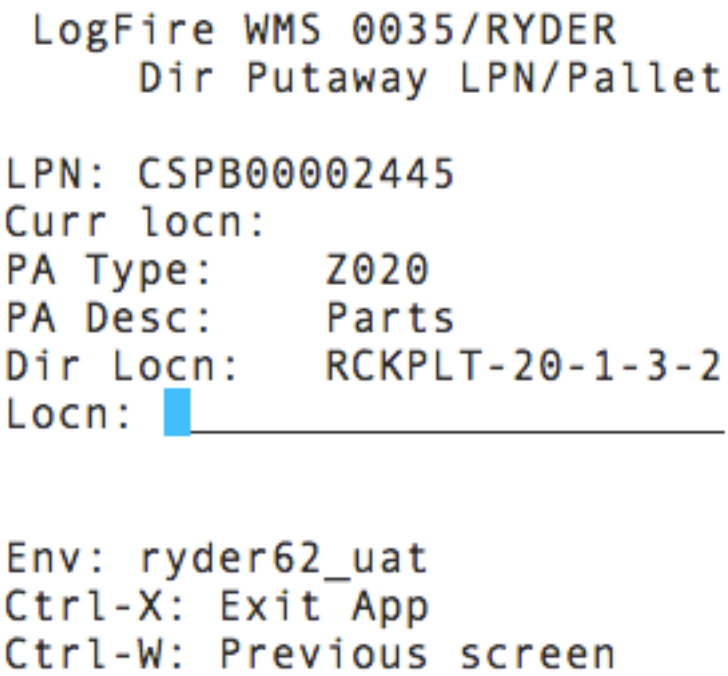
# System Directed Putaway – No exceptions

The RF – Transaction ‘Directed Putaway’ will be used to putaway cases/pallets to a storage/picking location. The system will direct the user to a specific putaway location.

1. Select the RF transaction ‘Directed Putaway’.
2. Scan the LPN on the label of the pallet or case that needs to be putaway.




3. The RF will direct the user to a putaway location.

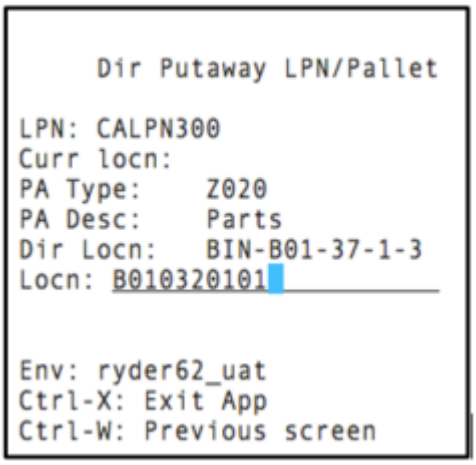



4. Go to the location prompted; scan the location barcode, and putaway the LPN.

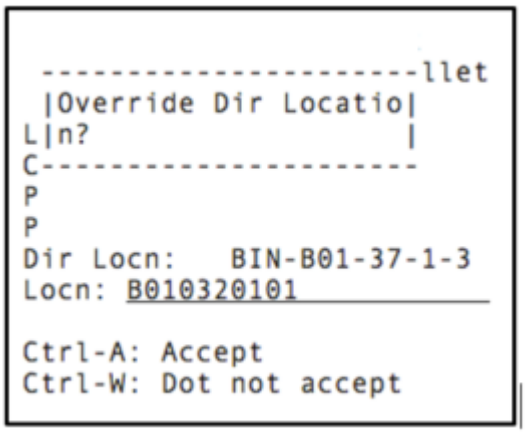
## Directed Putaway – Exception

If a location directed on RF Screen is full or unavailable, a user will be able to override the putaway location by choosing another available location in the same zone.

1. From RF Gun, in RF-Transaction 'Directed Putaway', Scan another available location in the same zone.

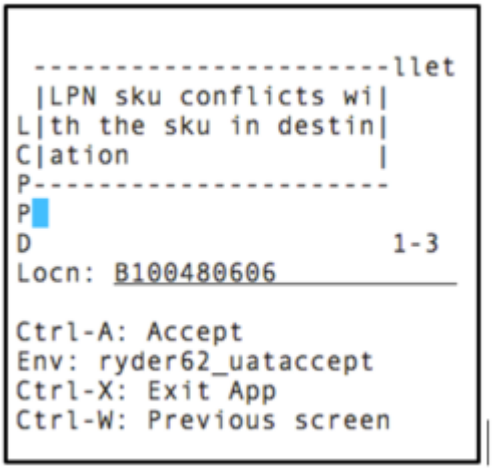



2. RF – Screen will display 'Override Location?'

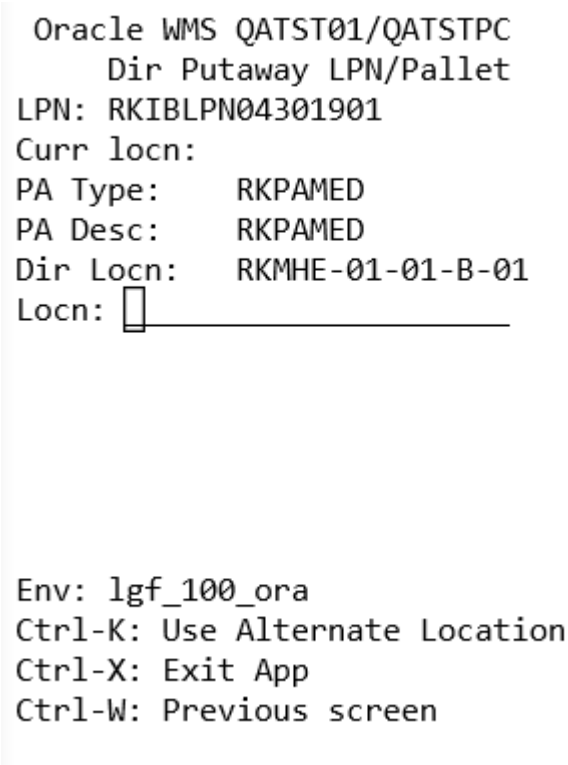



3. Press Ctrl-A to accept overriding the location prompted.

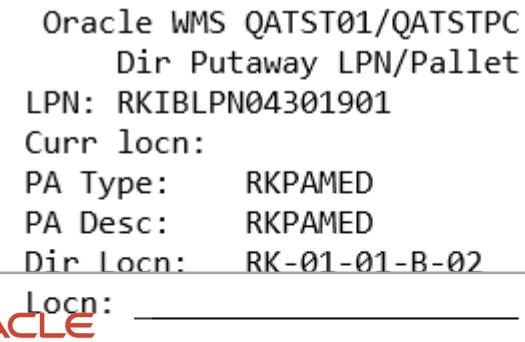
**Note:** If the location chosen already has inventory, or is reserved for another Item, the RF will advise the user that the location is unavailable. User will press CTRL-A, and scan another available location.




You can also get a list of alternate locations by entering CTRL-K.

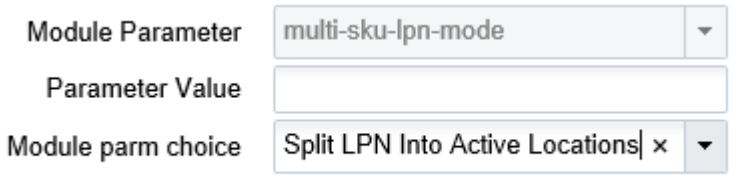



Once you enter CTRL-K, the system will show the next location based on putaway method priority.



## Split LPN into Active Location

You can split LPNs into different active locations using Directed Putaway. To do this the Parameter "multi-sku-lpn-mode" must be set to "Split LPN Into Active Locations".



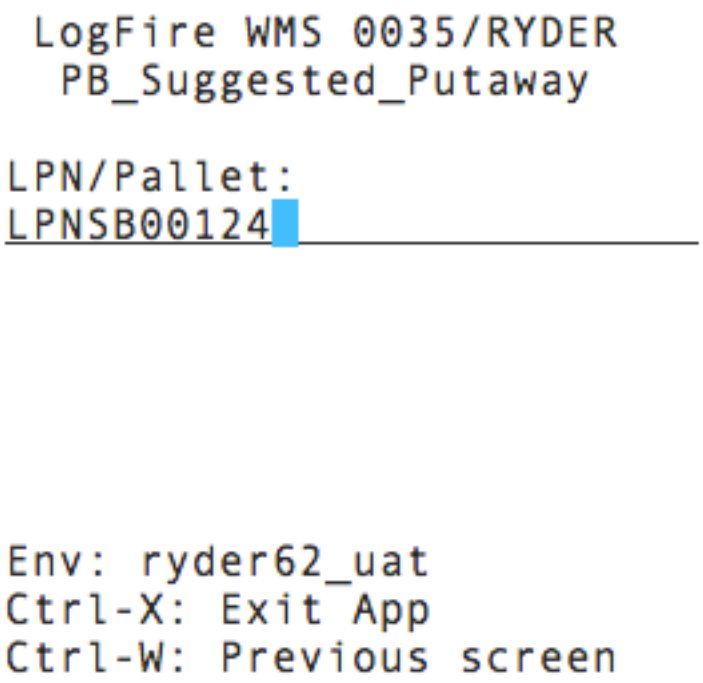

Once you scan the LPN, the system will validate the item's unit weight (sum of items unit weight present in the container) with the maximum weight for the location determined through putaway method priority.

If the location's max weight has the capacity to accommodate all of the items (sum of all items unit weight for the scanned LPN), then putaway will happen for that respective location.

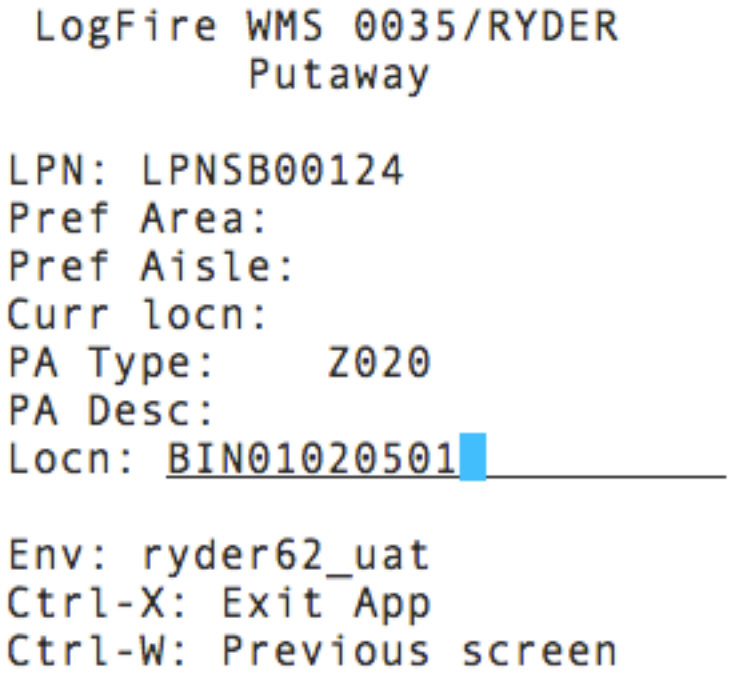
# Suggested Putaway

The RF – Transaction 'Suggested Putaway' can be used to putaway based on the user's choice. This can be used if inventory needs to be putaway to a specific location without having to go through and to override the system's directed location. This can also be used to putaway to the Pick line Locations if there are any empty locations and if replenishment has not occurred yet.

1. Select the RF-Transaction 'Suggested Putaway'.
2. Scan the LPN on the label of the pallet or case.




3. Scan the location chosen for putaway.



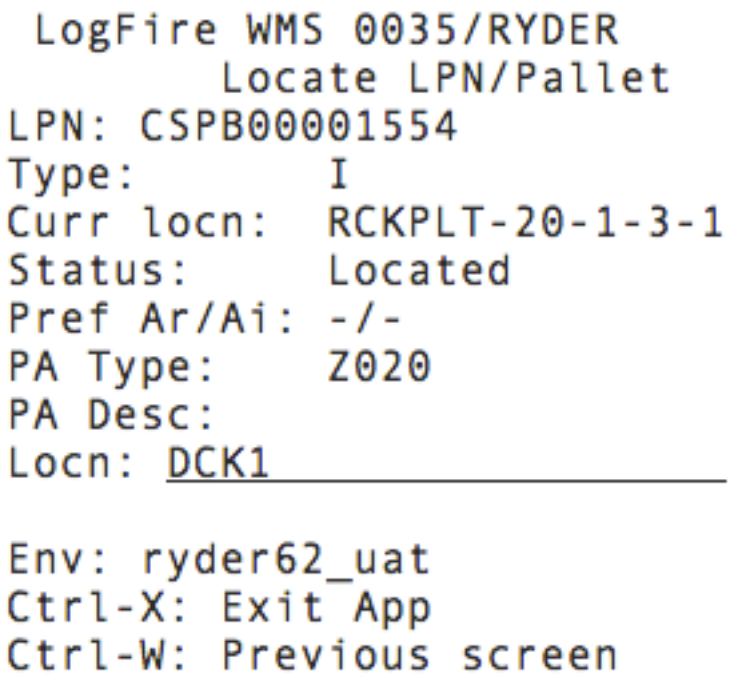

> **Note:** If the scanned location has a max weight greater than zero, the system will validate the location's max weight with the scanned IBLPN/Pallet weight to make sure that the new IBLPN/Pallet is still within the limits of the max weight.

# Locate LPN to any Reserve Location

RF-Transaction 'Locate LPN/Pallet' is used to locate pallets or case to any Reserve or Dock locations. The user will be able to choose any Reserve or Dock location to which the Pallet or Case needs to be located.

Note: The system does not do any capacity validation with this option.

1. Select RF-Transaction 'Locate LPN/Pallet'.
2. Scan the LPN on label of pallet or case being located.
3. Scan the Dock or Reserve Location to which the pallet or case is being located.



# 3 Material Handling Equipment (MHE)

## Material Handling Equipment in Oracle WMS Cloud

This topic includes an overview of the Oracle Warehouse Management Cloud (WMS) APIs used for Material Handling Equipment (MHE) configuration.

The guidelines in the following topics assume that you have a good understanding of APIs and WMS operations. MHE Configuration may vary depending on your warehouse setup.

*Related Topics*

- Common MHE Flows
- Configuration

## Overview

### Overview

Oracle WMS Cloud supports various types of automated material handling equipment (MHE) such as:

- Conveyors
- Carton Sorter
- Tilt Tray Sorter
- Pick-to-Light
- Put-to-Light
- Put-to-Wall
- Carousels

In Oracle WMS Cloud you can configure which systems you will use as well as the messages and routing instructions that will go out to each MHE System. Oracle WMS Cloud uses a set of standard APIs to provide real time, low latency communication for fast and efficient fulfillment.

## WMS APIs that support MHE Configuration

Refer to the following documents for more details on WMS legacy APIs:

*Oracle WMS Cloud Integration API Guide* – Overview of supported integration with MHE including Prebuilt integrations with certain MHE Vendors and for predefined flows and standard Oracle WMS Cloud APIs.

*Oracle WMS Cloud Interface Specs* - Excel file contains the Standard Interface Index of APIs and detailed specifications.

The following APIs support MHE configuration:

| API | Description | MHE System | API from or To WMS |
|---|---|---|---|
| Induct LPN | Allows automated systems (MHE) to induct an LPN locations tied to an MHE conveyor system. | Generic (conveyor / sorter) | Incoming |
| Divert Confirmation | Allows automated systems (MHE) to confirm that an LPN was diverted or located. This will trigger the update of the LPN's location as well as possibly completing any putaway allocations. | conveyor | Incoming |
| Route Instruction | Output interface API generated when a route instruction rule is fired. The message content is documented in the *interface specifications*.<br><br>See *Route Instruction Configuration* for more details. | conveyor | Outoing |
| Pick Confirm | Gives the ability for automated systems (MHE) to complete allocations of the LPN (i.e. pack, pick, etc.). This will trigger the update of WMS to complete the packing operations. | Pick to Light | Incoming |
| Wave Pick Info | Output API that gets generated when the wave is completed. Includes picking information that can be sent to the MHE system. The message content is documented in the *interface specifications.* | Pick to Light | Outgoing |
| Distribution Info | Distribution info is generated as part of the distribution wave, and is generated in the Output Interface and can be sent to the MHE system. The message content is documented in the *interface specifications.* | Sorter / Put to Light | Outgoing |
| From MHE Distribution Pack | Rest API to perform packing updates when MHE System is performing distribution and packing of inducted inventory. New API which provides information related to the outbound LPN's packed by Tilt Tray Sorter or Put to Light System or Distribution Sorter. Once outbound LPN is completely packed MHE system makes an API call to perform packing updates for LPN distributed | Sorter / Put to Light | Incoming |
| From MHE Distribution Short | Rest API to perform shorting updates when MHE System is performing distribution and | Sorter / Put to Light | Incoming |

| API | Description | MHE System | API from or To WMS |
|---|---|---|---|
| | packing of inducted inventory. This will trigger the update of WMS to perform shorting related updates. | | |

Refer to the *Oracle WMS Cloud Integration API Guide*for more details about these APIs.

# Common MHE Flows

See the following topics for more details about common MHE flows:

*Related Topics*

- Pick to Light
- Load Balancing
- MHE Pick Confirmation API
- Pick Confirmation Messages
- Put to Light / Sortation

## Pick to Light

In a Pick to Light (PTL) flow, after WMS Cloud runs a wave and creates allocations, these are then communicated to the PTL system. The PTL will have information on each allocation, container, location and item quantities to be picked.

As a container is scanned at the start of the picking module, lights light up corresponding to the allocations in that container. As the operator pushes the light buttons to confirm picks, the PTL system sends messages. Once the container is complete, a close message is received from the PTL and the container can proceed to staging. Exception scenarios such as short picks are also covered through these APIs.

### Pick to Light Flow Steps

1. Run cubed or non-cubed wave.
2. Generate Wave Pick information as an output interface file to be sent to MHE's control system.
3. Scan LPN to start packing.
4. Pick and Pack into LPN. As the lights glow, use **Pack** API.
5. Send short API if picked short.
6. Send **Close LPN** (non-cubed or automatically packed)
7. Send **Complete** command if all picking for given OBLPN is complete to short all remaining picks.

## Load Balancing

Oracle WMS Cloud contains a load balancing feature to spread workloads across mirrored areas of a distribution center. This load balancing can be used with or without MHE systems.

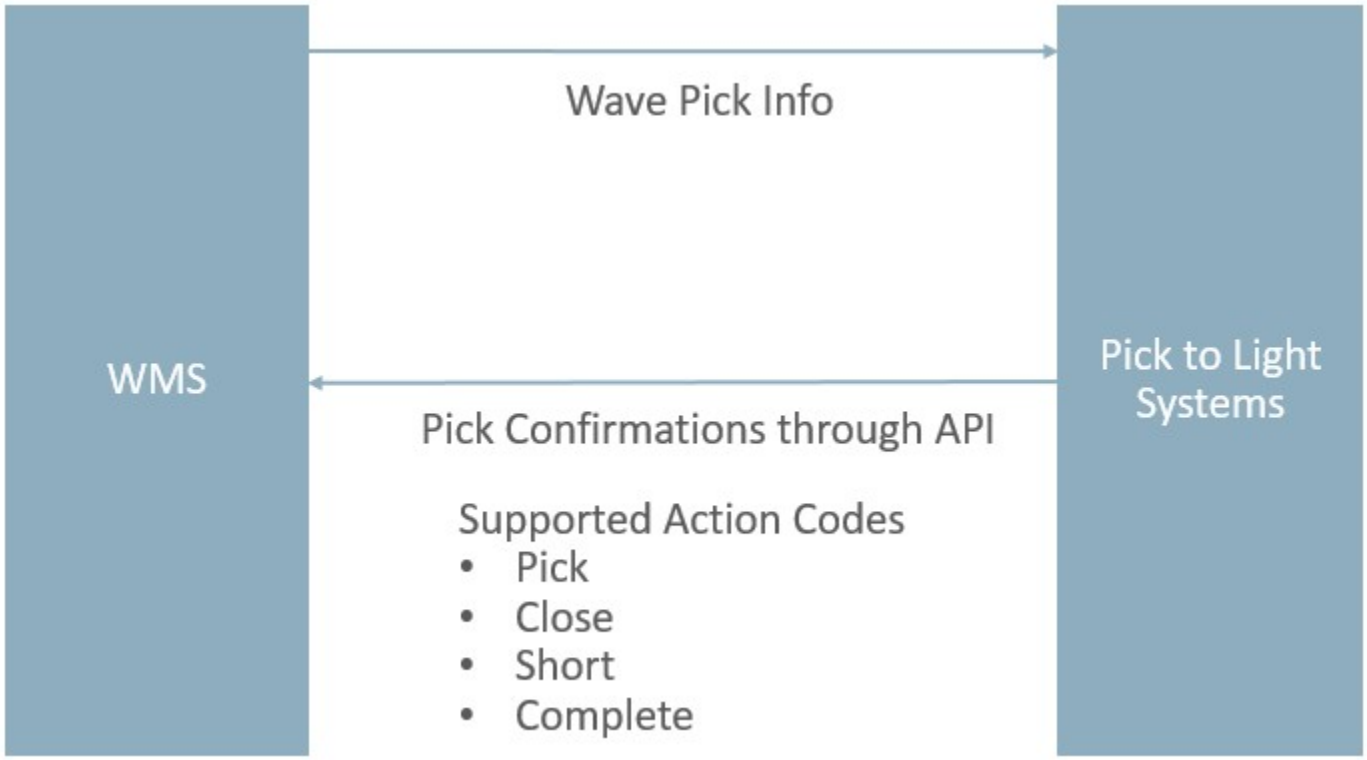
Your operation can determine the number of different zones to consider when running a wave by creating a group. Oracle WMS Cloud allows you to evenly spread the requirements from the wave across the different zones in terms of number of orders, units, volume or weight, depending on the most applicable metric for the customer.

## Wave Load Balancing Flow

The following table indicates the order and actions involved in a typical Wave Load Balancing flow:

| Step | Description |
|---|---|
| 1 | Wave Load Balancing – wave group has order selection and capacity to create balanced waves |
| 2 | WMS sends Wave Pick Information message |
| 3 | Pick to Light System receives Wave Pick Information message |
| 4 | Pick and Packing is performed using Pick to Light System |
| 5 | Pick to Light system makes an API call when Picks are performed |
| 6 | WMS updated with pick and pack information |

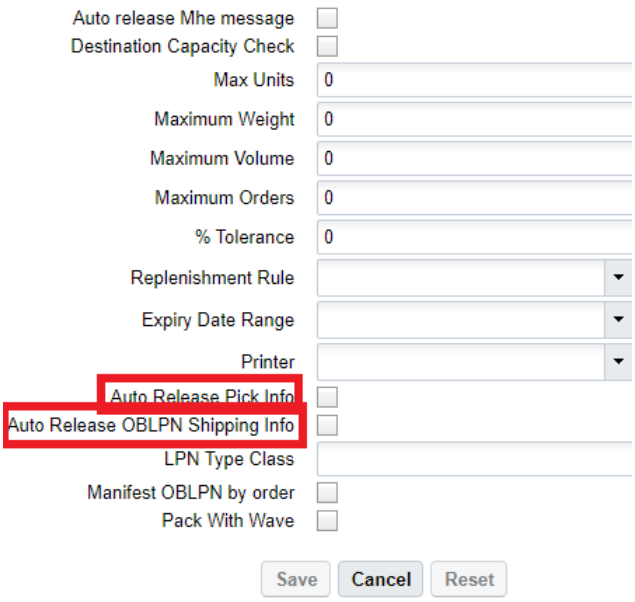
This flow diagram illustrates the Wave Pick Information being sent to the Pick to Light System and the Pick to Light System generating and API call to WMS as picks are confirmed. WMS then performs the pick and pack updates:




# Send Picking and Packing information to MHE

From the **Wave Template** UI, you can configure sending of Picking and Packing information to MHE:

1. From the **Wave Template** UI, select the Wave Template you want to configure.
2. Click **Edit**.
3. Select **Auto Release Pick Info** to send Wave Pick information after a wave is run.
4. Select **Auto Release OBLPN Shipping Info** to send Pack information if the wave is cubing the OBLPNs.




# MHE Pick Confirmation API

The Pick Confirm API allows you to perform cubed or non-cubed picking.

> **Note:** *This is a new API meant to replace the existing legacy `pick_confirm`API. The legacy API will eventually be retired so no further enhancements will be made to it. New functionality will instead be added to this API as part of the lgfapi suite.*

This API supports features of the legacy API including the following parameters:

- **mhe_mode_flg** - true/false; default true
- **async_flg** - true/false; default true
- **short_flg** - true/false; default false
- Replaces using the legacy "action_code" = "SHORT".

The supported action codes are:

| Action Code | Assumptions |
|---|---|
| Pick | • order_nbr is required,<br>• at least item_alternate_code or item_barcode must be passed<br>• qty is required<br>• pick_location or from_containter_number required<br>• to container nbr is required |
| Close | • to container nbr is required |

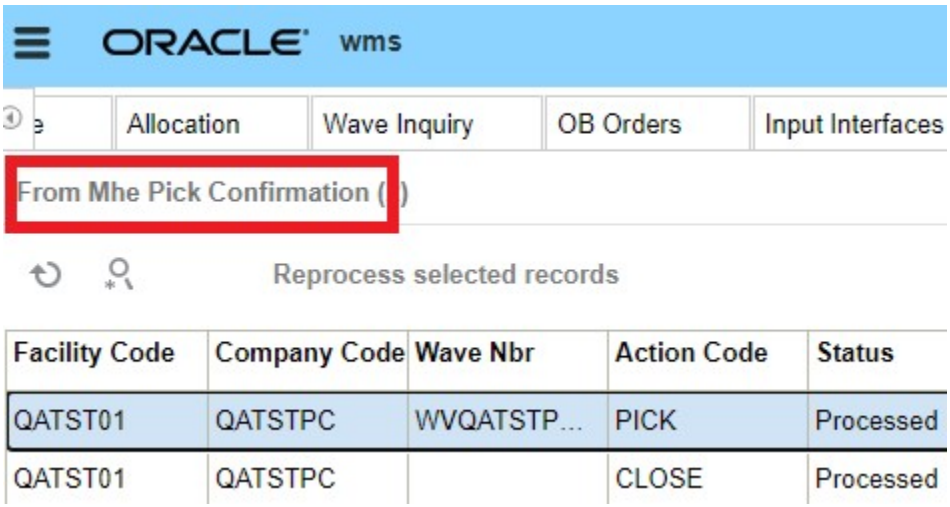
| Action Code | Assumptions |
|---|---|
| Short | • order_nbr is required,<br>• at least item_alternate_code or item_barcode must be passed,\<br>• qty is required<br>• pick_location or from_containter_number required |
| Complete | |

Pick Confirm API can be called using the following POST request:

```
POST ..lgfapi/v10/pick_pack/pick_confirm/
```

# Pick Confirmation Messages

From the **From MHE Pick Confirmation** UI, you can see the pick confirmation messages flowing in to WMS and track MHE picking:




# Put to Light / Sortation

Oracle WMS Cloud can communicate with several types of MHE systems in order to cover customer business flows. The following example illustrates a distribution process, (sometimes called put to store) that can be executed through the RF or through Oracle WMS Cloud MHE APIs.

In this flow, the bulk quantity travels through a conveyor and inventory is put from the bulk container to different locations, each indicating a different destination. Oracle WMS Cloud can be set up with distribution instructions indicating the location/divert for each destination/stop for the put to store.

## Put to Light / Sortation Flow steps

| Step | | Description |
|---|---|---|
| 1 | Wave Distribution Message sent | To MHE Distribution Info (output interface) Includes overall information by sku. |
| 2 | RF Picking occurs | After picking, physical LPNs information is sent. |
| 3 | **Induct LPN** (via RF or API) | Allows automated systems (MHE) to induct an LPN to a Drop location tied to an MHE conveyor system. This will trigger the MHE Route Configuration rules to generate an appropriate Route Instruction message in the Output Interface. |
| 4 | **From MHE Distribution Pack** API | Happens at end of the Induct LPN process so that LPNs can go to distribution zones. This API provides information related to the outbound LPN's packed by Tilt Tray Sorter / Put to Light System / Distribution Sorter. Once an outbound LPN is completely packed, the MHE system makes an API call to perform packing updates for LPN distributed. |
| 5 | **From MHE Distribution Short** API | Performs shorting updates when MHE system is performing distribution and packing of inducted inventory. This API will trigger the update of WMS to perform shorting related updates.<br><br>Informs WMS of missing quantities for current batch - (damaged item or physically no item there) |

## Output Interfaces

When configured, the **MHE Distribution Information** or To **MHE IBLPN Information** Output Interfaces send information to MHE.

The following table provides more detail about these two output interfaces, and the trigger points for each:

| Output Interface | Description | Filename | Trigger Points | |
|---|---|---|---|---|
| To MHE Distribution Info | Tells you the requirement for SKU quantities by destination facility at the wave level. | For XML Format DMX For One Line format DMI | **Wave Template** UI | Auto release MHE message flag |
| | | | **Wave Inquiry** UI | In the **Wave Inquiry** UI, you can generate an MHE Distribution information |

| Output Interface | Description | Filename | Trigger Points | |
|---|---|---|---|---|
| | This output interface sends the data elements required in xml_data or flat_data for sending facility distribution information to MHE. | | | message manually via the **Release MHE Messages** button. |
| | | | RF **Receiving** transaction | Parameter generate-distro-message should be set to Yes. |
| | | | RF **Distribute LPN** | Parameter generate-distro-message should be set to Yes |
| | | | **IBLPN** UI | Generate MHE Distribution message button |
| To MHE IBLPN Info | Tells you what the requirement is by SKU, physically sending sku, quantity, and what LPN sku is coming on - information to MHE systems.<br><br>This output interface sends information about the inbound LPN to be distributed by MHE system. | For XML Format ILX For One Line format ILI | RF **Pick IBLPN** | • Message is sent after user close LPN. They must have : Facility Parameter MHE_ ENABLED flag should be set to "Yes".<br>• Allocations present on Inbound LPN should be of type "Alloc type: Internal Bulk Pick/ Task Type: INTERNAL-PICK".<br>• Open Allocations present on the LPN should have MHE system code populated. Go to the Wave Inquiry UI, click the Allocation button, look at field MHE System<br>• Go to MHE system configuration- Search for the MHE System - find the MHE Type. Go to MHE message configuration - search the MHE type and associated mhe message type for_LGF-Send IB LPN-info-Active Flag= yes |
| | | | RF **Move LPN** | • Message is sent after user close LPN. They must have Facility Parameter MHE_ ENABLED flag set to "Yes".<br>• Allocations present on Inbound LPN should be of type "Alloc type: Internal Bulk Pick/ Task Type :INTERNAL-PICK". |

| Output Interface | Description | Filename | Trigger Points | |
|---|---|---|---|---|
| | | | | • Open Allocations present on the LPN should have MHE system code populated. From the Wave Inquiry UI – click the Allocation button- look at field MHE System.<br>• Go to MHE system configuration- Search for the MHE System - find the MHE Type. Go to MHE message configuration - search the MHE type and associated mhe message type for_LGF-Send IB LPN-info-Active Flag= yes |
| | | | RF **Receiving** | • Generation of **to_mhe_ib_lpn_info** message should get triggered once LPN is allocated for flow through, while performing receiving.<br>• If Receiving program is configured to generate to_mhe_distribution_info message, to_mhe_ib_lpn_info message should get generated once to_mhe_distribution_info message is generated. Facility Parameter MHE_ENABLED flag ="Yes".<br>• Allocations present on Inbound LPN should be of "Alloc Type: Distribute LPN" or "Alloc type: Internal Bulk Pick/Task Type PICKLPN-INTERNL"<br>• Open Allocations present on the LPN should have MHE system code populated- Go to theWave Inquiry UI – click Allocation button - look at field MHE system.<br>• Go to MHE system configuration- Search |

| Output Interface | Description | Filename | Trigger Points | |
|---|---|---|---|---|
| | | | | for the MHE System - find the MHE Type. Go to MHE message configuration - search the MHE type and associated mhe message type for_LGF-Send IB LPN-info-Active Flag= yes |
| | | | RF **Distribute LPN** | parameter "mhe-system-code" must be populated. From MHE system configuration, search for the MHE System code, and find the MHE Type. Go to MHE message configuration - search the MHE type and associated mhe message type for_LGF-Send IB LPN-info-Active Flag= yes |
| | | | **IBLPN** UI | Generate MHE IB LPN Info Msg button |
| Wave Pick Info | The Wave Pick Info interface sends Wave Allocation information to the MHE system. | WOA | **Wave Inquiry** UI | From the **Wave Inquiry** UI, click the Release Wave Pick Info button to sent the wave allocation information. |
| | | | **Wave Template** UI | "auto release pick info" flag should be set to yes. |

## Input Interfaces

The following table provides more detail about the MHE input interfaces, and the trigger points for each:

| Input Interface | Description | Trigger Points |
|---|---|---|
| From MHE Distribution Pack | API Call (to receive the carton pack message upon completion of distribution) | API |
| From MHE Distriburtion Short | API Call (to perform shorting for distribution allocations) | API |

**Note:** the MHE system code should be of value “LGF” for the distribution to work.

There is a flag on the MHE code “use_cons_distribution_flag”. This plays a pivotal role in determining whether MHE does the distribution based on WMS allocations or if MHE runs its own logic.

For more details about the information in each Output Interface, see the *Interface Specifications* document.

## View Packing Confirmation Messages

You can view the packing status messages coming from Put to Light or Sortation MHE systems in the **From MHE OBLPN Hdr** UI. You can also click details to drill down to see additional order detail (such as packed quantity) in the **From MHE OBLPN Detail** UI.

# Configuration

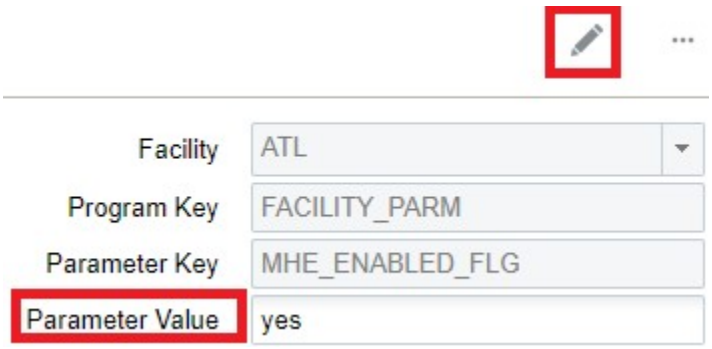
You need to complete the following configuration steps in Oracle WMS Cloud for MHE to work:

*Related Topics*

- Facility Parameters
- Items
- MHE System Configuration
- Location for Induction

## Facility Parameters

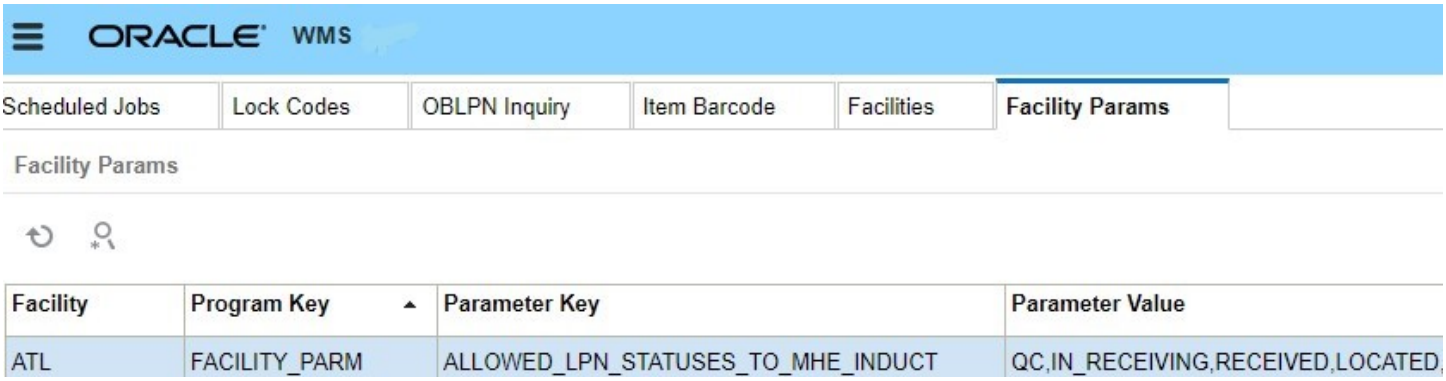
1. Search for the parameter key MHE_ENABLED_FLG.
2. Click **Edit**, and set the Parameter Value to **Yes**.




- For the facility parameter **ALLOWED_LPN_STATUSES_TO_MHE_INDUCT** set up the value with all of the LPN statuses that are used in MHE.

Allowed statuses include the following:

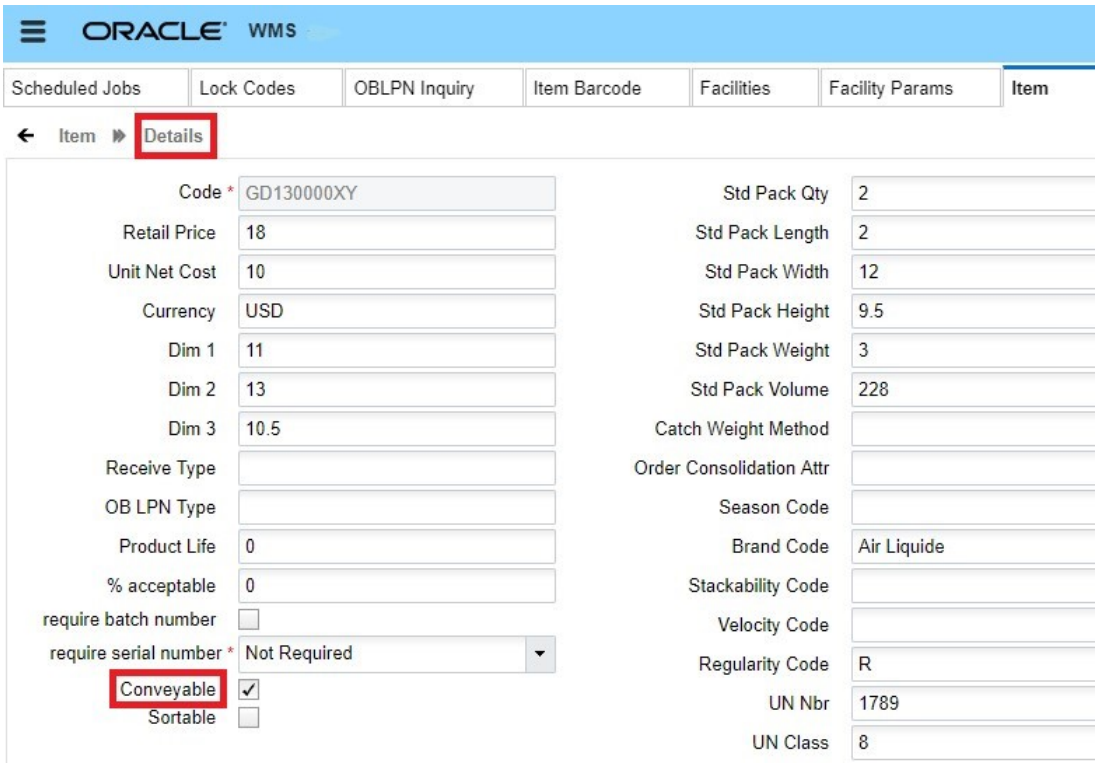
QC,IN_RECEIVING,RECEIVED,LOCATED,RESERVED,PARTLY_ALLOCATED,ALLOCATED,OUTBOUND_READY,IN_PICKING,PICKED,II




# Items

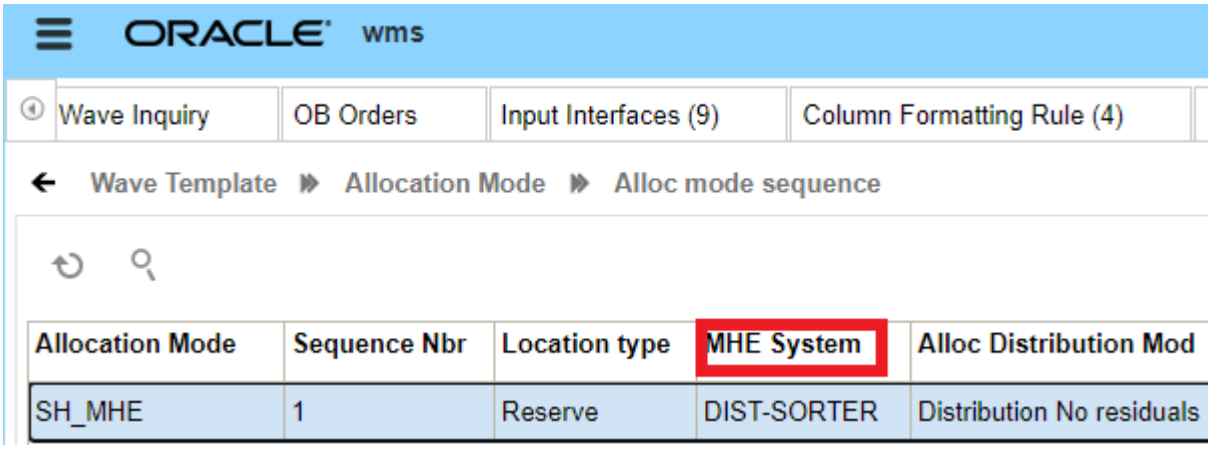
Certain items must be configured in order to be accepted in MHE.

1. From the **Item Details** UI, click **Edit** to set the Conveyable flag:



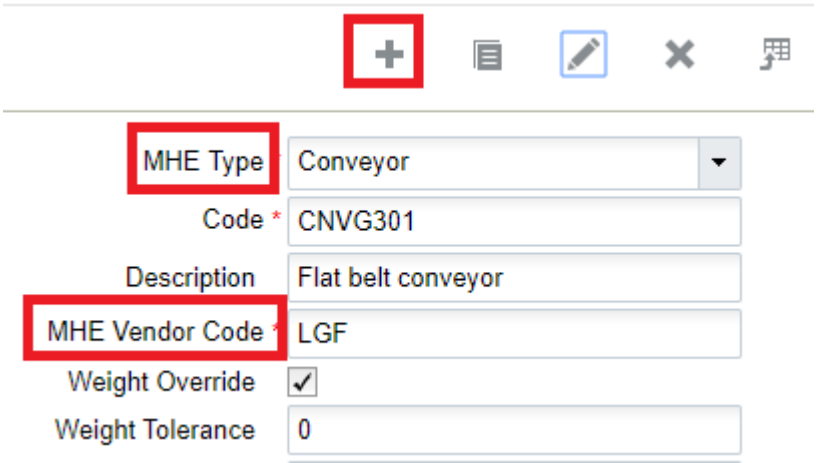

# MHE in Wave's Allocation Mode Sequence

When you are creating an allocation mode in the Wave Template, you need to input the MHE system needed for the allocation. If picking is happening from MHE, then the MHE system has to be populated on the allocation mode sequence.




# MHE System Configuration

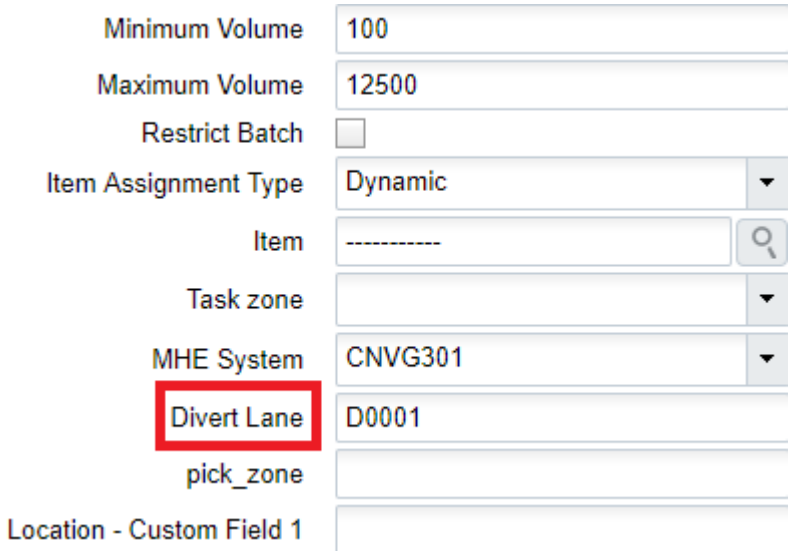
- From the **MHE System** screen, create a record with the MHE Type = Conveyor and MHE Vendor Code = LGF:




The **MHE Logs** action button will allow you to look at the logs for this system.

# Location for Induction

From the **Locations** UI, configure a Divert lane with Reserve/Active (Putaway) and a Drop location:




# Route Instruction Configuration

You can manage and configure conveyor routing in Oracle WMS Cloud. You can configure routing for either LPNs that are received and are going to be put away or for picked LPNs that will go to staging lanes.

Inbound LPNs can invoke WMS's robust putaway logic and divert the appropriate zone for putaway. If the MHE system determines the putaway location, the divert confirmation can inform Oracle WMS Cloud with the final location where the MHE located the LPN.

For outbound LPNs, the flow is similar. Based on the destination, Oracle WMS Cloud can instruct the sorter which lane to divert the container to. If the logic is in the MHE, then upon divert, a confirmation can be sent informing Oracle WMS Cloud of the lane and staging location that was used for the container.

## MHE Routing Flow

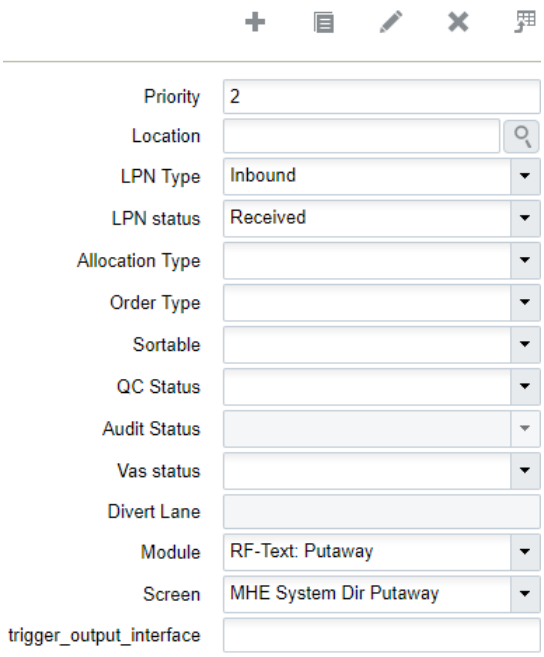
The following steps outline the flow of MHE from Induction of the LPN (RF or API) to the Route Confirmation Message:

1. Induction of LPN (RF or API)
2. Route Instruction for Rule firing (pre-configured rules)
3. Genration of Route Instruction Message (sent to MHE's control system)
4. Generation of triggered output files (if configured in the rule)
5. LPN Inventory Info/OBLPN Shipping Info is sent to specified targets
6. Route Confirmation Message (from MHE's control system)

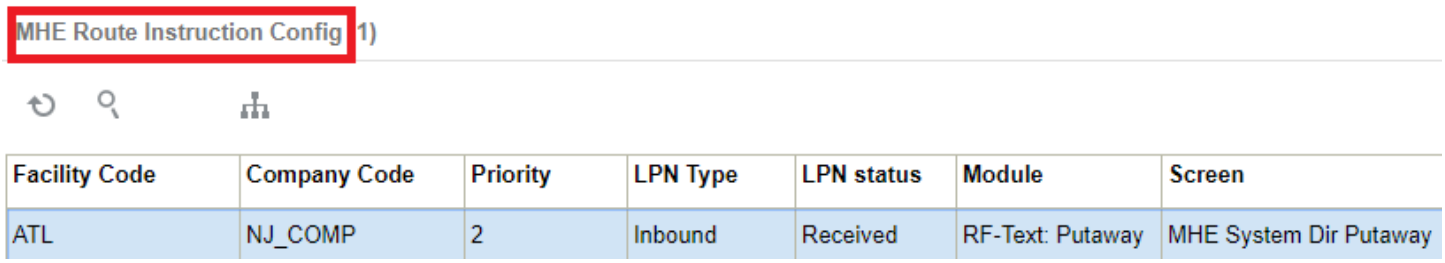
## Set Up Route Instruction Rules

Divert instructions can be configured in the WMS Cloud and these are the rules that will identify an LPN for inbound or outbound processing and then the subsequent lanes it must divert to based on the putaway characteristics or the destination for delivery.

From the **MHE Route Instruction Configuration** screen, set up rules to check during induct for Received LPNs:

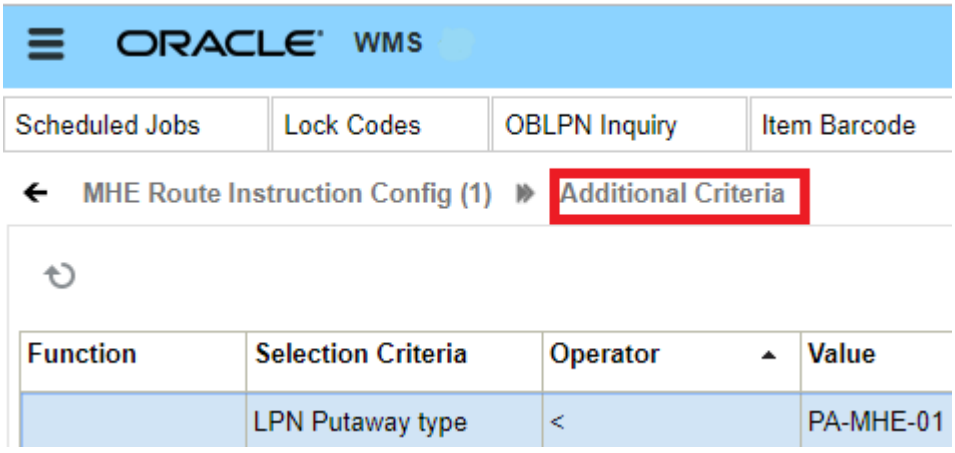



Once you set up all rules, your updated rules display in the **MHE Route Instruction Configuration** UI:




## Filter LPN Selection Criteria

Click **Additional Criteria** to mention criteria in the details (not mandatory). This allows you to filter the IBLPNs:



# Inbound Receiving and Putaway with MHE

See the following topics for more details about Inbound Receiving and Putaway with MHE:

*Related Topics*

- Receive a Cartonized LPN using an API
- MHE Trigger Output Interface
- Configure calling Directed Putaway

## Receive a Cartonized LPN using an API

You can receive a cartonized LPN via the Receive LPN API. This API also allows you to xdock an inbound LPN.

Example URL:

```
https://xxx.wms.ocs.oraclecloud.com/<env_name>/wms/api/receive_lpn/
```

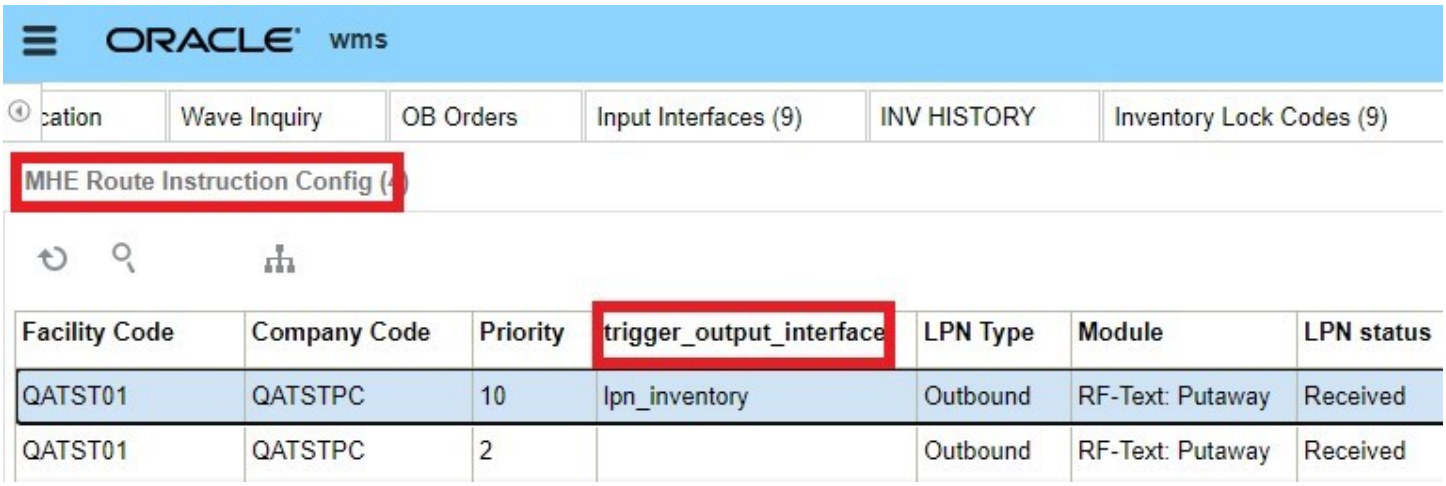
**Assumptions**

- For cross dock mode, a valid allocation must exist.
- If receiving_location is an MHE induct location, the container will be inducted and corresponding MHE logic will be triggered.
- Requires location to be type Drop with an MHE System configured of type Conveyor
- receiving_location must of type "Dock" or "Drop" for non-xdock.
- "Staging" is also allowed for xdock.

## MHE Trigger Output Interface

From the **MHE Route Instruction Configuration** UI, you can send information to MHE about the container for performing putaway operations or send information so that shipping labels can be printed.

You can configure MHE Route Instruction Rules to send LPN inventory information to MHE by populating the **trigger output interface** field with lpn_inventory or oblpn_shipping_information:



## Configure calling Directed Putaway

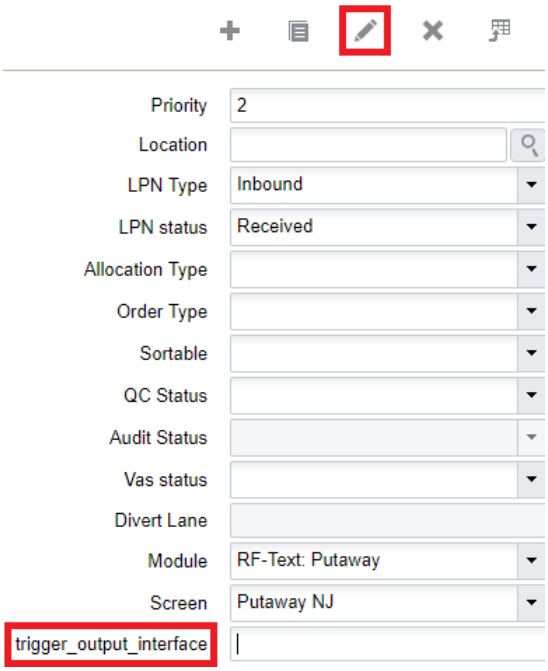
1. To configure Directed Putaway with MHE:From the **MHE Route Instruction Configuration** UI, create a new Route Instruction rule or select an existing Route Instruction rule.
2. Once you have selected LPN Type and LPN Status, from the **Module** drop-down, select **RF Text: Putaway**.
3. From the **Screen** drop-down, select the applicable Putaway screen.
4. Click **Save**.

# Generate LPN Inventory or OBLPN Shipping Information Message

You can generate LPN Inventory and OBLPN Shipping information from the **MHE Route Instruction Configuration** UI. This feature allows customers to send information to the MHE system.

For example, the MHE system can take this information and use it to print a shipping label. If the Outbound LPN is subject to Route Instruction check, after user perform induction via RF or API, the system will check the configuration and generate the LPN_INVENTORY message or the OBLPN_SHIPPING_INFO.

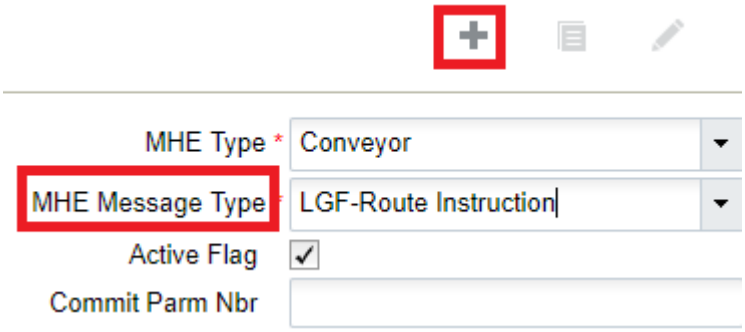
From the **MHE Route Instruction Configuration** screen – update the **trigger_output_interface** field with either LPN_INVENTORY message or the OBLPN_SHIPPING_INFO



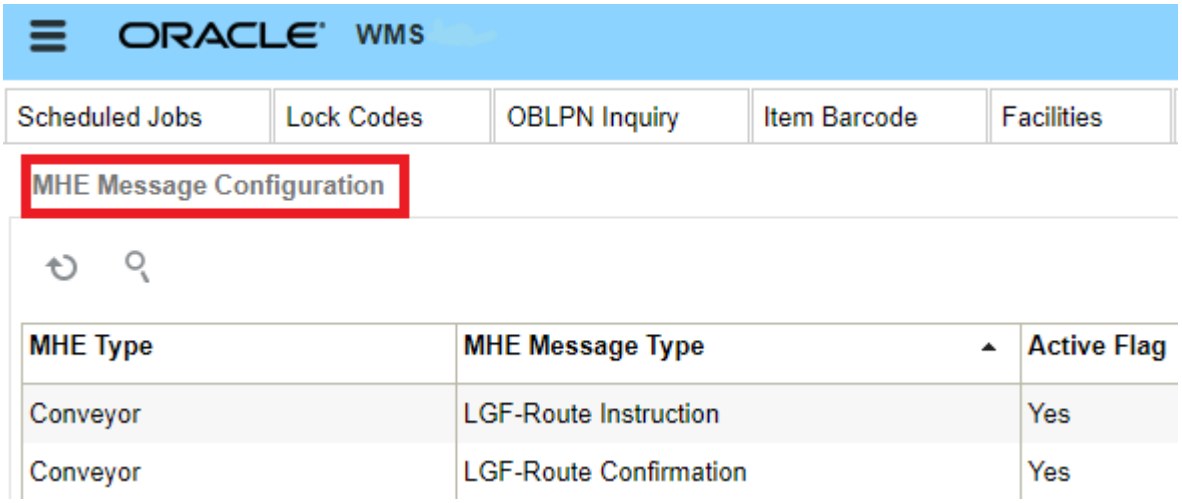
# Message Configuration

There are various types of MHE Message types you can configure from the **MHE Message Confirmation** UI.

1. In order to setup MHE message configuration for Route Instruction, go to the **MHE Message Configuration** UI.
2. From the **MHE Message Type** drop-down, select “LGF-Route Instruction”.
3. Click **Save**.




1. Next, to setup MHE message configuration for Route Confirmation, go to the **MHE Message Configuration** UI.
2. Set up MHE message configuration with the MHE message type “LGF-Route Confirmation” for Route Instruction output file generation:




# Example of How to Invoke RF Induct LPN

In Oracle WMS Cloud, users can implement several levels of MHE sophistication. In some cases, the automation is a hybrid of man power and machine power, with operators manually initiating the induction instead of initiating with sensors. Oracle WMS Cloud allows these processes to be mobile through the RF, indicating the induction into an MHE system.

The following is an example of how to invoke the RF Induct LPN and scan the received LPN and Drop location to divert. Alternatively, you can use the Induct REST API:

First, scan the LPN:

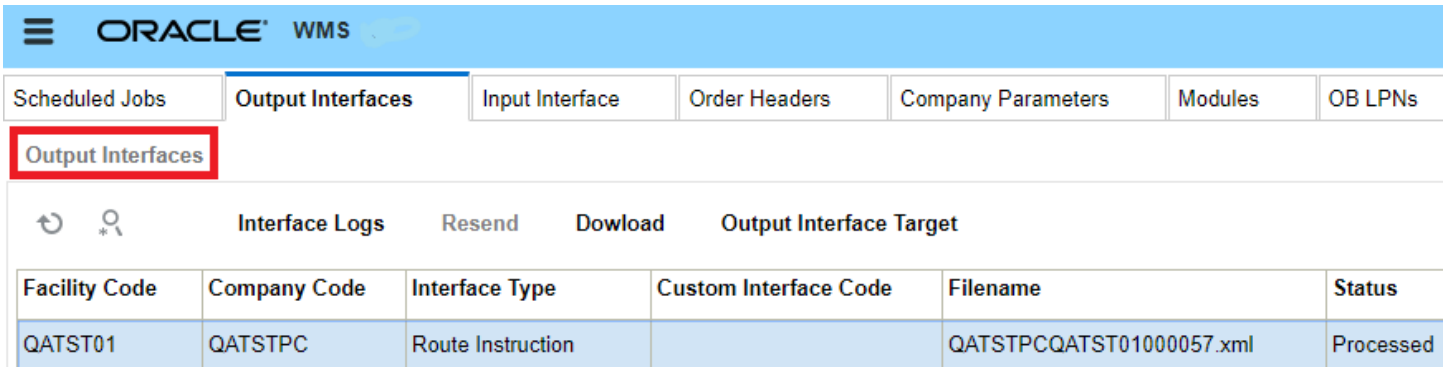
```
LogFire WMS QA3PLEST/QAM
  RF-Induct LPN to MHE to MHE

LPN/Pallet:LPN160310
Locn:DRPMHE01D001
```

The drop location “LPN successfully inducted” message displays:

```
LogFire WMS QA3PLEST/QAM
                        to MHE
  ┌──────────────────────┐
  │LPN successfully ind  │
L │ucted                 │_____
L └──────────────────────┘
```

# Example of the Output file Generated

The Route Instruction output file is generated in the **Output Interfaces** screen:




File content:

CNVG301|QA3PLEST|QA3PLGEO002|LPN160310|D001|RES-01-MHE-001|RES01MHE001

# 4 Outbound

## Configuring Outbound Orders

## Outbound Orders

Outbound orders are orders placed by customers for inventory from the warehouse. Orders can come from individual customers, companies, stores, or distribution centers.

## Creating Orders in WMS

There are two ways to create Orders in WMS:

1. Manually from the UI
2. Interfaces

### Manually Create Orders from the UI

To create an Outbound Order (Sales Order), go to the Order Headers screen and click Create.

After creating the order, you must specify the **items** being ordered and their respective ordered **quantities**.

To manually add SKUs to an Order in the UI:

1. Select the order record and click on Details (). This takes you to the Order's details, where you can enter the items and quantities.
2. Click Create () and populate the Item Code and Ordered Qty.
3. Click "Save".

> **Note:** The "Order Details" screen is also available to view multiple Order details at once.

### Create Orders Through the Interfaces UI

You can also create orders through an Oracle WMS Cloud Excel template. Based on the column headers, users must populate select fields in the template when creating an Order.

Preparing the Input Interface file:

Follow the rules below to use the Oracle WMS Cloud interface correctly:

- The filename must start with the phrase "ORR".
- Populate the columns specified as 'required' in the interface specification document.
- Populate [H1] for every distinct Order number and [H2] for its details (see figure below).

- Populate the correct sequence in the 'seq_nbr' field (i.e. no duplicate values).

| [headings] | po_nbr | facility_code | company_code | vendor_code | action_code | ord_date | ref_nbr | po_type | delivery_date | dept_code | ship_date | cancel_date | cust_field_1 | cust_field_2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [H1] | POSN100301 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | |
| [headings] | seq_nbr | action_code | item_alternate_code | item_part_a | item_part_b | item_part_c | item_part_d | item_part_e | item_part_f | pre_pack_code | pre_pack_ratio | pre_pack_total_units | ord_qty | unit_cost | PO#1 |
| [H2] | 1 | CREATE | THK01 | | | | | | | | | | 10 | 0 | |
| [H2] | 2 | CREATE | THK03 | | | | | | | | | | 15 | 0 | |
| [H1] | POSN100302 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | PO#2 |
| [H2] | 1 | CREATE | THK04 | | | | | | | | | | 10 | 0 | |
| [H2] | 2 | CREATE | THK02 | | | | | | | | | | 15 | 0 | |
| [H1] | POSN100303 | DC_01 | SNEPHEW | VENDOR101 | CREATE | 20141003000000 | | | 20141003000000 | | 20141003000000 | 20141003000000 | | | PO#3 |
| [H2] | 1 | CREATE | THK03 | | | | | | | | | | 10 | 0 | |

The figure above shows an example of a file that will create three different Orders. You can create multiple Orders within the same ORR file by using the "headings" column to differentiate one order from another. A '[H1]' value denotes a new Order Header record, while a '[H2]' value denotes a new Order Detail record.

## Upload the Interface into WMS

1. Go to the "Input Interface" screen.
2. Use the drop-down to select the appropriate interface.
3. Click on "Upload Files" and navigate to the file you wish to upload.
4. When the file displays in the screen, click "Run Interface".
5. The system returns a message dialog notifying you that the file has been successfully processed.

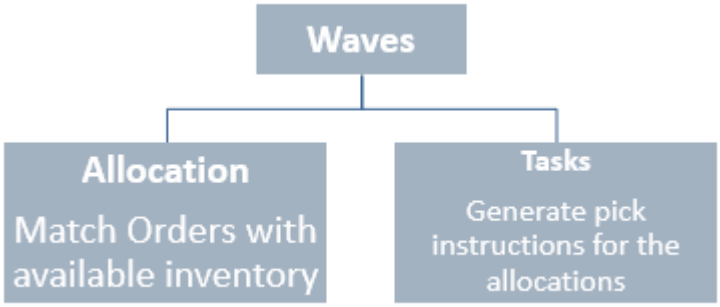
# Order Integration into WMS

A third method to interface records into WMS is through a shared SFTP directory.

1. Host system drops the "ORR" file into the shared directory (typically an "input"folder).
2. When the file is dropped, ORACLE WMS CLOUD will automatically detect the file and process it into WMS.
    - If a file fails for some reason, it is automatically moved into the "error" folder.

# Waves

Users must execute Waves in order to allocate orders with allocatable inventory in the warehouse. Each wave creates an allocation and a series of tasks.




## Allocation Units of Measurement (UOM)

1. Full LPN - full LPN allocations occur when the Order's SKU and Quantity is exactly the same as an LPN's SKU and Quantity.
2. Cases - Case allocations occur when inventory is allocated either in cases as defined in the "Standard Case Quantity" field of the Item. Specifically, a case allocation will occur if the ordered quantity is a multiple of the ordered SKU's "Standard Case Quantity".
3. Packs - see explanation for cases.
4. Units - unit allocations are the lowest UOM and occur when wave templates are configured to allocate in 'eaches'.

For example: SKU A has a standard case quantity = 4, and the ordered quantity is 12. This will create an allocation for 3 cases.

# Creating Wave Templates

Wave Templates require the following configuration pieces:

- Wave Search Template
- Allocation Mode
- Task Creation Template
- Allocation Method

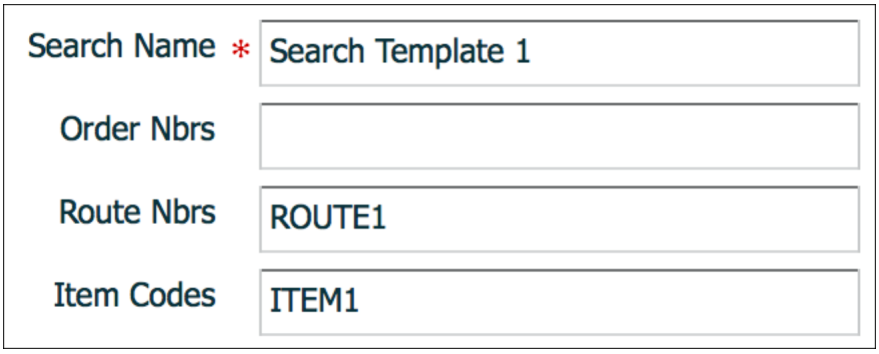
### Step 1: Create a Wave Template Search

Wave Template Searches are used as filters for selecting specific Orders during a wave. Each search template has a set of fields that are configurable.

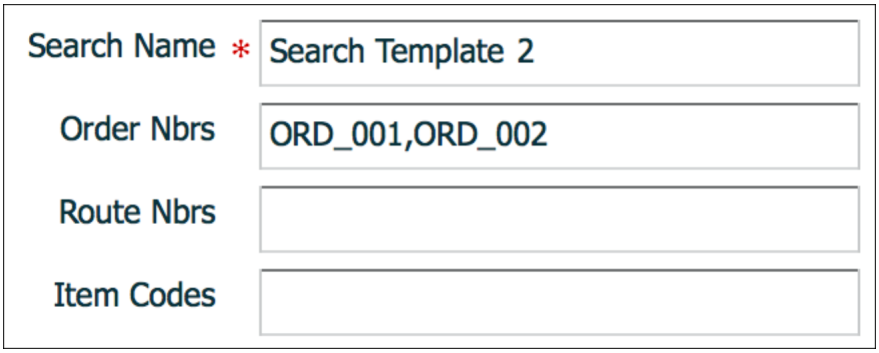
To view existing Template Searches, click the "Wave Template Searches" button from the "Wave Template" screen.

From Wave Template Searches, click Create to create a new Search Template. Here, you can define the filtering parameters.

**Examples:**




In example 1, “Search Template 1” will filter all orders with route number “ROUTE1” and that only contain SKU “ITEM1”.




In example 2, “Search Template 2” will filter orders that have order numbers “ORD_001” and “ORD_002”. In other words, Wave Templates with this search template selected will only attempt to allocate these two orders.

Users can also define Order Types as additional filtering criteria:

1. Select the Search Template and click the Details button ().
2. Click the Create () button to add Order Types for this Wave Search record. If there are no Order Types defined, it will not filter by Order Type.

## Step 2: Create an Allocation Mode

Allocation Modes are used to define how the inventory should be allocated in terms of the different allocation UOMs.

In the Wave Template screen, click on the “Allocation Mode” button – this will take you to the list of Allocation Modes available for the current company.

**Note:** Make sure you are at the correct company view before proceeding).

1. Create a new Allocation Mode with the Create button.
2. Enter its details with the Details button.
3. Create the sequence of allocation UOMs desired for the Wave Template. See example below.

| Allocation Mode | Sequence Nbr | Location type | Restrict area | Restrict alloc zone | Allocation UOM | Cartonize UOM | Alloc Distribution Mode |
|---|---|---|---|---|---|---|---|
| Reserve Allocation | 10 | Reserve | | | LPNs | | No Distribution |
| Reserve Allocation | 20 | Reserve | | | Cases | | No Distribution |
| Reserve Allocation | 30 | Reserve | | | Packs | | No Distribution |
| Reserve Allocation | 40 | Reserve | | | Units | | No Distribution |

**Note:** Allocation modes are only editable in the company view in which they were created. For example, if an allocation mode was created at the PARENT company view, the user must activate to the PARENT company to be able to edit it.

## Extra Configuration Parameters

- **Sequence Nbr:** The order in which the system will look for allocations.
- **Location Type:** The locations that will be used for allocation – Reserve or Active.
- **Restrict Area:** If populated, the WMS will search for allocations in this area only.
- **Restrict Alloc Zone:** If populated, the WMS will search for allocations in this allocation zone only.
- **Cartonize UOM:** If populated, the WMS will automatically create a new carton per UOM defined.
  - *Example:* If Cartonize UOM = Units, the system will create a new carton number for every unit allocated in the wave.
- **Alloc Distribution Mode:** This field is used to enable/disable the distribution (Put to Store) functionality. If using distribution, you must choose one of the following parameters:
  - **Distribution Residuals OK:** This is the first distribution option that is used in distribute to store. The “Residuals OK” implies that when allocating orders to available LPNs in the inventory, the system allows LPNs to be partially allocated and have unallocated units left over (ie. ‘residuals’). Depending on the order quantity and the available inventory, this allocation type can allocate both LPNs and units. Distribution Residuals OK only allows you to select units, packs, or cases from the Allocation UOM drop-down.

    **Note:** If you plan on allocating less than full LPNs from reserve, you must make sure the location flag "**Allow reserve partial pick**" is enabled. For more details, see Allow Reserve Partial Pick in the *Location Master* section.

> **Note:** The system is not currently handling the **Allow reserve partial pick** flag during replenishments.

- **Distribution No Residuals:** This distribution mode will only allocate LPNs with no residuals. In other words, every time an LPN is allocated for distribution, all of its contents must be allocated to one or more orders (ie. LPNs cannot be “Partly Allocated”). Distribution No Residuals only allows you to pick units, packs, or cases from the Allocation UOM drop-down.
- **Consolidate and Distribute:** This distribution mod allows you to pick allocation from Reserve or Active. Consolidate and Distribute only allows you to pick units, packs, or cases from the Allocation UOM drop-down.Note: This option allows you to pick inventories for multiple stores to a temporary LPN, place it in a consolidated location, and distribute inventories based on the stores.
- **No Distribution:** No Distribution turns the distribution off, and it will create non-cubed picks based on the allocation UOM. This mod allows you to pick units, packs, cases, or LPNs from the allocation UOM drop-down.

  > **Note:** Distribution Residuals OK, Distribution No Residuals, and Consolidate and Distribute do not allow the user to set the Allocation UOM as LPNs. If you try to save this setting, you will see the following error: “Alloc UOM LPN invalid for distribution modes”

- **mhe_sytem:** Input the MHE system needed for this allocation, if configured. If picking is happening from MHE, then the MHE system has to be populated on the allocation mode sequence.

- **Ignore Attribute A, B, or C:** This determines whether or not to ignore the custom attributes in the Order Header.
  - **If “No”:** the order’s custom attribute must match the value defined in the Wave Search Template.
  - **If “Yes”:** the order’s custom attribute will ignored.

## Step 3: Create a Task Creation Template

Task Templates are used to determine the Task Types that will be used for the wave. Similar to allocation UOMs, Task Types are records that create Tasks based on the UOMs defined in the Allocation Mode. Therefore, to correctly configure a Wave Template, the selected Allocation Mode’s UOMs must match the Task Template’s Task Types.

If the Wave Template has Allocation Mode Sequence 1 of “LPNs”, the complementary Task Template must have a Task Type that matches the LPN allocation, which in this case is “Distribute LPN”, “Full LPN Pull” or “LPN Move”.

## Task Types

The 'Task Type' UI Module will display all task types used in WMS. The task type details will display all RF Modules used within a task type.

> **Note:** If new configuration will be done to task types, new task type records need to be created. For base functionality, previously created task types can be used.

If new screens are required for new task types, these screens need to be first created using Screen configuration view. However, you need to ensure that the RF modules used to create a new screen are the same as the RF module mentioned in the existing Task Type.

> **Note:** From the **Task Type** UI, click **Details** to see the RF Modules used (also listed in table below) with each task type.

The table below displays a list of Task Types and their uses.

| Task type | Description | Explanation | RF Modules Used with Task Type |
|---|---|---|---|
| CONSOL_REPLEN | Consolidate Replenish | Used for a type of replenishment that allows you to pull multiple cases from multiple locations and replenish to one more location. Requires Task Zone movements. | • RF IBLPN Pick for Consol Replen<br>• RF - Task Zone Movements<br>• RF Distribute Replenishment |
| DISTRIBUTE-LPN | Distribute LPN | Used for LPN picking tasks with distribution. | • RF Move LPN<br>• RF - Task Zone Movements<br>• RF Distribute {oblpn} |
| FULL-CONTAINER | Full LPN Pull | Used for LPN picking tasks. This task type is enabled when the quantity ordered matches the exact LPN quantity in the inventory. | • RF Pack {oblpn}<br>• RF- Task Zone Movements<br>• RF Putaway OBLPN |
| INTERNAL-PICK | Internal Picking Task | Tasks relevant to internal unit movements, such as directed putaway. | • RF IBLPN Pick for Consol Replen<br>• RF - Task Zone Movements<br>• RF Distribute Replenishment |
| LPNCASES | Reserve Cases | Used for Case picking tasks with no distribution. | • RF Pack {oblpn}<br>• RF - Task Zone Movements |
| LPNMOVE | LPN Movement | Used for movement of intermediate LPNs during distribution and replenishment. | • Pack NC Active {order}<br>• RF - Task Zone Movements<br>• RF Putaway OBLPN |
| LPNPACKS | Reserve Inner Packs | Used for Pack picking tasks with no distribution. | • RF Pack {oblpn}<br>• RF - Task Zone Movements |
| LPNUNITS | Reserve Units | Used for Unit picking tasks with no distribution. | • RF Pack NC Active {order}<br>• RF Task Zone Movements<br>• RF Putaway OBLPN |
| NC-ACTIVE-PICK | Noncubed Active Picking Task | Used for internal non-cubed active picking tasks. | • RF Pack NC Active {order}<br>• RF -Task Zone Movements<br>• RF Putaway OBLPN |
| PICK_CART | Pick Cart | Used for creating Pick Cart tasks. | • RF Pick Cart<br>• RF -Task Zone Movements<br>• RF: Putaway OBLPN |
| PICKLPN-INTERNL | Pick LPN Internal | Tasks relevant to internal LPN movements, such as directed putaway. | • RF Pick {iblpn}<br>• RF - Task Zone Movements |

| Task type | Description | Explanation | RF Modules Used with Task Type |
|---|---|---|---|
| PLTMV_AUTOPK | Plt Move Auto-Pack | Used for pallet picking tasks. To enable this task type, the order detail must specify that the pallet that will be allocated in inventory in the "Pallet Nbr" field. | • RF Move LPN<br>• RF Task Zone Movements<br>• RF Putaway OBLPN |
| REPLEN-CASES | Cases Replenishment | Used for LPN replenishment tasks. This task type is enabled when cases from a given LPN are being replenished (as opposed to replenishing the entire LPN). | • RF Move LPN<br>• RF - Task Zone Movements<br>• RF Distribute Replenishment |
| REPLEN-LPN | Full LPN Replenishment | Used for LPN replenishment tasks. This task type is enabled when entire LPNs are being replenished. | • RF Move LPN<br>• RF - Task Zone Movements<br>• RF - Replenish Full LPN |
| CC-LOCATION | Cycle Count Location | Used for Cycle Count Location tasks. | • RF Cycle Cnt {locn} |
| CC-LOCATION-DTL | Cycle Count Location Detail | Manual CC by Item Detail | • RF Cycle Cnt {locn} |
| CC-LOCN-LPN-CNT | Cycle Count Location LPN Count | Count the LPNs in a Cycle Count Location. | • Resv {lpn} Nbr Cnt<br>• Cycle Cnt {locn} |
| CUBEDSINGLEUNIT | Cubed Single Unit | Pick and Pack cubed single LPNs that were generated by the wave. | • RF Pack {oblpn}<br>• RF – Task Zone Movements |
| FULL-LPN-PALLET | Full LPN | Pick and Pack full LPNs that were generated by the wave. | • RF Pack {oblpn}<br>• RF - Task Zone Movements<br>• RF Putaway OBLPN |
| CUBED SINGLE CASE | Cubed Single Case | Pick and pack cubed single cases. | • RF Pack {oblpn}<br>• RF – Task Zone Movements |
| CUBED SINGLE PACK | Cubed Single Pack | Pick and pack cubed single packs. | • RF Pack {oblpn}<br>• RF – Task Zone Movements |
| MULTILPNMOVE | Multi LPN Move | Movement of multiple intermediate LPNs during distribution and replenishment. | • RF Move LPN<br>• RF – Task Zone Movements |

To create a Task Creation template:

1. From the Task Creation Template screen, create a new Task Template and add a description.
2. Set “Template Type” to “Regular”.
3. Click the Detail button to inspect the Task Template’s details.
4. Create new Task Types for the template by populating the sequence, Task Type, and Destination Zone.

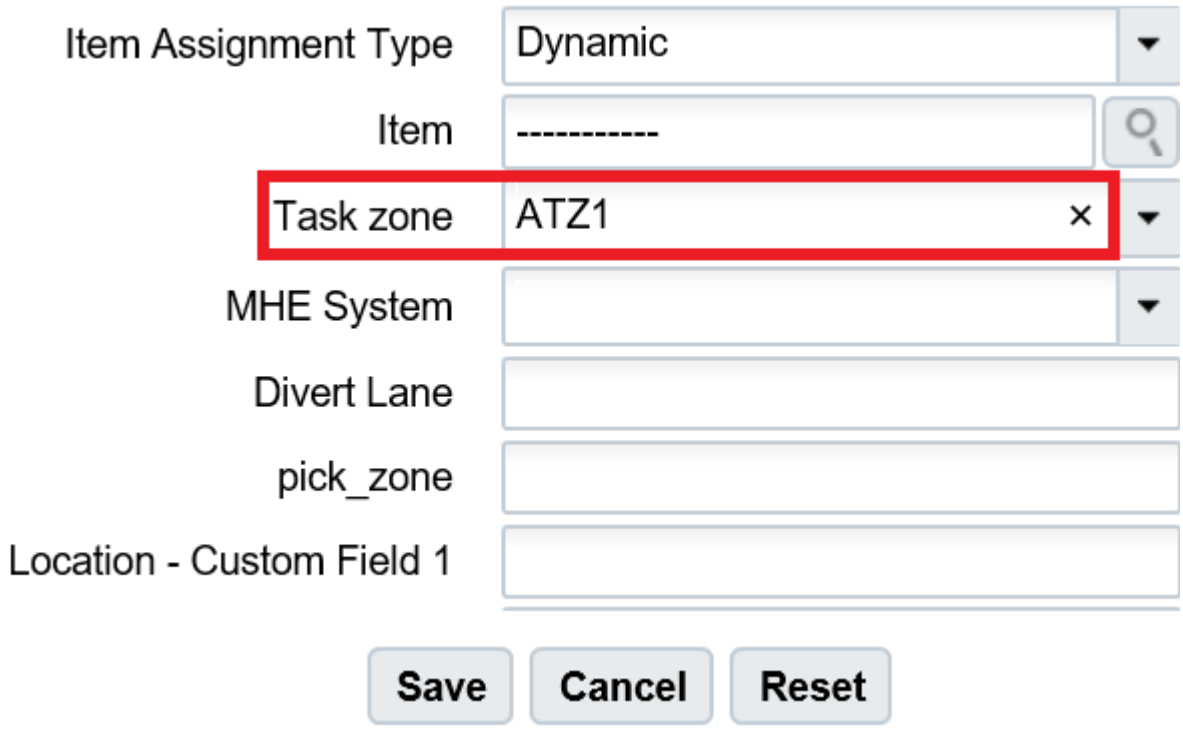
## Task Creation Template Details

| Parameters | Description |
|---|---|
| SequenceNbr | Determines the sequence of each Task Type |
| Break byQuantity | Not functional - do not use |
| Priority | Determines the priority of the Task Type. The priority can override the record's sequence number. |
| create_held_flg | This flag determines whether the Task will be 'held' when created. When a Task is held, it will not be visible to the picking operator in the RF gun. The operator will only be able to view this task once the superuser 'releases' this task in the "Tasks" screen, via the "Release Task" button. |
| DestinationZone | When an operator reaches the end of a Task, this configuration determines whether or not the RF will prompt him/her to move the picked boxes into a Destination Zone. Destination Zones are essentially locations that have Task Zones configured. |

To add a Task Zone to a location:

1. Go to the Task Zone screen and create a new Task Zone.
2. Go to the Locations screen, select the desired location and click edit.
3. In the "Task Zone" field, select the Task Zone that you added in step 1.

For example, if there is a Drop Zone location "DZ1" with Destination Zone "ATZ1", there will be the following Task Template configuration:




This means that at the end of every "Reserve Units" Task, you are prompted to move the picked LPNs into a "DOOR_DROP" location – which in this case is location "DZ1".

Once all the necessary Task Types are created, you will now have to configure the selection and breaking criteria for each Task Type.

## Ordering Criteria

The Ordering Criteria allows you to determine the break logic for each Task. For example, if there is a criteria for “Break by Order Nbr = 1”, WMS will create a new Task for every unique Order number in this Task Type.

1. Select the Task Type record and click “Ordering Criteria”.
2. Create a new breaking rule for this Task Type by clicking the Create () button.
3. Enter the sequence number, select the logic criteria and the ‘break by’ value.
4. Click Save.

## Example:

| Sequence Nbr | Order by column | Break by count |
|---|---|---|
| 10 | Location Pick Sequence | 0 |
| 20 | Pallet Number | 1 |

screen

1. Location Pick Sequence, Break by count = 0

   This will sort the creation of Tasks in order of the allocation’s Location Pick Sequence.
2. Pallet Number, Break by count = 1

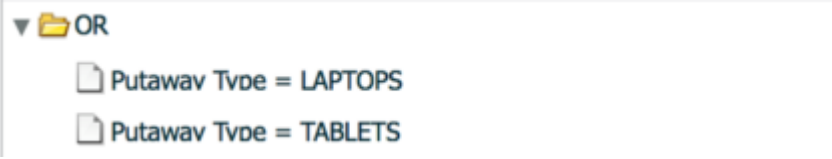
   This will create a new Task for every Pallet that is allocated. This may be used in cases where the picking equipment does not allow users to pick multiple pallets at a time.

## Selection Criteria

You can use Selection Criteria to configure Task Type conditions.

1. Select the Task Type record and click on “Selection Criteria”.
2. In this new window, you will see a folder icon (); this is a “Complex Operation”. Within this folder, there can be many nodes with criteria specified; these are “Basic Operations”.
3. To create a new basic operation, select the folder icon and click on the “Insert Basic Operation” button.
4. Select the SQL Operator, column name and column value.
5. Click “Save”.

## Example:




This configuration translates to the following:

- If the allocation's SKU has a Putaway Type of LAPTOPS or TABLETS, create a Task under the current Task Type.
- Once every Task Type has Ordering Criteria and/or Selection Criteria set up, the Task Template is complete.

## Step 4: Combine all Configuration Pieces Together

Once the Wave Search, Allocation Mode and Task Templates are created, the user can now combine everything to create a Wave Template.

1. Go to the Wave Template screen and click the Create () button.
2. Enter a name for the template and select the previously created configurations from the drop-down.
3. Once everything is selected, click the "Save" button.

## Choosing an Allocation Method

- **FIFO**: First in First Out – based on the LPN's create timestamp.

  > **Note:** this method supports both FIFO and FEFO allocation in the same method. In other words, when a Wave Template uses FIFO, it will also consider orders with expiry dates.

- **LIFO**: Last in First Out – based on the LPN's create timestamp.
- **FEFO**: First Expiry First Out – based on the LPN's "Expiry Date" field.
- **LEFO**: Last Expiry First Out – based on the LPN's "Expiry Date" field.
- **Quantity Descending**: Allocate LPNs with the largest quantity first.
- **Quantity Ascending**: Allocate LPNs with the smallest quantity first.
- **Location Descending**: Allocate LPNs whose location pick sequence is largest first.
- **Location Ascending**: Allocate LPNs whose location pick sequence is smallest first.

## Optional Step: Additional Configuration Parameters

You can configure additional parameters in the Wave Template depending on how you will use it:

- **Reuse LPN Nbr:** determines whether or not the IBLPN number can be reused as the outbound LPN number during packing.
- **Cubing Mode:** (see section 4.3.4.2 for more info)
- **Cubing Rule:** (see section 4.3.4.3 for more info)
- **OB LPN Type:** (see section 4.3.4.1 for more info)
- **Location Size Type:** if populated, the wave template will search for allocations specifically from locations with the defined Location Size Type.
- **Cancel Unallocated:** used as cancellation waves. If yes, all orders unallocated from this wave will be cancelled.

- **Routing Mode:** defines the routing logic for parcel manifest orders.
- **Column Ordering:** if populated, WMS will automatically print labels according to the selected Column Order when a wave is completed.
- **Auto release MHE** message: generates a custom MHE message when a wave is run.
- **Max Units/Weight/Volume/Orders:** defines the maximum value that the wave can allocate. For example, if “Max Units” is set to 1000, the wave can only allocate up to 1000 units at a time.
- **Tolerance_percentage:** The value populated here defines a tolerance with respect to the maximum defined in the “Max Units/Weight/Volume/Orders” field. For example, if the “Tolerance Percentage” field is defined as 5% and the “Max Units” field is set to 1000, the tolerance will allow WMS to allocate up to 50 more (1050 units total).

# Dynamic Wave Search

Wave Template Searches are used as filters for selecting specific Orders during a wave. Each search template has a set of fields that are configurable.

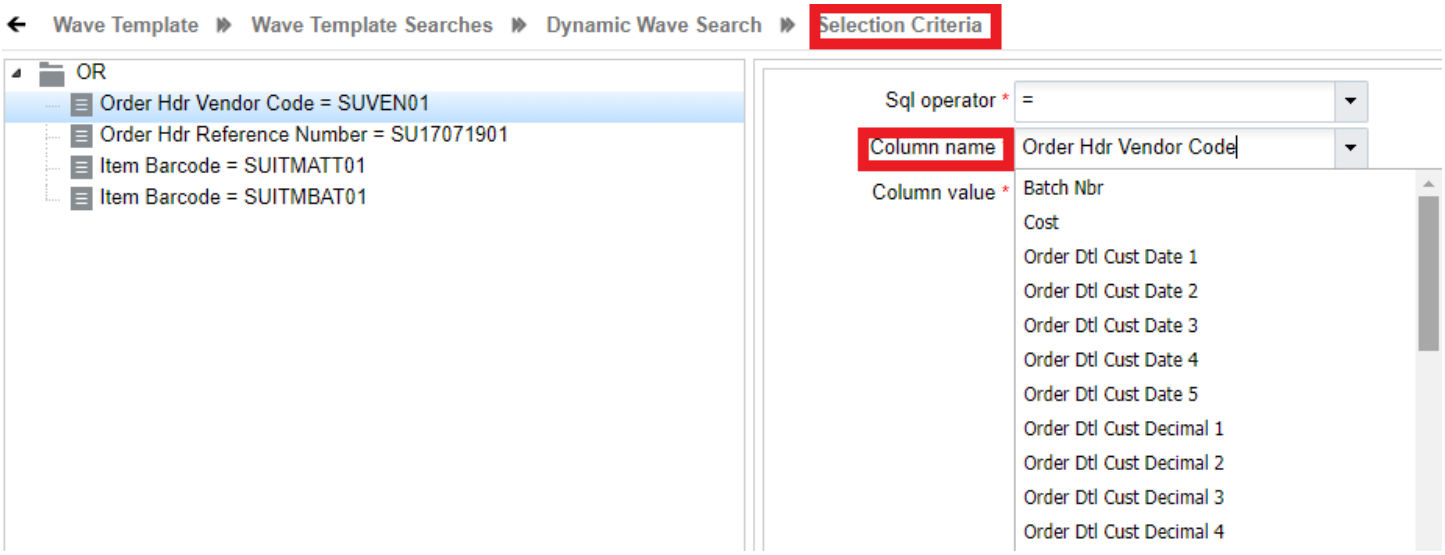
The Dynamic Wave Search button allows you to associate customized order search definitions to wave template order searches. It gives you more customization and power for your wave template searches.

From the **Wave Template UI**, click **Wave Template Searches** to access the Dynamic Wave Search button.

> **Note:** Your Dynamic Wave Search needs to be associated with your Wave Template Search to work.

You will know that your Dynamic Wave Search is associated with your Wave Template Search if it displays in the **Dynamic Wave Search** column, viewable from the **Wave Template Searches** UI.

Once you have created your Dynamic Wave Search, click **Selection Criteria.** From here, click the Column name drop-down to view many more criteria to specify for your Dynamic Wave Search.




## Selection Criteria Rules

The Selection Criteria Rule in Dynamic Wave Search allows you to add a date/time range from the current date to extract the data of a particular value. You can fetch the data of any column by adding or subtracting the date/date timestamp by the value of x.

1. Login to Oracle WMS Cloud.
2. From **Wave template**, go to **Wave Template Search**, and then **Dynamic Wave Search**.
3. Select the wave and click **Selection Criteria**. The selection criteria rule page opens.
4. Set the selection criteria in any order:
    a. Sql operator – Select your operation. For example, =.
    b. Column Name – Choose an appropriate selection column name from the drop-down menu.
    c. Column Value – Enter the value. For example, d+10, where x is the number of days or minutes.

    Based on the Selection Criteria, the system fetches data set for the next 10 days from the current date and also data specified in the Column name drop-down (Order Dtl Custom Date 1).

For example, let's say your current date is 10/10/2008 (D). You need to fetch data until 20/10/2008 for the Order detail custom date 1 field, then your Column value = (D) + (number of days you want the information to be fetched, i.e., 10 days).

Similarly, if you need to fetch data in minutes, enter m+/- x, where x= minutes.

**Note:** The keyword "m" is not recommended to use against column of "date" type date.

The behavior of the selection criteria is applicable to the following screens:

- Putaway Type Determination Rules - Selection Criteria
- Task Creation Template – Details - Task Selection Rules
- Wave template - Wave Template Search - Dynamic Wave Search - Wave Order Selection Rules

- Audit Rule - Audit Selection Rule

# Executing Waves

There are three ways to run waves in WMS:

1. **Wave Templates** are used for running a large number of orders at once.
2. **Wave Groups** are used for running a multiple wave templates in a preconfigured sequence.
3. **Manual Waves** are used for running waves by Order detail.

**Note:** Once you begin picking from a Task within a wave, that wave cannot be cancelled. However, this feature can be disabled in the Facility Parameters screen by setting parameter “UNDO_WAVE_EVEN_AFTER_PICKING” to “Yes”.

## Executing Waves via Wave Template

1. To run waves using the Wave Template screen, you must first input the orders to run waves for in the Wave Template Search. Click the Wave Template Searches button.
2. The UI will open a new window containing a list of Wave Search Templates. Select the Search Template that will be used in the Wave Template and click Edit.
3. This will prompt a small window to the right. Populate the order numbers you wish to allocate in the “Order Nbrs” field. Click “Save”.

   **Note:**
   - Multiple order inputs should be separated by commas with no spaces in between each value (see figure below).
   - If the Order Nbr field is left blank, WMS will search for all eligible Orders (Orders in status “Partly Allocated” or “Created” status).
4. Click “Back” to return to the original Wave Template screen, select the template and click “Run Wave Template”.
5. If done correctly, a popup message will appear notifying the user of the new Wave record.

## Executing Waves via Wave Group View

You can use Wave Groups to run multiple wave templates at the same time. To configure a Wave Group, go to the “Wave Group View” screen.

1. To configure the group of wave templates in “Group Wave 1”, select the record and click the Details button (). This will bring you to the following screen:

| Name | Sequence Nbr | Template Name | Active Flag | Create Timestamp | Mod Timestamp | Mod User |
|---|---|---|---|---|---|---|
| Group Wave 1 | 20 | LTL | Yes | 09/23/2014 4:38:34 PM | 09/23/2014 4:38:34 PM | lgf_thkim |
| Group Wave 1 | 10 | Parcel | Yes | 09/23/2014 4:38:28 PM | 09/23/2014 4:38:28 PM | lgf_thkim |

2. The figure above displays the sequence wave templates that will run whenever “Group Wave 1” is executed. To add a new wave template to the list, click the Create () button and populate the necessary fields.
3. To run the wave group, select the wave group and click “Run Wave Group”.

## Executing Waves via Manual Wave

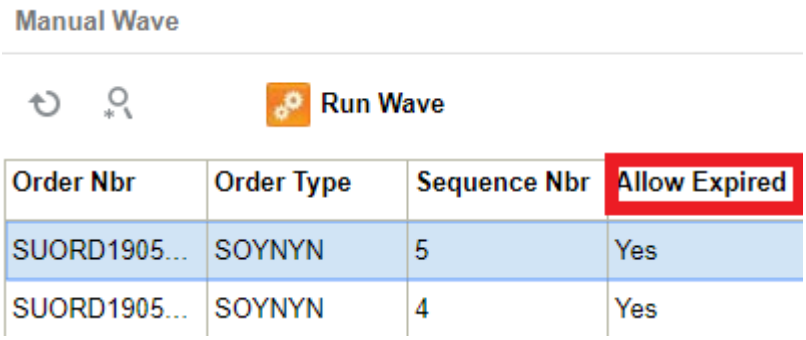
You can use manual waves to run waves at the order detail level. You can select multiple lines by holding *Shift* and selecting the desired order detail records to allocate.

After the order details are selected, choose the desired wave template from the drop-down and click “Run Wave Group”.

When the wave record is created, WMS should prompt a confirmation message with the wave number.

## Prevent Allocating Expired Inventory

When you are planning your wave, you want to make sure that the wave only selects the correct inventory. The allow_expired_inventory flag in Order Type and in the Manual Wave Search screen allows you to prevent allocating expired inventory.




When you select the allow_expired_inventory flag from the search option in the Manual Wave screen, the resulting order details will display yes in the Manual Wave screen, indicating these orders are allowing expired inventory. When you deselect the allow_expired_inventory flag, the Allow Expired Inventory column displays as “No”, indicating the orders are not allowing expired inventory. Please note that if the wave search has the allow expired inventory checked, it will only allocate inventory to the orders that have order type with allow expired inventory checked. If allow expired inventory is not checked, the system will **not** allocate inventory for orders with expired inventory.

# Wave Inquiry - Viewing Created Waves

Users must use the **Wave Inquiry** screen to view all created waves. Here you can view all the waves and their statuses (whether they are completed or in progress). The message text column will display all of the allocations made in units, followed by the LPN count in parenthesis.

You can also click on “Allocations” to view the selected Wave’s Allocation details.

To view a detailed report of a wave’s allocation, select the wave record and click on the “Allocation” button.

The **Allocation** screen includes information such as the Task number created and its Task Type, the Order’s allocated and its SKU/Qty, where it was allocated from, and its From and To LPNs (the first “LPN” denotes the IBLPN in the inventory it was allocated to and the second “LPN” denotes the final carton number that the merchandise will be packed to).

# Printing Pick Tickets

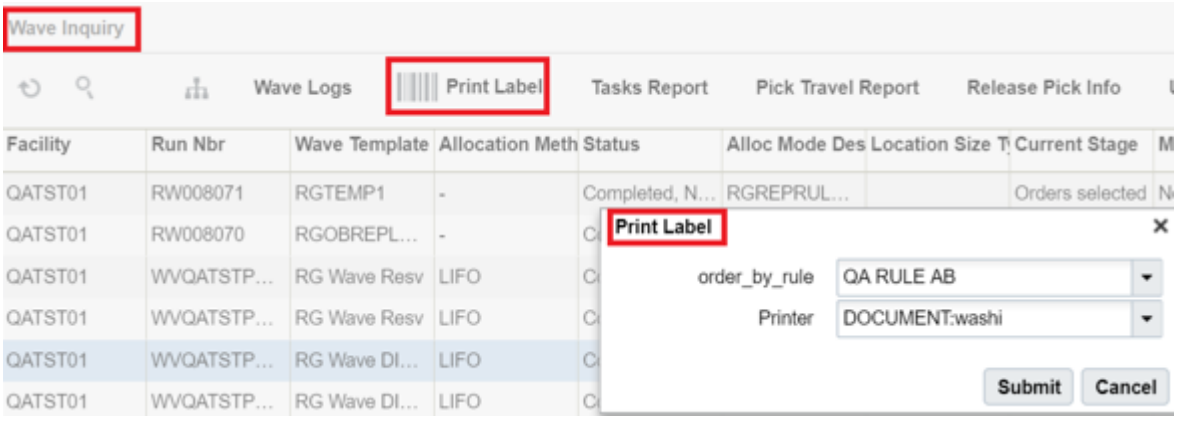
Once a wave is complete, users can use the “Print Label” button to print outbound carton labels for the picking team. They can use these labels to begin a task by scanning the label barcode rather than selecting an arbitrary Task Number from the RF.

WMS provides a feature that allows you to configure the order in which the labels for the wave are printed, such as by Order Number (print all carton labels for Order A, then B, then C, etc.). This is configured via the “Column Ordering” screen.

## Configure the Label Printing Sequence

1. Go to the “Column Ordering” screen.
2. Click the Create () button and give your Print sequence record a Description and Type.
3. Select the record and click on the Details button.
4. In the detailed view, click Create to create new criteria for printing. For example, to print by Label and Allocation , set ‘order_by_field’ to ‘Allocationn Order Nbr’.

Once this configuration is complete, return to the Wave Inquiry screen and select the newly created column ordering criteria from the drop-down. To print, click the “Print Label” button.



# Picking

See the following topics for details about task management and different types of picking in Oracle WMS Cloud:

*Related Topics*

- Task Management
- Non-Cubed Picking
- Zone Picking
- Cubed Picking

## Task Management

Tasks are picking instructions that are generated with every allocation at the end of a wave. They provide operators with information such as the outbound LPN number, the SKU, quantity, the picking location and the carton's destination.

From the **Task** screen, users can view a list of ready or pending tasks.

## Non-Cubed Picking

WMS supports four allocation types for non-cubed picking:

- Full LPN: When the ordered quantity matches the LPN's quantity.
- Cases: When the ordered quantity is a multiple of the Item's "Standard Case Quantity".
- Packs: When the ordered quantity is a multiple of the Item's "Standard Pack Quantity".
- Units: When allocation occurs in 'eaches'.

Although each of these UOMs have similar picking processes, there are some differences.

### RF Execution - Full LPN Picking

Full LPN picking occurs when the ordered quantity matches the LPN's quantity. Because the LPN, SKU and quantity is known prior to picking, WMS will not require you to scan the LPN's details during picking. Instead, by simply scanning the IBLPN, WMS will recognize its contents – this uses what is called a "smart label".

1. Go to the "Execute Task" screen and select a Full LPN Task.[1]
2. The RF will prompt you to scan an OBLPN. This OBLPN will be the container used for shipping. If the wave template used for this allocation had the "Reuse LPN nbr" flag set to yes, this OBLPN prompt will be automatically filled in.
3. Since this is a Full LPN task, WMS will recognize the LPN's contents. The RF will display the LPN's contents. Press ctrl-A to proceed.

   > **Note:** You can view specific task types by pressing the Ctrl-T button and selecting the desired task type. This will refresh the task in the RF with the task type filter.

4. Begin the pick by scanning the IBLPN.

5. When all the LPNs have been picked, the RF will direct you to a destination zone (if one was configured in the Task Template). You must scan a location with that task zone to end the task.

## RF Execution - Units, Cases, and Packs

Overall, the picking process for units, cases, and packs are similar; the only difference occurs when you have to input the item quantity during the pick.

1. Go to the “Execute Task” screen and select a Full LPN Task.
2. The RF will prompt you to scan an OBLPN. This OBLPN will be the container used for shipping.

> **Note:** Users can view specific task types by pressing the Ctrl-T button and selecting the desired task type. This will refresh the task in the RF with the task type filter.

3. Begin the pick by scanning the IBLPN and the quantity. This process is similar for cases, units, and packs.
4. When all the LPNs have been picked, the RF will direct you to a destination zone (if one was configured in the Task Template). You must scan a location with that task zone to end the task.

## Cartonization during Picking

WMS also has the capability to cartonize LPNs during picking (Reserve locations only). During this process, the system will automatically generate LPN numbers for each LPN, Case, Pack, or Unit that is allocated.

To configure these UOMs for cartonization, go to the “Allocation Mode” in the “Wave Template” screen:

Select the UOM for the “Allocation” and “Cartonize UOM” columns – make sure they match. Once this configuration is set up, the system will begin cartonizing.

*Caveat:*

Currently, the system **cartonizes at different points** depending on the UOM allocated.

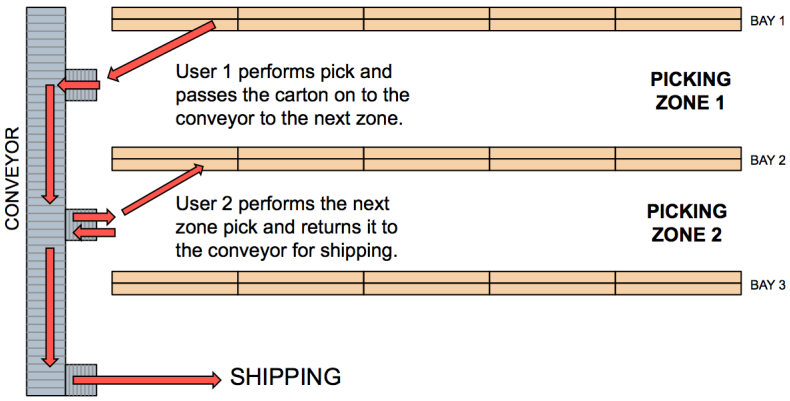
- For FULL-LPN allocations, the system will cartonize **with the wave**.

- For Case, Pack, and Unit allocations, the system will only cartonize when the **Task is completed** (i.e. when the users finish scanning the “Drop Location” prompt at the end of a Task).

# Zone Picking

Zone Picking is a method of order picking that divides items into multiple zones, where each employee is trained to pick within an assigned zone.

The following figure shows an example of Zone Picking:




## Zone Picking Configuration

There are several items tied to configuring WMS for zone picking:

- Setting up the Zone Picking RF module
- Creating the Task and Wave Templates
- Setting up Pick Zones for locations

## Step 1: Setting up the Zone Picking RF Module

1. Go to the “Screen Configuration” screen.
2. Click on “Generate Screens” and select the module entitled “RF-Text: Pack NC Active {order}”.
3. Select the module and click on its details.
4. In the screen name field, add “Zone Picking”.
5. Click Save.

For details on the Zone Picking-related parameters, see the table below:

| Parameter Name | Value | Behavior |
|---|---|---|
| Zone Picking | Default Behavior | Zone Picking is not performed and existing behavior holds well. System creates multiple Outbound LPN’s if Break by Order or Container is set. |
| | Zone Picking with Drop | Zone picking logic kicks in and the drop location prompt is displayed if the task contains picks from multiple zones. Works with only Single Outbound LPN. This parameter overrides the setting done on Break Picks by Parameter. |
| | Zone Picking without Drop Location | Zone picking logic kicks in and the drop location scan screen is not displayed if the task contains picks from multiple zones. Works with only Single Outbound LPN. This parameter overrides the break picks by parameter. |
| | Zone Picking with Suggested Drop | Zone picking logic kicks in system displays the drop location relevant for the next pick zone |
| Break Picks By | 1- None | While picking, the system does not break the picks by Order or by Destination. |

| Parameter Name | Value | Behavior |
|---|---|---|
| | 2- Destination (default/current status) | While picking, the system prompts for a new Outbound Container when the picked order points to different destination.<br><br>When the 'Zone Picking' parameter is set, then the 'break picks by destination' will not be considered and you continue with the same Outbound LPN. |
| | 3- Order | While picking, the system prompts for a new Outbound Container when picking a different order.<br><br>When the 'Zone Picking' parameter is set, then 'break picks by Order' will not be considered and you continue with the same Outbound LPN. |
| Retain Close LPN on Task | Yes | When this parameter is set to 'Yes', as soon as you close the LPN by using CTRL-E, WMS does not prompt for drop location and does not remove the LPN from the task.<br><br>To perform zone picking without moving the LPN's on the conveyor or if Zone picking is not done, it is advisable to set this parameter to Yes. |
| | No | When this parameter is set as soon as the user closes the LPN by using CTRL-E, WMS prompts for a drop location and removes the LPN from the task.<br><br>Setting this parameter to 'No' ensures that Zone Picking is done with Single Outbound LPN being moved across different pick zones. If the LPN reaches its capacity, select CTRL-E and the system will prompt for a drop location. |

## Configure Zone Picking for Active Unit Picking

1. Now that the Pick Zone module is configured, it needs to be enabled for the desired Task Type. Go to the "Task Type" screen.
2. To configure zone picking for Active Unit picking, select Task Type 'NC-ACTIVE-PICK'. To configure zone picking for Reserve Unit picking, select Task Type 'LPNUNITS'.[1]
3. Click the Detail button to view Zone Picking details.
4. To change the RF program to the one configured in steps 2-4, select module "Pack NC Active {order}" and click Edit. Choose the Zone Picking RF program from the drop-down list:
5. Click "Save".

## Step 2: Creating the Task and Wave Templates

Once the Zone Picking Task Types are defined, you must now add them to the Task Template and eventually to the Wave Template.

1. Go to the “Task Template” screen.
2. Create a new Task Template with the Create button. Once created, select the record and click on its details.
3. Create new Task Type records with the Create button. In the Task Type drop-down, select the Zone Picking Task Types from Step 1.
4. Set up additional Selection and Ordering criteria as needed.
5. Now that the Task Template is complete, use this template in the Wave Template. In the Wave Template, make sure it uses an allocation mode that has the UOM “Units” created.

See *Creating Wave Templates* for details on selection and ordering criteria.

## Step 3: Adding Pick Zones to Locations

Locations must be assigned Pick Zones in order to be considered in the zone-picking task. To add “Pick Zones” to locations, you must use the location interface (“LOC” file).

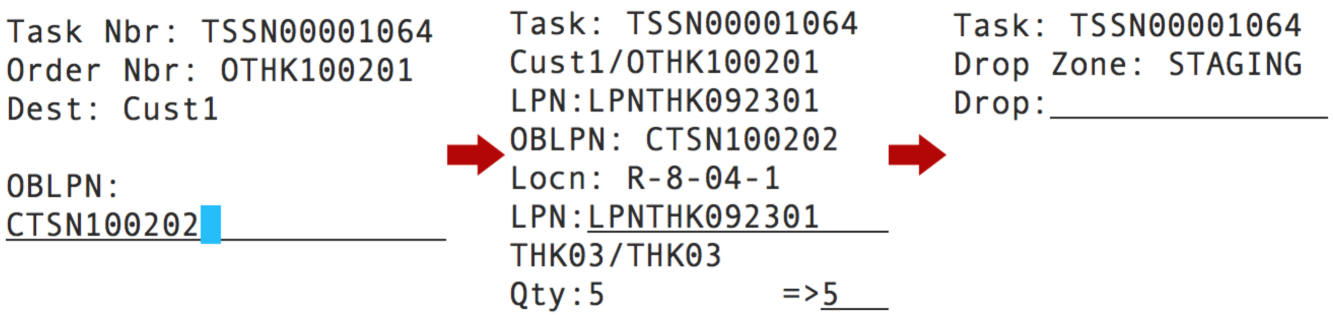
1. Open the “LOC” excel file.
2. For every location that requires a pick zone, scroll over to the “pick_zone” field (column AI) and assign a pick zone to the location. Note that the pick zone order is defined by the location’s pick sequence.
3. Once all the pick zones are defined, save the file and return to WMS. Go to the “Input Interfaces” screen.
4. Select the “Location” from the drop-down and upload the file. Click “Run Interface” to process the file.

> **Note:** If there is inventory in any location that is being modified, you must first set the “LOCATION_UPDATES_WITH_INVENTORY” parameter to “Yes” in the “Facility Parameters” screen.

## Executing Pick Zone Tasks in the RF

Pick Zone tasks behave very similarly to normal tasks. The only difference is that at the end of every zone pick, the RF will automatically prompt you to leave the picked LPN at an intermediate drop location (eg. a conveyor). The second picker will then intercept this LPN and continue the picking process until the task is complete.

1. Enter the “Execute Task” RF module and enter the pick zone task.
2. To begin picking, the RF will prompt you with an OBLPN to pack the merchandise to.
3. One the OBLPN is initiated, the picking process will begin. The RF will direct you to a pick location and ask you to scan the IBLPN and quantity.
4. When all the picks for the first zone are complete, the RF will prompt you for the intermediate drop location. You must scan the drop location to confirm that the OBLPN is dropped off.
5. When the second operator arrives to continue the pick, you must press Ctrl-P within the “Execute Task” module. This will prompt you to scan a Task or Container number. Scan the OBLPN.
6. At this point, the picking process will repeat itself until the LPN reaches the last pick zone and all of the units are picked. When the last pick is complete, the RF will prompt you for a destination zone (if configured).




7. When the task is complete, the RF will return to the Task list.

# Cubed Picking

## OBLPN Types

OBLPN Types are pre-determined carton types that are frequently used in the warehouse for packing. In WMS, these OBLPN Types are used for cubing during waving. For example, you may have the following OBLPN Types set up:

| Code | Description | Maximimum Volume | Maximum Weight | Prefix | Length | Width | Height | Empty Weight |
|---|---|---|---|---|---|---|---|---|
| SMALL | SMALL | 250 | 25 | S | 2.5 | 2.5 | 2.5 | 0.025 |
| MEDIUM | MEDIUM | 500 | 50 | M | 5 | 5 | 5 | 0.05 |
| BIG | BIG | 1000 | 100 | B | 10 | 10 | 10 | 0.1 |

Depending on what the Wave Template's "Cubing Mode" is set to, WMS may or may not use these OBLPN Types for cubing.

## Cubing Modes

Cubing Mode is an additional configuration in the Wave Template that decides how the cubing logic will be used. There are three main types:

| Cubing Mode | Value and Comments |
|---|---|
| None | Cubing is not performed |
| 1 à Use predetermined OBLPN Type | OB LPN Type picked from Wave template/Order/Item. |
| 2 à Calculate OBLPN Type and cube with wave | OB LPN type computed dynamically and Outbound Cartons created |
| 3à Calculate OBLPN Type and cube at packing | OB LPN Type computed dynamically but Outbound Cartons to be packed into are not created, until the time of Packing. |

| Cubing Mode | None | Mode 1: Existing Behavior | Mode 2: Calculate OBLPN Type at the Wave | Mode 3: Calculate OBLPN Type Cube in Packing |
|---|---|---|---|---|
| Step 1 | Wave does not cube. | Wave performs cubing | Wave performs cubing | Wave performs cubing |
| Step 2 | - | OBLPN Type fetched from Wave Template/Order Detail/Item | OB LPN Type determined by Wave Dynamically | OB LPN Type determined by Wave |
| Step 3 | - | OBLPNs are created as part of the wave (status: “Outbound Created”) | OB LPN Type on Wave Template/Item/Order is Ignored for actual cubing. | OB LPN Type on Wave Template/Item/Order is Ignored for actual cubing. |
| Step 4 | - | - | Outbound LPN's are created as part of Wave | Outbound LPN's are not created as part of Wave but created as part of Packing |

## Setting up a Wave Template for Cubing

1. Go to the Wave Template Screen.
2. Select the Wave Template to be edited and click Edit.
3. Go to the “Cubing Mode” drop-down and select the desired Cubing Mode.
4. If choosing mode “Use predetermined OBLPN Type”, you must also select the desired OBLPN Type in the “OB LPN Type” drop-down.
5. Click “Save”.

## Adding Cubing Rules

You can use Cubing Rules to configure the breaking rules for breaking cubed containers.

1. Go to the "Cubing Rule" screen.
2. Create a new record and add a description.
3. Select this record and click the Details button (). This will prompt you to a new screen.
4. Create a new record and populate the sequence number.
5. Select this record and click on “Ordering Criteria”. This is the screen used for adding breaking logic.
6. Create new breaking criteria for cartons from the drop-down in the “Order by column” field.
7. Populate a number in the “Break by Count” field to configure how much it should break by.

## Viewing the Cubed LPN Numbers and Quantities

1. Go to the Wave Inquiry screen.
2. Select the wave number to inspect and click the “Allocations” button.
3. The second “LPN” column (outbound LPN) should be populated. This means that the allocation record has been cubed to that Outbound LPN number.
4. To view what OBLPN Type it was assigned to, follow these steps:
    a. Go to the “Allocations” screen.
    b. Add a search filter for either the IBLPN Number in the “IB LPN Nbr” field or the OBLPN number in the “Ctn Nbr” field.
    c. Click “Search”.
    d. The column “allocation_oblpn_type” will be populated with the OBLPN Type it was assigned to.

# Packing (Repack Module)

The Repack module is a packing RF transaction that allows you to:

- Pack OBLPNs from “Picked” to “Packed” status
- Combine OBLPNs
- Split OBLPNs

# Repack Configuration – Adding the RF Module

1. Go to the “Module” screen.
2. Select the RF module “RF-Text: Repack OBLPN”.
3. Once the screen is added, enter its details to configure its parameters.
4. Click **Save.**

See the following table for a description of parameters:

| Parameter name | Value | Description |
|---|---|---|
| Print-extras | None\|Packing Slip | **When the parameter is set to 'None'**, system will not print the OBLPN packing slip.<br><br>**When the parameter is set to 'Packing Slip'**, system will print the OBLPN packing slip when a 'To OBLPN' goes to “packed” status. |

| Parameter name | Value | Description |
|---|---|---|
| Print-to-oblpn-label | None\|No\|Yes | **When the parameter is set to 'No' or none**, system will not prompt for printer to print shipping label.<br><br>**When the parameter is set to 'Yes'**, system will prompt for printer to print shipping label. If printer is not scanned system and user tabs on printer prompt, system will consider default printer configured for the user. |
| Restrict-multiorder-comb | None\|No\|Yes | **When the parameter is set to 'No' or none**, system will allow users to scan To OBLPN having different order.<br><br>**When the parameter is set to 'Yes'**, system will prevent packing inventory into a 'To LPN' belonging to an order different from the From LPN's order . RF will return the message “multi-order not allowed”. |
| Req-lpn-type | None\|No\|Yes | **When the parameter is set to 'No' or none**, system will not prompt for 'LPN type' for 'To LPN'.<br><br>**When the parameter is set to 'Yes'** , users will be prompted to scan the 'LPN type' after scanning the 'To LPN'. This is applicable only for repacking of non-cubed LPNs. |
| Req-pack-station | Yes None\|No\|Yes | **When the parameter is set to 'No' or none**, users will not be promoted to scan pack station location.<br><br>**When the parameter is set to 'Yes'**, users will be prompted to scan the Packing station location. |
| prompt-lpn-type-on-packed | • None\|Yes\|No | **When the parameter is set to 'No' or none**, system will not prompt for LPN type when 'To LPN' is packed.<br><br>**On setting value to 'Yes'**, the system will prompt for LPN type only when all the inventory from "From LPN" is moved to "To LPN" and parameter "cmbne-one-src-to-one-lpn" is set to Yes. |
| print-column-order-descr | • Users need to provide a valid rule 'description' as configured on 'Column Ordering UI' | **When not configured**, the system will not consider column ordering rule for label printing<br><br>**When configured**, the system will print OBLPN labels based on the Label type configured in Column Ordering>>OBLPN Label Type. |
| extra-info-to-display | None\|Order type | **When the parameter is set to none(blank)**, the system will not display any additional info related to Order. |

| Parameter name | Value | Description |
|---|---|---|
| | • | **When the parameter is set to 'Order Type'**, then on scanning a 'From OBLPN', the system will display the order type associated with the order of the 'From OBLPN' |
| auto-populate-to-oblpn | None\|Do not auto populate the to oblpn \|Auto populate the to oblpn | **When the parameter is set to 'Do not auto populate' or none**, the system will not pre-populate 'To LPN'. Users will be prompted to scan the LPN number<br><br>**When the parameter is set to 'Auto populate the to oblpn'**, then on scanning 'From LPN' and SKU, system will pre-populate the 'To LPN'(System will populate the 'To OBLPN' which is generated during wave (cubing mode - Calculate OBLPN Type and cube at packing)) |
| close-oblpn-status | None\|Packed\|Picked | **When the parameter is set to 'Packed' or none**, then upon Close OBLPN, the system marks the 'To OBLPN' status to 'Packed'<br><br>**When the parameter is set to 'Picked'**, then upon Close OBLPN, the system will change the 'To OBLPN' status to 'Picked'<br><br>Note: Regardless of the configuration of the new parameter 'close-oblpn-status', the system will not allow to combine inventory from a 'Picked' OBLPN into a 'Packed' OBLPN and vice-versa. |
| cmbne-one-src-to-one-lpn | None\|No\|Yes | **When the parameter is set to 'No' or none**, the system allows user to pack source LPN into multiple OBLPNs<br><br>**When the parameter is set to 'Yes'**, the system restricts packing source LPN into multiple OBLPNs. This configuration is suggested for scenarios where RF Repack OBLPN is used for repacking of Non cubed LPNs<br><br>Note: If company parameter "USE-SEQ_CTR_BY_DEST_COMP" is set to YES and if there is no final OBLPN allocated, then the system generates a OBLPN according to Destination sequence counter corresponding Order in the From OBLPN. Also, the systems will display an error message if the FROM OBLPN is associated with multiple Orders that is destined to different destination. |
| manual-end-for-combine | • None\|No\|Yes | **When the parameter is set to 'No'**, the system will end the 'To OBLPN' for any inventory moved from the 'From LPN'.<br><br>**When the parameter is set to 'Yes' or none**, users will have to end the 'To LPN' |

| Parameter name | Value | Description |
|---|---|---|
| | | |
| sub-blindlpn-for-cubedlpn | • None\|No\|Yes | **When the parameter is set to 'No' or none**, the system will not allow substituting different OBLPN number against the cubed 'To LPN'.<br><br>**When the parameter is set to 'Yes'**, the system will allow substituting blind OBLPN number in lieu of cubed 'To OBLPN'. This is allowed only if the cubed OBLPN does not have any inventory picked into it yet.<br><br>Click "**Save**". |

**Note:** if the parameter "req-pack-station" is enabled, locations of type "Packing Station" need to be created.

1. Go to the "**Locations**" screen.
2. Click the (+) Create button to add a new location.
3. Populate the necessary fields. In the "Location Type" field, select "Packing Station".

# Using the Repack RF Module – Packing

1. Enter the "Repack" RF module.
2. Depending on which parameters are activated, the RF displays a different number of fields. The figure below shows all of the possible fields for the RF.

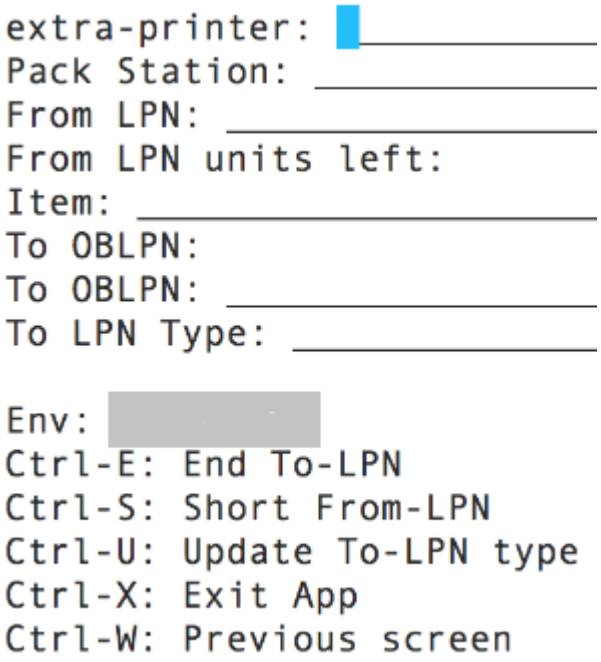



Figure 298: The repack RF screen

- **Extra-printer:** Scan the laser printer barcode (this is to print the packing slip)

- **Pack Station:** Scan the Packing Station in which the OBLPN will be packed.
- **From LPN:** Scan the OBLPN to pack from (this is the OBLPN in "Picked" status).
- **From LPN units left:** This field displays the number of units there are left to pack from. As the user scans each unit from the "From LPN", the quantity will decrease.
- **Item:** Scan the item code.
- **To OBLPN:** This is the OBLPN that you will pack to (also known as the "final OBLPN").
    - If the allocation is not cubed, WMS will not prompt an OBLPN number. You will manually choose the LPN to pack to, followed by the OBLPN Type.
    - If the allocation is cubed, WMS will pre-assign an OBLPN with the OBLPN number and LPN Type.
        - When the "From LPN" is emptied, the RF cursor will return to the "From LPN" field and prompt you for another OBLPN to pack from.

For packing scenarios, the Task Type requires a special configuration that makes an OBLPN update to "Picked" (as opposed to the default "Packed") status after a Task is complete. This configuration only works for **Reserve and Active** unit picking.

1. Go to the "Module" screen.
2. Add the "RF-Text: Pack NC Active {order}" screen.
3. Click **Details.** Select the record and enter it's details.
4. Modify the "close-oblpn-status" parameter to "Picked".
5. Now that the RF program is created, add it to the relevant Task Type (Reserve or Active Units).
6. Go to the "Task Type" screen.
7. Select the desired Task Type ("NC-ACTIVE-PICK" or "LPNUNITS") and go to its details.
8. Modify the "RF-Text: Pack NC Active {order}"'s RF program to the module created from step 2.
9. Add this Task Type to the Task Template.

With this configuration, each time an operator picks the chosen Task Type, the OBLPN will update to "Picked" status.

# Using the Repack Module – Combine/Split

You can use the same RF module to combine/split OBLPNs. To combine or split two LPNs, simply scan the origin LPN in the "From LPN" field and the destination LPN in the "To LPN" field.

## Combine one Source to Another

1. Go to the "**Repack OBLPN**" module.
2. Click on Screen Parameter button > Select **combine-one-source-to-one-lpn**
3. Click **Edit** and choose **yes**.
4. Click **Save**.

1. Invoke the RF Repack OBLPN and scan the LPN to remove units from "From LPN".
2. Scan the Item you are moving.
3. Scan the destination To LPN that the item will be moved to.

> **Note:** the system will auto-populate the To OBLPN field if the screen parameter *auto-populate-to-oblpn* is enabled.

4. When all of the desired items have been moved, press Ctrl-E to end the "To LPN".

On invoking the RF Repack, the system transfers the contents from One Source to another LPN (1-1 combination). If the screen parameter for combine-one-source-to-one-lpn is enabled, the system auto generates the To-OBLPN to be packed.

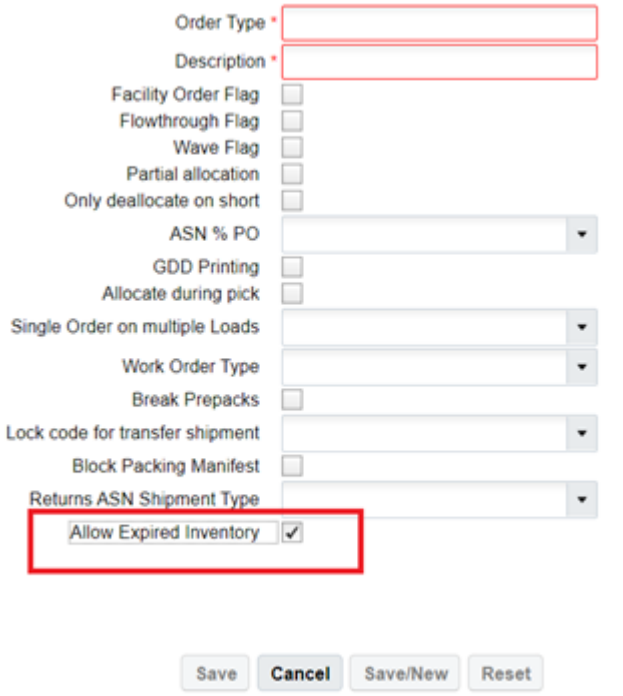
You can also use a second level of RF-Repack where the system moves the inventory from an asset LPN to a Final container which will be shipped. The status of the carton will be updated from Picked to Packed Status.

Once the Inventory from asset is completed, WMS releases the LPN assets for reuse.

# Allow Repacking for Expired Inventory

In order to allow repacking of an expired inventory, you need to enable the *Allow_Expired_Inventory* flag on the Order Type UI.

1. Go to the **Order Type** UI.
2. Click **Add** or **Edit** to create/edit the order type.
3. Enable the **Allow_Expired_Inventory** check box. You need to disable the flag in order to prevent repacking of expired inventory.




4. Click **Save.**

## Repack Expired Inventory Behavior

1. Invoke the **RF Repack** transaction
2. Scan the SKU
3. Scan “From LPN” and item.
    - 

- If the SKU tracks expiration where product life is >0, then the system prompts you for expiration date and checks if the inventory is for an order and Order type flag ALLOW_EXPIRED_INVENTORY. The system behaves in the following manner:

| ALLOW_EXPIRED_INVENTORY Flag | Has Inventory Expired | Behavior |
|---|---|---|
| No | Yes | The system displays an error message: Inventory is expired. |
| No | Not | Continues with the packing. |
| Yes | Yes | Continues with the packing. |
| Yes | Not | Continues with the packing. |

# Direct Allocation

Oracle WMS Cloud allows you to allocate inventory to an order and process the IBLPN to an OBLPN without running a wave through Direct Allocation. This transaction provides the following parameters:

## Parameters

- reuse-lpn - Set the parameter to **Yes** to enable the system to reuse the same lpn number when creating an OBLPN.
- prompt-drop – Set the parameter to **Yes** to prompt for a drop location where you want to drop the OBLPNs.
- auto-load – Set the parameter to **Yes** – the system automatically packs and loads the allocated LPN to the OB load. If the auto-load is set to **No**, then the system consumes the IBLPN and updates the corresponding OBLPN to “Packed” status and IHT records are updated in the inventory history accordingly.

Configuration:

1. Make sure that the Direct Allocation RF screen is configured in the system with items and orders created in the system.
2. Define the parameter for the **Direct Allocation** transaction. The parameters are detailed above.

# Pack with Wave

Pack with Wave functionality is typically used when there is a need to pick and pack large volumes of items such as promotional items, brochures, catalogues and so on, without being concerned too much about the accuracy of quantities being packed.

In a Pack with Wave scenario, OBLPNs are systematically picked and packed during the wave. All system updates are made on allocations, locations, IB LPNs OBLPNs etc, as they would be done after a physical pick and pack using the RF. The physical pick and pack would occur later, as per the convenience of warehouse floor users without using WMS UI or the RF.

# Pre-Requisites for Pack with Wave

The following configurations need to be in place in order to enable the Pack with Wave functionality.

- Wave Template
- Item Configuration

*Related Topics*

- Wave Template
- Item Configuration

# Wave Template

The “Pack With Wave” flag needs to checked on the wave template.

- The wave template needs to be configured so that cubing occurs during the wave.
- The system does not allow the creation of a wave template if both Replenishment Rule is populated and the “Pack With Wave” flag is configured as **Yes**. This is to avoid automatic packing of inventory from potential in-transit quantity.
- Although the system allows the creation of the wave template when both “Pack With Wave” and “Wave Pick Info” flags are enabled, you should exercise caution when enabling “Pack With Wave” in this scenario.
    - If the intention is to only pick and pack via MHE based on cubing in WMS, then the “Pack With Wave” flag can be enabled.
    - However if the intention is to track pick and pack operations performed by MHE, then the “Pack With Wave” flag should not be enabled.
- If the Pack With Wave” flag is enabled and the allocation mode sequence is configured with the MHE system for performing distribution, then distribution takes precedence. This is because if the cubing rule is configured along with distribution (which is not a recommended configuration), then distribution takes precedence and cubing is not performed.
- Although the system allows the creation of a wave template when “Pack With Wave” flag is enabled and the task creation rule is populated, you should configure task creation only for items that are not eligible for “Pack With Wave.”

**Note:** Item eligibility is described in *Item Configuration*.

# Item Configuration

The items that are part of order lines for the wave should have both the “Dummy Sku Flag” and “Pack With Wave” flag checked.

- The system does not allow the “Pack With Wave” flag to be checked if the “Dummy Sku Flag” on the item is unchecked. Only dummy SKUs are eligible for Pack with Wave functionality.
- Items that have “Dummy Sku Flag” unchecked, can also be part of the same wave; however these items will not be eligible for Pack with Wave functionality.
- If different items are cubed into one OBLPN, with some items having both flags checked and other items having one or both flags unchecked, then the entire OBLPN will not be eligible for Pack with Wave functionality.

# Pack with Wave Functionality

During the wave process, the “Pack with Wave” stage occurs after cubing. This stage triggers after the load assignment stage of cubing before tasks are created. In wave templates where the “Pack with Wave” flag is not checked, this stage will be skipped.

# Pack with Wave Updates

Towards the end of the “Pack with Wave” stage of the wave process, the following updates are seen in the system:

1. OBLPNs that are eligible for “Pack with Wave” will be updated to packed status and corresponding allocations are marked complete. Packed quantity on allocation will be updated accordingly.
2. Inventory from corresponding dummy dynamic locations (that are created during the wave) will be reduced by the corresponding packed quantity.
3. If OBLPNs were not already assigned to a load and if the facility parameter “ASSIGN_LOAD_WHEN_PACKED” is configured as **Yes**, then the load assignment will be complete and OBLPNs will be assigned to a load.
    - Load is not assigned to the OBLPN if the associated order has “externally_planned_flag” set to **Yes** and externally planned load number is not populated on the order detail.
4. If OBLPNs are not already manifested and if OBLPNs ship_via has a carrier type of parcel, then OBLPNs are manifested.
5. If the company parameter “FILES_TO_GENERATE_AT_LPN_PACKED”:

- Is configured as **OLO**, then “OBLPN Shipping Info” file is generated
- Is configured as **LLS**, then “Outbound Load Export” file is generated
- Is configured as **LLS** and **OLI**/**OLO**, then both “Outbound Load Export” and “OBLPN Shipping Info” files are generated.

Order Status is Updated:

- To **Packed**, if all items in the order were eligible for “Pack with Wave” functionality and the order is completely packed.

- To **In-Packing**, if only some items from the orders were eligible for “Pack with Wave” functionality and the rest are still in allocated status.
- To **Partially-Allocated**, if some order lines are completely packed and some of the order lines are not selected at all.

Next:

- Order Status Change Inventory History record is created.
- Container Detail Packed Inventory History record is created for each OBLPN line that was updated as packed.
- If the company parameter “FILES_TO_GENERATE_AT_ORDER_PACKED” is configured as **PLS**, then the “Order Outbound Load Export” file is generated for orders that have been updated as packed.

## Autopack Wave OBLPNs

As an alternative to “Pack with Wave”, an action button called “Autopack Wave OBLPNs” is available on the Wave Inquiry screen. You can use this button when the “Pack with Wave” flag is not checked on the wave template.

- This button allows supervisors to review allocations before initiating auto pack of OBLPNs for a wave.
- The button is enabled only for wave runs that have status “Completed” or “Completed, Not Fully Allocated”.
- The button is disabled if more than one wave run is selected.
- Only users with the role of ADMINISTRATORS or MANAGEMENT can access this button. If other users need access to this button, then access needs to be provided via group permissions for “Wave Inquiry/Allow Auto Packing”.

## Functionality

When the “Autopack Wave OBLPNs” button is checked, the system performs the following checks:

- If there are any open allocations which are cubed (allocations that have container number populated) that have only dummy SKUs and all dummy SKUs have “Pack with Wave” flag enabled.
- If no such allocations are found, the system displays the message “No eligible allocations for autopack.”

> **Note:** if eligible allocations are found, then the system performs updates as described in *Pack with Wave Updates*.

# Outbound Audit

Outbound Audit allows you to create and configure audit rules to flag OBLPNs for audit based on different criteria. Then during packing, these OBLPNs get flagged for audit based on the rules you configure. Before OBLPNs move to staging after packing, OBLPNs flagged for audit are taken to the audit area and the corresponding audit is performed manually using the RF Outbound Audit option.

# Outbound Audit Rules Screen

The Outbound Audit Rules screen is a rule-based screen that allows you to determine which of the packed OBLPNs will be marked for audit. The OBLPNs that are marked for audit are random based on the 1 of Y field. The Outbound Audit Rules screen contains the fields Facility, Name, Description, Enabled, and 1 of Y. Click Create to create and configure a new rule, and edit to edit an existing rule's configuration.

Each rule has a detail screen (selection criteria) where you can define the rule using the OBLPN (description) fields store, packer, or item. The 1 of Y column indicates the number of rules configured.

For example, in the rows above, Facility F002 has 1 of 10 rules enabled. Facility F002 has 1 of 5 rules disabled, and Facility F003 has 1 of 20 rules enabled.

Once you have created your audit rule, you need to select details to view the selection criteria and define the audit rule using the OBLPN fields store, packer, or item. The rules support "AND" and "OR" relationships between those fields.

The Outbound Audit Rules screen also contains the **Change Global Audit Setting** button at the top which allows you to control the global audit settings that apply by facility.

The following table is an example of how you can set the Global Audit Setting for facilities:

| Facility | Audit if Shorted |
|---|---|
| F002 | Yes |
| F003 | No |

From the Outbound Audit Rules screen, click the **Change Global Audit Setting** button.

When you click the Change Global Audit Setting button, the following confirmation window appears which allows you to set the audit_if_short setting for your facility to True or False. In the following example, the current audit_if_short setting is set to False (i.e No), but if you change this to True and click OK, the Audit if shorted setting changes to Yes.

> **Note:** if rules are configured using multiple different criteria, it is important to add rules with more specific criteria with higher priority and continue with less specific rules.

## Audit Status

> **Note:** You can view Audit Status from the OBLPN screen. OBLPNs are created by default with a status of "Audit_Status=not required". Possible audit statuses include:
>
> - not required
> - audit pending
> - audit complete
> - audit missing

# RF Outbound Audit

The RF Outbound Audit module allows you to execute detailed audits for OBLPNs or Pallets. RF Outbound Audit contains the following two parameters:

- Audit Mode
- Audit - Default Reason Code

The Default Reason Code parameter allows you to add a reason code for your audit.

## Audit Mode

The Audit Mode parameter has three choices:

- Simulated with Pending Audit
- Simulated without Pending Audit

## RF Outbound Audit Screen

The RF_Outbound Audit screen prompts you to scan the container to be audited (in this case an OBLPN with unit allocations is scanned).

The following screen flow is applicable when the Simulated Audit mode screen parameter is set with the value None or Simulated Mode with Audit Pending or without Audit Pending.

**Note:** The OBLPN must be in Packed status.

Important: You can reduce quantity via RF Outbound Audit, but you cannot increase quantity in an OBLPN.

## RF SKU Prompt Screen

After you scan the LPN, you are prompted to add the SKU:

When the allocation is done in terms of cases, the following is an example of the RF Outbound Audit Cases prompt screen:

The above RF screen flow is applicable when the Simulated Audit mode screen parameter is set as any of the following:

- None
- Simulated Mode with Audit Pending
- Simulated without Audit Pending.

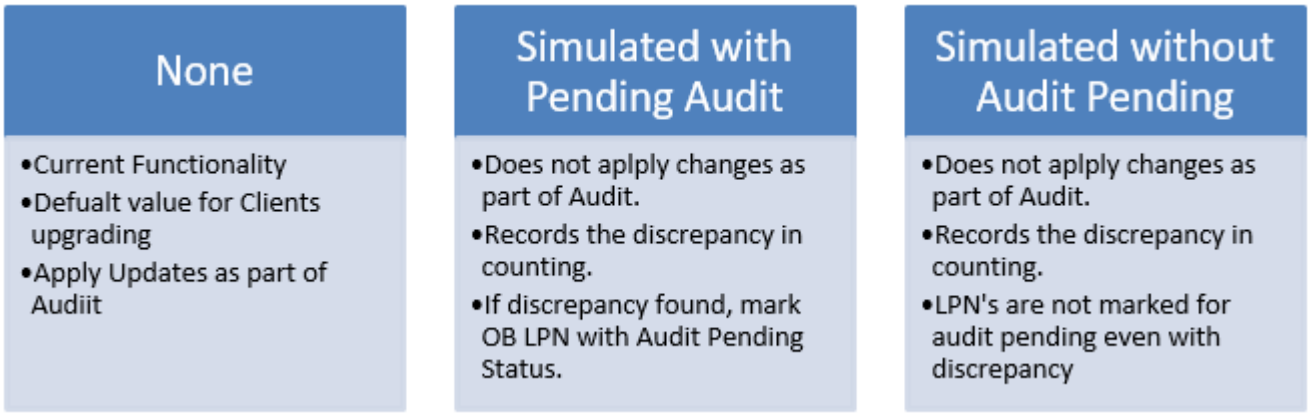
Whether the Simulated Audit Mode is configured for Normal Mode or Simulated Mode, the following updates apply:

- When an extra unit or an item that does not belong to the OBLPN is scanned, the error “item does not belongs to OBLPN Discrepancy will be recorded” displays. You can accept the message with Ctrl-A and physically take out the extra unit/sku that does not belong to the OBLPN at hand. If you press Ctrl-W, you are returned to the Sku Prompt screen without recording the discrepancy.
- Scanned items and quantity per item are recorded for each sku. The scanned items and quantity are stored and displayed in the Audit Detail History screen.

Based on the type of container you scan in the first screen, the RF Outbound Audit module behaves differently as follows:

The Audit OB LPN Transaction allows you to audit OB LPN or Pallets in Normal Mode when updates are performed as part of the audit transaction or in Simulated Mode.

The Audit Mode parameter choices are defined below:




**Note:** a Simulated Audit Mode value of none is also considered as Normal Audit Mode.

Whether the Simulated Audit Mode Screen parameter is configured for Normal Mode or Simulated Mode, the following screen flow is applicable.

Once you scan all of the items in the OBLPN or finish the audit, you end the audit by pressing Ctrl-E.

The system asks you a verification question to end the audit and you accept message using Ctrl-A. Otherwise, you can press Ctrl-W to return to the previous screen and continue scanning more items.

After you end the audit, the system informs you of any discrepancies of scanned LPNs.

## Serial Number Tracking

RF Audit supports scanning items which are serial number tracked. During audit, you are prompted to enter serial numbers if serial number tracking is enabled for an item

Scanned serial numbers are captured in inventory history records. No changes are made to audit history records. Also, serial number tracking is only applicable in non-simulated mode. If you encounter serial number tracked items during one of the simulated modes, an error is thrown and you will not be able to proceed with audit in these modes.

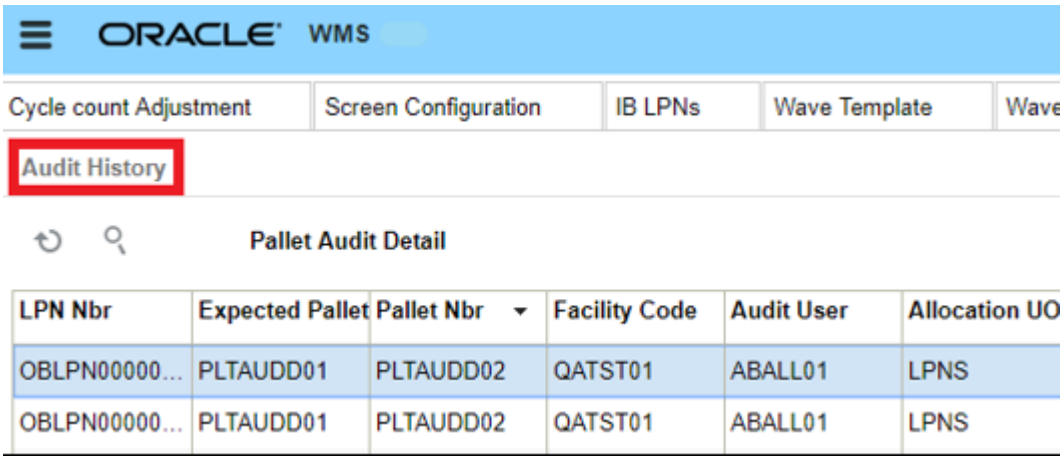
## Rules to Determine if Item is Serial Number Tracked

In order to determine if the item is being tracked for serial numbers the following two parameters at the company and item level are checked:

- Company parameter for tracking serial needs to be set either to “Packing Only” or “End to End.”
- Item attributes that specify serial number tracking need to be set as “Track Serial Numbers”

## Audit HIstory

The Audit History screen shows most of the detailed information for the audit so that you often do not need to go to the details screen to view details and discrepancies. The following screen shows what the Audit History screen looks like. Refer to the Audit Detail History Columns section below for more details.




From the Audit History screen, you can click **Pallet Audit Detail** to view details such as expected and scanned number of LPNs, difference, number of expected LPNs scanned, and OBLPNs not anticpated.

## Audit Detail History Columns

| Column | Description |
|---|---|
| Pallet Number | Pallet Number which has been scanned in Audit, If Pallet not Scanned display null |
| Audit OB LPN Number | Outbound LPN which has undergone Audit |
| Load Number | Load Number associated to the Pallet/OB LPN. If OB LPN is associated with Parcel carrier then display Load Number field blank |
| Expected Pallet Number | When OB Pallet is scanned, this column depicts the pallet number associated with the OB LPN Scanned |

| Column | Description |
|---|---|
| Audit Mode | Normal or Simulated |
| Audit Type | OB LPN Audit or OB Pallet Audit |
| Item Code | Item Scanned, If Outbound LPN scanned has multiple sku's write different rows for each sku |
| Packed Qty | Packed Qty associated to the inventory record for OB LPN. Qty Present on the OB LPN when the Outbound LPN was Packed. |
| Current Qty | Qty present in OB LPN during Audit (Can be 0 if Sku scanned is not anticipated in the OB LPN Scanned |
| Audit Qty | Quantity audited by User (Can be Zero or less or equal or greater than current qty) |
| Unit Variance | Current Qty-Audit Qty (If Audit Qty is greater than Current Qty, display the value in brackets). |
| Total Pack Cost | Unit_Cost for the item times the quantity expected for the sku in the OB LPN |
| Total Audit Cost | Unit_Cost for the item times the quantity Audited for the sku |
| Cost Variance | Total Pack Cost-Total Audit Cost. (If Total Audit Cost is greater than total pack cost, display the value in brackets). |
| Alternate Item Code | An alternate representation of the SKU, which concentrates SKU parts A through F into a single record. |
| Audit User | User who performed the audit transaction |
| Item Description | Description of the item. |
| Destination Facility Code | Destination facility for the OB LPN Scanned in Audit |
| Ship to Facility Code | Ship to facility for the OB LPN Scanned in Audit |
| Allocation UOM | Units/Packs/Cases |
| Pack Qty | Item's Standard Pack Qty |
| Standard Case Qty | Standard Case qty from item |
| Pick User | Pick user associated to the Outbound LPN |
| Pack User | Person who Packed the Outbound LPN. |
| Audit _ts | Create time stamp of when Audit Performed |
| Packed_ts | Time Stamp of when the Outbound LPN was packed |
| Manifest Number | If Outbound LPN is not associated to load, display manifest number, if associated to Manifest |
| Order Number | Order Number associated to the OB LPN |
| Order Type | Order Types differentiate orders based on certain characteristics. |
| OB LPN Type | Container Type associated with the Outbound LPN Audited |
| Allocation Type | Allocation Type from the Corresponding Allocation Record associated with the Outbound LPN |
| Batch Number | Batch Number for the Item Associated with the Outbound LPN Audited. |
| Item Hierarchy Code | Describes the item hierarchy. |

# LTL Load Management and Shipping

Refer to the following related topics for more details about LTL Load Management and Shipping:

> **Note:** *LTL and Parcel shipments go through different loading and shipping processes. These topics are for LTL shipments only.*

*Related Topics*

- Load Assignment
- Outbound Loads
- Outbound Stops
- Loading an OBLPN
- Unloading an OBLPN
- Pack and Hold Functionality

## Load Assignment

WMS can be configured to assign OBLPNs to OB Loads either automatically or manually.

### Automatic Load Assignment

To enable automatic assignment of loads for packed OBPLNs, the facility parameter ASSIGN_LOAD_AT_CREATE_OBLPN must be set to “Yes”. This means that whenever an OBLPN’s status is updated to “Packed”, it is assigned an Outbound Load number.

By default, there are two ways in which WMS assigns LPNs to Loads:

1. By the order's unique "Route number".
2. By the Order’s combination of “Ship To Name” and “Ship to Address 1”.

If the order has a route number populated, all outbound cartons associated to this order will have their own Outbound Load. If there are other orders with the same route number, all of its cartons will be moved to this Load as well.

*Example:*

Order 1 & 2 have the route number = ‘ROUTE1’

Order 3 has the route number = ‘ROUTE2’

When cartons associated to all these orders are packed, cartons from Orders one and two will be assigned LOAD1, while cartons from Order three will be assigned LOAD2.

If the order’s route number field is blank, then WMS will look at the Order’s “Ship to Name” and “Ship to Address 1” fields. The combination of these two fields will become the criteria for creating a new Load number.

*Example:*

Order 1 is destined to ORACLE WMS CLOUD with address 1st Street.

Order 2 is destined to ORACLE WMS CLOUD with address 2nd Street.

Because each order has different Ship to Name and Address combinations, each order will be assigned different Loads.

## Manual Load Assignment

Users can also manually define the Load that an order or OBLPN is assigned to.

1. Enter the RF module “Assign to Load”.
2. Enter the Load number that the Order or LPN will be assigned to. This may be either a new or existing Load number.
3. Scan the Order/LPN that needs to be assigned to the Load scanned from step #2.

## Caveats

- The option of scanning either an Order or an LPN must be configured in the RF’s parameters under the “Screens” tab.
  - Go to the “Screens” tab.
  - Search for the “Assign to Load” screen.
  - Select the screen and click on the Details () button.
  - Select the parameter and click the Edit () button.
  - In the “Module parm choice” drop-down, select either “Scan Order” or “Scan OBLPN”.
- The RF module will not allow you to re-assign orders that contain OBLPNs that are in “Loaded” status in other Loads. In this case, you must unload these OBLPNs to reassign them into a new Load.
- Once the Load number is populated, it will stay populated until “Ctrl + X” or “Ctrl + W” is pressed to account for any pending assignments.

# Outbound Loads

The Outbound Loads screen provides details for all existing Outbound Loads including load status, load number, trailer number, estimated departure, and estimated delivery.

The following table provides definitions for all of the buttons available to help you manage your outbound loads:

| Action Buttion | Description |
|---|---|
| GDD | New window pops out that allows you to submit a Guia de Despacho. |
| Check In | Allows you to Check In load. |
| Check Out | Allows you to Check Out Load. |
| Reset Load Status | Must have Reset Load Status permission. Enabled only when the selected load is in the status : **Close load in progress** or **Ship Load In Progress**.This button enables the user to reset the Load with status Close load in progress to **Loading Started** and Ship Load In Progress to **Loaded** status. |
| Bill of Lading | According to your configuration on Company Report Type, it will Print Bill of Lading. |
| Export Shipment Packing List | According to your configuration on Company Report Type, it will Print Export Shipment Packing List |

| Action Buttion | Description |
|---|---|
| Shippers Export Packing List | According to your configuration on Company Report Type, it will Print Shippers Export Packing List |
| Commercial Invoice | According to your configuration on Company Report Type, it will Print Commercial Invoice |
| Ship Load | Ships Load |
| Print LPN Labels | Prints LPN Labels |
| Close Load | Close Loads |
| Reopen Load | Changes load from loaded status to loading started. |
| GDD Summary | You will get custom implementation of GDD. |
| Locate Trailer | You will be able to select the location where to locate trailer. |

# Outbound Stops

The Outbound Stops screen (available from Outbound Loads, details) shows the load information, and orders that are part of the load (available in a hyperlink). Once you select the Num orders hyperlink, The Orders on Stop screen provides a summary of all the orders that belong to a particular Stop at the Order Header level. It provides useful information, such as the percentage of the order that is packed or loaded.

| Action Buttion | Description |
|---|---|
| LPNs on Stop | A new window shows you the LPNs on Stop, and allows you to add new LPNs |
| Stopgdd | New pop up window comes up where you can fill out information and submit it |
| GDD Summary | You will get custom implementation of GDD. |
| Load Stop | Provides the ability to select an OB Stop record from the existing 'OB Stop' screen and load all the corresponding OBLPNs in 'Packed' status. |

# Loading an OBLPN

Once all the cartons for a load have been staged, it is ready for loading.

1. Go to the Outbound Loads screen and select the Load that will be loaded.
2. Select an open Dock Door from the drop-down and click "Check In". The Load's status should update to 'Checked in'.
3. At this point, the Load is ready to be loaded with the RF. Enter the RF module "Load OBLPN".
4. In the "Locn:" field, scan the Dock Door. Since the Load is checked into this Dock, the system recognizes the Load number and auto-populates it.
5. Populate the trailer number (this is only prompted the first time).
6. Begin loading OBLPN/Pallet by scanning a label.

7. When you are done loading all the cartons, the RF will prompt the message “Load complete.”
8. You must close the load with the option “Ctrl-E: Close Load.”
    - At this moment, if the system identifies pending pallets/cartons still to be loaded, a warning message displayd in the RF indicating the cartons that have not been loaded.
9. In the Outbound Loads screen, the appropriate load will be updated to status “Loaded”.
10. To ship the load, select the Load and click “Ship Load”. The Load’s status will be updated to “Shipped”.

## Ship Load from RF

You can perform shipping activities for an OB load via the RF. From Load OBLPN, you can press the Ctrl-P key to ship a load.

**Note:** Only valid LPNs whose status “Loading Started/Loaded/ Checked Out” are eligible for a ship load action.

## Shipping a Load through RF

1. Login to your RF and invoke “Load OBLPN”.
2. The Load OBLPN screen displays the “Ctrl-P: Ship Load” hot key.
3. Enter the required information:
    - Location: Location of the OB Load assigned
    - Load: Load Number
    - Trailer number: Trainer Number
    - Route: Route information
    - Next LPN: LPN number.

## Ctrl-P: Ship Load

**Note:** Make sure to enter the load/trailer number whose LPN status is in “Loading Started/ Loaded / Checked Out”. Otherwise, the system populates a dialog box “Load Number to Ship” for you to enter the Load information.

1. After scanning the LPN, invoke the hot key “Ctrl-P: Ship load”. The system first checks for all the validation and then proceeds to ship the LPN.
2. A warning message is displayed, press “Ctrl-A” to Accept and proceed with 'Ship Load'. Otherwise, press “Ctrl – W” to reject.
3. Once the transaction completes, the system returns back to the RF Load OBLPN screen and the required IHT records are written.
    - For more details about the RF Load parameters, refer to the *Oracle Warehouse Management Cloud - RF Parameters* document.

# Unloading an OBLPN

Users can only unload to location types **“Pack and Hold”** or **“Staging Location”**

**Note:** Staging Location is configurable via the “Unload OBLPN” RF module’s parameters. Users can configure to either prompt a Staging or Pack & Hold location while unloading.

1. Enter the RF module Unload OBLPN.
2. In the “OBLPN/Plt” prompt, scan the OBLPN to unload.
    - If the Load is already closed, you must reopen it via the “Reopen Load” button in the OB Load screen. When the Load’s status updates to “Loading Started”, you may proceed with the unloading.
3. RF prompts message “Do you want to unload OBLPN?”. Press Ctrl-A to accept.
4. In the “Enter Locn:” prompt, user scans a Staging/P&H Location to locate the OBLPN.

# Pack and Hold Functionality

Pack and Hold is the process of temporarily holding packed containers in a separate area prior to shipping. Oracle WMS Cloud has a special location type called “Pack and Hold”, which is where all the related containers will be sent.

## Configuring a Pack and Hold Location Type

1. Go to the Locations screen.
2. Create a new location using the Create button.
3. Populate all the required fields. In the “Type” field, select “Pack and Hold” from the drop-down menu.
4. Click “Save”.

## Moving OBLPNs to a Pack and Hold Location

1. From the **RF Dynamic Staging Transaction** (module: rf.outbound.cwrfdynamicstagingcntr) select your desired screen parameter choice from **pack-and-hold-mode**. (stage first, then Pack and Hold, or Pack and Hold directly)
2. Enter the Pallet/OBLPN to be moved.
3. In the “Pck/Hd Loc:” prompt, enter the location to move that carton to. Note that the system will suggest a Pack and Hold location, but you may override this suggestion.
4. Scan the Pack and Hold location and the pallet number that it will be placed to.

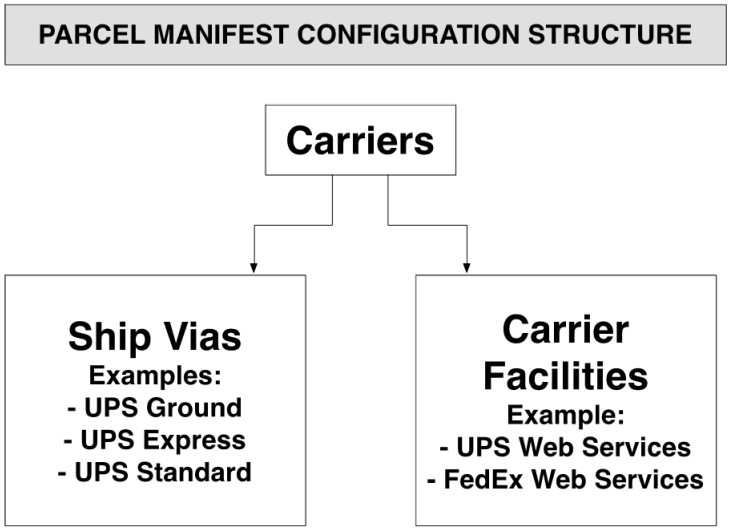
> **Note:** There is no validation process in Pack and Hold. For example, users can mix multiple orders into the same Pack and Hold location.

# Parcel Configuration, Load Management, and Shipping

The parcel manifest functionality in ORACLE WMS CLOUD allows the use of UPS and FedEx Parcel Carriers for Shipping. The functionality will allow integration with FedEx/UPS services for sending information on outbound cartons and receiving tracking numbers.

> **Note:** LTL and Parcel shipments go through different loading and shipping processes. This section is for Parcel shipments only.

# Parcel Manifest Components in Oracle WMS Cloud




- Carriers:

The courier company that transports the parcels (eg. UPS).

- Carrier Facilities:

Screen used to configure login credentials to the courier's server.

- Ship Via Codes:

Carriers can have different **Ship Via Codes.** Ship Vias are the different services offered by carriers (eg. UPS Ground).

- Manifests:

Manifests are the parcel equivalent of "Outbound Loads" with LTL shipments. When shipping via parcel carriers, a **Manifest** is opened for each carrier being used. Manifests are documents that will provide details of a shipment such as:

- The Carrier and Ship Via used
- The outbound cartons numbers
- The SKU and Quantity of each outbound carton

To have both LTL and Parcel orders in WMS, the ship via must be enabled. The following displays a summarized diagram of the overall process:

## LPN Assignment to Manifests

Outbound cartons are assigned to an *open* manifest based on their ship via.

*Example: If orders ship via UPS Ground, the outbound cartons for those orders is assigned to the manifest opened for this Ship Via's carrier.*

When Parcel Manifests are closed, the outbound cartons assigned to these manifests will have their status changed to "Shipped". Outbound cartons are considered "manifested" when they get assigned a manifest.

# Parcel Manifest Configuration

The Parcel Functionality in the ORACLE WMS CLOUD WMS is used to ship via Parcel Carriers UPS and FedEx Services. This functionality is used to send information back and forth between WMS and the courier (eg. tracking numbers and manifests).

**Step 1: Creating Carriers**

1. Go to the “Carriers” screen.
2. Select the “Carrier Type” (LTL or Parcel). Orders with LTL carriers are assigned to Outbound Loads, while orders with Parcel carriers are assigned to manifests.
3. Press “Save”.

The following is a list of the Carrier Types Available:

- Rail
- Air
- Ocean
- LTL/TL
- Parcel

Each Parcel Carrier is linked to a Standard Carrier. Standard Carriers are global in ORACLE WMS CLOUD and include the following:

- FedEx Express
- FedEx Freight
- FedEx Ground
- United Parcel Services Inc.These are chosen from the “**Std Carrier**” drop-down menu when adding a new carrier.[1] Additionally, Carriers are associated to companies, and **should be created at the company/child company level**. Each company in a facility will have their own carriers. Carriers for a company can only be seen at this company’s level.

> **Note:** New standard carriers might be added by ORACLE WMS CLOUD at anytime. Carriers should have a **code, carrier type, description,** and a **std_carrier (**if it is of type Parcel). The other fields are not mandatory.

## Configuration Strategies

Method 1: Creating 1 Carrier for all of its Ship Vias. Example:

| Ship Via | Carrier |
|---|---|
| UP1D/UPS 1 DAY | UPS |
| UP2D/UPS 2 DAY | UPS |
| UPSG/UPS Ground | UPS |

Method 2: Creating 1 Carrier for each Ship Via. Example:

| Ship Via | Carrier |
|---|---|
| UP1D/UPS 1 DAY | UP1D/UPS 1 DAY |
| UP2D/UPS 2 DAY | UP2D/UPS 2 DAY |
| UPSG/UPS Ground | UPSG/UPS Ground |

In addition to having a specified carrier, each ship via is linked to a **Standard Carrier Service**. Standard Carrier Services type send information to carriers such as UPS/FedEx (to get additional info such as tracking numbers, rates, etc… based on the service). Standard Carrier Services type are global in ORACLE WMS CLOUD. For more details, see the *Parcel Carrier Integration* document.

**Step 3: Creating a Carrier Facility**

The Carrier Facility screen provides courier account credentials in order to gain connectivity to their server. These accounts are used for billing and retrieving tracking numbers. These are the two integrations supported in Oracle WMS Cloud:

- FedEx/UPS Web Services

Web Service is a method of communication between two systems over a network. Oracle WMS Cloud communicates with courier networks to send carton information (weight, volume and address), while at the same time receiving tracking numbers that are updated to WMS.

- FedEx PC Ship Manager

The FedEx PC Ship Manager is a third party software used for retrieving tracking numbers and FedEx shipping labels. When a carton's tracking number is sent to FedEx, they will create a shipping label based on the specified service.

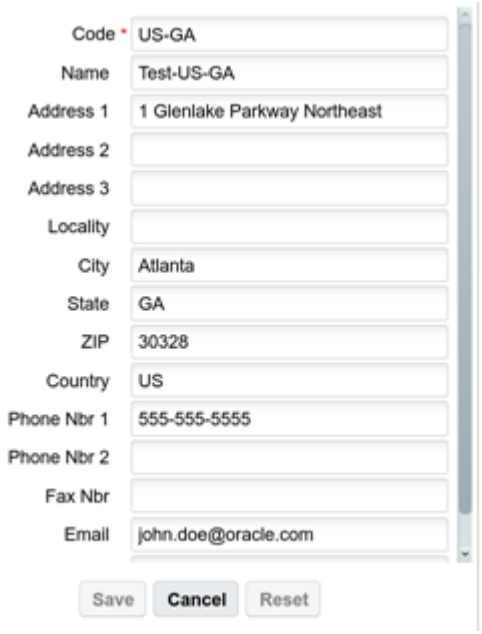
***Instructions:***

1. Go to the "Carrier Facility" screen.
2. Populate the necessary fields as described below.
3. Press "Save".

## Description of Fields

- **Account Nbr:** The UPS/FEDEX Account Number. (REQUIRED by UPS / Fed Ex)
- **Payment Method:** The party that will be billed in the transaction (eg. Bill Sender).
- **Integration Type:** Field for selecting one of the three supported integration types
  - If the Integration type is **Web Services**, the following fields are required:
    - The License or Meter Nbr
    - Web Services Username and Password
  - If the Integration type is **FedEx PC Ship Manager**, the following fields are required:
    - Interface DB Name: Please contact Oracle WMS Cloud support for this value.
- **WSDL Root Path:** Please contact Oracle WMS Cloud support for this value.

**Step 4: Configuring Contact (Optional)**




## Description of Fields

- **Code :** the reference code value that is used to lookup and identify a particular contact.
- **Name :** the name of the contact.
- **Address 1 :** first line of the address.
- **Address 2 :** second line of the address.
- **Address 3 :** third line of the address.
- **Locality :** if the address has a locality needed in certain countries etc.
- **City:** if the address has a city.
- **State:** if the address has a state.
- **Zip:** the zip portion of the address.
- **Country:** portion of the address.
- **Phone Nbr 1:** first / main phone number of the contact.
- **Phone Nbr 2:** secondary phone number of the contact.
- **Fax Nbr:** fax number of the contact.
- **Email:** the email address of the contact.
- **Contact:** the contact person you would want to get a hold of at the address / phone number / email.

**Step 5: Configuring Order Header**

**Note:** All order header fields must be included when you create your orders.

## Description of Fields

- **Carrier Account Number:** add the carrier account number for the payment info in the case of UPS and Connect Ship. For Fed Ex this can be an overriding shipper account number and the payment account number on the carrier facility. For UPS and Connect Ship carrier account number only overrides the payment account number. The shipper account number for UPS still comes from the carrier facility. For Connect Ship the shipper number comes from the license or meter number so there is no override for the carrier facility needed with regards to the shipper account number. Carrier account number overrides Carrier Facility account number for payment which is required for doing Bill Receiver or Bill Third Party shipments. Can be used in conjunction with ship via account details.
- **Payment Method:** set the payment Bill Sender, Bill Recipient, or Bill Third Party. Overrides Carrier Facility Configuration. Can be used in conjunction with ship via account details.
- **Ship Via:** for wave manifesting the Ship Via Code is looked up and used for manifesting the oblpns on the order.
- **Ship Via Ref Code:** for wave manifesting the Ship Via Code.
- **Bill To Carrier Account:** add the carrier account number for the payment info in the case of Fed Ex only. Overrides the Carrier Account Number on the Order Header and the account number on the Carrier Facility configuration for payments for Fed Ex Only.
- **Duties Carrier Account:** add the duties carrier account number for Fed Ex only.
- **Duties Payment Method:** set the payment Bill Sender, Bill Recipient, or Bill Third Party for duties.
- **Customs Broker Contact:** select the customs broker contact from the contact view.

**Step 6: Configuring Ship Via Account Details (Optional)**

Ship Via Account Details is used to override the carrier facility settings. This is needed if you have lots of accounts with licenses or meter numbers and do not want to setup a carrier facility for each account and then have to setup a carrier with all of the same ship vias for each carrier for each carrier facility. This prevents you from having to create lots of ship vias when you only need one set of ship vias with a single carrier.

**Requirements:**

- Carrier Account Number must be set on the order header.
- Payment Type must be set on the order header.
- Ship Via must be set on the order header.

## Description of Fields

- **Account Nbr:** The UPS/FEDEX Account Number. Required by UPS / Fed Ex.
- **License or Meter Number :** You will need the License or Meter Number from the company you are configuring this for. This will be called the Access Key by FedEx. Note an Access Key is required by Fed Ex in order to ship packages.
- **Hub:** not required.
- **Bill 3rd Party Contact:** references a contact code from a contact that is in the contact view that refers to the contact information of the billing of the 3rd party.
- **Ship From Contact:** references a contact code from a contact that is in the contact view that refers to the contact information of the ship from party. Note this does not have to be the same as bill 3rd party.

**Step 7: Configuring Proper Routing Parameters**

You must also configure how WMS will recognize a Ship Via for an Order; this is done with specific routing parameters. Currently, there are two different paths for configuration:

1. Changing the Company Parameter 'PACKING_ROUTING_MODE'
    - If this field is blank, ship vias are not used.
    - If this field equals to "MODE_0", ship vias will be determined based on the destination's default ship via (preconfigured).
    - If this field equals to "MODE_1", ship vias will be determined based on the routes configured in the "Route Header" screen. Each route will have a group of stores with the same ship via. Routes can be enabled/disabled.
2. Changing the Routing Mode from the Wave Template

> **Note:** When using modes 1 – ii, 1 – iii, and 2, you must make sure that the orders have an order type with the "Facility Order Flag" set to "Yes". Orders with this mode should also have either Destination Facility, Ship To Facility or both populated in order to make this configuration work as expected.

## PACKING_ROUTING_MODE = MODE_0

For '**MODE_0'**, the order's ship via will be verified **at packing**

1. First, WMS will look at the Order's "Ship Via" field to decide which Manifest it must go to Fedex Ground.
2. If the "Ship Via" field in the Order is **blank**, WMS will revert to choosing the destination facility's **Default Ship Via Code,** located in the "Facilities" screen.
3. To view an OBLPN's Ship Via Code, go to the "OBLPNs" screen and click "Carrier LPN".

When the OBLPN is packed, its weight, volume and address information will be sent to the courier's server. If all the information is valid, WMS will receive a tracking number, which will be updated to the "Tracking Nbr" field in the "OBLPN" screen.At the same time, this OBLPN will be manifested, if a valid Carrier for the OBLPN's Order is open.

> **Note:** The Order's Order Type must have the "Facility Order Flag" set to "Yes". The Default Ship Via Code field is located in the "Facility" screen store master.

If the Carrier for the Ship Via has type "**LTL/TL**", the outbound cartons will be assigned to an outbound load.

## PACKING_ROUTING_MODE = MODE_1

For '**MODE_1'**, the order's ship via will be verified according to configurations made in the "Route Header" screen. This parameter value will work for orders specifying a Ship To Facility in the Order Header. The ship via for the order will be determined based on the Ship To Facility's route.

## Setting up Routes

**Routes** will be configured in the "**Route Header**" screen. Each route specifies a **ship via.**

1. Go to the "Route Header" screen.
2. Click Create () to create a new route – specify the name and Ship Via for this route.
3. Click Details () to add the destination facilities (eg. Stores) that will be using this Route/Ship Via.
4. Click Create () to add Facilities to this route. Make sure the sequence numbers are unique.

*A route of ship via "FedEx Ground" has facility "THK_STORE1". If this route is activated, all orders with the destination facility equal to "THK_STORE1" will automatically be considered under this route.*

## Configuration Strategies

1. One route can be set up for all Facilities.
2. One route can have one Ship To Facility.
3. One Facility can be assigned to multiple routes – the user will decide which route will be active that day (using the “active” flag).

## Caveats

- With “MODE_1”, because the system will always refer to the Ship Via specified in the Route Header screen, the “Ship Via” field in the Order Header will be ignored.
- If there is an open order for a Facility that is not configured in any of the routes, you will receive an error in the RF at packing.
- Using this parameter requires the use of a store master (the ‘Facilities’ table).

## Wave Template Routing Mode

This configuration is similar to MODE_1 for the Facility Parameter, but in this case the order’s ship via is verified at the **wave**.

1. Go to the Wave Templates screen.
2. Select the Wave Template that will be used and click the Edit button.
3. In the “Routing Mode” field, select “MODE_1” – this enables connection to UPS/FedEx services after a wave is complete (as opposed to after packing a carton).
4. Make sure the open orders using this mode have the “Ship To Facility” field populated.

This wave parameter works with the active Routes configured in “**Route Header View**” for Ship To Facilities.

When a wave is complete, the Ship Via for the outbound cartons is determined by the active routes. The route for the order is determined from the Ship To Facility specified on the order header. If the Carrier for the Ship Via has type “**Parcel**”, then the connection to corresponding UPS/FedEx Services will happen based on the integration type and account configured in “**Carrier_Facility**”.

After the wave runs, connection to UPS/FedEx Services is done for outbound cartons in “**outbound created**” status. Based on the Ship Via determined from the route, tracking numbers are received and the cartons are manifested.

If the Carrier for the Ship Via has type “**LTL/TL**”, the outbound cartons are assigned to outbound loads.

## Caveats to Wave Template Routing Mode

- This method only works for **FULL LPN** allocations. With FULL LPNs, weight on the outbound carton is taken from the inbound carton, so cartons in “Outbound Created” status will have a weight and will be able to get tracking numbers after the wave is run.
    - LPN Units, and LPN Cases do not get a weight on the outbound carton until they are packed, so they will not be able to get tracking numbers after the wave is run.

# Overall Caveats for Using Parcel Functionality

- All outbound orders shipping via Parcel will specify either a **Destination Facility/Ship To Facility** or a **Ship Via** on the order header for the Parcel Functionality to work.

The **Destination Facility** is the *final* destination of an order, while the **Ship To Facility** represents the *immediate* destination of the order. If both the Destination and Ship To Facility fields are populated, WMS chooses the "Ship To Facility" field for determining the route's ship via.

- Before (1) running a wave (if the Routing Mode is configured in the Wave Template) and (2) packing an order (if the PACKING_ROUTING_MODE parameter is configured), users must validate the following:
  - Validate that the routes are activated.
  - Verify that there are open Manifests for the specific Carrier and Ship Vias orders that will be packed.

Weight on outbound cartons is always mandatory to receive tracking numbers from UPS/FedEx Services. Therefore, weight data must be specified either in the Item Master or in the IBLPNs during receipt.

- For Full LPN, weight on outbound carton will be the weight specified on the inbound carton. If no weight is specified on the inbound cartons, the weight will be calculated from the Item Master given that items have a weight specified.
- For LPN Units, and Cases, weight is calculated at packing.
- If the Ship To facility on the order header is not on any active routes, or if there is no active route, outbound cartons are no manifested or packed until an appropriate route is active.
- If there is no open manifest for the order's particular carrier and ship via, the outbound cartons are not manifested or packed until a manifest is open for the appropriate ship via.

# RF Assign to Manifest

This screen allows you to assign OBLPNs to specific manifests by scanning the Trailer number on the manifest. This helps you keep track of when the OBLPN is assigned/loaded and the OBLPN's specific trailer.

You can scan a valid trailer number. This number stays populated, allowing you to scan multiple OBLPNs more efficiently onto the same trailer. OBLPNs must be in packed or loaded status.

**Note:** Scanned trailer numbers must exist in the trailer number field of an Open Manifest.

After you scan a valid Trailer Nbr (see validations below), the screen retains the value until the user exits the screen via Ctrl-X or Ctrl-W. This allows you to load multiple OBLPNs more efficiently onto the same trailer. In other words, every time an OBLPN is scanned, the system only clears the OBLPN field.

Notice that the Assign to Manifest screen also allows you to re-assign OBLPNs from one manifest to another, provided that both manifests are still OPEN.

Once all the Trailer and OBLPN validations pass, the following updates should happen:

- A new Parcel shipment detail is created.
- The status of the OBLPN is updated to Loaded.

- Inventory History record “13-Contener Loaded” is created if the OBLPN is updated to Loaded Status.

# FedEx Multi-Piece Shipment Configuration

FedEx supports the grouping of two or more packages during ship requests that are fetching a tracking number. In general, these packages must all use the same service and must all have the same destination, billing information, and accessorials. Multi-Piece Shipment (MPS) users gain added visibility into FedEx shipment tracking and may also be granted better rates for MPS. You should check with your FedEx representative to determine if MPS can be used.

For an MPS shipment, each OBLPN still requires it's own request to FedEx for a tracking number. MPS packages are tied together by a master tracking number. The master tracking number is the tracking number of the first OBLPN manifested in the group. It's tracking number is passed as the master tracking number is each subsequent OBLPN's ship request. Additional information such as the total number of pieces (X of Y) and total shipment weight is required for MPS. Different shipping scenarios such as Dry Ice or International MPS require even more shipment-level information in the request.

**IMPORTANT:** MPS also requires additional operational work as well as for exception scenarios. Because information pertaining to all OBLPN's in the group must be sent in each OBLPN's request, the final state must be available before any tracking numbers are fetched.

For example, assume a wave cubes an order into three OBLPNs and a FedEx MPS shipment is created and three tracking numbers are fetched. If during packing it is determined that the order requires four OBLPNs, then the entire MPS shipment must be voided (by voiding any of one of the tracking numbers) and all four OBLPNs re-manifested and new tracking numbers and labels obtained. If the MPS group changes, then all information must be updated to FedEx, which requires the fetching of new tracking numbers.

**Note:** Currently, Oracle WMS Cloud only supports grouping OBLPNs for MPS by a single order.

WMS allows MPS requests during a cubed wave. The wave must be cubed in order to complete MPS as the final OBLPNs must be available.

To configure MPS during a cubed wave, there are two flags:

- Ship Via UI
- Wave Template UI

To Manually trigger an MPS request for all OBLPNs associated to an order, select the “Manifest” button on the Order Header View UI.

# Dry Ice Configuration

FedEx supports shipping dry ice in parcel packages if certain attributes are passed when requesting a tracking number for the OBLPN.

This will also trigger any dry ice information to print on the returned FedEx web service shipping label.

## Dry Ice Fields

| Entity | Field | Description | Overview |
|---|---|---|---|
| item | shipping_temperature_instr | Shipping Temperature Instruction | When this field has a value of "Shipped On Dry Ice", the item is understood to require dry ice. |
| lpn_type | dry_ice_weight | Dry Ice Weight | Default dry ice weight for the LPN type. Used as dry ice weight during a wave when requesting a tracking number for a cubed OBLPN. |
| carrier_lpn | dry_ice_weight | Dry Ice Weight | Dry ice weight value of the OBLPN. Copied from LPN Type or input during UI Manual Manifest. |

## Dry Ice Functional Overview

### Cubed Wave

You can request a tracking number during a cubed wave as the dimensions and final contents of each cubed OBLPN are known. As part of cubing, an LPN type is assigned to the OBLPN. Each LPN type can be configured with a default dry ice weight. This default weight is used in the ship request as the dry ice weight of the package. It will also be copied over to the OBLPN's corresponding Carrier LPN record.

### Manual Manifest UI

*Accessed from ObContainerView UI → Manifest*

You can request a tracking number for individual OBLPNs in the UI. The manual manifest popup contains an input field for the dry ice weight. This is accessible and required when the OBLPN contains an item that requires dry ice.

The dry ice weight will be updated on the OBLPN's corresponding Carrier LPN record.

### Package-Level Dry Ice FedEx Ship Request

FedEx requires that dry ice weight is reported in kilograms (KG). If tracking is in pounds (See Company Parameter "PARCEL-WEIGHT-UOM"), WMS will convert the weight to kilograms for the purposes of the request.

The package-level portion of the request is included for any OBLPN with any item that is flagged as requiring dry ice (See shipping_temperature_instr). An item is flagged as requiring dry ice when the shipping_temperature_instr field has a value of "Shipped On Dry Ice."

### Package-Level Dry Ice Info

```
<RequestedShipment>
 <RequestedPackageLineItem>
 <PackageSpecialServicesRequested>
 <PackageSpecialServiceType>DRY_ICE</PackageSpecialServiceType>
 <DryIceWeight>1.234</DryIceWeight>
 <DryIceWeightUnits>KG</DryIceWeightUnits>
```

```
</PackageSpecialServicesRequested>
```

| Entity | Description | Mapping | Notes |
|---|---|---|---|
| PackageSpecialServiceType | Package-level special service | DRY_ICE | Hard-coded, static value |
| DryIceWeight | The weight of the dry ice in the OBLPN | carrier_lpn.dry_ice_weight | FedEx requires dry ice weight is reported in kilograms (KG). WMS will handle conversion if tracking parcel weight in pounds.<br><br>carrier_lpn.dry_ice_weight is copied over from either lpn_type or entered during UI manual manifest. |
| DryIceWeightUnit | Dry ice weight unit of measure | KG | Hard-coded, static value |

## Shipment Level Dry Ice FedEx Ship Request

The shipment-level portion of the request is only required if the current OBLPN is part of a Multi-Piece Shipment (MPS).

```
<RequestedShipment>
 <SpecialServicesRequested>
 <SpecialServiceTypes>DRY_ICE</SpecialServiceTypes>
 <ShipmentDryIceDetail>
 <PackageCount>2</PackageCount>
 <TotalWeight>
 <Value>1.234</Value>
 <Units>KG</Units>
 </TotalWeight>
```

# Manually Updating Manifest and Ship Vias to Individual LPNs

Updating the Ship Via for outbound cartons can be useful for the following possible scenarios:

1. If the Ship Via needs to be changed after packing
2. If a Ship Via did not get determined for certain cartons
3. If a specific Ship Via can only be determined after packing and weighing all cartons

There are currently two ways to update the Ship Via for outbound cartons in “Packed” status.

1. Modifying an LPN’s Ship Via from the UI
2. Modifying an LPN’s route from the RF

## Modifying an LPN's Ship Via from the UI

1. Go to the “OBLPNs” screen.
2. Select the OBLPN that will be modified and click “Manifest”. This will open a new window containing the LPN’s manifest and ship via information.
3. Select the new Ship Via in the “Ship Via:” field from the drop-down.
4. Click the “Manifest” button.

**Note:** Only one LPN's ship via may be modified at a time. The **Label Printer** drop-down is not intended for OBLPN labels. The Label Printer drop-down options only apply to the screen parameter with regards to generating OBLPN shipping information files.

### Modifying an LPN's Route from the RF

1. Go to the RF Module "Update Route on Carton"

   **Note:** This method will only work for the flows that have routes configured in "Route Header View." Also, if the route on a carton is updated, then the Ship Via associated to the route will also be updated on the carton.

2. In the "Route" field, type in the new desired route for the LPN.
3. In the "OBLPN" field, scan the OBLPN to modify.

**Note:** New tracking numbers are received every time a carton is re-manifested.

## Shipping Parcel Manifests

Since Parcel OBLPNs are automatically added to Manifests during packing, no loading process is necessary. However, before packing any parcel LPNs, you **must ensure that there are Manifests open for that particular Carrier** .

### Shipping Manifests

1. Go to the **Manifests** screen.
2. Select the Manifest that will be shipped. Click the "Close Manifest" button.
3. If all the order information tied to the containers in this Manifest are correct (eg. Valid Zip Code, valid address, valid country code, etc.), WMS will open a dialogue stating that the Manifest was successfully closed.
   - If the Manifest did not close because of incorrect order information, select the Manifest and click on 'manifest_logs' to inspect the orders that need corrections.

## Parcel Manifest Exceptions

Parcel orders must have a valid Address, Country and Zip Code. If these fields are incorrect, WMS will not receive a tracking number from the courier.

# 5 Inventory Management

## Inventory Types

WMS includes two inventory types: Allocatable (Available) and Unallocatable (Unavailable) Inventory.

### Available/Allocatable Inventory

Available/Allocatable inventory is any inventory that is located in a reserve or active location that has not been allocated against an outbound order.

### Unavailable/Unallocatable Inventory

Unavailable/Unallocatable inventory is any inventory that is either allocated for an outbound order, or is in a status that won't allow for allocation. Below are the basic scenarios for unavailable inventory:

1. Received inventory that has not been putaway (configurable)
2. Inventory undergoing VAS processes
3. Inventory located in a Drop Zone
4. Inventory associated with outbound LPNs
5. Inventory in locations with lock codes (and the lock code is configured as Unallocatable)

## Item Master

The Item Master stores information for all the items that are used in the warehouse.

### Unit of Measure in WMS

Oracle WMS Cloud supports four units of measure:

- **CASE: Cases** refer to physical boxes (must define "Standard Case Quantity").
- **PACK:** Cases can be further broken down into **Packs** (must define "Standard Pack Quantity").
- **UNIT:** The smallest unit of measure is **Units**, which represents an 'each'.
- **LPN: LPNs** are the largest UOMs in the system, and can have multiple meanings.

If each box is labeled with an LPN, the LPN represents a physical box.

If an entire pallet is labeled with an LPN, the LPN represents a pallet.

The LPN has an attribute called "LPN is Pallet", which systematically marks the LPN as a physical Pallet. The advantages of using this functionality is that pallets will only require one label (LPN) and can be allocated into Pallet, Cases, Packs or Units.

LPNs can only be set to “LPN is Pallet” during receiving. You must use a receiving RF module (either “Receive LPN Shipment” or “Receive LPN Load”) and configure its “pallet-handling” module parameter to “LPN as Physical Pallet”. With this setting, any LPN received with this Pallet will have the “LPN is Pallet” flag set to true.

## LPN as a Pallet

There are two ways to treat the LPN as a Pallet:

1. Using “LPN is Pallet” flag: LPNs have an optional flag that mark the containers as pallets.
2. Without using the “LPN is Pallet” flag: LPNs do not use the flag, but physically the pallets are labeled with LPNs.

While option two is easier as it does not require special configuration (the user tricks WMS by systematically using LPNs but physically using pallets), it is has limited visibility.

The main difference is that you cannot define the ‘standard pallet quantity’ with option two while this is possible with option one.

## Setting up the "LPN is Pallet" flag to true for LPNs

As stated above, using option one requires extra configuration. You can only set the LPN’s “LPN is Pallet” flag to “TRUE” during receiving via a receiving RF module with special parameters configured. To configure this:

1. Go to the “Screens Configuration” screen.
2. Create a new “Receiving LPN Shipment” or “Receiving LPN Load” RF module.
3. Select this record and click on its details.
4. Modify the “pallet-handling” flag and set it to “LPN as Physical Pallet”.
5. Now, every LPN that is received with this special RF module will have the “LPN is Pallet” flag enabled.

Additionally, you must also define the standard pallet quantity in the Item master. To do so:

1. Go to the “Items” screen.
2. Select the item record and click on its details.
3. Click “Edit” to begin editing.
4. Populate the following fields:
    a. Standard Pack Quantity (optional)
    b. Standard Case Quantity
    c. LPNs per Tier
    d. Tiers per Pallet
5. Click Save.

> **Note:** Step 4 above is used to define the standard pallet quantity by specifying how many units there are in a case (Standard Case Quantity), and how many cases there are in a pallet (LPNs per Tier & Pallets per Tier).You can view the “LPN is Pallet” column in the “IBLPNs” screen.

# Description of Item fields

- **Style:** Represents the Item Code.
- **Parts A through F:** Represents the breakdown of parts in a SKU, if applicable. Example: A small blue polo could be represented as:

    - part_a = ‘POLO’
    - part_b = ‘BLUE’
    - part_c = ‘SMALL’.

- **Alternate Item Code**: An alternate representation of the SKU, which concatenates parts A through F into a single record.
- **Description:** Description of the item.
- **Barcode:** The item’s barcode.
- **Putaway Type:** Refers to the value used to group similar SKUs together. For example, SKU “LAPTOP” could belong to Putaway Type “ELECTRONICS”. This is a functional field that defines the putaway logic in the “Putaway Priorities” screen.
- **Unit cost:** The item’s individual cost.
- **Unit Length/Width/Height/Weight/Volume:** Denotes the unit’s dimensions. This field does not store the values in a particular unit of measure. These fields are required for functional purpose such as cubed waving, putaway, and replenishment.
- **Item Line**: Not used in WMS.
- **VAS Group Code**: If there is a VAS Group Code defined in WMS, this field links the item to a particular set of VAS activities.
- **Hazardous**: Used to define an item as hazardous.
- **Pre-Pack Code:** For Prepack scenarios, the item also carrys a prepack code, which is a separate record that represents a group of child SKUs. For example, WMS could use a combination of different Polo’s that come in a prepack into a single ‘Prepack’ SKU record.
- **Host Aware Item Flag:** Used in Prepack scenarios in determining whether or not the Host is aware of the Prepack item.
- **Is Parent:** Used in Prepack scenarios to determine whether the item is a parent SKU. If it is a parent SKU, it will contain a prepack of multiple child SKUs.
- **Dummy SKU Flag:** This is a SKU that can be ordered and allocated, but will have unlimited inventory. The SKU will be prompted for during picking. For example, this could be used to grab gift cards to go along with an order
- **Cubiscan Mod Timestamp**: Updates the timestamp in which the Item was modified by a cubiscan interface.

## Additional Fields (Item Details)

- **Std Case Qty:** Defines the standard Case Quantity of an item.
- **Std Case Length/Width/Height/Weight/Volume:** Defines the dimensions of a Case.
- **Std Pack Qty:** Defines the standard Pack Quantity of an item.
- **Std Pack Length/Width/Height/Weight/Volume:** Defines the dimensions of a Pack.
- **Special Code 1 & 2:** Informational fields.
- **Product Life:** The expected lifespan of an item in DAYS.
- **% Acceptable:** The percentage of remaining life required (according to the product life) at receiving.
- **Require Batch Number:** Requires an item to have a batch number during receiving.
- **Require Serial Number:** For future use only in release 6.3.
- **Conveyable**: Used when MHE systems are enabled. Defines whether or not an item is conveyable.

- **Sortable:** Used when MHE systems are enabled. Defines whether or not an item is sortable.
- **LPNs per tier:**
  - If the “LPN is Pallet” is FALSE, this field defines how many LPNs are in a tier for a given pallet.
  - If the “LPN is Pallet” is TRUE, this field defines how many CASES there are in a pallet tier.
- **Tiers per Pallet:** This field defines how many tiers there are in a pallet for this SKU.

**Note:** “LPNs per tier” and “Tiers per Pallet” fields are used to define the standard number of LPNs acceptable per pallet.

- If the “LPN is Pallet” is FALSE, the RF only displays a warning message to the you that the maximum number of LPNs has been reached for the pallet (you can override this message).
- If the “LPN is Pallet” is TRUE, these fields are define the standard pallet quantity of a SKU, given that the “Standard Case Quantity” field is also defined.

# Creating Items Manually

1. Go to the “Items” screen and click the Create button.
2. Enter the following information to create a new item:
   a. Parts A
   b. Description
   c. Barcode
   d. Unit Cost
   e. Unit Length
   f. Unit Width
   g. Unit Height
   h. Unit Weight
   i. Unit Volume
3. Click “Save”.

# Adding Items through Manual Interfaces

Items can also be created through an Oracle WMS Cloud Excel template.

## Step 1: Preparing the Input Interface file:

You must follow the rules below in order to correctly use the Oracle WMS Cloud interface:

- The filename must start with the letters “ITM”.
- The columns specified as ‘required’ in the interface specification document must be populated.

## Step 2: Uploading the Interface File into WMS

1. Go to the “Input Interface” screen.

2. Use the drop-down to select the appropriate interface to process:
3. Click on “Upload Files” and navigate to the file you wish to upload.
4. When the file is displayed in the screen, click “Run Interface”.
5. The system will return a message dialog notifying you that the file has been successfully processed.

**Note:** if you have any issue uploading your file, try uploading the file without the column headings.

## Item Master Integration into WMS

A third method to interface records into WMS is through a shared SFTP directory.

1. Host system drops the “ITM” file into the shared directory (typically an “input” folder).
2. When the file is dropped, ORACLE WMS CLOUD will automatically detect the file and process it into WMS.
    - If a file fails for some reason, it is automatically moved into the “error” folder.

# Alternate Barcodes

The *Alternate Item Barcodes* screen sets up alternate barcodes for SKUs in the warehouse. This screen enables the ability to configure multiple barcodes for the same Item Code.

## Adding Alternate Barcodes from the UI

1. To add a new barcode to an existing item, from Item Barcodes, click “Create” (

) at the top right and input the Item Code and the new Barcode:
2. When you are populating the Item Code, you can either populate the field or use the magnifying glass to look for the code from the Item Master.
3. When you are using the magnifying glass, the system will pop up a new window. To display the records, press the “Search” button.
4. Once the Item record is found, double click the record to select it.
5. Click "Save".

## Adding Alternate Barcodes via Interface

You can also interface alternate barcodes into WMS using the “IXR” (or “IBR”) interface template.

Open the interface with Excel and populate the “item_barcode” with the original barcode and the “vendor_barcode” with the new alternate barcode:

Make sure that the correct company code is populated and that the “action_code” is set to “CREATE”. Save the interface.

1. Go to the “Input Interfaces” screen and select the “Item Barcode” from the drop-down menu:After selecting the Item Barcode from the drop-down, upload the file and click “Run Interface” to process the file.
2. If successful, the new barcodes should be displayed in the “Alternate Barcodes” screen.

# Required Item Fields

You can also make certain Item fields required before it can be received into WMS. This is done through the *Required Item Fields* screen.

To add a new 'required field', click Create. This prompts a new window, where you can select a field from the drop-down:

> **Note:** for numeric value fields such as "unit_weight", WMS will treat '0' as an empty value. In other words, the system does not allow receipt of that item until it is changed to a non-zero value.

If the required item field is not populated, the RF displays an error message during receipt:

To populate the required item fields, go to the *Items* screen, select the item record, and populate the appropriate item field. There are two places in which an Item field can be populated:

1. From the **Items** screen, click **Edit**:
2. From the **Items** screen, click **Details** (click Edit and then Save your changes when you are finished):

Once all of the required item fields are populated, you must retry receiving the LPN with the RF receiving option.

# Printing Item Labels

If items received into warehouse do not have item labels, users on the warehouse floor have the option to print item labels from WMS and stick on individual items. WMS provides the option to print item labels from the following three modules:

- RF Print Item Label
- Item UI
- IB Shipment UI

## RF Print Label

You can print item labels from handheld devices using the RF Print Item Label module.

1. Once you select Print Item Label from RF, you are presented with an option to enter the label printer.
    - If you tab out of this field without entering a printer, system will check if a default label printer has been configured for the logged in user. If a default label printer is not configured, the system displays a "Required Field" message forcing you to enter a printer.
    - If a default printer is configured for the logged in user, the system will ask if you would like to print the label to the default printer.
    - If this message is configured as a warning, you can either accept the message (using Ctrl+A) to print to default printer or hit Ctrl+W to go back to the printer field and enter a different label printer.
    - If this message is configured as an error, you are forced to go back (using Ctrl+W) and enter printer in the printer field.

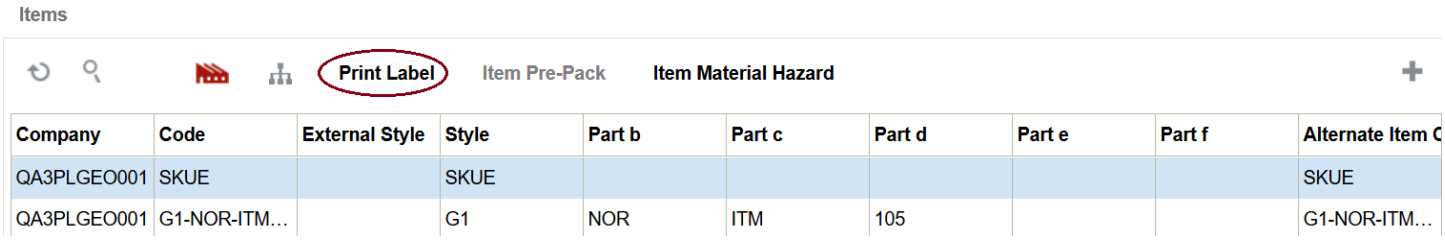
> **Note:** If the message is not enabled, this message does not show up at all. The default printer is automatically populated in the printer field when you tab out of the printer field.

2. After printer validations, you are prompted to scan the item barcode or vendor barcode.
3. Finally you are prompted to enter the number of labels required to be printed for the scanned item. A quantity greater than 0 must be provided.
4. If a customized item label that has been designed through label designer is configured, then the customized label will be printed. Else item label(s) will be printed based on base label format.

# Item UI

Item labels can also be printed using the Print Label button from the Item UI:

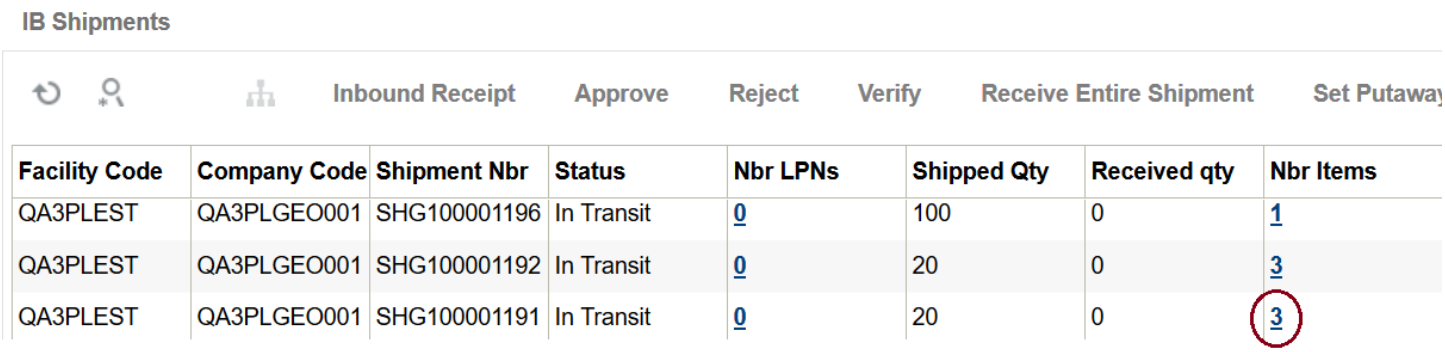
When an item is selected on the Items UI, Print Label button is enabled. This button is not enabled when multiple items are selected. When you click the Print Label button, the following dialog pops up:




You can enter the number of labels required for this item and hit submit. Item labels will be printed to the default label printer configured for the logged in user. Since there is no option to change or enter a printer using this option, it is necessary that the default label printer is configured for the logged in user.

# IB Shipment UI

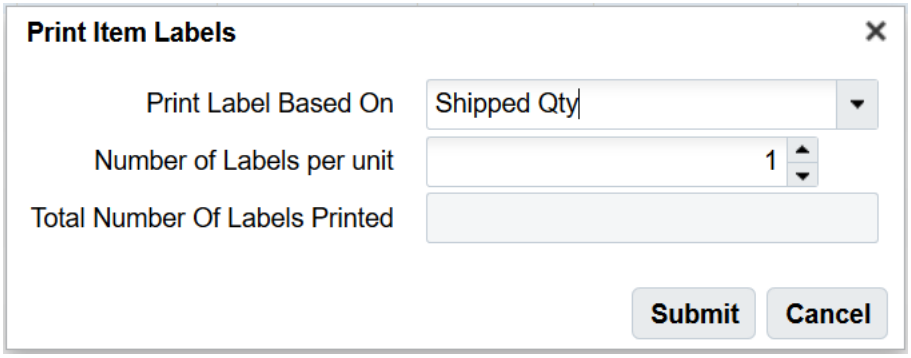
There is also an option to print item labels from the IB Shipment UI. In the IB Shipments view, click on the Nbr Items hyperlink for the desired IB Shipment.



This brings up a view that lists all items on the shipment. There are two buttons available from this view:

- Print Item Labels – This button is only enabled when a single item is selected on this view. Item labels will be printed only for the selected item.
- Print All Item Labels – This button is always enabled and can be used to print labels for all items on the shipment

When you click either button, the following pop-up is displayed. You have the option to print labels based on Shipped Qty OR Received Qty. After choosing that, you need to enter the number of item labels that need to be printed for each unit.




For example, if Shipped Qty is selected (which is 10 in this example) and the number of labels per unit is 5, then 50 item labels will be printed for this item.

Similar to the item UI, since this option does not prompt for printer, you must configure the default label printer for the logged in user.

# Location Master

Locations in WMS represent storage locations in the warehouse. Below is a brief description of each Location field:

**Location Type:** Locations have different types depending on how they are used within the warehouse. The different Location Types are:

| Location Type | Description |
|---|---|
| Active | Used for designating active locations. Active locations can only store units. |
| Consolidation | Used in PTS flow to assign Locations to Destination Stores. |
| Dock | Used to assign to loads during receiving/shipping. |
| Pack and Hold | Used for temporarily storing OBLPNs before shipping. |
| Yard | Used to locate trailer. |
| Packing Station | Used for packing LPNs with the 'Packout' RF option. |
| Drop | Used to hold both inbound and outbound LPNs while in between warehouse processes. You can configure the picking task to target a specific drop zone. |

| Location Type | Description |
|---|---|
| QC | Used to perform QC on LPNs during receiving. |
| Reserve | Used for designating reserve locations. Reserve locations store bulk inventory in all UOMs (LPN, Cases, Packs, and Units). |
| Staging Location | Used in the outbound process to consolidate OBLPNs based on a configured criteria. |
| Receiving Station | Used for inbound sorting functionality for LPNs. |
| VAS | Used to perform VAS on units during receiving/shipping. |
| Shipping Location | Used for shipping LPNs individually; if LPNs are located to a “Shipping Location”, its status is automatically updated to status “shipped”. |

Additional warehouse Location Type identifiers are defined below:

| Identifier | Description |
|---|---|
| Facility | Facility ID for location is part of. |
| Type | Add drop-down options |
| Dedicated Company | Used to assign a company to the location. |
| Location Size Type | Used in putaway for defining the Putaway Priorities. |
| Alloc zone | Refers to the Location’s allocation zone. This is a free-form field used to group locations that must be allocated separately. The ‘alloc zone’ field is used in “Allocation Mode” (Wave Template) and “Replenishment Rules” (Replenishment Template) for specific UOMs. By specifying an allocation zone, you can configure WMS to allocate inventory by zones. |
| Item | If Location applies to an item. |
| Area/Aisle/Bay/Level/Position/Bin: | Used to describe the specific warehouse location. |
| Pick Sequence | Numeric value used to determine the pick sequence between locations.<br><br>NOTE: The picking sequence values for all locations must have the same number of digits; it is recommended that the user start this field with the value 10000. |
| Barcode | The location’s barcode. |
| Length/Width/Height | Refers to the location’s dimensions. These values are considered during two different processes:<br><br>During Putaway logic if using the Putaway Search Mode “Most Empty by Volume” or “Least Empty by Volume”;<br><br>As a trigger for Replenishment if using Replenishment Mode “Percentage of Max”. |
| Min/Max Units | Refers to the min/max units of inventory allowed in the location at a time. |
| Max LPNs | Maxinum LPNs the location can hold. |
| Mod Timestamp | When Location was last modified. |

| Identifier | Description |
|---|---|
| Mode User | User that last modified this location. |
| Allow Multi Sku | If checked, allows location to have multi-Sku. |
| To be counted flg | If checked, a cycle count has been created for this location. |
| To Be Counted Ts | A time stamp that gets set whenever the to_be_counted_flg gets set. |
| Lock Code | Used to lock a location. When a location is locked, all inventory stored in this location receives the specified lock code. Additionally, any other LPN that is located to this location will have that lock code added to it as well. |
| Last Counted At | When item was last counted. |
| Last Counted By | User that completed cycle count. |
| Allow reserve partial pick | This flag determines whether the location can be allocated for partial picking or not. If the flag is checked, the location is eligible for partial picking, and vice versa.<br><br>If this flag is checked, you can add an extra restriction to prevent Full LPNs stored in this location from being broken by setting the Facility Parameter “RSV_PARTIAL_STRICT_FLG” to “YES”.<br><br>**Note:** The system is not currently handling the **Allow reserve partial pick** flag during replenishments. |
| Lock_for_putaway_flg | If set to “YES”, the location is not considered when using “Directed Putaway.” |
| Putaway Seq | Refers to the putaway sequence of the location, similar to the Picking Sequence field.<br><br>Putaway sequence values for all locations must have the same number of digits; it is recommended that the user start this field with the value 10000. |
| Replenishment Zone | Replenishment Zones define locations that are eligible for replenishment when a Replenishment wave is executed. Replenishment Zones must first be created in the “Replenishment Zones” screen. |
| Min/Max Volume | Refers to the min/max volume of inventory allowed in the location at a time. These values are used during the following:<br><br>Putaway: If the location’s max volume is reached, WMS skips this location for putaway.<br><br>Replenishment Mode “Percentage of Max”: If the location’s inventory drops below the ‘min volume’ value, WMS triggers this location to receive replenishment up to the defined ‘max volume’. |
| Restrict Batch | If the Restrict Batch flag value is set to yes, then the idea is to not have different batch numbers for the same sku present in a single location. If there are different batch numbers but each batch corresponds to different items, then the system should allow putaway to place the LPN.<br><br>If a Pallet has two LPN's (LPN-1==>SKU-A batch-b1, LPN-2==>SKU-A, batch-2) then the location with restrict batch flag set to yes should not be picked even though capacity checks passes.<br><br>If the flag value is set to no then the system allows mixing inventory with different batch numbers in same location for same sku. So If Pallet has two LPN's (LPN-1==>SKU-A batch-b1, LPN-2==>SKU-A, batch-2) then location with restrict batch flag set to no should be picked for putaway assuming other checks do pass. |

| Identifier | Description |
|---|---|
| Item Assignment Type/Item | These fields assign a permanent item to a location. If the Item Assignment Type is set to “Permanent” and the Item Code is specified in the Item field, other items may not be mixed in this location. These fields also set up locations for Replenishment. |
| Task Zone | Task Zones are used to group locations based on a functional configuration. Usually locations of type “Drop” are assigned Task Zones.<br><br>Task Zones may be used to designate a “Destination Zone” in the Task Template. If this is defined, you are asked to drop the LPN to the “Destination Task Zone” at the end of a Task.<br><br>Task Zones are also used as intermediary locations for Tasks that require multiple drop locations. |
| Mhe_system/Divert Lane | This field specifies whether or not this location will integrate with an mhe system for routing purposes. If an MHE system is defined, you must populate the specific Divert Lane code that the location will be used for during routing. |
| Pick zone | Configured / designated picking zone. |
| In Transit Units | Units that are en route to the location. |
| Cust Field 1-5 | Used as custom fields for any custom operation. Example: Using cust_field_1 to populate a printer’s IP address to assign a printer to that location. |
| Display Text | A calculated field that is the concatenation of area, aisle, bay, level, position and bin. These are separated with a '-'. |
| Restrict Inventory Attribute | If checked, only allows one inventory attribute to be stored in the location. |
| Assembly Flag | If checked, flags a location where inventory is brought to to be assembled into a different SKU. |
| Billing Location Type | Specify billing location type. |

# Creating Locations through the Interface (UI)

Using the Oracle WMS Cloud “LOC” interface file, you can map the warehouse locations into WMS.

Step 1: Fill out the “LOC” excel file

Fill out all the necessary information into the location interface. Column A defines the location type. Refer to the table below:

| Interface Code | Location Type |
|---|---|
| C | Consolidation |
| D | Dock |
| Q | QC |
| V | VAS |
| P | Drop |
| S | Staging Location |
| A | Active |

| Interface Code | Location Type |
|---|---|
| H | Pack and Hold |
| Y | Shipping Location |
| R | Reserve |
| K | Packing Station |
| T | Receiving Station |

Step 2: Setting up the parameter for location updates

WMS requires a special parameter to be set before creating location updates in the system (for locations that contain inventory).

1. Go to the “Facility Parameters” screen.
2. Set the LOCATION_UPDATES_WITH_INVENTORY parameter to “YES”.

Step 3: Uploading the Interface file into WMS

1. Go to the “Input Interface” screen.
2. Use the drop-down to select the appropriate interface to process:
3. Click on “Upload Files” and navigate to the file you wish to upload.
4. When the file displays, click “Run Interface”.
5. The system will return a message dialog notifying you that the file has been successfully processed.

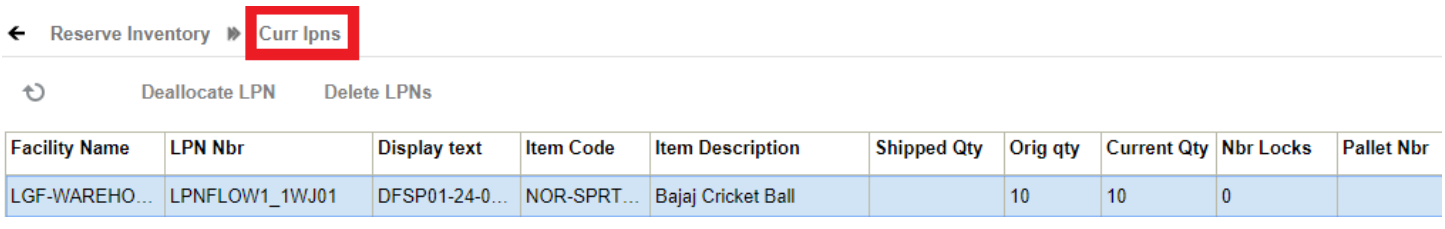
# Inventory Screens

You can use the following screens to view the available inventory in the warehouse:

- Reserve Inventory
- IBLPNs
- Inventory Summary

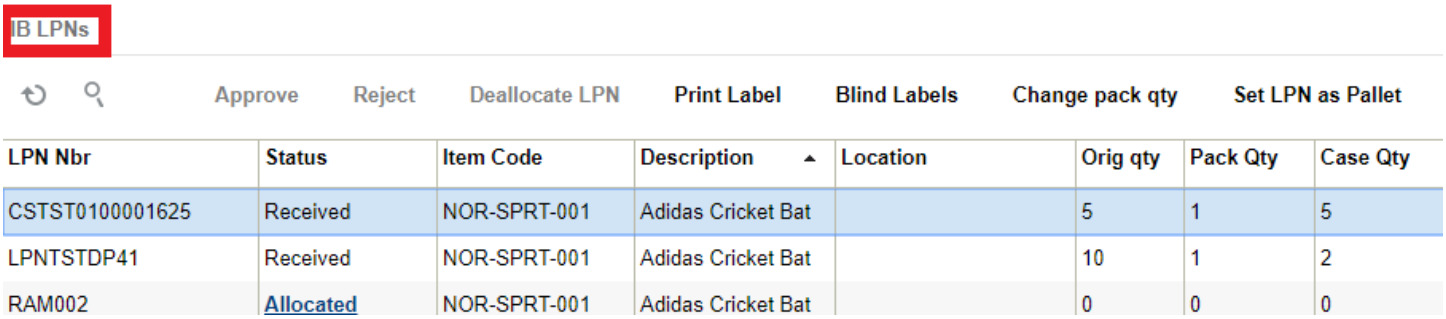
## Reserve Inventory

The *Reserve Inventory* screen provides detailed inventory information filtered by Location Area and Item Code. You can click on the linked LPN number in the “Curr lpns” column and see more information regarding the items in each LPN such as the Shipped Quantity, Current Quantity (by LPN), and Pallet Number.



# IBLPNs

The *IBLPNs* screen contains detailed information about all the IBLPNs currently stored in the warehouse. This includes individual LPN information broken down by SKU such as its Status, Quantity, Current Location, Expiry Date, Pack, and Case quantity.




| Action Button | Description |
|---|---|
| Accept | If the LPN is Marked for quality control, you can accept it here. |
| Reject | If the LPN is Marked for quality control, you can reject it here. |
| Deallocate LPN | If the LPN is allocated, you can deallocate here. |
| Print Label | This button prints the LPN label according to the label template set up in Label Template View (label type IB Container) |
| Blind Labels | Allows you to print blind labels by selecting the number of labels, Label type (either IBLPN, OBLPN or Pallet), Destination company, and Destination facility. |
| Change Pack QTY | Allows you to change the pack quantity of the selected IBLPN. |
| Set LPN as Pallet | Allows you to Set LPN as Pallet. |
| Unset LPN as Pallet | Allows you to unset LPN as pallet. |
| Modify Qty | Allows you to modify the LPN quantity, and you must provide a reason code. |
| Locate LPN | Locates the LPN. If the flag capacity check is enable, the system will make sure that the LPN fits the location according to max volume, max units, and max weight. |
| Generate MHE Distribution Msg | It generates the TO_MHE_DISTRIBUTION_INFO message. |
| Generate MHE IB LPN Info Msg | It generates the TO_MHE_IBLPN_INFO message. |

| Action Button | Description |
|---|---|
| Mass Update Attributes | Allows you to do a mass update for Inventory attributes A-O and Putaway Type. Updates all the records shown in the page, so it's a good idea to limit your search. It will first tell you the number of records that will be updated. |
| Print UOM Label | Allows you to print a UOM Casel label or UOM Pack label fo the LPN selected. |
| Update LPN Type | Allows you to update the LPN type of the selected LPN. |

## Editing Batch Numbers

Currently, Oracle WMS Cloud provides an option from the IB LPN Inquiry screen to update batch numbers for batch tracking items. Some warehouse managers may want the option to prevent batch number edits for certain users based on screen parameter settings.

The allow_edit_batch_nbr screen parameter in the IB LPN Inquiry screen allows you to prevent editing the batch number of an inventory.

## Parameter Choice Behavior

- When the allow_edit_batch_nbr parameter is set to yes, the batch number field in the edit screen in the IBLPN inquiry will be editable and you can edit the batch number and save.
- When the parameter is set to no, you can edit the batch number field in the edit screen in IBLPN inquiry. However, when you Save the edited batch number, the system will throw the error "Cannot change batch number".

| UI Screen Parameter Name | Options | Behavior |
|---|---|---|
| allow_edit_batch_nbr | • yes<br>• | • User can edit batch number and save. |
| | • no | • Batch number field is editable and once you save, the system throws error "Cannot change batch number." |

# Inventory History

Inventory history records various WMS transactions taking place in the facility for purposes of informing the

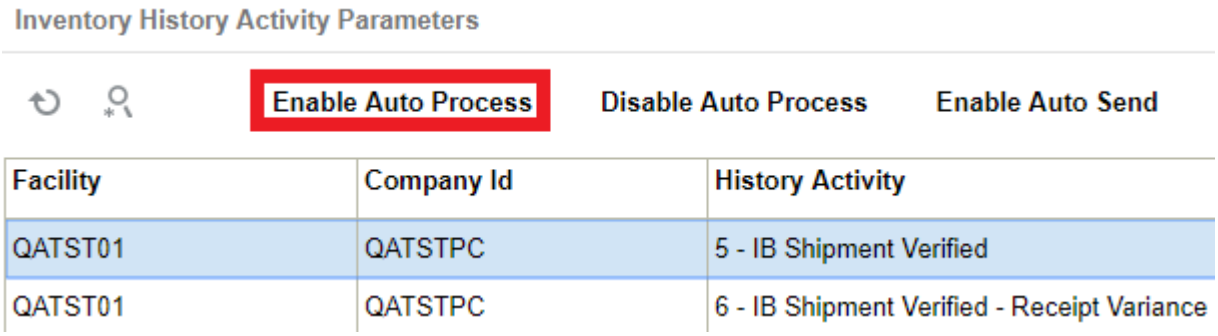
ERP or any other external system that may be interested.

For more information about the Iventory History UI fields, see the *Interface Specifications* document.

**Note:** not all columns will be included in each IHT record.

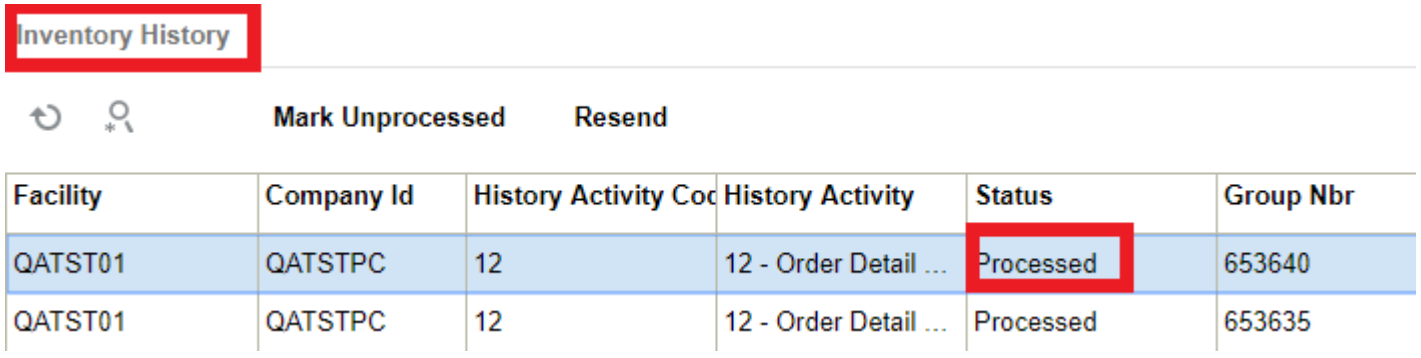
## Enable/Disable Auto Process

To help customize your view of inventory history records, from the **Inventory History Activity Parameters UI** you can click the **Enable Auto Process** or **Disable Auto Process** buttons.




Once you click the Enable or Disable Auto Process buttons, a dialogue box appears asking for your password. Enter your password and click **Submit**.

**Note:** By default, all of the IHT records have the auto process option set to no. In order for IHT records to be considered, you need to select them and click Enable or Disable Auto Process.For any inventory records where you have selected and clicked the AutoProcess flag, the associated inventory history record will display as Processed in the **Inventory History UI**.




## Enable Auto Send of Inventory History

In the past the main way to extract WMS transaction records would be via scheduled jobs at pre-determined intervals. Scheduling too frequently may place unnecessary load on the system and scheduling too infrequently may caused delays in notifying the ERP or other systems of critical WMS updates. You can now automatically send inventory history records as and when they are created.

They are sent via the Output Interface setup just like other outgoing messages. The new fields "enable_auto_send" and "disable_auto_send" are available in the Inventory History Activity Parameter. From the Inventory History Activity Parameter screen, you can select all history activities that are crucial for you to monitor. If the enable_auto_send flag is enabled, then the system will post the relevant IHT records as soon as the records are written to the relevant webservice end point setup in the Output Interface Configuration screen.

**Note:** If the auto-send is enabled for an IHT record, the auto-send takes precedence. The default value forthe flag is No. Auto send is supported if the file format is XML and also if the interface type is Rest WebServices.

To enable Auto-Send of Inventory History, do the following:

1. From the Inventory History Activity Parameter screen > Select the IHT Record.
2. Click on **enable_auto_send**.

## Set Inventory History Transactions to Not Ready (Un-Processed)

From the Inventory History UI, you can click the “Mark Unprocessed” button to change the IHT status of a record to Un-Processed (Not Ready).

The Mark Unprocessed button allows you to reprocess the IHT records and let the system to pick up inventory again.

> **Note:** The “Inventory History/ Can mark Inventory History unprocessed” permission should be enabled at the group level for user role SUPERVISOR/EMPLOYEE/GUARD/MANAGEMENT to perform this action.

Steps:

1. Go to the Inventory History UI.
2. Select the IHT record. You can select one or more IHT records to process the request at the same time.

   > **Note:** The system enables the button only if the selected IHT records is in status “Processed/Processing/ Cancelled”.

3. Click the **Mark Unprocessed** button. The system prompts for password.
4. Enter your OCWMS password. Click **Submit**. To discard, click **Cancel**.
5. Upon success, the system displays a confirmation message “Updated 1 record”, and the IHT status for that particular record is changed to “Not Ready”.

> **Note:** You need to turn-off the **Auto-Process** parameter in the Inventory History Activity parameter screen in order for the system to change the status of the IHT record status. Otherwise, if the Auto-process is configured for the IHT, then the record continues to remain in Processed status and the activity will not be reset to “Not Ready”.

*Related Topics*

-

# Configuring Reason Codes

Reason codes are used as identifiers for performing certain transactions, such as modifying the quantity of an LPN. Reason codes must be added at the **Parent company** level.

1. Go to the “Reason Codes” screen.
2. Click the Create button.
3. Populate the code and description.
4. Click “Save”.

## Reason Code Parameters

You may also configure reason codes that are required for certain transactions. These parameters are located in the “Company Parameters” screen.

- CYCLE_COUNT_REASON_CODE: Defines the reason code for performing a cycle count.

- DFLT_BATCH_EXP_ADJ_REASON_CODE: Defines the reason code for modifying a container's batch expiry date.
- SHORT_REASON_CODE: Defines the reason code for performing a short pick.

# Lock Codes - Background

Lock Codes control whether material is considered available for allocation and whether certain transactions can be performed against it (e.g. putaway, loading, manifesting, shipping loads).

**Note:** the parameter to disallow Multiple Lock Codes is only enforced during **Receiving.**

- Lock Codes can be applied to **Active Locations, and Inbound and Outbound LPNs.** When Lock Codes are associated to a batch, the Lock Code gets applied to all of the LPNs that contain that batch, including all of the material contained in the LPN regardless of the batch.
- Fully available inventory typically has no Lock Code.
- Multiple Lock Codes can only be applied at the **LPN** level. You can only apply one Lock Code to an Active Location.
- Reserve locations can have a lock code. Any LPN located in that location will get that lock code applied upon putaway. Unlock/remove lock code on LPN must be used to remove the lock code from the location while the LPN is still located. Moving an LPN out of the location does not remove the lock code.

# Configuring Lock Codes

Lock Codes must be added at the **Parent company** level.

1. Make sure your current company view is at the Parent company.

   **Note:** the system will display an error if you try to configure lock codes at the child company level.
2. Go to the "Lock Codes"screen.
3. Click the Create button.
4. Populate the applicable fields/flags.
   a. **Allocatable:** If checked, LPNs with this lock code are still eligible for order allocation.
   b. **Unlock on locate to Reserve:** If checked, LPNs with this lock code will have this lock code removed whenever it is located to a Reserve location (a location that does not have a lock code).
5. Click **Save.**

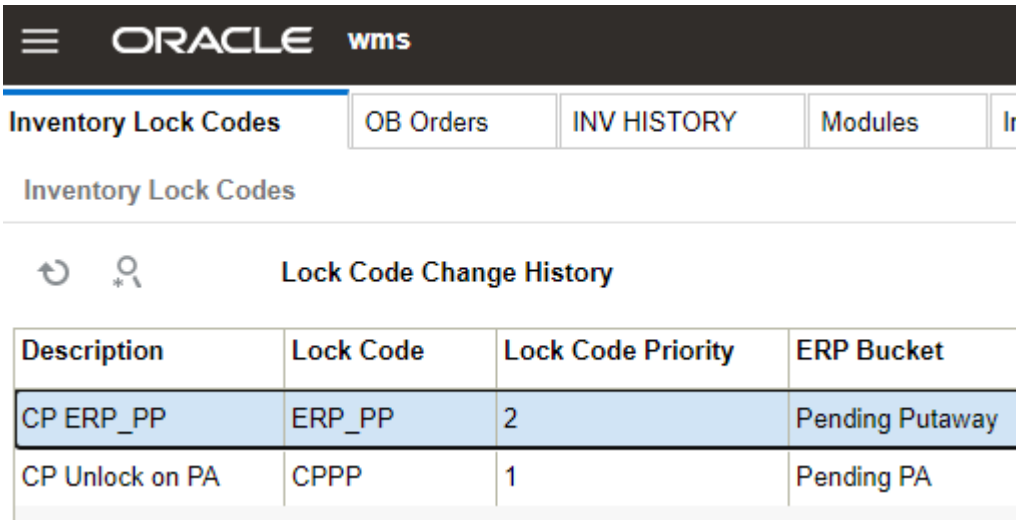
## Adding a Lost Lock Code

Warehouses can have a lock code exclusively for lost items. WMS requires a separate configuration to differentiate a lost lock code from all other lock codes.

1. Go to the "Company Parameters" screen.
2. Edit the "LOST_LOCK_CODE" parameter. In the "Parameter Value" field, populate the lock code you wish to use as the lock code for lost LPNs.
3. Click "Save".

# Lock Code Priority

The **Inventory Lock Codes** screenallows you to associate an Inventory Bucket (ERP Bucket) and tag a lock code priority.




## Fields on Inventory Lock Codes Screen

**ERP Bucket** is a free form field where ERP buckets against the lock code can be defined. By default, this field is blank. You can track ERP buckets on the inventory by defining values in this field.

> **Note:** the ERP bucket name should be configured properly to correspond to an Inventory Summary Bucket in ERP.

**Lock Code Priority** is a numeric field where priority for the lock code can be defined. The default value in this field is blank. You should define a distinct lock code priority value. When Inbound or Outbound LPNs are associated with multiple lock codes, then the lock code with the highest priority is considered for the ERP bucket. Lower numeric values are considered as the highest priority value. You should prioritize the lock codes from most restrictive (Priority 1) to least restrictive.

**Allocatable flag -** This flag on the lock code specifies that inventory can be allocatable for an order.

**Unlock on locate to reserve flag -** The Unlock on locate to reserve flag specifies that if inventory is located to reserve or active, the lock code gets removed from the Inbound LPNs.

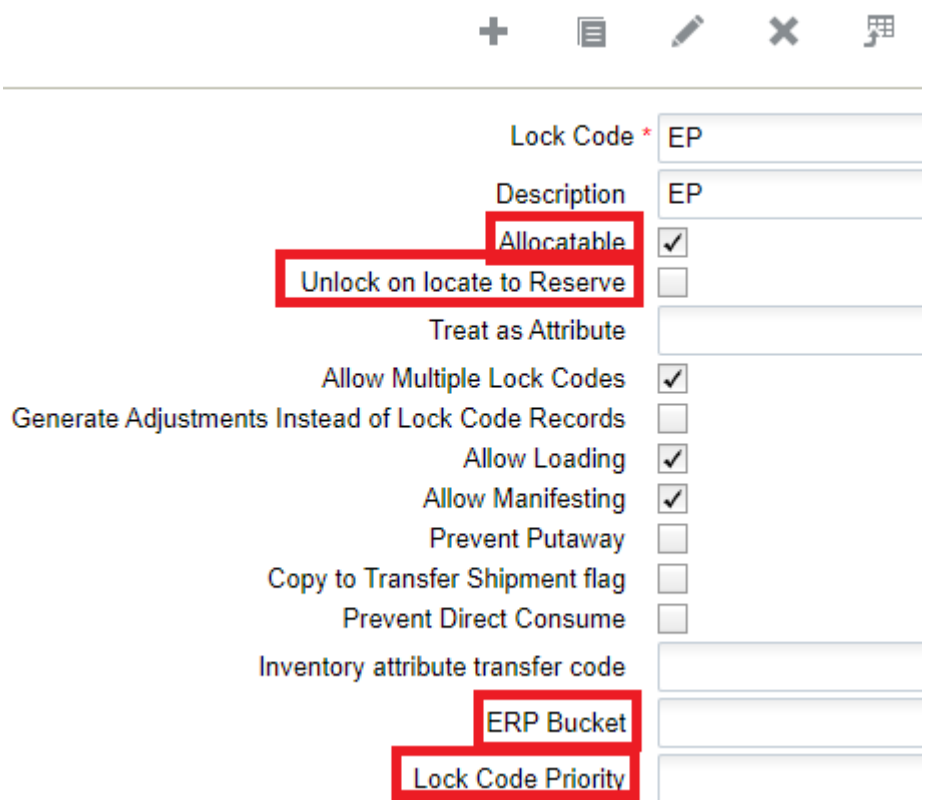
**Treat as Attribute –** If a Lock Code has the Treat As Attribute field set to an attribute (between a-o), the Lock Code is recorded to the corresponding attribute field set in the Lock Code configuration. During any transaction, if a Lock (with "*Treat_As_Attribute*" set to any value between a-o) is applied to the LPN/Inventory and the LPN/Inventory already has an inventory attributes (a-o) value, then the system will overwrite the inventory attribute value on the corresponding inventory record when the Lock Code is applied. Treat as Attribute functionality is only applicable for IBLPNs and Active inventory.

> **Note:** You can use the “Treat as Attribute” feature if you plan to align WMS Cloud Lock Codes to ERP Inventory Summary buckets.

**Prevent Putaway –** When an LPN is scanned, if the LPN has at least one lock code that has the flag 'Prevent Putaway' set to **yes,** the system will prevent the user from LPN putaway.

**Copy to Transfer Shipment flag –** When set to **yes,** the system passes the lock code from shipped out LPN's to Auto Created ASN's during transfer shipment so that destination DC/Stores can handle the putaway of the inventory.

**Prevent Direct Consume -** If an LPN has a lock code, and the lock code has the flag Prevent direct consume set to Yes, the system will not allow the user to consume this LPN using the transaction RF **Direct Consume.**




## Company Parameter – Honor Lock Code Priority

When inventory is subjected to multiple lock codes, users need to know from which ERP bucket lock codes need to be considered against the inventory. To overcome this scenario, WMS determines priority associated with the Lock Code and considers the ERP bucket from the highest priority lock code.

The company Parameter “HONOR_LOCK_CODE_PRIORITY” (when set to yes) allows you to enable Lock Code Priority values. The default value in this parameter is blank (No).

**Note:** If you are using the ERP bucket feature, it is recommended that you confirgure this value.

The following table describes the behavior for the Company Parameter **honor_lock_code_priority:**

| Company Parameter honor_lock_code_priority set to: | Description |
|---|---|
| **Yes** | • ERP buckets that correspond to the lock code with the highest priority are picked up while writing inventory history. Lock Code priority is used to determine the ERP bucket.<br>• If a new lock code is applied on the inventory, then the previous ERP bucket value is based on the highest priority lock code present on the inventory prior to the new lock being applied. The current ERP bucket value is based on the highest priority lock code present on the inventory after a lock is applied.<br>• If an existing lock code is removed from the inventory, then the previous ERP bucket value is based on the highest priority lock code present on the inventory prior to the lock being removed. The current ERP bucket value is based on the highest priority lock code present on the inventory after the lock is removed.<br>• The previous and current ERP bucket on the inventory can be the same when inventory has the highest priority lock code and a lock code added/removed is having lock code lower priority (higher value) than already existing locks on Inbound LPN's or Outbound LPN's.<br>• If inventory is adjusted, then the previous and current ERP bucket is determined by the existing lock codes on the inventory.<br>• Some IHT's populate previous and current lock codes in reference fields. Ordering of lock codes is in descending order of lock code priority.<br>• If inventory has multiple lock codes with conflicting lock code priority, then the ERP bucket is picked up from the lock code that was applied last.<br>• Lock Codes are ordered based on the lock code priority value.<br>• Locks applied on the container that also have a batch lock are considered while determining the ERP bucket. The ERP bucket is determined by considering the locks present on the container/location and the batch lock.<br>• When using this parameter, you should not have lock codes without ERP buckets for the highest priority lock code value. |

| Company Parameter honor_lock_code_priority set to: | Description |
|---|---|
| **No** | If you don't want to use the priority defined on the lock code for ERP bucket consideration, you can set the value to No<br><br>(Default value) in this parameter.<br><br>When the value is set to No, the ERP bucket is determined based on the order in which the lock code is applied. The ERP bucket corresponding to the last applied lock code is considered.<br><br>Locks applied on the container and the batch lock are considered while determining the ERP bucket. If the inventory has a container/active location lock and batch lock, then the ERP bucket is determined by based on the last applied lock code.<br><br>If a new lock code is applied on the inventory, then the previous ERP bucket value is based on the last applied lock code on the inventory prior to the new lock being applied. The current ERP bucket value is based on the new lock code applied.<br><br>If an existing lock code is removed from the inventory, then the previous ERP bucket value is based on the last applied lock code present on the inventory prior to the lock getting removed. The current ERP bucket value is based on the last applied lock code present on the<br><br>inventory after the lock is removed. |

| Company Parameter honor_lock_code_priority set to: | Description |
|---|---|
| | If inventory is adjusted, then the previous and current ERP bucket is determined by considering the existing lock codes on the inventory.<br><br>If Inventory history has old and new lock codes populated, then the lock codes are ordered based on the ascending order of the lock code applied timestamp. |

## Example

**Scenario:** the following example shows the inventory flow from one bucket to other bucket when an LPN is applied with multiple lock codes.

## Configuration

- The Facility Parameter "**DEFAULT_ERP_BUCKET_FOR_INBOUND_INVENTORY**" is set to "**AVAILABLE.**"
- The Company Parameter "**honor_lock_code_priority**" is set to **Yes.**

The Lock Code are configured with the following priority:

| ERP Bucket | Lock Code Priority |
|---|---|
| Damage | 1 |
| Receiving | 2 |
| Cycle Count | 3 |
| Quality Check | 4 |

1. The LPN is received in the warehouse with a default Receiving Lock Code. Inventory is moved to the **Receiving** bucket:
2. Inventory is located to the reserve location in the warehouse. The **Receiving** lock code is removed and the inventory is moved to the default **available** bucket.
3. A Lock Code of **Cycle Count** is applied, and the inventory is moved to a Cycle Count bucket.
4. Again, the Lock Code **Damage** is applied. Now inventory is moved to the damage bucket as the Damage lock code has the highest priority.

| Lock Code Priority | Previous ERP Bucket | Current ERP Bucket |
|---|---|---|
| 1 | Cycle Count | Damage |

## Key Considerations for Lock Codes

| If | Then |
|---|---|
| You do not want to track ERP buckets… | Then you should not configure the ERP bucket value on the Lock Codes and Default Facility/Company parameter for ERP buckets. Also, you should not configure Lock Code Priority/Honor Lock Code Priority. |

| If | Then |
|---|---|
| | |
| You decide when inventory is subjected to multiple lock codes… | The ERP bucket should be considered based on lock code priority or the lock code applied sequence, and based on that Honor Lock Code Priority company parameter. |
| The company parameter Honor Lock Code Priority is enabled… | The lock code priority should be populated with the proper numeric value. A blank value on the lock code priority column will have lesser weightage compared to lock codes with a numeric value. |
| Lock Codes are not defined with an ERP Bucket… | The system considers the default ERP bucket from the Inbound Facility parameter for inbound inventory and the default ERP bucket from the Outbound Facility parameter for the outbound inventory. |
| If lock the code is not configured with an ERP bucket and the lock present on the LPN's does not have ERP buckets… | the value is considered from the default facility /company parameters. |
| You change the ERP bucket and lock code priority once they are set… | This might cause issues in regard to integration set up. Newly reflected ERP bucket values are considered for future Inventory History records that are written and not for previously created records. |
| Multiple lock codes on the inventory have the same priority… | The ERP bucket is picked up from the lock code that was applied last. It's suggested not to have conflicting priority for lock codes. |
| You populate ERP Buckets with names such as (Prevent Loading, Unavailable for Allocation)… | This will not prevent inventory for allocation or Loading. In addition, corresponding Lock code properties should be set for WMS to achieve these operations. |
| You are using lock codes that are not defined with an ERP bucket… | The previous/currentERP bucket will not be populated. |

**Note:** Default ERP bucket is considered when there is no outstanding lock code on the inventory being dealt with. The consideration of Adjusted Quantity/ Original Quantity for ERP bucket is based on IHT's.

The following are the list of transactions where ERP bucket value is considered from default Facility/Company parameters even though lock codes are populated on the IHT's. During those transactions, the system writes Lock Inventory History Transactions, to avoid double dipping of the inventory in the ERP bucket this change is done.

| Activity | Inventory History Transaction |
|---|---|
| Container Received with default lock code | Even though the receiving inventory is subjected to lock, and the current ERP bucket is populated from the facility parameter “DEFAULT_ERP_BUCKET_FOR_INBOUND_INVENTORY ", the system populates the lock codes on the IHT with respect to receiving (IHT- 1 and IHT- 72). |
| Container Creation with default lock code: | When you create a container with a default lock code, then the system writes IHT for the container creation (IHT 29 -Create Allocatable Container / IHT 30 -Create Unallocatable Container) by populating a default lock code on it, but the current ERP bucket value is populated from facility parameter " DEFAULT_ERP_BUCKET_FOR_INBOUND_INVENTORY " |
| Inventory Movement to Active Location | When inventory is moved to an active location with a lock code, then the system populates the lock code in the Inventory adjustment IHT (IHT- 4 / IHT- 17) for the active location, but the current ERP bucket value is populated from facility parameter " DEFAULT_ERP_BUCKET_FOR_INBOUND_INVENTORY." |
| Partial Putaway to Active /<br><br>Create LPN from Active Locations with a Lock Code | • Inventory History (IHT 63 - Lock Update Pre-verification and IHT 64 - Lock Update Post-verification).<br>• WMS populates ERP bucket on IHT 63/64 during lock update, ERP bucket populated on this IHT act’s like summary of bucket transfer with respect to subsequent adjustment IHT’s.<br>It’s advised that:<br>• If IHT63 and 64 are considered for ERP bucket processing, then ignore subsequent inventory adjustment IHT’s for correct flow of inventory from one bucket to another bucket.<br>• If IHT63 and 64 are not considered for ERP bucket processing, then consider subsequent inventory adjustment IHT’s for correct flow of inventory from one bucket to another bucket.<br>• After considering IHT 63 and 64 along with subsequent inventory adjustment, IHT’s will result in improper movement of inventory from one bucket to another bucket. |

**Note:** Additional reference fields are added on the IHT’s (Inbound inventory adjustment IHT’s) such as ERP Vendor ID, Vendor Site ID, Unlock on Locate etc… Refer to the *IHT Trigger Point* Document for details.

## Facility and Company Parameters

Two new Facility and Company parameters are available. These parameters allow you to define default ERP buckets for Inbound and Outbound Inventory, (when inventory is not subjected to any lock code or inventory has operational lock codes that are not defined with any ERP bucket.

**Note:** It is not mandatory for you to configure these facility and company parameters if you are not using them.

Facility parameters will take higher precedence over company parameters.

The default Facility and Company Parameters for Inbound Inventory is:

**DEFAULT_ERP_BUCKET_FOR_INBOUND_INVENTORY**

- Allows you to define the default ERP bucket for inbound inventory in the above parameter. When inbound inventory does not have a lock code or a lock code present is not defined with an ERP bucket, then the system populates the value from the inbound facility parameter.

- If the facility parameter is set to blank, then the value in the ERP bucket is considered from the Inbound company parameter.

The default Facility and Company Parameter for Outbound Inventory is:
**DEFAULT_ERP_BUCKET_FOR_OUTBOUND_INVENTORY**

- Allows you to define the default ERP bucket for outbound inventory in the above parameter. When inventory associated with an outbound LPN does not have a lock code or lock code present is not defined with an ERP bucket, the system will populate the value from the outbound facility parameter.
- If the facility parameter is set to blank, then the value in the ERP bucket is considered from the Outbound company parameter.
- If you want to keep the same default ERP bucket for both Inbound and Outbound inventory, you can define the same value in the Inbound and Outbound Facility/Company parameters.

## Inventory History

Inventory History is now enhanced to display Previous and Current ERP buckets for inventory.

**Previous ERP Bucket**: the Value in this field represents the previous ERP bucket associated with the inventory before the inventory is subjected for update (Lock, Unlock, Adjustments, Inventory transfer etc…).

**Current ERP Bucket**: the value in this field represents the current ERP bucket associated with the inventory after the inventory is updated (Lock, Unlock, Adjustments, Inventory transfer etc…).

The current ERP bucket field can be blank. The previous ERP bucket field is populated if the system is consuming or shipping out inventory..

Values in the previous and current ERP bucket are derived based on the lock code associated with the inventory. If lock codes are not present, then the default value from the Facility/Company parameter is considered.

All of the IHT's are not subjected for ERP Bucket population. Only IHT's that impact inventory changes are subjected for ERP Bucket value population. See **Inventory History Transactions subjected for ERP Bucket** for more information about which IHT's are subjected for ERP bucket changes.

**Note:** Some transactions result in multiple IHT's.

- The Inventory History file that is generated will include the previous ERP bucket, the current ERP bucket, and the lock code priority fields.
- Lock Code Priority value on the IHT is populated only for Lock/ Unlock container IHT's.
- ERP Systems can use previous and current ERP buckets for updating the summary inventory buckets in ERP.

## Output Interface

## Shipment Verification:

The shipment verification file includes the lock codes present on the LPN during shipment verification and the ERP bucket. If multiple lock codes are present on inbound LPN then corresponding lock codes are separated with a delimiter. The ERP bucket is determined by considering the lock code priority or based on the last lock code applied.

## Ship Load (SLS):

The Ship Load (SLS) file includes the lock codes present on the OBLPN during Ship Load and the ERP bucket. If multiple lock codes are present on the outbound LPN, then the corresponding lock codes are separated with a delimiter. The ERP bucket is determined by considering the lock code priority or based on the last lock code applied.

**Note:** the new fields added to the Shipment Verification and SLS file are applicable to the 20D version of Oracle WMS Cloud and not prior versions.

## Inventory History Transactions subject for ERP Bucket

For more details on previous and current ERP bucket population for the following list if IHT's, refer to the interface specification (*IHTTrigger Point Document*).

| Inventory History Transaction | Description |
|---|---|
| IHT 1 | LPN Received |
| IHT 2 | Container Consumed |
| IHT 3 | Container Shipped |
| IHT 4 | Inventory Adjusted pre verification |
| IHT 10 | Container DetailPacked |
| IHT 11 | Container Packed |
| IHT 14 | Container Cancelled |
| IHT 16 | Pre receive inventory Adjusted pre verification |
| IHT 17 | Inventory Adjusted Post verification |
| IHT 19 | Inventory Adjustment Cycle Count Active |
| IHT 22 | Lock Container Before ASN Verification |
| IHT 23 | Lock Container After ASN Verification |
| IHT 24 | Unlock Container Before ASN Verification |
| IHT 25 | Unlock Container After ASN Verification |
| IHT 29 | Create AllocatableContainer |
| IHT 30 | Create UnallocatableContainer |
| IHT 31 | OB Container Modified |
| IHT 32 | OB ContainerCancelled |
| IHT 34 | Split Container Before ASN Verification |

| | |
|---|---|
| IHT 35 | Split Container After ASN Verification |
| IHT 36 | Split Container Lock Acquired |
| IHT 49 | Lock Active |
| IHT 50 | Unlock Active |
| IHT 52 | Audit Adjustment |
| IHT 53 | Cycle Count Reserve SKU Counted |
| IHT 54 | Container DetailPicked |
| IHT 62 | POS Interface |
| IHT 63 | Lock Update Pre verification |
| IHT 64 | Lock Update Post verification |
| IHT 65 | Lock OBLPN |
| IHT 66 | Unlock OBLPN |
| IHT 69 | Kitting Complete |
| IHT 70 | Kitting InventoryConsumed |
| IHT 72 | Container Received Subject to QC |

## Lock Code Priority Configuration

To setup ERP buckets and lock code priority for inventory, you need to do the following:

1. Configure the **ERP Bucket** in the **Lock Code** Field.
2. Set the **Lock Code priority** in the **Lock Code** Field to prioritize lock codes based on lock code priority value. (Applicable when inventory has multiple lock codes.)
3. The **default** ERP Bucket should be configured in **Facility and Company** parameters.
4. The Company Parameter **Honor Lock Code Priority** should be set to Yes (Applicable when inventory has multiple lock codes) to prioritize lock codes based on the lock code priority value.

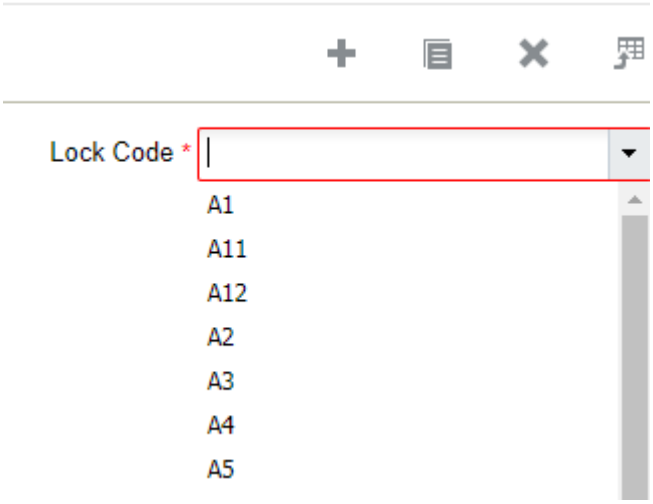
# Adding Lock Codes to LPNs

You can add specific Lock Codes to an IBLPN by clicking the blue number value in the “Nbr Locks” column:

This will prompt a new window, where you can add multiple lock codes to the container:


| Facility | Company | LPN Nbr | Lock Code | Create Timestamp | Mod Timestamp |
|---|---|---|---|---|---|
| QATST01 | QATSTPC | 146541 | LC1 | 05/16/2018 5:48:30 AM | 05/16/2018 5:48:30 AM |
| QATST01 | QATSTPC | 146541 | LL3 | 03/21/2018 7:10:38 AM | 03/21/2018 7:10:38 AM |

The above figure shows all the Lock Codes currently added to the container. Click Create () and select one of the configured Lock Codes from the drop-down to add lock codes.




# Modifying IBLPNs

LPNs can be modified via the RF module *Modify IBLPN*. Here you can modify either the LPN's SKU, Quantity, or Putaway Type.

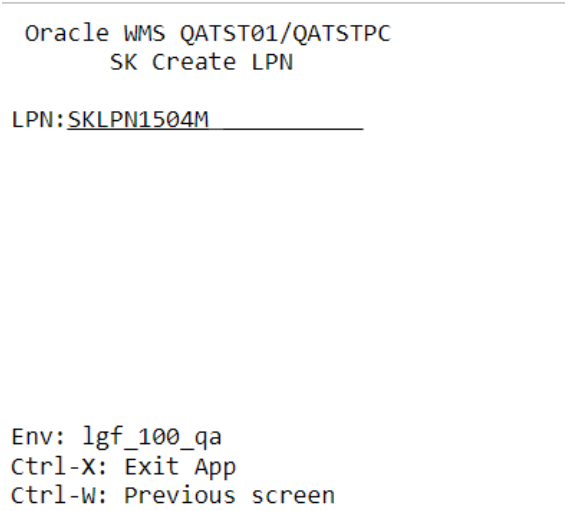
1. Enter the RF module *Modify IBLPN.*
2. Scan the IBLPN to modify.
3. In the "Qty:" field, enter the new quantity (you must input the current quantity even if the current quantity remains the same).
4. To modify the Putaway Type, select option *Ctrl-R: Putaway Type*. This prompts a list of Putaway Types in the system – select the appropriate Putaway Type to modify.
5. Once all the modifications are done, the LPN's attributes should be displayed in the RF screen. When done, select option *Ctrl-N: End Modify*.
6. In the "Reason Code:" prompt, input the appropriate Reason Code for that transaction.
    - A list of configured Reason Codes can be viewed in the *Reason Code* screen.

## RF Create IBLPN

Before you begin to assign an inbound load to an outbound, create an LPN as shown in the following steps:

Steps:

1. Login to the WMS RF through your credentials.
2. Create an LPN for the order. To do that, select the Create LPN transaction. After invoking, create a new LPN and enter the LPN number. For example: LPN: SKLPN1504M.




3. The RF screen takes you to the next screen where you need to enter following information:
   a. **LPN**: Enter the LPN Number.
   b. **Items**: Enter the items that you created through the items UI.
   c. **Qty**: Enter the quantity.
4. You can also check the LPN status in the IBLPN UI. Go to the IBLPN UI **>** Search for the LPN number **>** the status displays as "**Received**" when items are successfully consumed.
5. After consuming all the items, press Ctrl-X to exit from the current page.

# Formatting Rules for Inventory Attributes

Because there can sometimes be a mismatch of inventory attributes in systems overall, WMS structures rules around open inventory attribute fields. This gives more control to end users for what they want to store in these fields.

In order to provide consistency for tracking inventory attributes in ERP and across other systems, you can create formatting rules for inventory attributes.

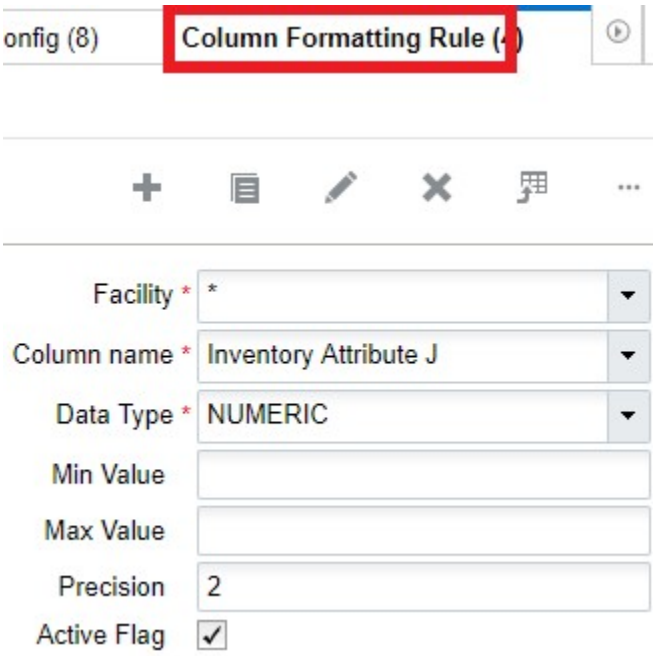
The following topics provide details about configuring formatting rules and applying rules in the RF, UI, and APIs. which will help prevent incorrect data entry:

*Related Topics*

- Configuring Formatting Rules
- Validating Formatting Rules

# Configuring Formatting Rules

From the **Column Formatting Rule** UI, you can create formatting rules for inventory attributes:




From the **Column Formatting Rule** UI, you can define numeric data types and set minimum to maximum values to associate with inventory attributes a to o. You can also define the decimal precision for numeric inventory attribute values.

**Note**: you can't enter decimal values for Min/Max fields above the defined precision. Also, you can't save multiple formatting rules for the same inventory attribute column. The system will throw an error message in this case.

To create a formatting rule:

1. From the **Column Formatting Rule** UI, click create.
2. Select the Facility or * to apply the rule to all Facilities.
3. Set the min/max value and precision.
4. Select the Active Flag to enable the rule and click **Save**.

The following table provides descriptions for each of the configurable fields in the **Column Formatting Rule** UI:

| UI Column | Description |
|---|---|
| Facility Code | User can select the facility or make it *. This drop-down will show what the logged in user is eligible for. Selecting * allows you to apply formatting rules to all associated facilities. |
| Column | List of Inventory Attributes (Drop-down) |

| UI Column | Description |
|---|---|
| Data Type | Numeric or String |
| Min Value | Applicable if the data type is Numeric. (leaving the field blank means there is no minimum value stipulated) |
| Max Value | Applicable if the data type is Numeric. (leaving the field blank means there is no maximum value stipulated). |
| Precision | Applicable if the data type is Numeric. This field does not support negative values. This field depicts the maximum precision allowed. A precision of 0 means no decimal points are allowed. |
| Active flag | Enable the active flag to activate or deactivate the rule. If the rule is not activated, then formatting rules will not be triggered. |

**Note:**

- the system will not validate formatting rules against existing data. However, any new data will validate against formatting rules that you setup.
- the system will not allow multiple rules activated for the same inventory attribute/facility/company code combination.
- When multiple attributes are provided for a SKU, rule validation will happen before the user captures the next attribute field.

# Validating Formatting Rules

## RF Screens

Once formatting rules are configured, Oracle WMS Cloud will validate and apply the formatting rule criteria. The decimal precision and the min/max range will be applied as configured on the formatting rule for all **RF** transactions that prompt for inventory attributes including:

- RF Receive by shipment
- RF Receive by Load
- RF Cycle Count Location
- RF Cycle Count LPN
- RF Create LPN
- RF Sort and Receive.
- RF Split IBLPN
- RF Modify LPN
- RF NC Active Picking

**Note:** If the formatting rule mandates precision, you won't be allowed to enter more than the precision after the decimals. If the rule has the min and max range configured, the entered value has to be within the range.

**IMPORTANT:** If you need to enter values with decimals and negative values, you must configure the company parameter **Allow Barcode lower characters** to allow "." or "-" .

> **Note:** "." and "-" will be applicable for all barcode entries.

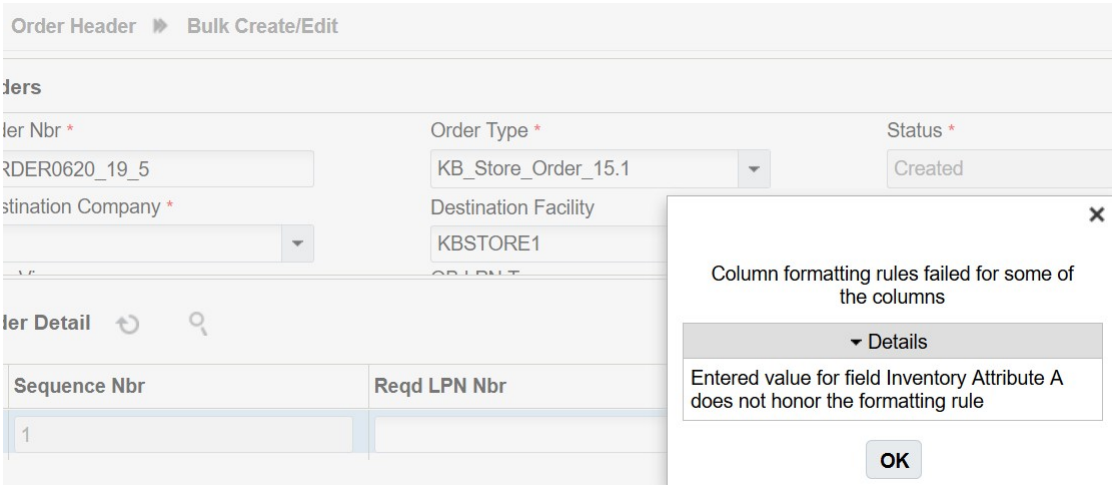
## UI Screens

Once formatting rules are configured, Oracle WMS Cloud will validate and apply the Column Formatting Rule criteria. The decimal precision and the min/max range will be applied as configured on the formatting rule for all **UI** transactions that display attributes for user entry:

- Purchase Order Inquiry
- Order Inquiry
- Work Order Inquiry
- Inbound Shipment Inquiry
- IBLPN Inquiry
- Mass Update Inventory attributes
- Bulk Update Order details

Inventory attribute formatting rules are triggered when you click **Save** after creating/editing the record.

> **Note:** After you click **Save,** If any attributes fail the formatting rule validations, the system displays which attributes failed.



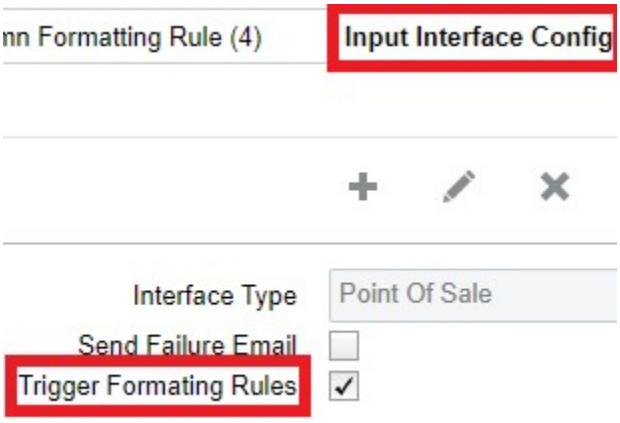

## Input Interfaces

The **Column Formatting Rule** is validated in the **Input Interfaces** because data could come from external systems. WMS triggers formatting rules for inventory attributes to prevent invalid data from entering the application. The system will error and prevent records from interfacing if the rule fails.

- IB Shipment
- Orders
- POS
- Work Order

- Purchase Order

In the **Input interface Configuration** UI, you can enable trigger formatting rules for Input Interface screens via the **Trigger Formatting Rules** flag. This flag defaults to no. Input Interface validation will be triggered only if the corresponding interface being run has the trigger_formatting_rules flag enabled.




To enable trigger formatting rules for **Input Interface** screens:

1. From the **Input interface Configuration** UI, select the interface type for which you want to enable trigger formatting rules.
2. Click **Edit**.
3. Select the Trigger Formatting Rules checkbox and click **Save**.

**Note:** Be aware that when you configure formatting rules for Input Interface screens, this can have an impact on processing time for associated records.

The new configuration added to the Input Interface Configuration UI is only applicable for **Purchase Order, Inbound Shipment, Orders**, **POS**, and **Work Order** interfaces. Even though the **Input Interface Configuration** UI configuration can be enabled for other interfaces like appointment, cubiscan etc, trigger formatting rules do not apply to them.

**Note:**

- Inventory attribute Column Formatting Rules will not be triggered during Input Interface processing for action code of "Delete".
- The DTLUPDATE action code in header is supported for Purchase Order, Inbound Shipment, and Order Interface interfaces. Column Formatting rules are triggered for the DTLUPDATE action code when the detail action code is "UPDATE" or "DELETE".

## Formatting Rules and Treat as Attribute Flag

The Order Interface allows lock codes from the order detail to be populated onto the inventory attribute if the **Treat as Attribute** flag is set on the lock code.

**Note:**

- Inventory Attribute formatting rules will not be applied when treat as attribute functionality is triggered. Users should ensure that any lock codes intended to populate an attribute do not have formatting rules defined.
- If attributes are not captured in the RF, formatting rules are not triggered. If Receiving does not prompt for attributes and corresponding shipment details have attributes which are not honoring formatting rules, receiving process will not be stopped. Formatting rules are only triggered upon ***user entry.***

## APIs

Certain Oracle WMS Cloud REST APIs allow inventory attributes to be interfaced and create new inventory records in the system. Once column formatting rules are configured for a particular inventory attribute, Oracle WMS Cloud will validate and apply the rule criteria for the relevant inventory attribute. API operations will fail when formatting rules are not honored or met.

The system applies formatting rules using the following API trigger points:

| API Operation | Description |
|---|---|
| Update Active Inventory | Operation to update active inventory.<br>• `POST .../entity/location/{id}/update_active_inventory/` |
| Composite Create | Used for Creating IBLPN with all details in a single request)<br>• `POST ¿/wms/lgfapi/v10/entity/iblpn/composite_create/` |
| Bulk Update Inventory Attributes | Operation to Bulk Update Inventory Attributes on Inventory<br>• `POST ¿/wms/lgfapi/v10/entity/inventory/bulk_update_inventory_attributes/` |

**Note:**

- When the user performs one of the above operations, if any of the attributes fail the validations, the system will send a response that includes the attribute which failed the validation.
- There will be some additional processing required for validating the formatting rules, so customers using Bulk Update Inventory Attributes cannot expect same performance levels with formatting rules enabled.

# Combining / Splitting IB LPNs

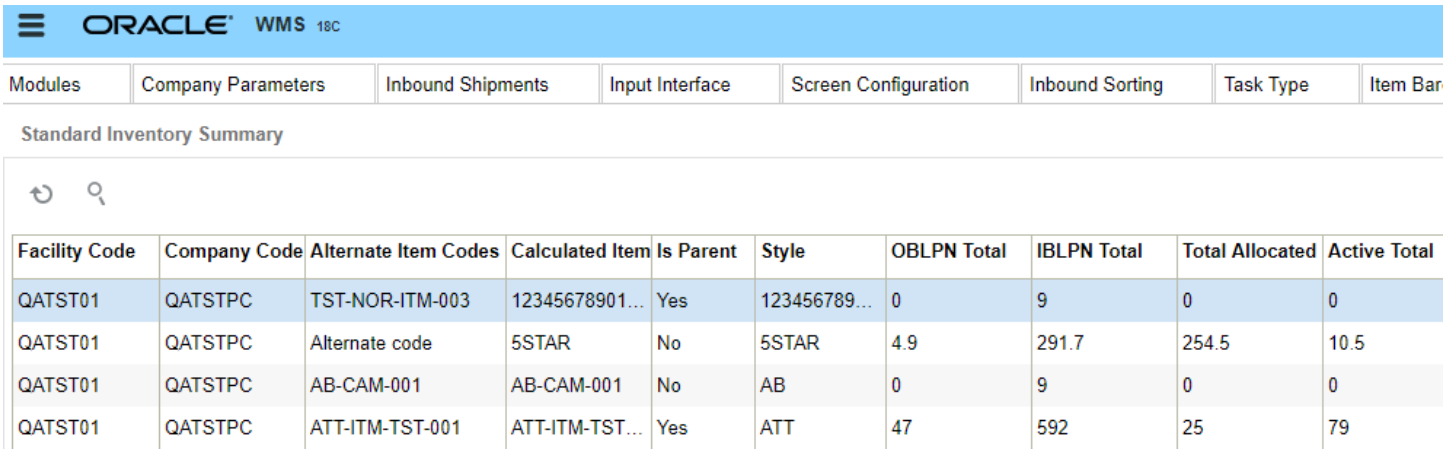
If two or more IB LPNs for the same item need to be combined into a single LPN, you can do this through the “Split Cntr” RF module. This module is used to either split or combine two IBLPNs into one IBLPN.

1. Go to the RF transaction “Split Cntr”.
2. Scan the LPN that needs to be moved into another LPN or from which part of the inventory it will be moved.
3. Scan the SKU Barcode of the item being moved to the other LPN.
4. Enter the quantity that will be moved from the old LPN to the new LPN.

5. If the LPN is being combined, enter the full quantity being moved.
   - If the entire quantity of the original LPN is being moved, the original LPN will be cancelled. Press 'CTRL-A' to accept.

# Inventory Summary

The *Inventory Summary* shows the inventory movement of all items from available quantity to packed quantity. This report can be used as an overview/summary of available inventory and to view how many allocated units are still pending to picked or shipped.




| Facility Code | Company Code | Alternate Item Codes | Calculated Item | Is Parent | Style | OBLPN Total | IBLPN Total | Total Allocated | Active Total |
|---|---|---|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | TST-NOR-ITM-003 | 12345678901... | Yes | 123456789... | 0 | 9 | 0 | 0 |
| QATST01 | QATSTPC | Alternate code | 5STAR | No | 5STAR | 4.9 | 291.7 | 254.5 | 10.5 |
| QATST01 | QATSTPC | AB-CAM-001 | AB-CAM-001 | No | AB | 0 | 9 | 0 | 0 |
| QATST01 | QATSTPC | ATT-ITM-TST-001 | ATT-ITM-TST... | Yes | ATT | 47 | 592 | 25 | 79 |

# Cycle Count

A cycle count is an inventory auditing procedure, which falls under inventory management, where a small subset of inventory, in a specific location, is counted on a specified day.

> **Note:** Multiple locations per item, work in process, and lags in paperwork processing can contribute to errors. You can mitigate these problems with correct cycle count procedures that specify not only the part number to be counted but also the location the part number should be in.

In Oracle WMS Cloud, you can run Cycle Counts in three ways:

1. Manually execute a Cycle Count in a location (RF)
2. WMS automatically triggers a Task (UI)
3. Run a Task Template that generates group of Tasks (UI)

## How To Check for a flagged Cycle Count Location

The *Active and Reserve Location* screens include a “To be Counted flg” column – if the value is *Yes*, then it means that the location needs to be cycle counted.

The *Tasks* screen.

Every location flagged for Cycle Count has a Task tied to it. To view these Tasks, filter the results by setting the Task type to “CC Location Contents” or “CC Location LPN Scan” and the status to “HELD” or “Ready”.

# Cycle Count Execution (RF)

There are three ways to run Cycle Counts with the RF, each varied by level of detail:

1. Cycle Count Location (By # of LPNs in a location): Prompts you to input the number of LPNs in the scanned location.
2. Cycle Count LPN (By LPN count): Prompts you to scan each LPN in the Location. Any IBLPN not scanned in a CC session will be updated as “Lost”.
3. Cycle Count LPN Detail

By SKU quantity: Prompts you to scan the LPN, SKU, quantity and its Inventory Attributes (Batch Number, Expiry Date, Serial Number) in the location. Here you input the quantity for each LPN.

By SKU Scan: Prompts you to scan the LPN and SKU in the Location. For the quantity value, you have to scan once for every SKU in the LPN. This option does NOT validate inventory attributes in the LPN.

The following sections describe the steps you would take to execute each CC type.

## Cycle Count Location

1. Enter RF transaction “Cycle Count Location”.
2. Scan the location that will be cycle counted.
3. Input the number of LPNs in that location.
4. Press *Ctrl-E* to end the count.
    - If the LPN quantity inputted is incorrect, RF prompts you to use the detailed Cycle Count transaction (option *0 - Cycle Count LPN Detail*).

## Cycle Count LPN

1. Enter RF transaction “Cycle Count LPNs”.
2. Scan the location to be cycle counted.
3. Scan the LPNs in the location.

> **Note:** if you scan an LPN that does not exist in the location, the RF prompts the message “Rescan the same LPN”. When you rescan the same LPN, WMS makes the inventory adjustment to record the new LPN into the location.

4. Continue step 3 until all LPNs are scanned.
5. When you are done scanning all the LPNs, press Ctrl-E to close the count.
    a. If WMS thinks there are still LPNs left to be scanned, the RF prompts the message “Remove LPNs from Location?”, followed by a list of LPNs that have not been scanned. Press *Ctrl-A* to proceed with the inventory changes.
    b. If the Cycle Count was correct, RF will prompt the message “Count completed for location”.

## Cycle Count LPN Detail

1. Enter RF transaction “Cycle Count LPN”.
2. Scan the location to be cycle counted.
3. Scan the first LPN in the location. Scan the SKU and quantity for the current LPN.
    - If the LPN has the “LPN is Pallet” flag set to “FALSE”:
    - If the LPN has the “LPN is Pallet” flag set to “TRUE”:
    - **Cases per Tier** refers to the “LPNs per Tier” field in the item’s detail in the Item Master.
    - **Tiers per Plt** refers to the “Tiers per Pallet” field in the item’s detail in the Item Master.
4. If the quantity is incorrect, the RF will prompt message “Reenter quantity for this item”.
    - If you reenter the same LPN, SKU and quantity, the adjustment is made.
    - If you are counting a multi-SKU LPN, the RF displays a warning message for SKUs that are not counted.
    - If the quantity is correct, the RF screen blinks and you can continue scanning the rest of the LPNs in the location.
5. When all the LPNs have been counted, press *Ctrl-E* to end the count.
    - If there are LPNs that have not been counted, the RF prompts a message “Remove LPNs from Location?” to ensure this change. When you accept with Ctrl-A, the uncounted LPNs are set to “Lost” status and the inventory adjustment is made.
    - If all the LPNs are counted, the RF prompts the message “Count completed for location.”

> **Note:** LPNs in “Allocated” status **cannot** be “Lost”.

## Cycle Count Caveats

1. WMS always validates the LPN’s Inventory Attributes (Batch Number, Expiry Date and Serial Number), if the SKU requires it.
2. LPNs that are allocated to a wave cannot be “Lost” during a Cycle Count transaction.
3. LPNs in “allocated” or “partially allocated” statuses cannot be Cycle Counted.

# Cycle Count Task Creation

In addition to manually Cycle Counting locations, you can also create Cycle Count Tasks and execute them later. There are two ways to create CC Tasks:

1. Through user-configured Triggers.
2. Through user-executed Task Template

## Cycle Count Trigger Management

Oracle WMS Cloud contains a list of possible triggers for cycle counts that you can choose to enable. When enabled, the system automatically generates Cycle Count Tasks for its location.

The *Cycle Count Trigger Management* screen contains the following parameters:

- **Facility/Company:** Defines which Facility and Company this trigger applies to (an asterisk * means it applies to all facilities/companies – must be at PARENT company level).
- **CC Trigger:** A description of the trigger. This is the action that will trigger the CC Task.

- **Enabled:** “Yes” means the trigger is enabled.
- **Priority:** The priority given to the Task when created.
- Task Type:
  - CC Location LPN Scan: Creates a Cycle Count Task that prompts you to scan the LPNs in the location.

See *Cycle Count Execution (RF)* for details.

- CC Location Content: Creates a Cycle Count Task that prompts you to scan the LPNs, SKUs and quantities in the location.

See section *Cycle Count Execution (RF)* for details.

## Description of Cycle Count Triggers

| Trigger | Definition/Expected behavior |
|---|---|
| Alternate location for Putaway | - You scan a location different than the one directed by the system during directed putaway:<br><br>- System generates a CC task for the location directed by the system.<br><br>- Trigger module: ‘rf.inbound.cwrfputaway’ with mode = ‘Directed Putaway Pallet’ or ‘Directed Putaway LPN’. |
| Short pick | - You short pick an LPN or units from an LPN:<br><br>- System generates a CC task for the location where the LPN was shorted.<br><br>- Trigger modules are: ‘rf.outbound.cwrfpacklpn’,‘rf.inbound.cwrfmovelpn’, ‘rf.inbound.cwrfpickiblpnreplen’, ‘rf.outbound.cwrfpickcart’, ‘rf.outbound.cwrfpackncactiveorder’, ‘rf.outbound.cwrfpickiblpn’ |
| Short pick active | - You short pick the remaining quantity of a SKU in an active location:<br><br>- System generates a CC task for the location where the quantity was shorted.<br><br>- Trigger modules are: ‘rf.inbound.cwrfpickiblpnreplen’, ‘rf.outbound.cwrfpickcart’, ‘rf.outbound.cwrfpackncactiveorder’, “rf.outbound.cwrfpickiblpn’ |
| Cancel OBLPN in ‘OB Created’ status | - You cancel an OBLPN in ‘Outbound Created’ status from the UI:<br><br>- System generates a CC task for the location(s) where the inventory in this OBLPN was allocated from.<br><br>- Trigger module: ‘ObContainerView’<br><br>- Note that this trigger should only work when an OBLPN in ‘Outbound Created’ status is cancelled manually from the UI. If an OBLPN in ‘Outbound created’ status is cancelled by ‘Undo Wave’, the system should not create corresponding CC tasks even if this trigger is enabled. |

| Trigger | Definition/Expected behavior |
|---|---|
| De-allocate IBLPN from UI | - You de-allocate an IBLPN from UI:<br><br>- System generates a CC task for the location where the IBLPN was de-allocated.<br><br>- Trigger module: 'IbContainerView' |
| De-allocate Active Inventory from UI | - You de-allocate a SKU from active inventory in the UI.<br><br>- System generates a CC task for the location where the SKU was de-allocated.<br><br>-Trigger module: 'ActiveInventoryView' |
| Set Location 'To be counted' from Location screen | - You set the "To be counted" flag equal to 'Yes' in the UI.<br><br>- System generates a CC task for the location where the flag was set to 'Yes'.<br><br>-Trigger module: 'LocationViewFW' |
| Recount Location | - You reject an inventory adjustment record with 'Loc Dtl Count' = No and with 'Creation Type' = Manual (Recount triggers are only applicable for Cycle Counts done manually).<br><br>- System generates a CC task for the location with rejected inventory adjustment record.<br><br>-Trigger module: 'Inventory Adjustment Management' |
| Recount Location Detail | - You reject an inventory adjustment record with 'Loc Dtl Count' = Yes and with 'Creation Type' = 'Manual' (Recount triggers are only applicable for Cycle Counts done manually).<br><br>- System generates a CC task for the location with rejected inventory adjustment record.<br><br>- Trigger module: 'Inventory Adjustment Management' |
| Approve 'Location Mismatch' record | - You approve an inventory adjustment record that moves an LPN from another location to the cycle counted location (inventory adjustment record has warning 'Location Mismatch').<br><br>- System generates a CC task for the location where the LPN was located BEFORE the cycle count adjustment (LPN's 'Expected Location').<br><br>*Ex. If LPN was systematically in location A. However, during the cycle count that generated the inventory adjustment record, same LPN was counted in location B. Upon approval of this record, the CC task must be generated for location A.*<br><br>-Trigger module: 'Inventory Adjustment Management' |

| Trigger | Definition/Expected behavior |
|---|---|
| Substitute LPN from different location | - You scan an LPN that is in a location different from the allocated LPN during Full-LPN or Reserve NC Picking (LPN substitution from different location).<br><br>- System generates a CC task for the location where the LPN was allocatedoriginally.<br><br>- Trigger modules are: 'rf.inbound.cwrfmovelpn', 'rf.inbound.cwrfpickiblpnreplen', 'rf.outbound.cwrfpickcart', 'rf.outbound.cwrfpackncactiveorder', 'rf.outbound.cwrfpickiblpn', 'rf.outbound.cwrfrepackoblpn' |
| Alternate location for Split LPN into active | - You scan a location different than the one directed by the system during RF_Directed putaway with parameter 'multi-sku-lpn-mode' = 'Split into active locations'.<br><br>- System generates a CC task for the location directed by the system<br><br>- Trigger module: 'rf.inbound.cwrfputaway' with mode = 'Directed Putaway Pallet' or 'Directed Putaway LPN' AND 'multi-sku-lpn-mode' = 'Split into active locations'. |

## Configuring Cycle Count Triggers

1. Go to the *Trigger Management* screen - this displays a list of Cycle Count Triggers.
2. Select the record and click Edit () to customize the trigger.
    a. Tick the "Enabled" checkbox to enable/disable the trigger.
    b. Set a number for the priority. This is the priority of the Task generated from the trigger.
    c. Select the Task Type. This defines the task type for the task created under this trigger (CC Location LPN Scan or CC Location Detali Count).
3. Click "Save" to save the changes.

# Creating Cycle Count Tasks with Task Creation Templates

Another way to create Cycle Count Tasks in WMS is through existing Task Templates.

**Note:** CC Tasks can only be created at the Location level.

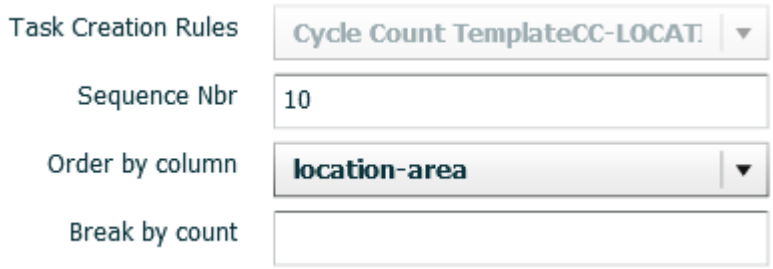
1. Go to the *Task Creation Templates* screen.
2. Click Create () and populate the necessary information.
    - **Description:** Input the Task Template's name.
    - **Template Type:** Select "CC" for Cycle Count Templates.
    - **Max Nbr of Tasks:** Input a numeric value. This is the maximum number of tasks that this template can create (leave blank if not applicable).
3. After creating the template, the next step is to create the task types that are created whenever this template is executed. Select this template and click on Details.
4. Click Create and populate the necessary information.
    - **Sequence Nbr:** Sequence for creating task types, if there are more than one within the template.
    - **Task Type:** The Task Type for the Task. This value must be a CC task type (CC Location LPN Scan or CC Location Contents).
    - **Priority:** The Task's priority when it is created.
    - **Create Held Flg:** When checked, the task automatically goes to "HELD" status when created. You must 'release' this task manually from the Tasks screen.
    - **Break By Quantity, Destination Zone:** Not applicable.
5. Click "Save" to save your changes.
6. The next step is to set up the Selection Rules. This tells the system which locations to create Tasks from. Go back to the Task Type window, select the record and click "Selection Criteria".
7. In this new window, you will see a folder icon (); this is a "complex operation". Within this folder, there can be many nodes with criteria specified; these are "basic operations".
8. To create a new basic operation, select the folder icon and click on "Insert Basic Operation". This creates a basic operation under the selected complex operation.
9. Select the SQL operator, column name and column value.
10. Click "Save" to save your changes.

## Optional: Configuration for Task Rules

Ordering Criteria in CC Task Templates are used to configure the order in which CC Tasks are displayed in the RF task list.

**Note:** If the Ordering Criteria is not specified, CC Tasks in the RF Task List is displayed in order of Task status, priority, and pick sequence.

1. Go to the *Task Creation Template* screen, select the template and click on 'Details'.
2. Select the Task Type record and click "Ordering Criteria".
3. This takes you to a new window with all the 'ordering' rules for the task type. Click Create to add a new record.
4. Input the necessary info for the ordering criteria record:




- **Sequence Nbr:** The sequence number for the ordering criteria record.
- **Order by column:** The criteria used for ordering the tasks.
- **Break by count:** Leave this field blank (only applicable for non-CC Tasks).

5. Press “Save” to create the record.

## Executing Cycle Count Task Templates

Once the Cycle Count Task templates are set up, the next step is to run them.

1. Go to the *Task Creation Template* screen and select the template.
2. Click on ‘Run Template’. The message “Tasks created” displays. Press OK.

> **Note:** You must specify a rule selection for the Cycle Count Task Template, or your will receive the error "CC Template does not have a selection rule."

3. To view a list of all the CC Templates that were executed, go to the *CC Run Inquiry* screen. This is similar to the *Wave Inquiry* screen for running waves.

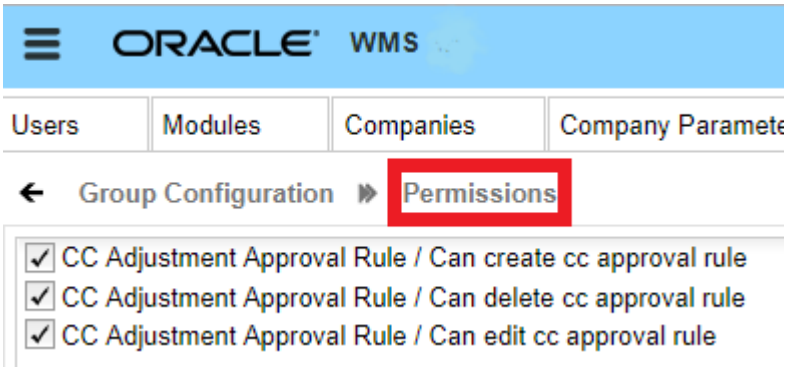
# Configuring a Cycle Count Approval Rule

The Cycle Count Adjustment Approval Rule screen allows you to configure a rule for cycle count approval and set tolerance levels for groups of items (using selection criteria.)

Let’s say you want to define your selection criteria as "Item Unit Cost" >= 50. For all the items that fall under the criteria, you want to set the tolerance % to 10%. In this case, if an item (whose unit cost is 60) is counted and a variance found is above/below 10%, then it will go for approval; otherwise it won't go for approval. (For example, if the expected count is 100, and the counted value is 101 or 99, then it will not go for approval.)

## Permissions

From the Group Configuration UI, click **Permissions** to view the available permissions for Cycle Count Adjustment Rule and to set group permissions.




## Cycle Count - Approval Settings

From the Cycle Count Adjustment Approval Rule detail screen, you can set "Approval Settings". Approval settings allow you to configure the mode for approval for each item(s)/ group of item(s) specified in the selection criteria.

You can configure different Approval Settings based on your preferences for different items.

Let's say you want to set item(s) belonging to velocity V1 so that they always go for approval when there is a variance. You set item(s) belonging to velocity V2 so that they never go for approval when there is a variance, and item(s) belonging to velocity V3 should go for approval depending on a certain threshold in the variance.

## Approval Rule Options

When your Approval rule is configured with Approval Settings = "Apply Tolerance Settings", and you are cycle counting the particular item that falls under this rule, the system will apply the tolerance settings. You can populate each rule detail with different tolerance settings.

From the Cycle Count Adjustment Approval Rule screen, you can click on a rule's Details to further refine the items that the Approval rule checks.

The following table shows what each of the Approval Rule options are and what they check:

| Approval Rule Option | Description |
|---|---|
| Priority | Priority for the Approval Rule. |
| Approval choice | You can specify your rule for **Manual Approval** or to **Auto Approve Based on Tolerance**. |
| Approval based on | You can apply Tolerance Settings based on "Quantity" or "Total Adjusted Cost". When the UOM selected is Quantity, you can set the tolerance check in terms of Absolute value or percentage.<br><br>When UOM selected is Cost, then the tolerance check will be based on Adjusted Cost. When UOM selected is Cost, you can set tolerance check in terms of Absolute value only. So when "Value" is selected, you can specify the tolerance value in the Tolerance Value field. The system then checks for the value set in the Tolerance check by field. |
| Value or percentage | You can specify your rule to check for either value or percentage for approval. |
| Min tolerance % | Minimum quantity tolerance percentage that is applied on the Total 'Current Qty'. |
| Max tolerance % | Maximum quantity tolerance percentage that is applied on the Total 'Current Qty'. |

| Approval Rule Option | Description |
|---|---|
| Tolerance value | Is Tolerance value always 0? |
| Tolerance check by | **Tolerance Check By** can be populated with Inventory or SKU. This allows you to configure whether the CC approval process should be triggered when there is a variance in the count in Inventory or in SKU.<br><br>When Tolerance Check By = **Inventory**, if there is a variance for one of the inventory in the location/ IBLPN that goes beyond the tolerance threshold, the system will trigger a manual approval flow.<br><br>If Tolerance check by is populated as "**SKU**", then the tolerance check is at the SKU level in the Active/ Reserve Location (if RF CC Location is selected). If you specify RF CC IBLPN, then the tolerance check will be at the SKU level in each IBLPN. |

### Selection Criteria Button

From the Cycle Count Adjustment Approval Rule screen, click Details (), and then click the Selection button to view and configure the Selection Criteria.

**Note:** From the Rule Detail screen, you can configure different selection criteria for each rule.

## Cycle Count Exception Scenarios

### Cancelling a Cycle Count Process

If you wish to exit and cancel the Cycle Count process for a given location, you must press “Ctrl-W” until the RF returns to the main menu.

### LPN is in "Consumed or "Shipped Status

- When you scan an LPN in “Consumed” or “Shipped” status in the Cycle Count operation, the system gives you an error message that the LPN is in invalid status.
- Finding “Consumed” and “Shipped” status LPNs in the reserve reflects poor inventory management.
- For the “Consumed” and “Shipped” LPN inventory, you must create a new LPN, using Create LPN RF option for the physical inventory in the location. DO NOT FORGET TO PUTAWAY.

### LPN is in an Invalid Status

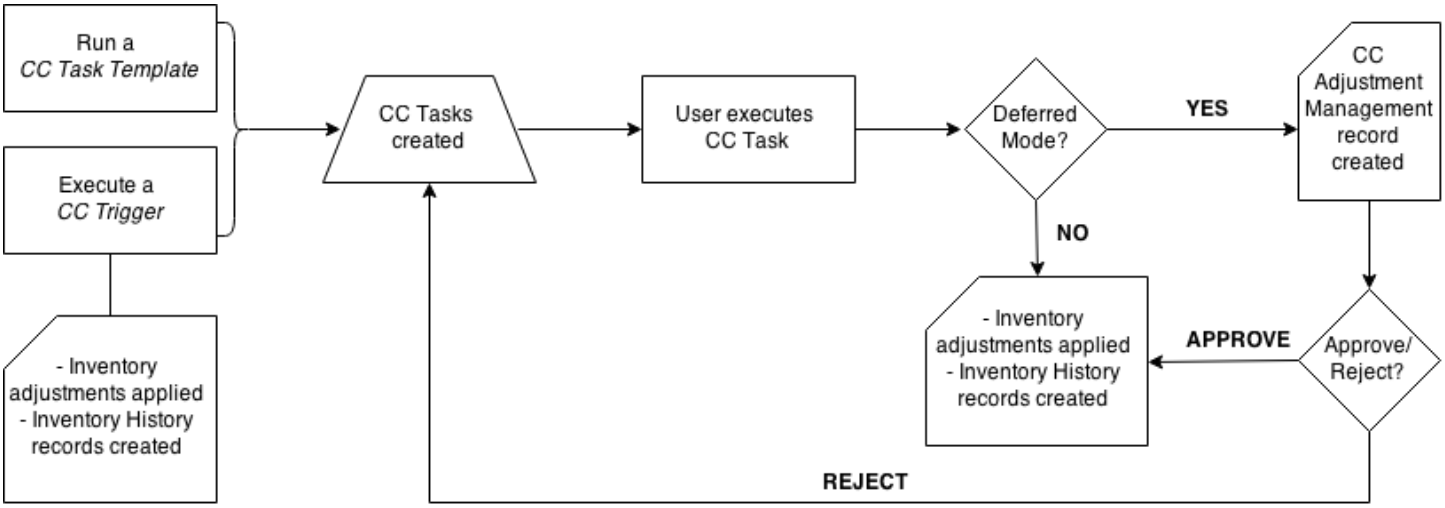
- When you scan an LPN in “Packed” status in the Cycle Count operation, the system gives you an error message that the LPN is in invalid status.

## Cycle Count Inventory Updates

### Deferred vs Immediate Mode

Oracle WMS Cloud allows you to approve/reject inventory adjustments before any real changes are made to warehouse inventory. This process, called the “Deferred Mode”, is enabled at both the Facility and Company levels.

Refer to the following diagram for a high-level process flow of the Deferred Mode:




To enable Deferred Mode for your facility, set the Facility and Company parameters "INVN_ADJUSTMENT_APPROVAL_REQUIRED" to "YES". If this parameter is set to "NO" at either the facility or company level, the "Immediate Mode" (default) will be enabled – in this mode, Cycle Count inventory adjustments are applied immediately. Note that in 3PL environments, this parameter must be set to "YES" at the child company level. Below are the possible configurations:

| **PARAMETER CONFIGURATION** | | **RESULTING BEHAVIOR** | |
|---|---|---|---|
| Facility Parameter 'INVN_ADJUSTMENT_APPROVAL_REQUIRED' | Company Parameter 'INVN_ADJUSTMENT_APPROVAL_REQUIRED' | Write record in 'Inventory Adjustments Management' screen? | Inventory Adjustments Mode |
| NO | NO | NO | Immediate |
| NO | YES | NO | Immediate |
| YES | NO | NO | Immediate |
| YES | YES | YES | Deferred |

In the Deferred Mode, WMS keeps track of all Cycle Counts in the *Cycle Count Adjustment screen*.

This UI screen displays detailed information about the Cycle Count record.

- **Group Number (group_nbr):** Must be equal to the 'Inventory History' group number. In Deferred Mode, inventory adjustments need to get posted with the same group number in the 'Inventory History' table. The group number must be the same for all adjustments done in a specific location (when CC is done at the location

level) or to a specific LPN (when CC is done at the LPN level) in one transaction. Note: Transaction is defined here as:
    - For RF CC_Location modules: Time between Location scan until 'Ctrl-E- End Location Count' is entered.
    - For RF_CC LPN module: Time between LPN is scanned until 'Ctrl-P' is entered to finish the LPN count.
- **Company (company_code):** Company where the transaction is performed. Note that parent level users are able to cycle count inventory at the child level, so child company code should be displayed here for this scenario.
- **Facility (facility_code):** Facility where user performing the count has logged in.
- **Status (status):** Current status of the adjustment record.
- **RF screen name:** Name of the RF transaction used to perform the Cycle Count.
- **Total Expected Qty:** Sum of current_qty (in units) of all the inventory in the location (CC at the Location level) or LPN (CC at the LPN level) before cycle count is performed.
- **Total Count Qty:** Sum of counted quantity (in units) during the execution of cycle count transaction for the location (CC at the Location level) or LPN (CC at the LPN level).
- **Total Adjusted Qty:** Total Count Qty – Total Exp Qty
- **Location (location):** Location where the CC transaction was executed. For CC at the LPN level, this field should be equal to the Location where the LPN was located at the time the count was performed.

# Creation Type

Action that trigged the creation of this inventory adjustment record. The same 'Creation Type' values needs to be added to the 'Task' screen with the exception of 'Manual' so both screens may reference the same table. Valid Creation types are:

| Creation Type | Definition |
|---|---|
| Trigger | Adjustment was done while executing a task that was created with a trigger. |
| CC Rules | Adjustment was done while executing a task that was created by running a 'CC Task Template'. |
| Recount | Adjustment was done while executing a task that was created by generating a recount (rejecting an inventory adjustment record in 'Pending' status) |
| Manual | Adjustment was done manually with RF_CC Location or RF_CC LPN (no task is executed). |

- **Recount Reference:** Used to keep track of counts that are done to the same location by generating a recount (rejecting a particular inventory adjustment). The first time a user rejects a record in 'Pending' status, the system must set the Recount Reference number equal to the Group Nbr of that record. This rejection will automatically trigger a CC task for the same location. Once this CC task is executed, the corresponding inventory adjustment record must be created with the Recount Reference of the first rejection (first Group Number)'.
    - **Task:** TheTask number that was executed to create the corresponding inventory adjustment. Value should be blank if the count was performed manually with RF_CC Location or RF_CC LPN.
    - **Task Type:** The Task Type that was created to create the inventory adjustment. Value should be blank if the count was performed manually with RF_CC Location or RF_CC LPN.

- **Cost Adjustment:** Sum of (item.unit_cost*adjusted_qty) for all the items in the location.
- **Loc Dtl Count:** 'Yes/No' value that indicates whether or not a particular non-active location count was done at the detail level.
- **Warnings:** Displays the number of warnings for a specific inventory adjustment record at the location (RF_CC Location) or LPN levels (RF_CC LPN) as a hyperlink. Click the hyperlink display a list of all the warnings for that specific inventory adjustment record.

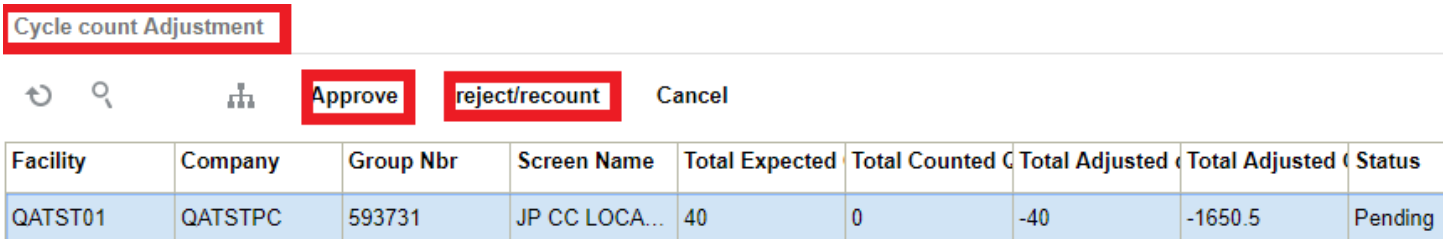
| Warning | Scenario |
|---|---|
| Attribute Discrepancy | - You enter a different batch and/or expiration date or serial number during Cycle Count.<br>- Warning should only be displayed for the detail record(s) for which different attribute was entered. |
| Inventory Expired | - You enter a passed expiration date during Cycle Count.<br>- Warning should only be displayed for the detail record(s) for which an expired expiration date was entered. |
| Mixed batches in restricted Locn | - You scan multiple batches in a location with 'Restrict Batch' flag enabled during Cycle Count.<br>- Warning should be displayed for ALL records in the location.<br>- Inv. Adjustment records with this warning cannot be approved. |
| Mixed SKUs in Single-SKU Locn | - You scan multiple items in a location with 'Allow Multi SKU' flag disabled during Cycle Count.<br>- Warning should be displayed for ALL detail records in the location.<br>- Inv. Adjustment records with this warning cannot be approved. |
| Permanent SKU mismatch | - You scan an item different than the item assigned to a location with 'Item Assignment Type' = 'Permanent' during Cycle Count.<br>- Warning should be displayed for ALL detail records in the location.<br>- Inv. Adjustment records with this warning cannot be approved. |
| Location Mismatch | - You scan<br>an LPN that is systematically in a different location, i.e. LPN's Expected location <> Cycle counted location.<br>- Warning should be displayed for all the details of the LPN that is scanned in a different location. |

- **Reason Code:** Display the value configured in Company Parameter 'CYCLE_COUNT_REASON_CODE'.
- **Create User:** User who creates the inventory adjustment record.
- **Create Timestamp:** Time at which inventory adjustment was completed. For the CC_Location scenario, time at which 'Ctrl-E: End Location count' is entered to finish the count. For the CC_LPN scenario, time at which 'Ctrl-P' is entered to finish the LPN count.
- **Mod User:** User who modifies the record. Set equal to Create User when record is created. Set equal to user who Rejects, Accepts or Cancels the record.

- **Mod Timestamp:** Time at which the record is modified. Set equal to Create Timestamp when record is created. Update timestamp when user Rejects, Accepts or Cancels the record.

## Approving and Rejecting Adjustments in Deferred Mode

The Deferred Mode allows supervisors to approve/reject inventory adjustments made by users who have previously Cycle Counted locations.




To approve/reject records, make sure it is in “Pending” status and click the “Approve” or “Reject/Recount” buttons.

Approving a record applies the inventory adjustments by adding/subtracting inventory from the locations as well as posting records in the Inventory History screen (referenced by the Group Number).

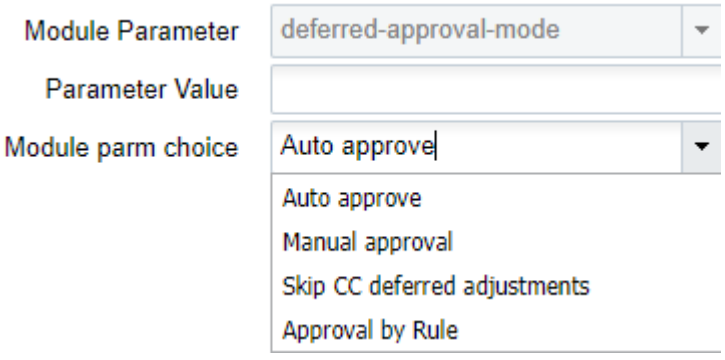
Rejecting a record will cancel the inventory adjustment and trigger a new CC task so that the location is re-counted.

## Deferred Approval Mode set up in RF Cycle Count Transactions

Previously, when performing a Cycle Count with RF Cycle Count Location or RF Cycle Count IBLPN, you would use the screen parameter “**auto-approve-mode (update 18C)**.” This screen parameter is now called “**deferred-approval-mode**.”

The deferred_approval_mode parameter makes it easy for you to distinguish the approval modes available while you are performing cycle counting operations.

From **Modules**, select Cycle Count Location or Cycle Count IBLPN, then Screens, and Screen Parameters to view and select your module parameter choice.




**Note:** you still have the option to use **Auto-Approve-Mode** as old options in this screen parameter are still available.

The available settings for the Deferred-Approval-Mode screen parameter are defined in the following table:

| Mode | Definition |
|---|---|
| Manual Approve | When "deferred-approval-mode" is set with **Manual Approve**, "RF Cycle Count Locn/IBLPN" writes the count information in the CC Deferred Adjustment UI and will leave the information for the supervisor to approve or cancel the count if supervisor is logged in with company and facility combination and mode is configured with deferred mode. |
| Auto Approve | When "deferred-approval-mode" is set with **Auto Approve**, RF Cycle Count Locn/IBLPN" writes the count information in the CC Deferred Adjustment UI and will get Auto Approved after passing through all the validations if user is logged in with a company and facility combination and mode is configured with deferred mode. |
| Skip CC Deferred Adjustment | • <br>• When "deferred-approval-mode" is set with **Skip CC Deferred Adjustment**, then while executing "RF Cycle Count Locn/IBLPN"; the system does not write the count information in the CC Deferred Adjustment UI even though the user is logged in with company and facility combination and mode is configured for deferred mode. In this case adjustments will be posted as an immediate counting mode. <br>• <br>• If there are discrepancies found while counting, when the system is operating in this mode, the necessary inventory adjustments are posted when counting is performed for the location/IBLPN. |
| Approval by Rule | • You can define the rules and set the tolerance % or value for an item or group of items. The system will check for rules before writing to the CC Deferred Adjustment UI and wait for approval. See *Configuring a Cycle Count Approval Rule* (Approval Rule Options) for more details. |

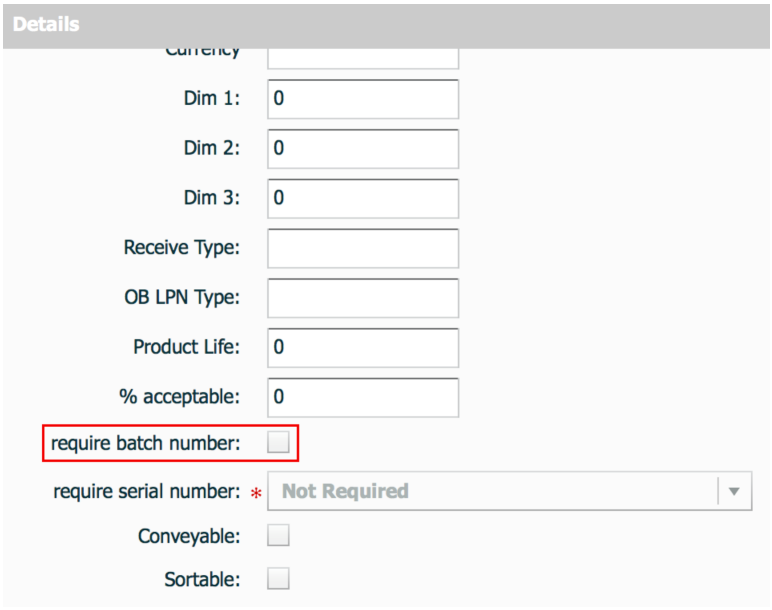
# Lot Management

Lot (batch) information is captured in receiving and maintained up until shipping. The LPN's Batch Number is set up during receipt. The item master maintains a flag ('require batch number') that will be used to determine if a lot (batch) number will be captured.

## Defining Lot (batch) Number Requirement

Each item is configured if it requires WMS to capture the lot (batch) number during receiving.

1. Navigate to the 'Items' UI screen.
2. Using the 'Search' button, search for the item that requires expiration date setup.
3. Select the item record, and click on the 'Details' button.
4. Click the 'Edit' button, and scroll down until you see 'require batch number'.




5. Click the checkbox, and then click the 'Save' button to save the changes made.

# View Lot (batch) Numbers

Lot (batch) numbers are maintained at the LPN level therefore, LPN screens are used to view the lot (batch) number.

1. To view lot (batch) number associated with IB LPNs navigate to the 'IB LPN' UI screen.
2. Using the 'Search' button, you can filter by a specific lot (batch) number in order to find all IB LPNs that are associated to the lot (batch) number.
3. To view the lot (batch) number associated with the OB LPNs navigate to the 'OB LPN' UI screen.
4. Using the 'Search' button, you can filter by a specific lot (batch) number in order to find all OB LPNs that are associated to the lot (batch) number.

# Batch Lock Codes

In the **Batch Management** UI when you apply a lock code to a batch, the **Batch Lock Codes** are considered for the following:

- inventory with batch tracking items
- relevant batches present on the inventory with a batch lock code
- batches with a lock code removed
- determining the lock code priority and corresponding ERP Buckets to be written in relevant Inventory History Records.

  See *Company Parameter – Honor Lock Code Priority* for more details.

**Note:** the system does not consider the batch lock code for non batch-tracked sku's when the inbound LPN or outbound LPN or active inventory is subjected for locking or unlocking.

The following IHT's are affected when inventory with a batch number has a batch lock added or removed:

| Inventory History Transaction | Description |
|---|---|
| IHT 22 | Lock Container Before ASN Verification |
| IHT 23 | Lock Container After ASN Verification |
| IHT 24 | Unlock Container Before ASN Verification |
| IHT 25 | Unlock Container After ASN Verification |
| IHT 49 | Lock Active |
| IHT 50 | Unlock Active |
| IHT 65 | Lock OBLPN |
| IHT 66 | Unlock OBLPN |

### Shipment Verification File

When inventory with multiple lock codes has a batch lock, the shipment verification file has batch lock populated in the inventory_lock_code field and the ERP bucket is populated with the lock code with the highest priority when honor lock code priority parameter is set to **Yes.**

- When the honor lock code priority parameter is set to **No**, (inventory with multiple lock codes and batch lock is present), the shipment verification file has batch lock populated in the inventory_lock_code field and the ERP bucket is populated with the ERP Bucket for the Batch lock code.
- Inventory with a Batch lock will have Container Consumed (IHT - 2) and Container Cancelled (IHT-14) IHTs.
- During QC rejection, when the system writes IHT- 74 QC Rejected, if the container has inventory with a batch lock, the lock code field displays with **Batch Lock.**

**Note:** The **Order Interface** allows lock codes from the order detail to be populated onto the inventory attribute if the **Treat as Attribute** flag is set on the lock code.

# Expiration Dates

Expiration dates are defined during receiving, either via ASN interface or user input, and they are tracked from receiving to wave allocation. Expiration dates are defined at the item level:

1. Product Life: Is defined as the expected lifetime of the item.
2. % Acceptable: Percentage of remaining life required at receiving (defined in %).

## Defining Expiration Dates

Expiration dates are maintained at the item level. Each item needs to be defined with the ‘Product Life’ and ‘% Acceptable’. The two values are defined in the ‘Items’ UI screen.

1. Navigate to the Item UI screen.
2. Using the ‘Search’ button, search for the item that requires expiration date setup.

3. Select the item record, and click Details ().
4. Click Edit, and scroll down until you see 'Product Life', and '% acceptable'.
5. Update these two fields and click "Save" when complete.

Product Life: 30 days

% Acceptable: 60%

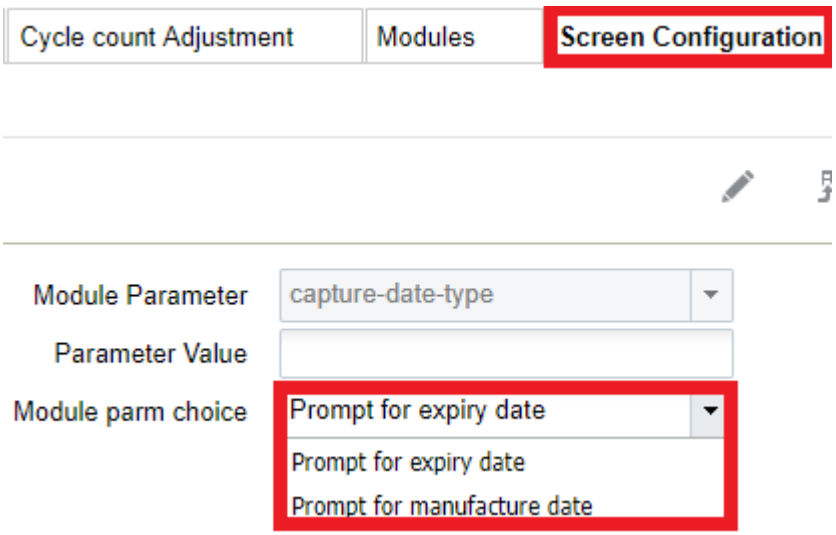
This converts to 30 * 0.6 = 18 days acceptable. In this case, the item has to have at least 19 days left until it expires for it to be accepted into the facility.

So if today's date was 11/24/2014, the system will only allow receipt if the item has an expiration date of at least 12/13/2014 (19 days later).

# Configuration for Expiry Date Receiving

In order to receive items with expiry dates, the receiving RF module must have the Expiry Date validation enabled.

1. Go to the "Screen Configurations" screen.
2. Select the receiving RF module that will have expiry date tracking enabled.
3. Click on Details to access its parameters.
4. Modify the "capture-date-type" parameter to "Prompt for expiry date."




> **Note:** if using manufacture dates, and if the item has the product life field defined, WMS automatically calculates the expiry date as well).

5. You can also define two parameters related to expiry dates: "allow-inv-exp-override" and "allow-rem-exp-override".

- **allow-inv-exp-override:** By default, the RF displays an exception message when the scanned expiry date is *older (i.e.* will expire sooner) than all the expiry dates in the current inventory. If this parameter is enabled, it allows you to override this message.
- **allow-rem-exp-override:** By default, the RF will display an exception message when the scanned expiry date is below the item's acceptable % of remaining life. If this parameter is enabled, allows you to override this message.

## Receiving Expiry Date Items in the RF

During receiving, if the item has a product life value populated, the RF prompts you to input the LPN's expiry date. When populating the expiry date, note that the input must be in the **MMDDYYYY** format.

**Example: December 11, 2014 becomes "12112014".**

# Recall Control

WMS supports the ability to lock a lot (batch) number in the event that a recall has been initiated.

1. To apply a lock to a lot (batch) number, go to the 'Batch Management' screen.
2. Using the search button, filter for the lot (batch) that requires a lock.
3. Select the applicable record, and click the 'Edit' button.
4. Select the applicable lock code from the drop-down menu, and click the 'Save' button.

# Serial Number Tracking

Oracle WMS Cloud users that manage costly electronic merchandise may need to track items individually through the use of Serial Numbers. In WMS, Serial Numbers are unique codes that identify a single unit.

## Important Caveats

Before enabling WMS to track Serial Numbers, here are some important caveats to be aware of:

- Serial Numbers are unique per item. In other words, you cannot have duplicate serial numbers within the same SKU and facility.
- The system allows duplicate serial numbers for different SKUs. In other words, Serial Number records are unique by Serial Number and SKU code combination.
- Oracle WMS Cloud supports up to 25 alphanumeric characters for Serial Numbers.
- If enabled, you will have to perform a scan for each Serial Number in a transaction[1].
- Clients need to be cautioned for changing the serial number tracking level configuration. If we change the serial number tracking levels then there can be situations where inventory in WMS and Serial Numbers will not be in sync.
- Enabling a SKU for Serial Number tracking enables it for all facilities that use that SKU.
- You cannot receive with Serial Numbers when the receiving mode is "receive LPN as Pallet" or if the receiving unit of measure is not Units.
- The system prompts for Serial Numbers when the OBLPN is packed using the Full Case or Cross Dock, given that Serial Numbers for the respective IBLPN are known.
- If the Serial Number tracking option is enabled from "Packing Only" ordering for a Specific Serial Number is not possible.

- Serial number functionality is not applicable for Pre-Packs. It's advised not to enable Serial Number tracking for Parent and Child item.
- The Sort and Receive transaction does not support the Serial Number prompt.
- The system assumes that you will scan every serial number in a pack or case.

Refer to *Serial Number Transactions* for a list of all transactions that have Serial Number validation.

# Enabling Serial Number Tracking

To enable Serial Number tracking in WMS, you have to configure the following:

- Enable tracking for the SKU in the Item Master
- Enable tracking for the Company in the Company Parameters
- Create a Barcode Type record for Serial Numbers

## Item Master Configuration

The item can have two types of Serial Number configurations:

| **Item Master Serial Number Configuration** | |
|---|---|
| **Selection** | **Description** |
| **Not Required.** | Item does not track Serial Numbers. |
| **Required, don't validate.** | The receiving RF transaction will NOT prompt for serial numbers when host has interfaced serial numbers to the system. |
| **Required, validate and allow user override.** | The receiving RF transaction will prompt for serial numbers regardless of whether or not the serial numbers are interfaced in the system. |

To enable Serial Number tracking, complete the following steps:

1. Select the SKU and click Details.
2. In the window, click Edit to begin modifying the SKU's properties.
3. Scroll down to the 'require serial number' field and select and option to enable Serial Number Tracking.
4. Click **Save.**

## Company Parameter Configuration

All companies within the environment that plan on tracking serial numbers must have the company parameter set.

| **SERIAL_NUMBER_TRACKING_LEVEL** | |
|---|---|
| **Value** | **Description** |
| **0** | Company does not track serial numbers, even if items are configured to do so. |
| **1** | From packing:<br><br>- Prompt Serial Numbers at packing |

| SERIAL_NUMBER_TRACKING_LEVEL | |
|---|---|
| | - Track Serial Numbers that are shipped<br>- Serial Number is tied to inventory from Packing |
| **2** | End to End:<br>- Track Serial Numbers at all stages, from receiving to shipping<br>- All inbound to outbound transactions prompt for Serial Numbers (if the item is tracking it) |

## Barcode Type Configuration

Once the item and company parameters are configured, the last step is to make sure that the barcode type for the Serial Number is created. This step configures the barcode length validation for Serial Numbers.

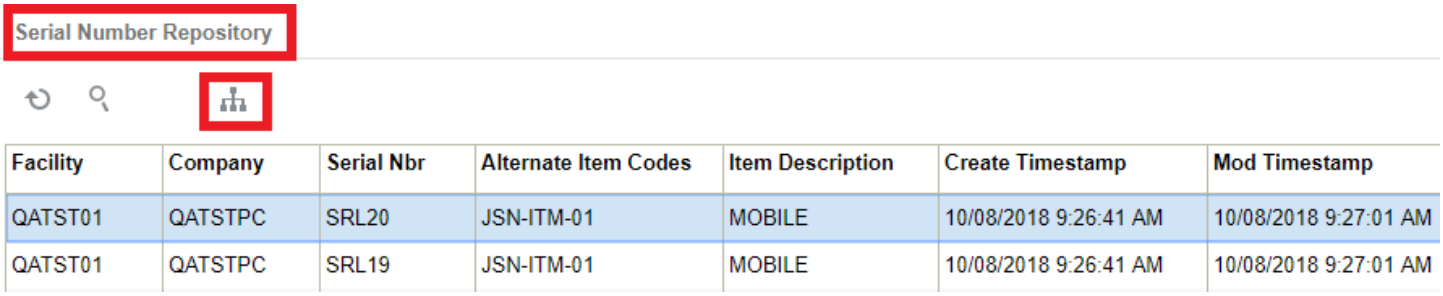
This step is important because without this configuration Serial Number records cannot be created in the company view.

1. Go to the *Barcode Type* screen.
2. Click Create. Select 'Serial Number' under the *Barcode Type* field.
3. Populate the remaining fields. *Length* refers to the barcode length required for Serial Numbers.
4. Click **Save.**

# Serial Number Management (UI)

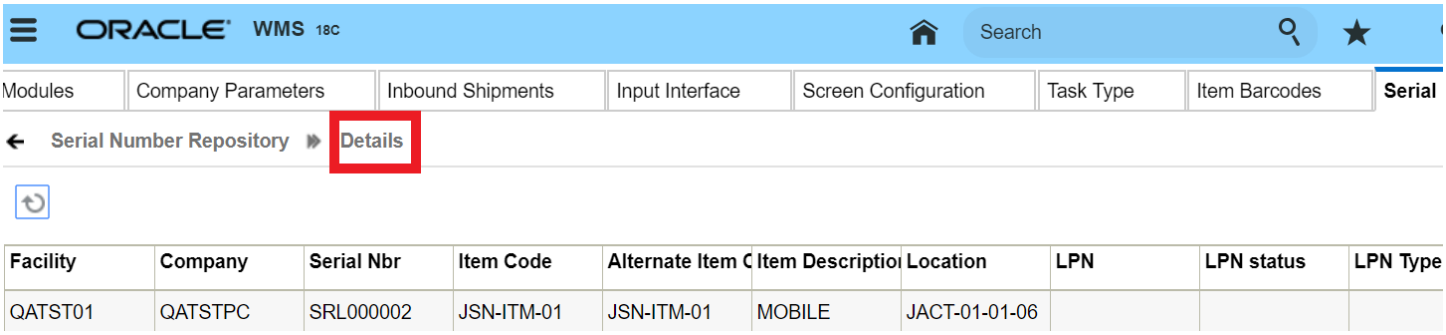
## Serial Number Repository View

This screen displays all Serial Numbers for all items in the current facility.




| Facility | Company | Serial Nbr | Alternate Item Codes | Item Description | Create Timestamp | Mod Timestamp |
|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | SRL20 | JSN-ITM-01 | MOBILE | 10/08/2018 9:26:41 AM | 10/08/2018 9:27:01 AM |
| QATST01 | QATSTPC | SRL19 | JSN-ITM-01 | MOBILE | 10/08/2018 9:26:41 AM | 10/08/2018 9:27:01 AM |

You can also drill down to the serial number record's details () to view the inventory associated to it:




| Facility | Company | Serial Nbr | Item Code | Alternate Item C | Item Descriptio | Location | LPN | LPN status | LPN Type |
|---|---|---|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | SRL000002 | JSN-ITM-01 | JSN-ITM-01 | MOBILE | JACT-01-01-06 | | | |

If the serial number is associated to inventory, the detailed view indicates the LPN's status (Located, Allocated, Packed, and so on).

# Serial Number Inventory View

This screen displays a 'flattened' view of Serial Numbers and their associated inventory records (ex. LPNs) in a single record.


| Facility | Company | Serial Nbr | Item Code | LPN Nbr | Serial Nbr Loca | LPN status | LPN Type |
|---|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | SRL000002 | JSN-ITM-01 | | JACT-01-01-06 | | |
| QATST01 | QATSTPC | SRL000001 | JSN-ITM-01 | CSTST01000... | | Received | I |
| QATST01 | QATSTPC | SRL160313 | JSN-ITM-01 | | A-A-B-L-02 | | |

**Note:** If a serial number does not have an associated inventory, the LPN Number/Status/Type columns are left blank. If a serial number is shipped and returned back to the same facility, this screen displays two records (shipped and received).

# Serial Number History View

This screen displays all the “serial number – inventory” association changes in the system. For example, there can be a serial number record for an LPN of type “I” (Inbound) and another for LPN of type “O” (Outbound).

Serial Number History

| Facility Code | Company Code | Serial Nbr | Item Code | Alternate Item Codes | Item Description | LPN Nbr | Type |
|---|---|---|---|---|---|---|---|
| QATST01 | QATSTPC | SRLWJ12002 | SRL-ELEC-131 | SRLELEC131 | Black & Decker Drill… | IBLPNSRL1212 | I |
| QATST01 | QATSTPC | SRLWJ12103 | SRL-ELEC-131 | SRLELEC131 | Black & Decker Drill… | IBLPNSRL1213 | I |
| QATST01 | QATSTPC | SRLWJ12104 | SRL-ELEC-131 | SRLELEC131 | Black & Decker Drill… | IBLPNSRL12104 | I |

# Creating Serial Number records in WMS

You can add Serial Number records in the system in two ways: through the UI and through interfaces.

## Through the UI

1. Go to the *Serial Number Repository* screen.
2. Click Create () and populate the Item and Serial Number.
3. Click “Save” to save your changes.

## Through Interfaces

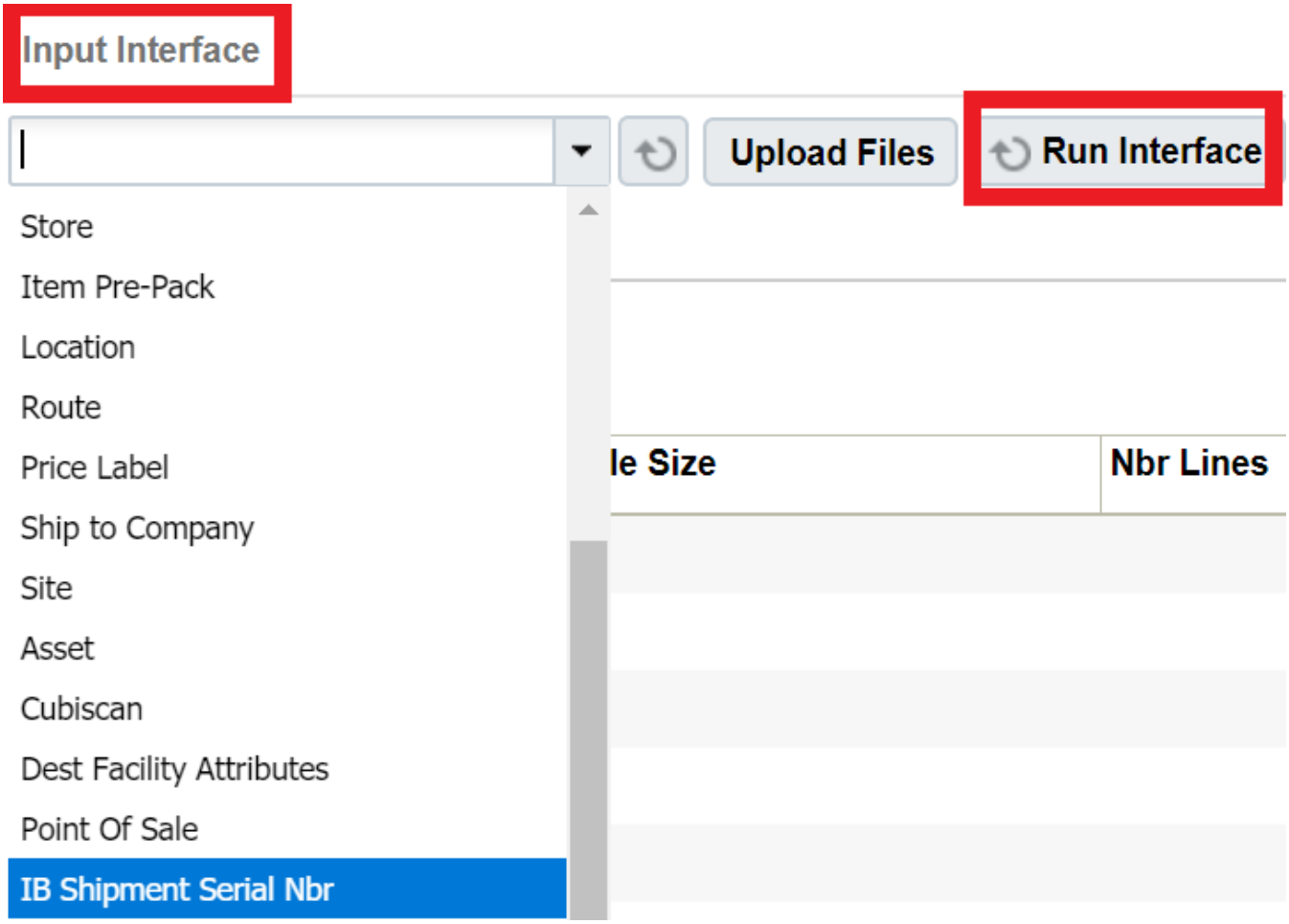
You can also interface Serial Numbers into Oracle WMS Cloud through the “ISN” interface. This is essentially an excel file with a set of columns that are populated to link LPNs with Serial Numbers.

Here is a list of things you need to check before attempting to interface an ISN file:

- The SKU in question must have the Serial Number activated.
- The Company Parameter *SERIAL_NUMBER_TRACKING_LEVEL* is set to either 1 or 2.
- The ASN (Shipment Number) must already be in the system.
- The ASN (Shipment Number) must have cartonized inventory (the ASN details must have the LPN populated).

Once you verify that all necessary information is in the system, follow these steps to upload your serial numbers:

1. Go to the *Input Interfaces* screen.
2. Select *IB Shipment Serial Nbr* from the drop-down, upload the interface file, and click “Run Interface”.




3. If everything was done correctly, the system prompts the message “Status: Interface Completed”. From the the Serial Number Repository screen, click OK and verify that the serial numbers were successfully uploaded.

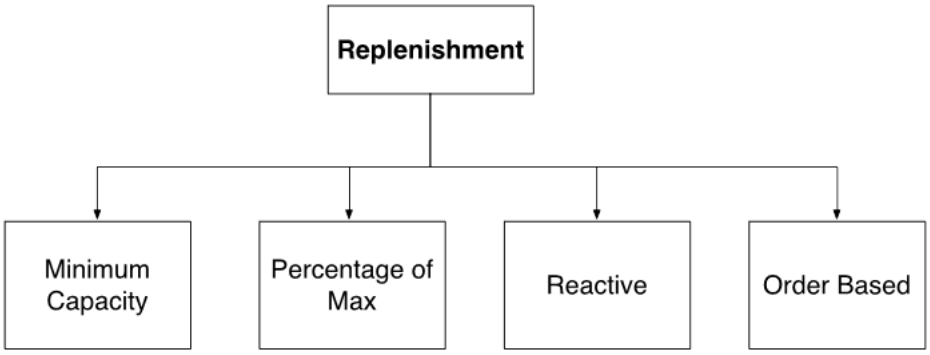
# Replenishment

**Short description:** Replenishment is the movement of inventory from reserve storage locations to picking storage locations. The purpose of replenishment is to maintain adequate inventory levels to meet customer demand.

Some objectives of integrating Replenishment into WMS include:

- You can replenish inventory for locations if the inventory goes below a defined level.
- Replenishment can be based on requirements such as satisfying orders for stores.
  - In this case, certain dedicated replenishment locations can be configured to consolidated orders for a store.
- Replenishment is performed in Active Locations and also allows you to perform Reserve to Reserve replenishment.

Oracle WMS Cloud supports four replenishment modes:




Each replenishment type has different criteria for when the replenishment wave is triggered:

- **Minimum Capacity:** Triggered when a location's current quantity goes below the required minimum quantity.
- **Percentage of Max:** Triggered when the volume of items in the location goes below the location's pre-configured percentage of maximum volume.
- **Reactive:** Triggered when you manually scan a location to be replenished.
- **Order Based:** Triggered when an order's SKU needs to be replenished in the picking locations.

# Repenishment Template Modes

When a location is allocated for replenishment, WMS considers several criteria, depending on the Replenishment Template's configuration:

- The Locations Min/Max Units (mode = "minimum capacity")
- The Location's Min/Max Volume (mode = "percentage of max")
- The Location's Item assignment

**Additional Configurations Required Based on Replenishment Mode**

**Minimum Capacity:**

Mimimum Capacity mode is triggered when a location's current quantity goes below the required minimum quantity. Additional configurations:

- Locations with Replenishment Zones require Min/Max Units and/or LPNs populated.
- Locations with Replenishment Zones need to be "Permanent" with an assigned Item.

**Reactive:**

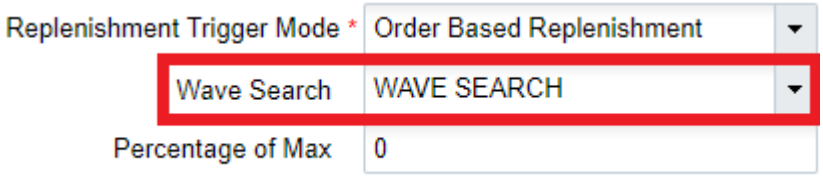
Reactive Replenishment mode is triggered when you manually scan a location to be replenished. Additional configurations include:

- A "Reactive Replenishment" RF module must be added in the "Screens" tab and to the user's Menu in the "Menus" screen.

**Order Based:**

Order Based Replenishment mode is triggered when anOrder's SKU needs to be replenished in the picking locations. Additional configurations include:

- Requires a Wave Search Template. Create a new search template from the "Replenishment Template" screen.
- Select the desired search template in the replenishment template.




# Required Configuration for Replenishment

Configuring a Replenishment Wave requires the following steps:

1. Setting up locations for replenishment
2. Setting up replenishment rules
3. Setting up task templates
4. Creating a Replenishment Template

## Step 1: Setting up Replenishment and Allocation Zones

Replenishment requires two types of locations: replenishment and allocation zones. Replenishment zones are locations that you replenish to, while allocation zones are locations that you pick from for replenishment.

*To Configure the Replenishment Zone:*

1. Go to the "Replenishment Zone" screen.
2. Define the different replenishment zones for the warehouse using the Create button.
3. Once the replenishment zones are created, go to the "Locations" screen.
4. Choose a location to replenish to by assigning it a replenishment zone. To do this, select the location and click Edit.
5. Scroll down to the "Replenishment Zone" field and select the appropriate zone from the drop-down.
6. Locations with replenishment zones also require item assignments. Item assignments tell the system what item this location is replenished with. To do so, change the location's "Item Assignment Type" to "Permanent" and populate the SKU code in the "Item" field.

7. Click “Save”.

*Configuring the Allocation Zone:*

1. Go to the “Locations” screen.
2. Select the location that you will replenish from and click Edit.
3. Scroll down to the “Alloc zone” field and populate an allocation zone. This value is used in the replenishment template for defining which allocation zone will provide the replenishment.
4. Click “Save”.

## Step 2: Create the Replenishment Template

Next, you need to create the Replenishment template and define the parameter:

1. Go to the “Replenishment Template” screen.
2. Click Create () to create a new template.
3. Fill in the desired parameters.
4. Click Save.

## Description of Fields

- **Area:** Configures WMS to exclusively look at the populated area to replenish to.
- **Template Name:** Enter the template name.
- **Replenishment Zone:** Determines which replenishment zones the template searches for.
- **Replenishment Rule:** Allows you to select which rule to use for the current template.
- **Task Creation Template:** Allows you to select which task template to use for the current template.
- **Replenishment Trigger Mode**: Determines the trigger mode (see replenishment modes described in section 5.1).
- **Wave Search -** Wave Search Templates are used as filters for selecting specific Orders during a wave. Each search template has a set of fields that are configurable.
- **Percentage of Max:** Triggered when the volume of items in the location goes below the location’s pre-configured percentage of maximum volume. Additional configurations:
    - Locations with Replenishment Zones need the Length, Width, and Height fields populated.
        - Locations with Replenishment Zones require Min/Max Volumes populated.
        - You should populate the “Percentage of Max” field in the replenishment template. This percentage value is used as criteria for triggering a location based on the location’s maximum volume.
            - For example, say that Location A’s Max Volume = 100 and Percentage of Max = 20%. If the location’s total volume goes below 20 (100*0.2 = 20), the location is triggered for replenishment.
- **Allow Expired Inventory:** If the flag is enabled, the system allows you to replenish inventory that exceeds the expiry date.

## Step 3: Setting up Task Templates

1. Go to the “Task Creation Template” screen.
2. Click “Create” () to create a new Task Template.
3. Select this template and click on Details () to view its details.
4. Click “Create” () to create the appropriate task types and their ordering/selection criteria.
    - For LPN replenishment, select “Full LPN Replenishment”.

- For Cases replenishment, select “Cases Replenishment”.
- For Units replenishment, select “Consolidate Replenish”.

5. Click Save

## Step 4: Setting up Replenishment Rules

Much like the Wave Template’s “Allocation Mode”, the Replenishment Template uses Replenishment Rules to define the types of allocations that are used for replenishment.

1. Go to the “Replenishment Template” screen.
2. Click on the “Replenishment Rule” button to access the rules.
3. Click Create to create a new rule. To access its details, select it and click Details.
4. To create a new allocation UOM, from the Replenishment Rule Sequence screen click Create and populate the appropriate fields.
5. Click Save

## Description of Fields

- **Replenishment Rule:** allows you to select which rule to use for the current template.
- **Sequence Nbr:** Sequence for creating task types, if there are more than one within the template.
- **Location Type**: Locations in WMS represent storage locations in the warehouse. Locations have different types depending on how they are used within the warehouse.
- **Restrict area:** populating this field tells WMS to exclusively look at the populated area to replenish from.
- **Restrict alloc zone:** populating this field tells WMS to exclusively look at the populated allocation zone (which was defined earlier) to replenish from.
- **Allocation Method:** defines the order in which LPNs are selected for replenishment.
- **Replenishment UOM:** defines the UOM that is allocated for replenishment.
  - **Note:** Units replenishment only works for Active locations.
- **Consolidate and Distribute Replen**: if this flag is checked, WMS allocates replenishment from multiple locations. This flag only works with Unit and Cases replenishment.
  - **Note:** Units replenishment only works for Active locations.
- **Consolidate and Distribute Replen**: if this flag is checked, WMS allocates replenishment from multiple locations. This flag only works with Unit and Cases replenishment.
- **Round Up One Uom**: The *Round Up One UOM* flag allows you to replenish beyond the need by one extra UOM (LPNs/cases/packs) for all of the eligible locations. When the Round Up One UOM flag is configured in the Replenishment Rule Header, the system replenishes by one extra UOM compared to the outstanding need of the location (see example below). When the Round Up one UOM flag is combined with the Ignore Capacity for Last Permanent Location Flag, the required need is replenished to the destination location when the replenishment UOM is LPNs/cases/packs. If the Ignore Capacity for Last Permanent Location Flag is set to no and the Round Up one UOM flag is enabled, then the destination location is replenished by one extra UOM when the need is not an integral multiple of the LPN/case/pack quantity.

## Step 5: Wave Inquiry

The Wave Group Inquirty screen will show the status of the Wave run. Choose the Allocation View in this screen. Once Allocation completes, the wave will generate a Task. It will also create an internal order.

# Executing Replenishment Waves

1. Go to the “Replenishment Template” screen.
2. Select a template and click “Run Template”.
3. WMS returns a message displaying the wave number. This creates a new replenishment Task.
4. Go to the “Execute Task” RF module and select/type in the desired replenishment task.
    - To search for pending Replenishment tasks in the “Tasks” UI screen, click the magnifying glass and filter by the replenishment task type.

      **Note:** You can also search via the Run Number on the Wave Inquiry screen.

    - To filter by replenishment tasks in the RF, press Ctrl-T and select the Task Type.
5. To verify if the replenish to the location is successful, go to the Active inventory Screen and check the current quantity.

# Replenishment Scenarios

From here, depending on the Replenishment Task Type, the order of RF screens is different. The following section outlines the different replenishment scenarios:

- Scenario 1: Cases replenishment, no distribution
- Scenario 2: Full LPN replenishment, no distribution
- Scenario 3: Cases replenishment, consolidate and distribute (reserve to active)
- Scenario 4: Units replenishment, consolidate and distribute (active to active)

## Scenario 1: Cases Replenishment, no distribution

For this scenario, you must make sure that both the Task Template and the Replenishment Rule have cases configured.

Once you enter the task, the RF prompts you for pallet and LPN numbers. This pallet is the intermediate pallet that transports the merchandise into the final replenishment location.

**Note:** *here the user will be pulling the **entire LPN**, even if it isn’t fully allocated.*

If there is no more room for more LPNs in the pallet, you can “End” the pallet by pressing Ctrl-E. Ending a pallet with pending picks causes the system to create a new replenishment Task for the remaining picks.

1. Once all the LPNs from the picking location are moved to the pallet, the RF prompts the destination location (the location to replenish to). You must scan the location barcode when they arrive to the location:
2. Once the location barcode is scanned, the RF will ask you to scan the “**To LPN”** (the destination pallet). This is the LPN that is replenished. In the “Qty:” field, you must enter the amount of cases being moved.

```
replen_location: R3051
LPN: CSSN00001003
Item:    59403325
Item 9
To LPN:____________________
Qty: 10 (cs=10) _________
```

> **Note:** for the "Qty: 10 (cs=10)", the first 10 represents the number of cases to move, while the second "10" value ("cs=10") represents the standard case quantity of the item.

3. Once the contents are moved, the remaining contents in the LPN must be returned to a reserve location. The following is an example of the reserve location field.
4. If there are no LPNs remaining, the task ends and the RF returns to the Task List.

## Scenario 2: Full LPN Replenishment, No Distribution

For this scenario, you must make sure that both the Task Template and the Replenishment Rule have LPNs configured.

1. Once you enter the task, the RF prompts for pallet and LPN numbers. This pallet is the intermediate pallet that transports the merchandise into the final replenishment location.

> **Note:** If there are multiple LPNs to be picked, the RF prompts for another LPN. If there is no more room for more LPNs in the pallet, you can "End" the pallet by pressing Ctrl-E. Ending a pallet with pending picks will cause the system to create a new replenishment Task for the remaining picks.

2. Once all the LPNs from the picking location are moved to the pallet, the RF prompts the destination location (the location to replenish to). You must scan the location barcode when the pallet arrives to the location.
3. Once the location barcode is scanned, the RF will ask you to scan the LPNs in the pallet to replenish with. The "Qty:" field denotes how many LPNs there are to replenish.
4. If there are no LPNs remaining, the RF displays a message saying "No more tasks". Press Ctrl-A to proceed.

## Cases Replenishment, Consolidate and Distribute (reserve to active)

Consolidate and distribute is the type of replenishment where the user is prompted to batch pick from multiple locations. During this batch pick, the user is to create a 'dummy' IBLPN that is used to carry the picked cases. In this sense, the 'dummy' LPN is an intermediate LPN use for transporting cases from the picking to replenishment location.

For this scenario, the you must make sure that both the Task Template and the Replenishment Rule have cases configured.

1. Upon entering the task, the RF prompts you to "open" an IBLPN. This is the 'dummy' LPN that is used to carry the picks.

> **Note:** at any point in time you may choose to close the current dummy LPN by pressing Ctrl-E. This will allows you to open another LPN (if the first LPN gets physically full) and continue with the pick. When you press Ctrl-E, the system will suppress the capacity check (units/weight/volume).

2. After scanning the dummy LPN, the RF directs you to the first picking location. Scan the location barcode to confirm that the user is at the location.
3. The RF will now ask you to begin picking cases from the first picking location, prompting you to scan the Item code and quantity.
4. If there are more cases to pick, the RF will direct you to the next pick location, and repeat the picking process. When you finish all the picks, the RF displays the message "Nothing left to pick":
5. Once all the picks are complete, the RF then directs you to the replenishment location. Scan the location barcode to confirm that the user is at the location.
6. The RF then prompts you to move the picked units into the replenishment location. Since you are replenishing to an active location, you should only enter the quantity being replenished.
7. When all locations in the task have been replenished, the RF will return to the Task list.

### Scenario 4: Units Replenishment, Consolidate and Distribute

Consolidate and distribute is the type of replenishment where you are prompted to batch pick from multiple locations. During this batch pick, you are to create a 'dummy' IBLPN that carries the picked cases. In this sense, the 'dummy' LPN is an intermediate LPN that transports cases from the picking to the replenishment location.

For this scenario, you must make sure that both the Task Template and the Replenishment Rule have cases configured.

1. Upon entering the task, the RF prompts you to "open" an IBLPN. This is the 'dummy' LPN that is used to carry the picks.

   > **Note:** at any point in time you may choose to close the current dummy LPN by pressing Ctrl-E. This allows you to open another LPN (if the first LPN gets physically full) and continue with the pick.

2. After scanning the dummy LPN, the RF directs you to the first picking location. Scan the location barcode to confirm that the user is at the location.
3. The RF now asks you to begin picking units from the first picking location, prompting you to scan the Item code and quantity.
4. If there are more units to pick, the RF directs you to the next pick location, and repeat the picking process. When you finish all the picks the RF displays the message "Nothing left to pick".
5. Once all the picks are complete, the RF directs you to the replenishment location. Scan the location barcode to confirm that the user is at the location.
6. The RF then prompts you to move the picked units into the replenishment location. Since you are replenishing to an active location, you should only enter the quantity being replenished.
7. When all locations in the task have been replenished, the RF will return to the Task list.

## Reactive Replenishment – Weight Capacity Check

When replenishment of items happens in a location via RF reactive replenishment, Oracle WMS Cloud allows you to do a weight based capacity check along with the current volume and unit. This will help optimize replenishment for a targeted location.

To enable weight based capacity check, make sure that your Replenishment Rule has the Capacity Check Method set as "Weight, Fall Back to Units."

In the Capacity Check Method drop-down, you can also specify the capacity check as Units, Volume, Fall Back to Units, or Volume, Weight, Fall Back to Units.

The following table provides definitions for the Capacity Check Method drop-down options:

| Capacity Check Method Option | Definition |
|---|---|
| Units | Replenishment rule will check capacity in terms units. |
| Volume, Fall Back to Units | Replenishment rule will first check capacity in terms of volume and if volume is 0, the system will check capacity in terms of units. |
| Weight, Fall Back to Units | Replenishment rule will first check capacity in terms of weight and if weight is 0, the system will check capacity in terms of units. |
| Volume, Weight, Fall Back to Units | Replenishment rule will first check capacity in terms of both volume and weight, and if volume or weight is 0, the system will check capacity in terms of units. |

## Executing Reactive (Emergency) Replenishment

In emergency situations that require quick replenishment, you can use the reactive replenishment functionality to instantly allocate a location for replenishment. This scenario uses a stand-alone RF module called “Reactive Replenishment”. Here, you simply scan the location that needs to be replenished with the RF and WMS creates a replenishment task. Depending on the RF’s parameter setting, you may or may not execute that replenishment on the spot.

1. Go to the “Reactive Replenishment” RF module.
2. In the “Locn:” field, scan the location to replenish. The RF displays the message “Replenishment submitted for location [area]”. This basically runs a replenishment wave for the scanned location.
3. If a replenishment task is generated, depending on the RF’s parameters, you may execute the replenishment on the spot. To do so, press Ctrl-A to proceed.
4. Perform the replenishment as described in previous sections.

# Replenishment with Picking Wave

Oracle WMS Cloud supports replenishment via Picking Waves. Upon performing replenishment, the system recognizes the location to allocate the inventory based on the Replenishment Rule Configured in the Wave Template.

This type of replenishment is called Order Based, as it is making sure that the Orders picked by the wave are getting fulfilled. So, if there is no sufficient inventory in the source location for users to pick and satisfy the order need, the system will replenish those locations. The system first tries to replenish permanent (Locations that have an Item Assignment type field as Permanent), and if there is no enough capacity, then the system will replenish to a dynamic active location.

**Note:** Replenishment with a picking wave is supported from Reserve to Active and Active to Active only.

| Location | Lean Time Replenishment | Replenishment with Picking Wave |
|---|---|---|
| Permanent Active | Yes | Yes |
| Dynamic Active | No | Yes |
| Permanent Reserve | Yes | No |
| Dynamic Reserve | No | No |

## Configuration for Picking Wave-based Replenishment

To configure Replenishment to dynamic locations, you’ll need to do the following: :

1. Set up Replenishment Type
2. Set up Replenishment Type to Replenishment Zone
3. Configure the Allocation Location
4. Set up Replenishment Rule in Wave Template

5. Run the Replenishment Wave
6. Execute Allocation tasks to Replenish inventory to active locations.

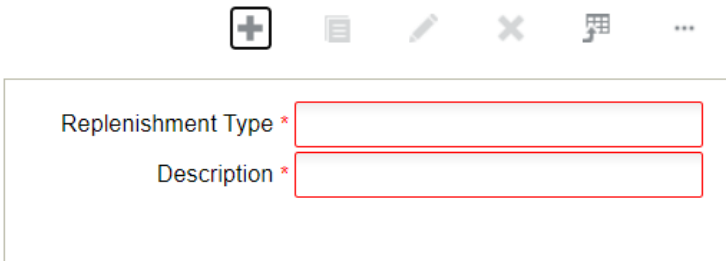
## Set Replenishment Type

The Replenishment Type (Replen-type) is used for finding locations. You should create a replenishment type on the item defined at the company level.

> **Note:** There can be similar replenishment types created across companies. Based on the login context, the system will show the replenishment types by company code.

Before you configure the Replenishment Type on the item facility, you need to define the type.

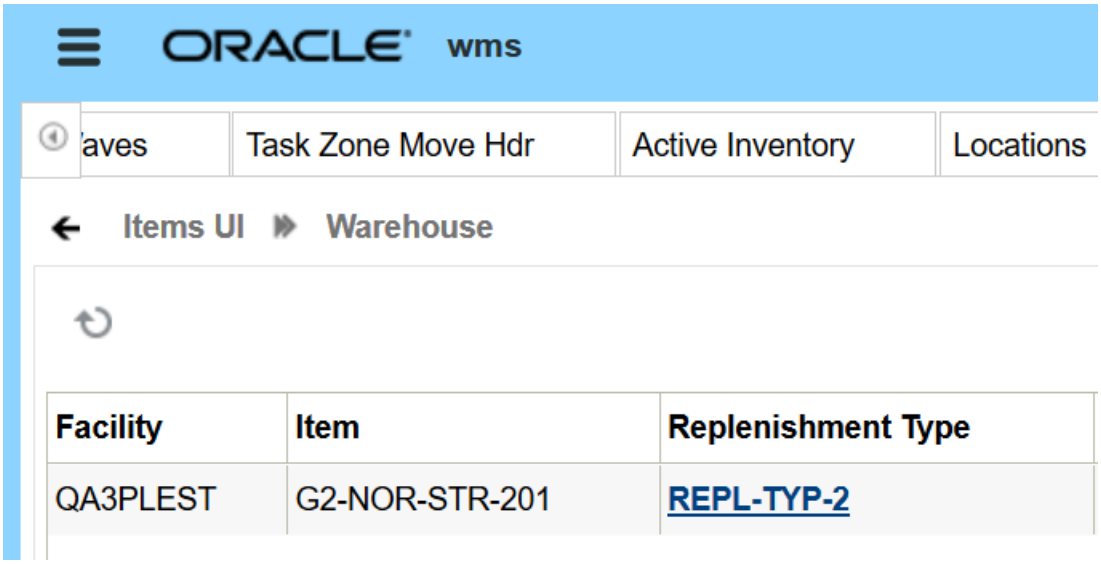
Define the replenishment type from the **Replenishment Type** UI > Click **Add** and enter the details as below:




To configure the Replenishment type on the UI:

> **Note:** You can also interface Item facility to associate replenishment type (replen_type).

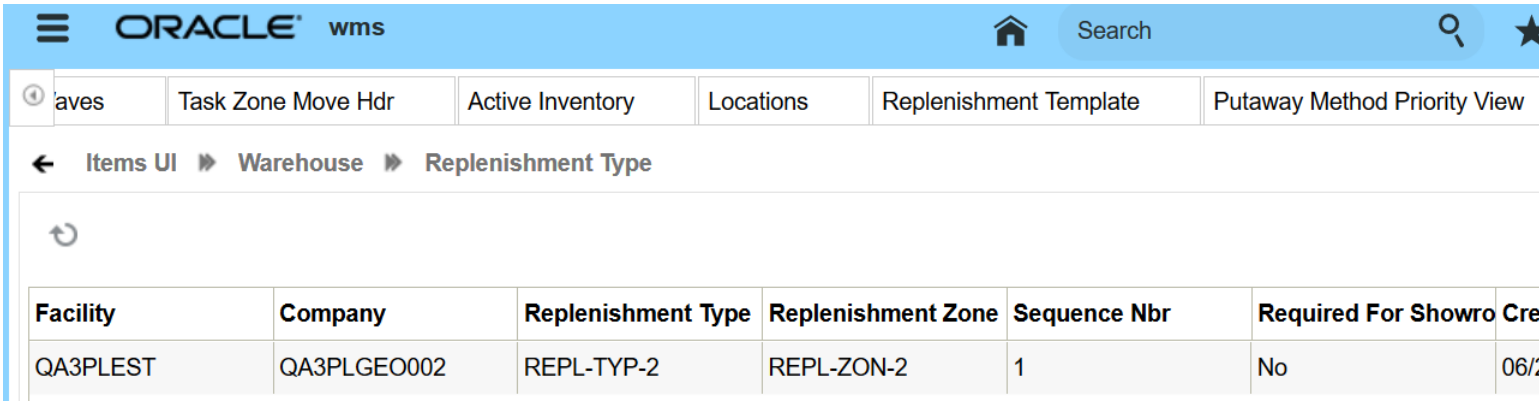
1. Go to the **Item** UI > Click the **Warehouse** icon.
2. Select the item or Click **Add** to open the item configuration pane.
3. Select your **Replenishment Type** from the drop-down menu and click **Save**.



## Replenishment Type to Replenishment Zone

As the system searches the Replenishment Type for the item. You need to establish an association between the replenishment type and the replenishment zone by defining the sequence number.

This configuration is helpful as items classified with similar replenishment type will be assigned to similar locations which do not have permanent items assigned.

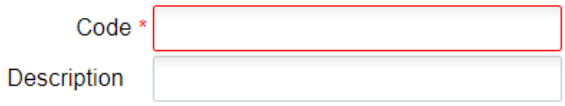



### Setup Replenishment Zone

Before you configure the replenishment zone in a location, you need to create a replenishment zone and associate it to the active location:

To create Replenishment Zone.

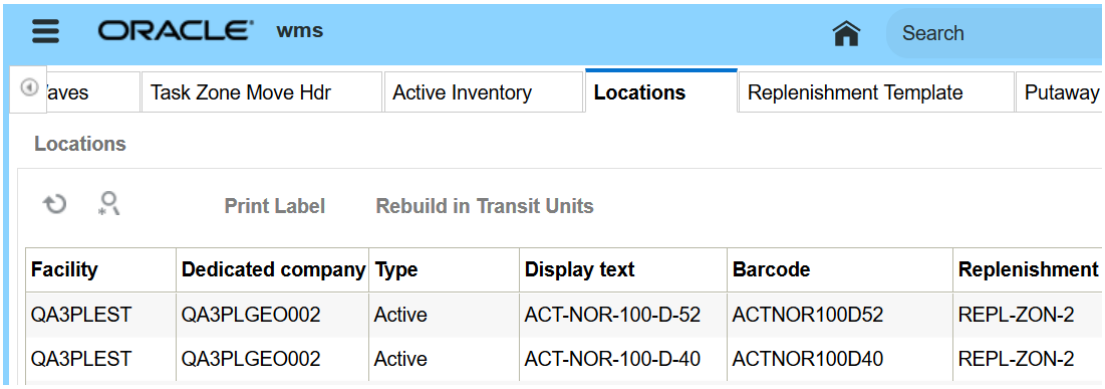
1. Go to the **Replenishment Zone** UI > Click **Add** .
2. Enter the **Code** and **Description** for the Replenishment Zone.



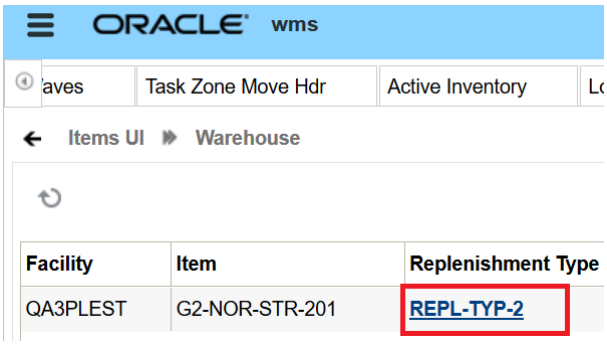

3. Click **Save**.

### Associate Replenishment Zone to the Dynamic Location

1. Go to the **Locations** UI.
2. Create an active location and associate the **Replenishment Zone**.



Now, configure your replenishment zone and sequence number in your **Item** > **Warehouse** > **Replenishment type** UI, click **Replenishment Type** hyperlink and configure your **Replenishment Zone**.



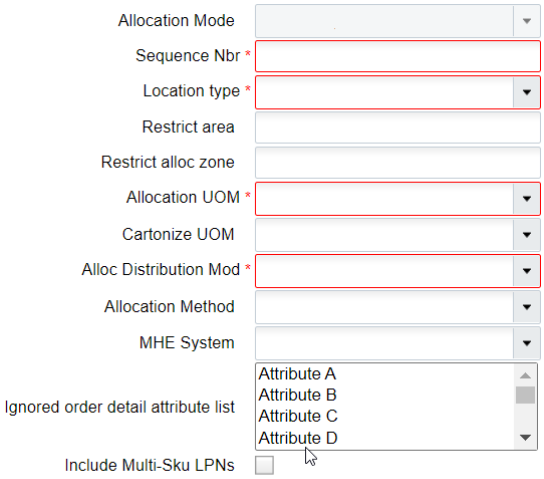

## Configuring Allocation Location

Allocation Modes are used to define how the inventory should be allocated in terms of the different allocation UOMs.

1. In the **Wave Template** screen > click on the **Allocation Mode** button. This will route you to the list of Allocation Modes available for the current company.

   > **Note:** Make sure you are at the correct company view before proceeding.

2. Create a new Allocation Mode with the Create button.
3. Enter its details with the **Details** button .
4. Create the sequence of allocation UOMs desired for the Wave Template.



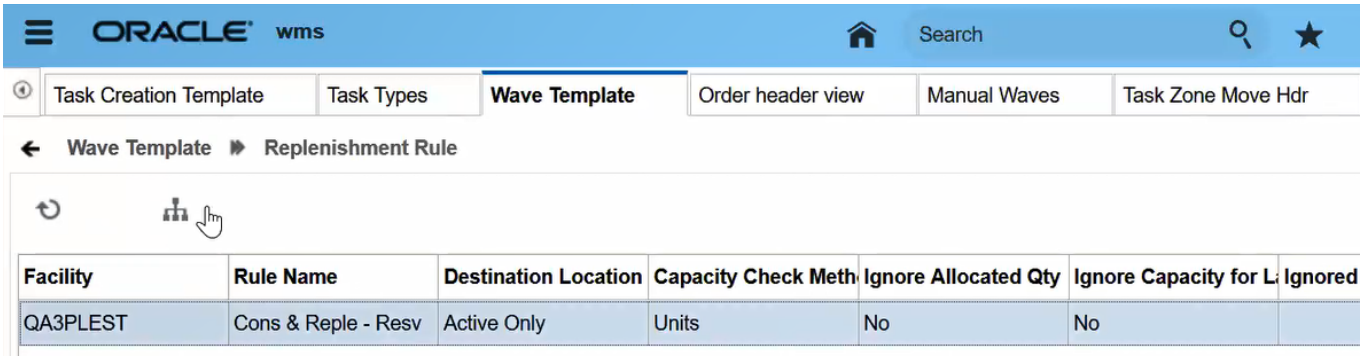

5. Click "**Save**".

> **Note:** You need to set the **Location type** as **Active** because the Allocation happens only from active and items are picked from the active location.

## Replenishment Rule in Wave Template

After defining your replenishment type, you need to define the replenishment rule in the Wave template. Before you configure the allocation location type, you need to the define the replenishment rules.

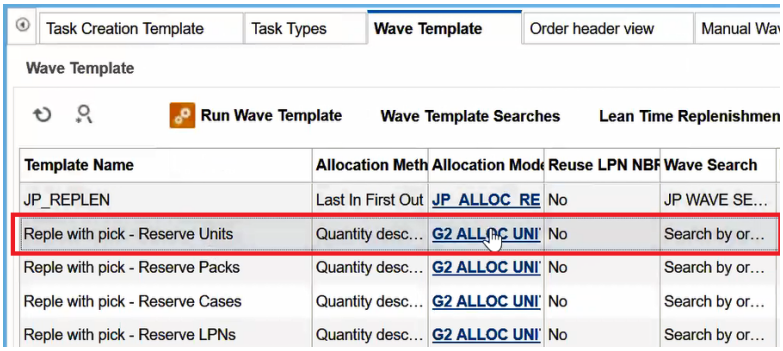
1. Go to the **Replenishment template** UI > **Replenishment Rules** button.
2. Click Add and define the Replenishment Rules.




3. Go to details and define the Allocation Location type, Allocation method, replenishment UOM type, and so on.


4. Click **Save**.

To perform replenishment with a picking wave, go to the **Wave Template UI.** Select the Wave Template where you'd like to assign a Replenishment Rule and edit the Replenishment Rule with the Rule of your choice.

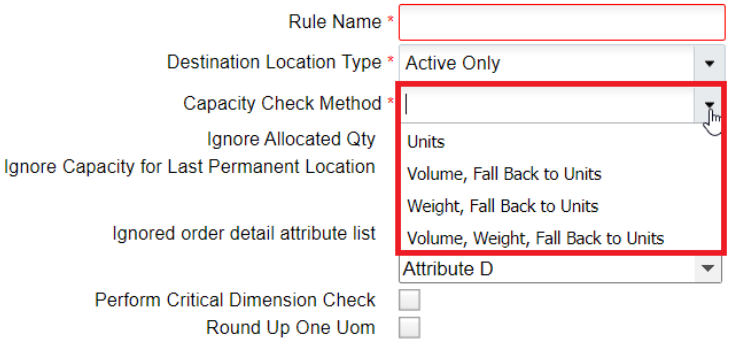



# Workflow of Replenishment with Picking Wave

When replenishment is run with a picking wave, the system first identifies the order need. After the order need is determined, the system checks if the locations have the inventory. If the selected SKUs are available to satisfy the order need, then the system does not proceed with the replenishment process. However, once the need for replenishment is determined, the system looks for the source location by giving priority to the permanent locations. If the permanent location's capacity is fulfilled, then the system finds a dynamic location to replenish.

1. You need to configure the **Replenishment Type** on the item facility and a search sequence by Replenishment type to **Replenishment Zone** configuration. This provides flexibility to set similar items together while assigning them to dynamic locations.
   a. Define capacity checks to assess how much can be replenished.

b. On assessing the capacity, the system performs the capacity check based on the configuration you select. You can choose to perform capacity check based on any of the following methods:




c. Upon assessing the capacity for reserve locations to perform replenishment, the system performs max volume and weight check, max units, and max LPN's check.

2. The **Replenishment Rule** associated to a wave template indicates the system to search for any replenishment opportunities.
3. On running the wave via a **Wave Template**, the system creates the replenishment allocation first based on the replenishment rule and then proceeds with the allocation phase.
4. Typically, replenishment with a picking wave will always replenish to locations defined in allocation mode sequences for the wave template. Therefore, its crucial to configure the **Allocation Mode** in the Wave and define the picking locations. This provides flexibility for users to replenish locations where the picking takes place.
5. After completing the Order selection phase, the system determines the total need required for each distinct SKU based on the Wave Search criteria in the Wave template. Then system calculates the required quantity needed to be replenished after considering the available inventory for each SKU in the locations. The system calculates the available inventory for the location as (In-transit + Current – Allocated).
6. If there is a need to replenish, the system first searches for permanent active locations for the SKU. The source locations of the SKU are fetched based on the replenishment rule and the destination permanent locations will be picked from the allocation mode sequence.
7. If **Permanent Active Locations** are full, then the system will search for **Dynamic Active Locations** for the SKU with inventory. Based on the location pick sequence, the available locations will be identified
8. After replenishing SKUs to permanent location is complete and if there are no further outstanding needs, the replenishment for dynamic active locations will be invoked. Replenishment of dynamic active locations will be done until the order need is satisfied.
9. On completing the replenishment phase, as part of the allocation phase, the system will provide the facility to allocate SKUs from In-Transit Inventory to the location. This allocated quantity is from the source location and apart from current quantity.
10. As part of the task creation phase, the system will create replenishment tasks, along with the picking tasks. There will be a single task creation rule for the wave template.

# Replenishment via Picking Wave Examples

**Scenario 1**

- Orders need =150
- Replenishment UOM is units
- Locations have the following capacity

| Location | Type | Min | Max | Current Qty | Capacity |
|---|---|---|---|---|---|
| A001 | Permanent | 20 | 200 | 20 | 180 |
| A002 | Dynamic | 20 | 200 | 0 | 200 |

The system first looks at the Permanent location. Replenishment with Picking Waves is based on order need, so the system will replenish until it meets the order need requirement. In the above case, the max capacity is 200,the Current Qty =20, and the available capacity is 180, and UOM is units

Therefore, after replenishment phase is complete, the system allocates 130 (in-transit) units where the order need of 150 is satisfied (Current + In-transit).

| Location | Type | Min | Max | Current Qty | In-Transit | Capacity |
|---|---|---|---|---|---|---|
| A001 | Permanent | 20 | 200 | 20 | 130 | 50 |
| A002 | Dynamic | 20 | 200 | 0 | 0 | 200 |

**Note:** When replenishing via a Picking wave, the system only replenishes up to order need and NOT up to the maximum capacity.

**Scenario 2**

- Orders need =150
- UOM is units
- Locations have the following capacity

| Location | Type | Min | Max | Current Qty | Capacity |
|---|---|---|---|---|---|
| A001 | Permanent | 20 | 200 | 120 | 80 |
| A002 | Dynamic | 20 | 200 | 0 | 200 |

Here, the permanent location has a capacity of 80, and to fulfill the order you only need 30 more units Therefore, the system will replenish up to 30 in location - A001. The system does not consider the Dynamic location as everything can be assigned from the Permanent Location.

| Location | Type | Min | Max | Current Qty | In-Transit | Capacity |
|---|---|---|---|---|---|---|
| A001 | Permanent | 20 | 200 | 120 | 30 | 0 |
| A002 | Dynamic | 20 | 200 | 0 | 0 | 200 |

**Scenario 3**

- Orders need sums up to be 150
- UOM is units
- Locations have the following capacity

| Location | Type | Min | Max | Current Qty | Capacity |
|---|---|---|---|---|---|
| A001 | Permanent | 20 | 100 | 100 | 0 |
| A002 | Permanent | 20 | 100 | 100 | 0 |
| A003 | Dynamic | 20 | 120 | 50 | 70 |
| A004 | Dynamic | 20 | 120 | 80 | 40 |
| A005 | Dynamic | 20 | 120 | 80 | 40 |

Here, the permanent locations (A001, A002) do not have any capacity in them. Therefore, the system replenishes items to dynamic locations – A003, A004, and A005.

| Location | Type | Min | Max | Current Qty | In-Transit | Capacity |
|---|---|---|---|---|---|---|
| A001 | Permanent | 20 | 100 | 100 | 0 | 0 |
| A002 | Permanent | 20 | 100 | 100 | 0 | 0 |
| A003 | Dynamic | 20 | 120 | 50 | 70 | 0 |
| A004 | Dynamic | 20 | 120 | 80 | 40 | 0 |
| A005 | Dynamic | 20 | 120 | 80 | 40 | 0 |

# Multi-Level Replenishment

Formerly in WMS, inventories were replenished to an active location was done based on the location maximum capacity. That is, even when there were inventories available in permanent locations, the system could replenish only up to maximum capacity of units to the active/reserve location. This required the creation of replenishment tasks each time to satisfy order needs which in turn needed manual intervention. In an environment like fast paced seasonal warehouses, there is a demand to introduce a constant flow of replenishment to meet the order supply.

In order to improve efficiency and increase productivity, WMS has introduced a new functionality called Multi-Level Replenishment (MLR) that addresses the following:

- Replenish Inventory beyond configured location max (Supported only through wave-based replenishment).
- Ability to supply inventory in the fulfilment sequence when inventories are depleted in the destination location.

- Capability to combine allocations from different waves templates into a common task.

# Workflow of MLR

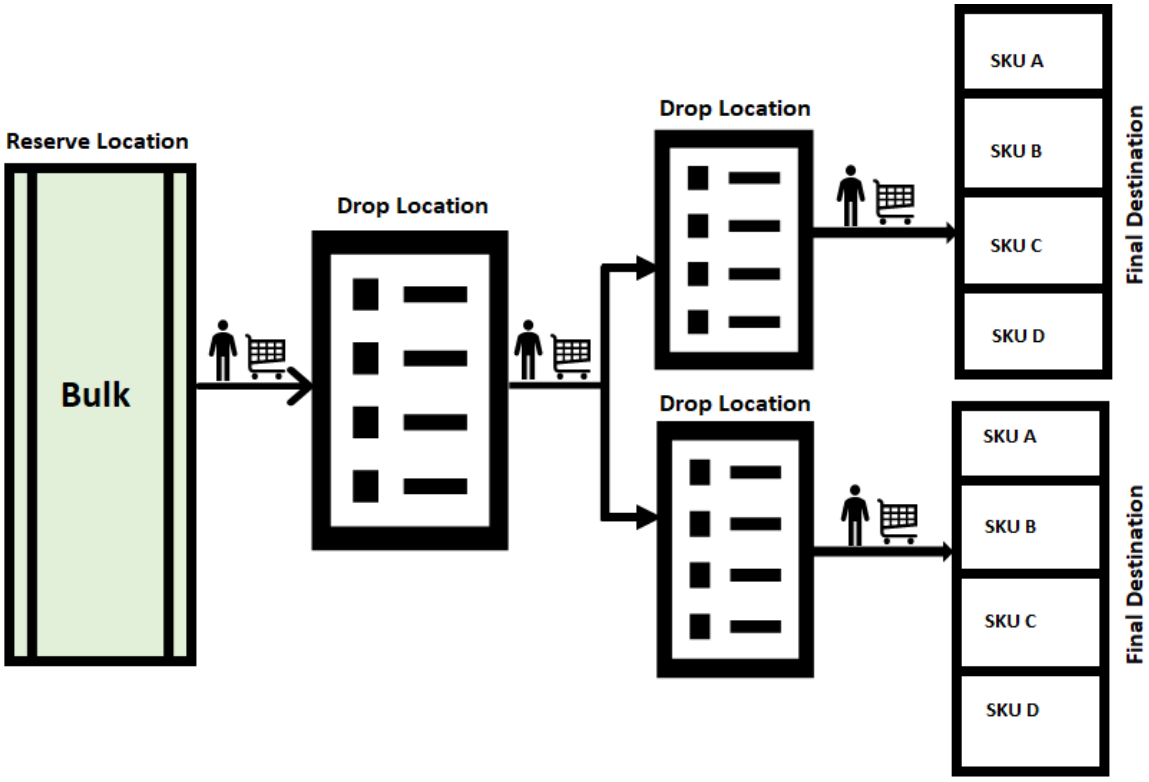
Multi-Level Replenishment allows users to keep destination locations (final destination location /pick face) constantly stocked with products, so that pickers can efficiently fulfil orders without waiting for the system to replenish inventory when available.

The following describes a high-level pictorial representation of the Multi-Level Replenishment workflow with a reserve location, drop location, and final destination (active location).

**Note:** Users can define any number of hops from a reserve to destination location by following similar procedures and instructions provided in this guide. The workflow contains the following elements:

- **Reserve Location** - The reserve location consists of bulk inventory having full LPNs and all the inventory from the bulk reserve location comes from the receiving area. These inventories are moved to the forward bulk area with pallets or forklifts by the warehouse floor users.
- **Drop Location** – The location where the floor user drops/picks the LPN from a reserve location to a drop location through regular tasks. In many cases, there may be scenarios where the user may partially split the inventory before reaching the picking/drop location. These are temporary locations between the source to the destination where the system instructs users to replenish inventory and place it to the final destination location.
    - The new multi-level replenished location is used to pick inventory from the drop location to the final destination location.
- **Final Destination** – The final destination location is the active location where pickers pick the SKUs and complete the order request. In the final destination, the user can define only one SKU per location. For example, SKU A, SKU B… as shown in the figure below.

    **Note:** The below pictorial representation describes replenishment for more than one location. Users can create any number of hops to replenish the inventory.




1. An order is said to be satisfied when there is sufficient inventory available in the Active location. However, when there is not enough inventory available in the Active location to satisfy the order, the system runs a wave for an Order and checks for inventory in the Permanent Active location or Reserve location to meet the need. This is the phase where the Replenishment takes place.
2. During these transactions, there may be scenarios involved with multiple drop locations where you are required to pick inventory and drop to another location and then to the final destination. In such cases, inventory needs to hop through multiple drop locations to reach the final destination. That is, inventory needs to pass through multiple Task Zones to reach the final destination. This process of moving inventory from one task zone to another is accomplished using Multi-Level Replenishment.
3. Once you run the wave, the system creates a Replenishment task where required inventory is pushed from the Reserve location to the drop location for the next hop/Task Zone (drop location).

   **Note:** This is configured under the Task Zone Movement screen for that Task Type.

4. In order to move inventory from the first Task Zone to the next Task Zone, you need to configure the path under Task Zone Movement for the Task Type “CONSOL_DISTRIBUTE”.
5. Use the RF screen "Multistep Replenishment", to scan the Task Type (CONSOLIDATE and REPLENISH) along with the current location.
6. The system will determine which destination location needs to be replenished. After logical calculation, the system will prompt you to scan the relevant LPNs to replenish.
7. The system picks inventory based on the task type and when picking of inventory is complete (or when you manually end the LPN), the system will prompt you to scan a drop location for the next Hop/Task Zone.
8. Repeat the process for replenishing inventory from one drop to the next until the inventory reaches the final destination.
9. When the inventory arrives at the last drop location, the final replenishment module is invoked through the RF and inventory gets replenished to the final destination.

# Configuration Process

Before you begin, you should understand the following check-points and then start with the configuration setup:

- Replenishment beyond maximum location is applicable only for Permanent Active locations and is not applicable for dynamic location.
- This enhancement is applicable for wave-based replenishment only and not for stand-alone replenishment.

# Setup

- Location (permanent active location) should be defined. The destination location can be active.
  - Task zones are created for each location. (i.e., locations that are created in the replenishment path (source, drop, and final destination locations) should have **Task zone** values populated.

    **Note:** You must create a task zone for this functionality to perform as expected.
- You must first create a *Wave Template*. These wave templates should have a Replenishment Rule defined.
- Configure the relevant Task Type for replenishment
- Configure the *Task Zone Movement* and define the movement of inventory from one location to another. Define the Task Zone Movement Rule.
- A new *RF Screen Module* must be configured to invoke the multi-level replenishment from drop locations.
- Wave Group configuration is required to be configured only if there are multiple orders required for different pick lanes. When you create a wave group, you can combine multiple tasks using the *Task Creation Template*.

# Wave Template

The Wave Template consists of many parameters to be set for a wave to run. In multi-level replenishment, you need to create wave templates to pick orders from a source location to a final destination location. Create a wave template from a Reserve Location (Bulk) to a common Drop Location and then to the next hop.

- Create a wave template from the source location to the first drop location and then to the final destination.
- Associate the replenishment rule for the order to be replenished from one location to another in the wave template.

**Note:** If the location needs to be enabled beyond max capacity, you need to enable the “Ignore capacity for the last permanent location” check box.

## Replenishment Rule

Configuring a replenishment rule is one of the most important configurations. Replenishment Rule allows you to replenish beyond max capacity by enabling a new flag “**Ignore Capacity for Last Permanent Location**” check box.

# Task Zone Movement

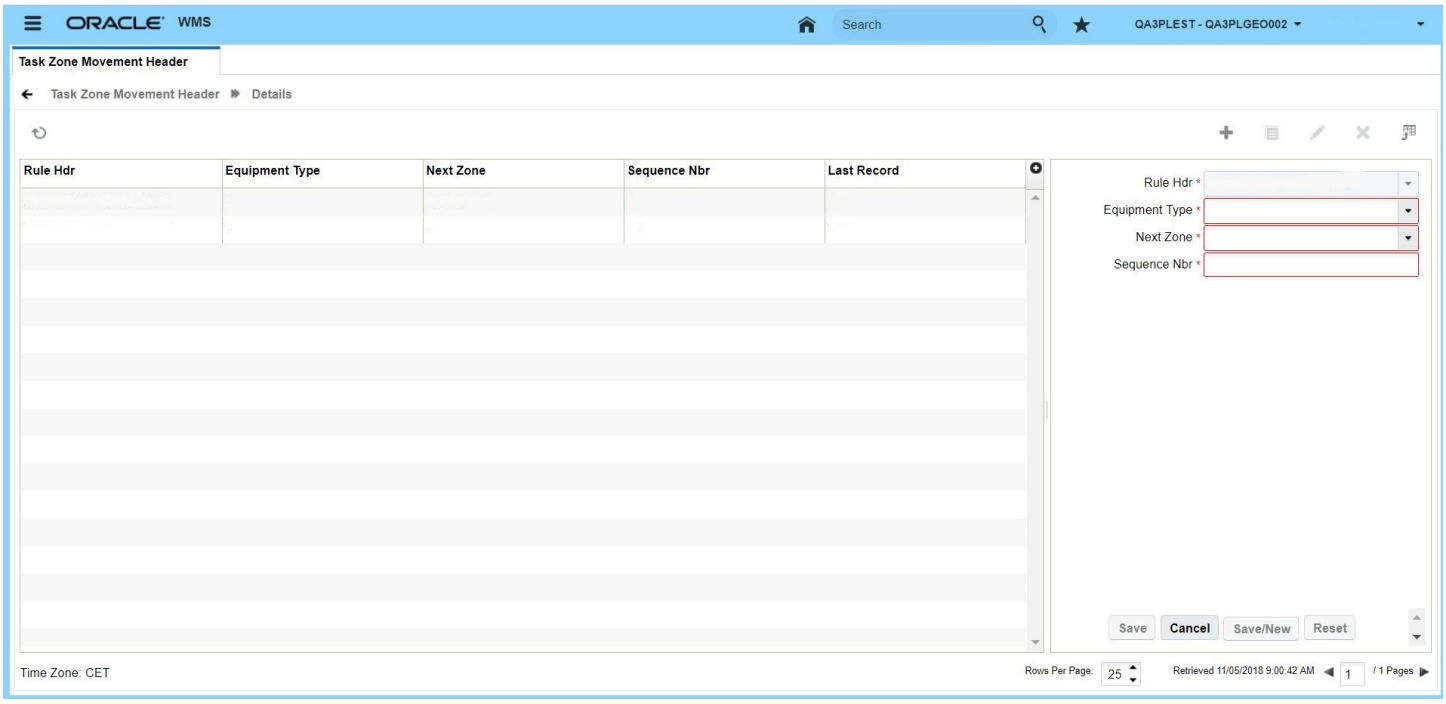
In a multi-level replenishment flow, creating a task zone movement is important because every unique path must have a task zone defined.

> **Note:** Every unique path will have the task type created and the corresponding task zone movement rule.For example, you may want to create a task zone movement for the following:

- Source to Final Destination – one task zone movement is created with * baring the end zone.
- Drop zones to Final Destination – Distinct task zone movement should be created with the relevant path.

## Task Zone Movement Rule

Define the task zone rule for every task zone movement by entering the mandatory information in the field as shown in the screen below:




# Wave Group

Wave group helps to distribute loads across different pick lanes. For example, suppose there are two pick lanes from one reserve location, then you can create a replenishment task from the wave group level.

Once you configure a task template at the wave group level, you can combine multiple tasks from different waves. To create a wave group, you need to define the Task Creation Template and Task Type.

## Task Creation Template

Task Templates are used to determine the Task Types that will be used for the wave. Task Types are records that create Tasks based on the UOMs defined in the Allocation Mode.

> **Note:** The Wave Template configuration is said to be successful when the selected Allocation Mode's UOMs match the Task Template's Task Types.

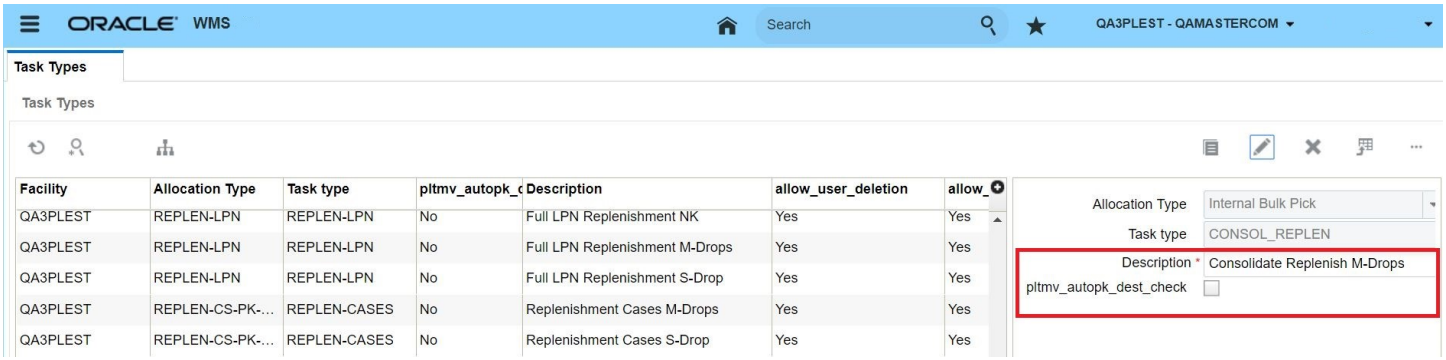
Task Creation Template is a set of instructions given to the user to perform tasks to satisfy the need. The task creation template is defined by configuring the following parameter:

1. Create a Task Creation template. Define template. For example, Type > Select **Regular**.
2. Define the Sequence Number.
3. Define the Task Type in the Task Creation template.

## Task Type

When you configure the system for multi-level replenishment, you need to create task types based on the Consolidated Replenishment. This Consolidated Replenishment is required to be created to move inventories from across one drop location to another drop location.

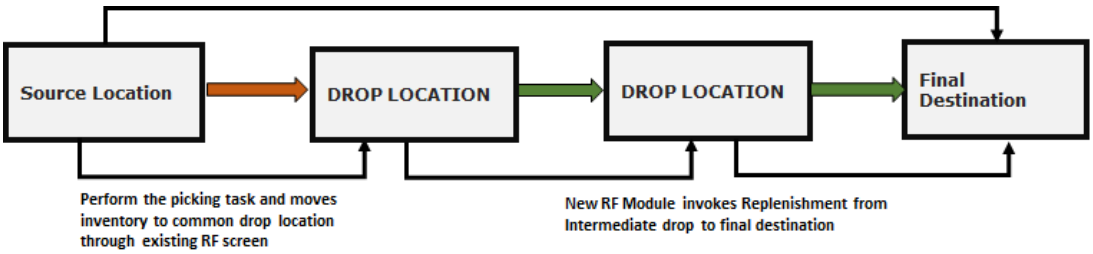
> **Note:** A task type for Full LPN Replenishment is created to pick inventories from a source location to the first drop location.



# RF Screen Module

A new RF module, "*rf.inbound.cwrfmultistepreplen*" allows you to move inventory from one drop location to another and then to a final destination location.

The following diagram describes how this new RF module is used:




The following are some of the characteristics of the new RF Module:

1. Scan the inventory from the source location and the system inferred the task zone.
2. Determine the final destination zone of the inventory by scanning the task type that defines the unique task zone.

   **Note:** Task type can be inferred from screen parameter or user can manually enter into the system.

3. On obtaining the source and destination zone, the system determines the following:
   - If the source location has inventory to satisfy the need/demand of supply in destination location.
   - Once inventory is available in the source destination location, the system prioritizes which location to replenish first based on the following filter:
   - If the filter criteria is set to current quantity <= minimum, then system considers inventory from the source location which are destined to pick locations having current inventory less than or equal to locations configured minimum. If multiple locations are found, the system will order the locations in ascending order of putaway sequence.
4. After determining the source and destination, the system prompts you to pick the relevant quantity of inventory in the temporary tote and deliver to intermediate drop locations and then to final destinations.

## RF Configuration Setup

The following are the set of RF configurations that you need to configure before executing the Multi-Level Replenishment flow:

- Go to the RF Screen UI.
- Set the following RF screen parameters:

| Parameters | Description |
|---|---|
| determine-src-inv-by | Determines the source inventory by Location or task Zone. By Default, the value is set to location. |
| task-type-description | Enter description that corresponding to valid task type:CONSOL-REPLEN. By default, the field is set to blank. |

| Parameters | Description |
|---|---|
| qty-uom | Set the quantity of inventory in unit of measure of units, packs, and cases. By default, the value is set to Units. |
| pick-for-single-destination-locn | System prompts only one destination location for which the inventory should be picked from the source location. By default, the value is set to no. |
| dest-locn-inclusion-criteria | System to determine via the destination location to replenish through the filter criteria. When the flag is set, system considers only locations whose current inventory is <=configured locations minimum when the value is "current<=locn minimum". |

# Kitting

Kitting is the process of assembling child items to create a parent item or a kit. The ratio of child items required to create a parent item is called pre-pack ratio and pre-defined in WMS. De-Kitting is the process of dis-assembling parent items or kits into child items. In order to assemble or dis-assemble parent items, Work Orders are required. The assembly or dis-assembly of parent items takes place in assembly locations.

There are two types of kitting flows in WMS - **Make To Stock** and **Make To Order**.

**Make to Stock** – The main objective of Make to Stock flow is that, the parent items or kits are assembled beforehand and putaway to stock in anticipation of future Outbound Order for the parent items. In this flow, a Work Order is either interfaced into WMS or created from Work Order view. After parent items are assembled using this Work Order, WMS prompts you to pack the parent items into Inbound LPNs. The Inbound LPNs are then putaway to stock (reserve locations). These parent items can be picked later against outbound orders, packed, loaded and shipped out like any regular item.

**Make to Order** – The main objective of Make to Order flow is for the parent items or kits to be shipped out based on the Outbound Order sent to the facility. In this flow, a Work Order is automatically created in WMS when an Outbound Order with a specific Order Type is interfaced into WMS. The Work Order has a reference to the Outbound Order. So when the parent items are assembled using this Work Order, Oracle WMS Cloud prompts you to pack the assembled parent items directly into Outbound LPNs against the Outbound Order. The OBLPNs can then be loaded and shipped out like any other OBLPN.

**Note:**

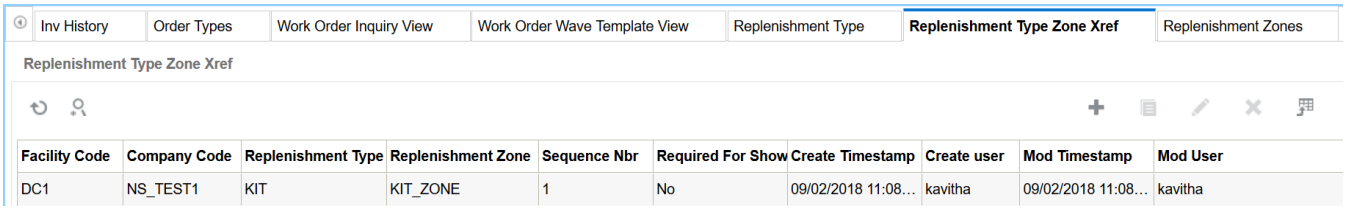
- Parent Items are also called Kit Items
- Child Items are also called Component Items
- Ratio of child items required to create a parent item is called pre-pack ratio

# Configure Kitting Process

The following steps describe the configuration that needs to be in place for the kitting process. These steps are common for Make To Stock and Make to Order.

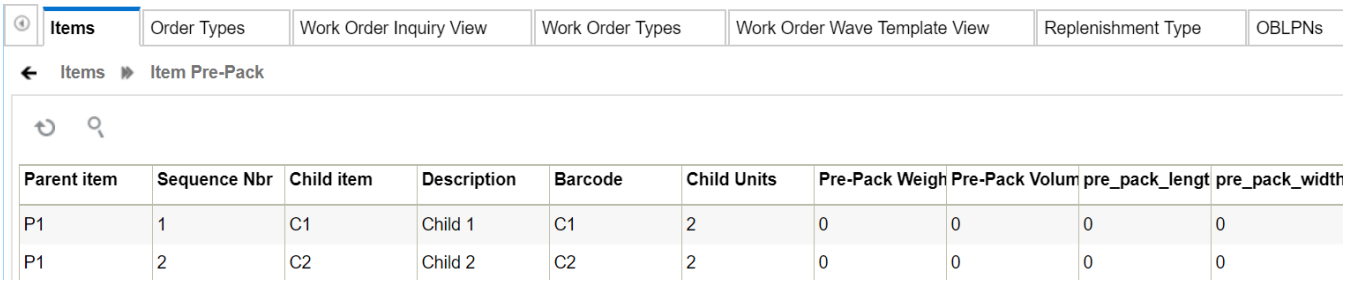
1. From the Replenishment Type UI, create a Replenishment Type for kitting.
2. Create a Replenishment Zone for kitting.

3. Tie the Replenishment Type with the Replenishment Zone.




| Facility Code | Company Code | Replenishment Type | Replenishment Zone | Sequence Nbr | Required For Show | Create Timestamp | Create user | Mod Timestamp | Mod User |
|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | KIT | KIT_ZONE | 1 | No | 09/02/2018 11:08… | kavitha | 09/02/2018 11:08… | kavitha |

4. Parent and child items need to be pre-defined along with the pre-pack ratio.




| Parent item | Sequence Nbr | Child item | Description | Barcode | Child Units | Pre-Pack Weigh | Pre-Pack Volum | pre_pack_lengt | pre_pack_width |
|---|---|---|---|---|---|---|---|---|---|
| P1 | 1 | C1 | Child 1 | C1 | 2 | 0 | 0 | 0 | 0 |
| P1 | 2 | C2 | Child 2 | C2 | 2 | 0 | 0 | 0 | 0 |

5. Parent items need to have a Replenishment Type defined in the item facility. On the Item UI, select the parent item that needs to be assembled and hit the facility button.

   In Item Facility view for the parent item, add a new record and select the Replenishment Type that was created in step 1.
6. Create an assembly location where the parent items will be assembled. This location needs to be a dynamic active location with the assembly flag checked and with the Replenishment Zone the same as the one created in step 2.

   > **Note:** Since this replenishment zone ( ***KIT_ZONE*** ) has been tied to the replenishment type ( ***KIT*** ) and the replenishment type is configured on parent item P1, this would mean that whenever parent item P1 needs to be built, the child items for P1 will always be replenished to assembly location ***AS111*** . Similarly, different parent items can be configured to be assembled in different assembly locations.

7. Create a Work Order Type with the Activity Type “Assembly”. This Work Order Type needs to be on Work Orders that are used to assemble parent items.

   > **Note:** Steps 1 through 7 are pre-requisites for both **Make to Stock** and **Make to Order** Flow.

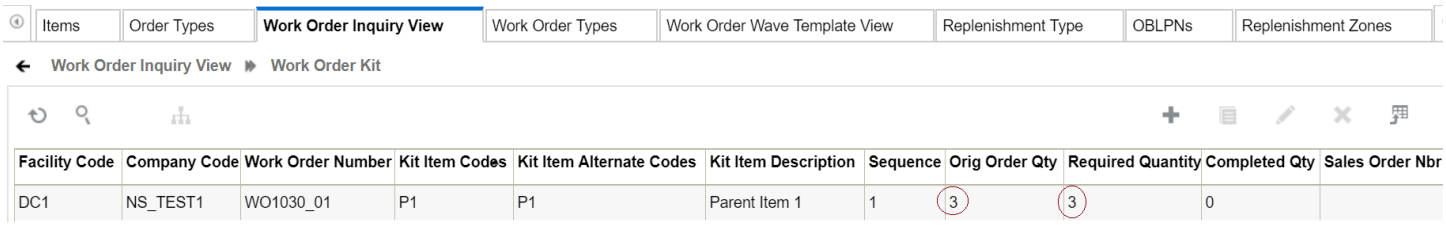
# Make to Stock Flow

In the Make to Stock Flow, Work Orders are either directly interfaced into WMS OR or they can be created manually using Work Order view.

## Work Order Creation

The Work Order Type described in *Configure Kitting Process* is used on the Work Order. This automatically sets the Activity Type to Assembly on the Work Order. The Work Order is initially in a Created status.

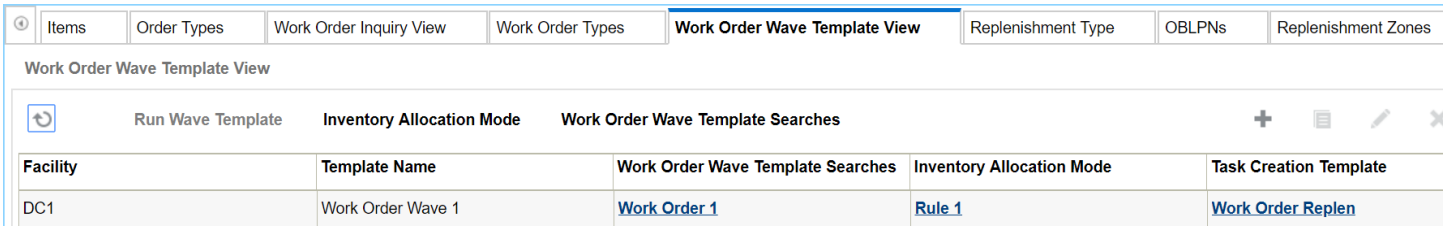
This Work Order has been interfaced (or created) to assemble three units for parent item P1.




| Facility Code | Company Code | Work Order Number | Kit Item Codes | Kit Item Alternate Codes | Kit Item Description | Sequence | Orig Order Qty | Required Quantity | Completed Qty | Sales Order Nbr |
|---|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | WO1030_01 | P1 | P1 | Parent Item 1 | 1 | 3 | 3 | 0 | |

## Work Order Wave Template

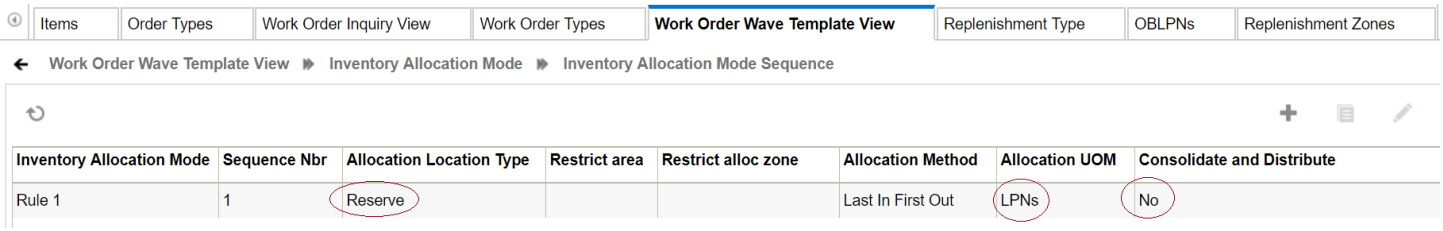
Create a Work Order Wave Template. This template will define rules to pull child items from reserve/active locations and replenish to an assembly location.




| Facility | Template Name | Work Order Wave Template Searches | Inventory Allocation Mode | Task Creation Template |
|---|---|---|---|---|
| DC1 | Work Order Wave 1 | Work Order 1 | Rule 1 | Work Order Replen |

The Work Order Template Search needs to have the right criteria to select the required Work Order.

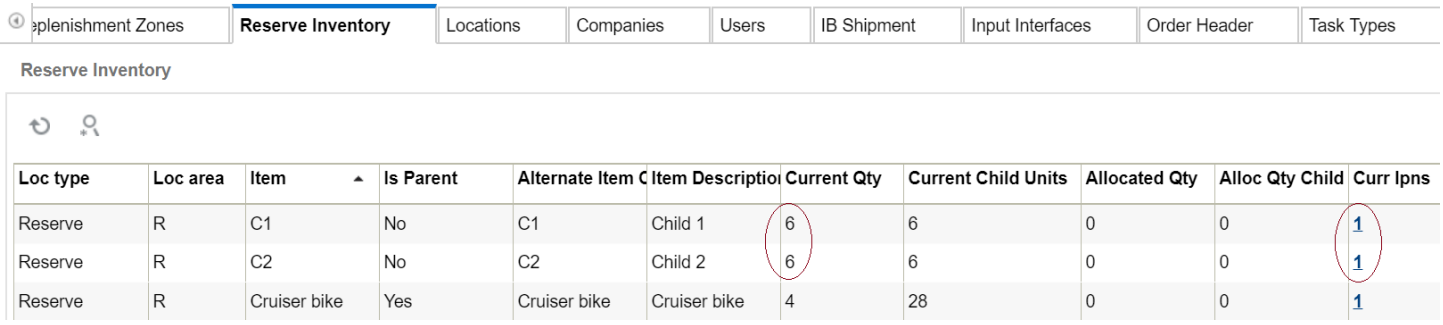
WMS offers multiple replenishment options. In this example, the rule is defined to pull full LPNs (with child items) from reserve locations.




...and a corresponding Task Template to create Full LPN Replenishment tasks.

# Inventory

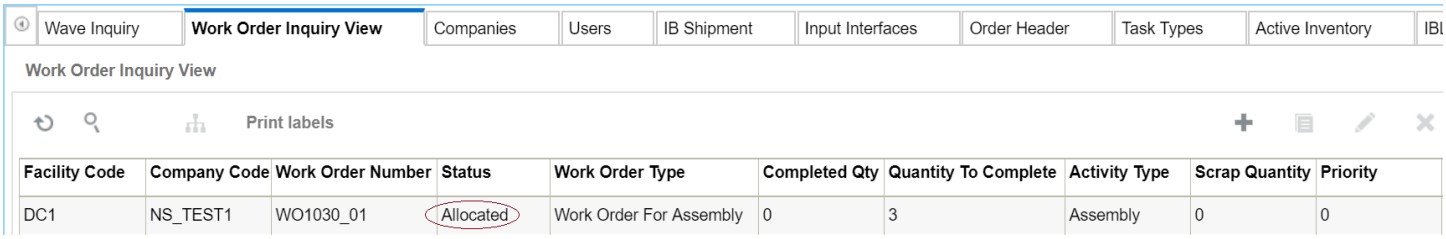
Ensure that there are LPNs in reserve locations with enough child units.




# Wave Run

Run the wave from the Work Order Wave Template View screen.

From the Work Order Inquiry View screen, the Work Order displays in Allocated status.




| Facility Code | Company Code | Work Order Number | Status | Work Order Type | Completed Qty | Quantity To Complete | Activity Type | Scrap Quantity | Priority |
|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | WO1030_01 | Allocated | Work Order For Assembly | 0 | 3 | Assembly | 0 | 0 |

Tasks are created to replenish child items from a reserve location to an assembly location.

# Task Execution

Execute the tasks in order to replenish the assembly location with child units from reserve locations.

1. Pick IBLPNs containing child items from reserve locations and place on a pallet.
2. Move and Replenish contents of the LPNs to the assembly location

```
  Oracle WMS DC1/NS_TEST1
  RF - Replenish Full LPN
Task #: TSNS_TEST1DC100000027
IBLPN1
Repl Loc: AS-1-1-1
Repl Loc: AS111

Item:    C1
Child 1




Env: ns_test1
Ctrl-D: Skip locn
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

The assembly location now has enough units of child items (C1 and C2) to build 3 units of parent item (P1). From the Work Order Inquiry View UI, the Work Order is now in Picked status:

## Kit Assembly

Now that the child items are in the assembly location, assembly of parent items can start using RF Work Order Kit Processing. All units of the assembled parent items can be placed in one IBLPN or multiple IBLPNs. In this example, all three units have been placed in one IBLPN.

```
  Oracle WMS DC1/NS_TEST1
Assembly Location: AS-1-1-1
Work Order Number: WO1030_01
IBLPN: IBLPN1030_03
P1
Parent Item 1
Pending Qty: 3 (3)
Qty: 3_____
```

```
Env: ns_test1
Ctrl-D: Skip Kit
Ctrl-E: End LPN
Ctrl-K: Cancel Kit
Ctrl-T: View Components
Ctrl-V: View Instructions
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

RF Work Order Kit Process offers other Ctrl options for processing Work Orders. For example you can use Ctrl-V to view extra instructions if there are any available for the kit being handled. You can use Ctrl-T to view the ratio of the child items that are required to assemble the parent items.

From the **IBLPN** screen, the Inbound LPN with the assembled parent items displays in Received status, and can be putaway to a reserve location. You will see in the **Work Order Inquiry View**, that the work order is completed.

From the **Inventory History** screen, you can see the Inventory History for the work order.

# Make to Order Flow

In the Make to Order Flow, a Work Order is automatically created in WMS when an Outbound Order with a specific Order Type is interfaced into WMS.

## Work Order Creation

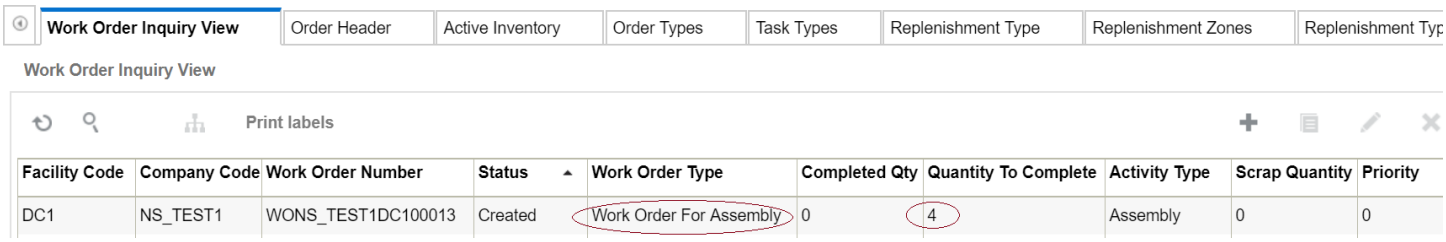
Create an Order Type for the Outbound Order. This Order Type needs to have the Work Order Type populated which is described in step 7 in the *Configure Kitting Process* section.

When an Outbound Order with such an Order Type is interfaced into WMS, a Work Order is automatically created behind the scenes.

# Interfaced Order Header and Detail

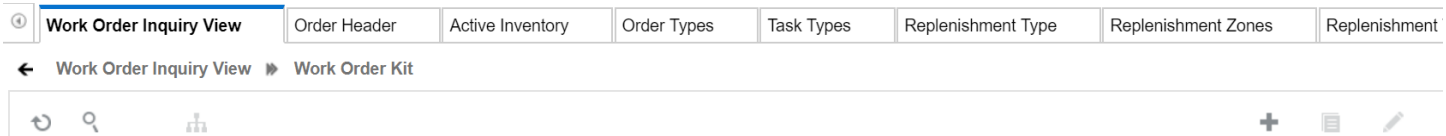
## Interfaced Work Order Detail

The Work Order Type on the Work Order is set based on the Work Order Type which is on the Order Type of the Outbound Order.




| Facility Code | Company Code | Work Order Number | Status | Work Order Type | Completed Qty | Quantity To Complete | Activity Type | Scrap Quantity | Priority |
|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | WONS_TEST1DC100013 | Created | Work Order For Assembly | 0 | 4 | Assembly | 0 | 0 |

The Work Order Kit has a reference to the original Outbound Order Nbr.




| Facility Code | Company Code | Work Order Number | Kit Item Codes | Kit Item Alterna | Kit Item Description | Orig Order Qty | Required Quantity | Completed Qty | Sales Order Nbr |
|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | WONS_TEST1DC100013 | P1 | P1 | Parent Item 1 | 4 | 4 | 0 | ORD1031_01 |

# Wave Run and Task Execution

The same Wave Template that was described under Make to Stock flow can be used, ensuring that the Wave Search criteria is modified to pull the new Work Order. The wave is run and tasks executed as shown under Make to Stock flow. Executing the tasks will replenish child items to the assembly location.

# Kit Assembly

Kit processing is similar to Make to Stock flow, however in the Make to Order flow, the system prompts for an Outbound LPN to place the assembled units. This Outbound LPN is tied to the Outbound Order that is on the Work Order Detail.

All units of the parent item can be placed in a single OBLPN or multiple OBLPN. In this example, all four units have been placed in one OBLPN.

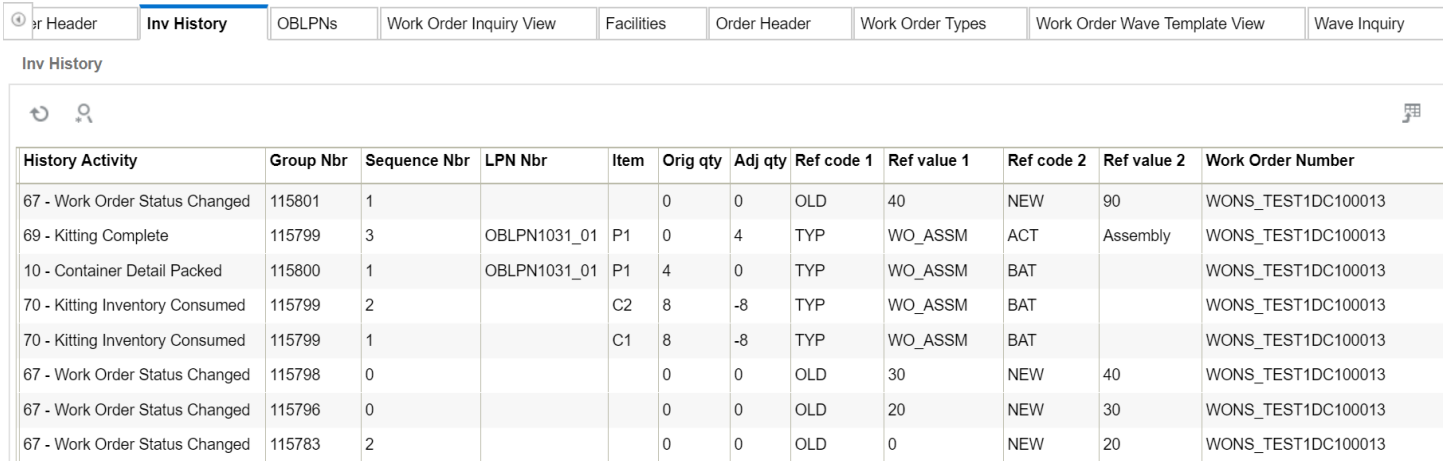
```
  Oracle WMS DC1/NS_TEST1
Assembly Location: AS-1-1-1
Work Order Number: WONS_TEST1DC100013
OBLPN: OBLPN1031_01
Order Nbr: ORD1031_01
P1
Parent Item 1
Pending Qty: 4 (4)
Qty: 4_____
```

```
Env: ns_test1
Ctrl-D: Skip Kit
Ctrl-E: End LPN
Ctrl-K: Cancel Kit
Ctrl-T: View Components
Ctrl-V: View Instructions
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

From the Work Order Inquiry View, the Work Order is completed.

Next, the Outbound Order is packed. The Outbound LPN with parent items is packed and can later be loaded and shipped out of the facility.

The following screen shows you the inventory history for the Work Order:




| History Activity | Group Nbr | Sequence Nbr | LPN Nbr | Item | Orig qty | Adj qty | Ref code 1 | Ref value 1 | Ref code 2 | Ref value 2 | Work Order Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 67 - Work Order Status Changed | 115801 | 1 | | | 0 | 0 | OLD | 40 | NEW | 90 | WONS_TEST1DC100013 |
| 69 - Kitting Complete | 115799 | 3 | OBLPN1031_01 | P1 | 0 | 4 | TYP | WO_ASSM | ACT | Assembly | WONS_TEST1DC100013 |
| 10 - Container Detail Packed | 115800 | 1 | OBLPN1031_01 | P1 | 4 | 0 | TYP | WO_ASSM | BAT | | WONS_TEST1DC100013 |
| 70 - Kitting Inventory Consumed | 115799 | 2 | | C2 | 8 | -8 | TYP | WO_ASSM | BAT | | WONS_TEST1DC100013 |
| 70 - Kitting Inventory Consumed | 115799 | 1 | | C1 | 8 | -8 | TYP | WO_ASSM | BAT | | WONS_TEST1DC100013 |
| 67 - Work Order Status Changed | 115798 | 0 | | | 0 | 0 | OLD | 30 | NEW | 40 | WONS_TEST1DC100013 |
| 67 - Work Order Status Changed | 115796 | 0 | | | 0 | 0 | OLD | 20 | NEW | 30 | WONS_TEST1DC100013 |
| 67 - Work Order Status Changed | 115783 | 2 | | | 0 | 0 | OLD | 0 | NEW | 20 | WONS_TEST1DC100013 |

# De-Kitting

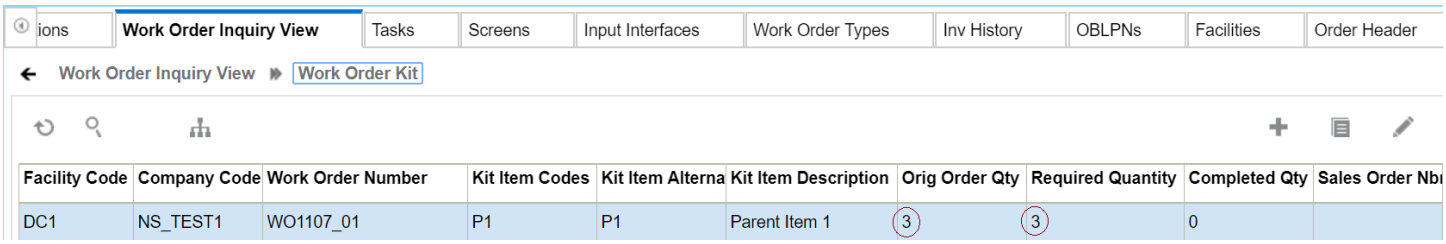
De-Kitting is performed to dis-assemble parent items into individual child items and put away child items into reserve/active locations. The child items can be later picked, packed, and shipped individually against outbound orders. This flow is typically performed if there is a need to ship individual child items from the facility and there are not enough child items to fulfil the need immediately.

## Work Order Creation

Create a Work Order Type with Activity Type as Dis-Assembly.

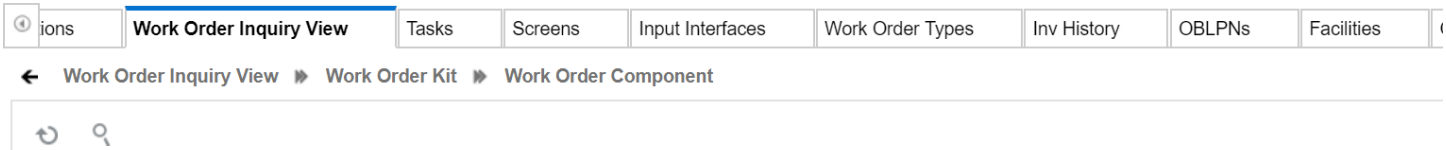
Interface a Work Order into WMS with the above Work Order Type on the Work Order. You can also create the Work Order from Work Order Inquiry view.

This Work Order has been interfaced to dis-assemble three units of parent item P1.




| Facility Code | Company Code | Work Order Number | Kit Item Codes | Kit Item Alterna | Kit Item Description | Orig Order Qty | Required Quantity | Completed Qty | Sales Order Nbı |
|---|---|---|---|---|---|---|---|---|---|
| DC1 | NS_TEST1 | WO1107_01 | P1 | P1 | Parent Item 1 | 3 | 3 | 0 | |

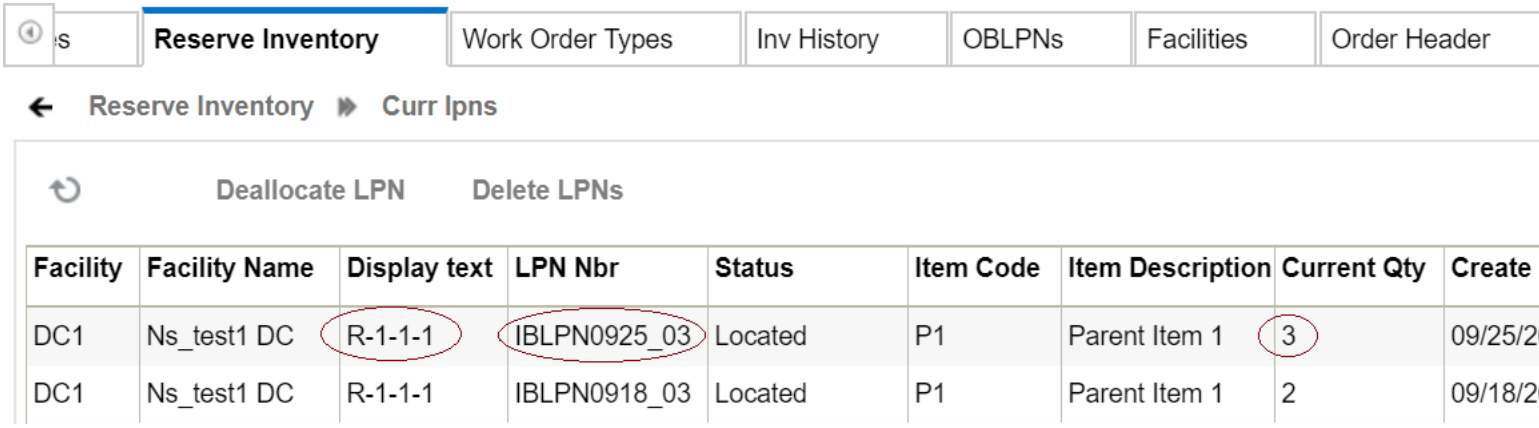
Since the pre-pack ratio for P1 is defined as two units of C1 and two units of C2 for one unit of P1, dis-assembling three units of P1 will result in six units of child item C1 and six units of child item C2.




| Work Order Number | Kit Item Codes | Item | Item Descriptio | Kit Item Quantity | Child Units | Converted Child Units | Scrap Percenta | Original Requir | Required Quant |
|---|---|---|---|---|---|---|---|---|---|
| WO1107_01 | P1 | C1 | Child 1 | 3 | 2 | 2 | 0 | 6 | 6 |
| WO1107_01 | P1 | C2 | Child 2 | 3 | 2 | 2 | 0 | 6 | 6 |

# Wave Run and Task Execution

Ensure that there is enough inventory for parent P1 in the facility. In this example, there is one LPN in a reserve location with three units of P1.




| Facility | Facility Name | Display text | LPN Nbr | Status | Item Code | Item Description | Current Qty | Create |
|---|---|---|---|---|---|---|---|---|
| DC1 | Ns_test1 DC | R-1-1-1 | IBLPN0925_03 | Located | P1 | Parent Item 1 | 3 | 09/25/2 |
| DC1 | Ns_test1 DC | R-1-1-1 | IBLPN0918_03 | Located | P1 | Parent Item 1 | 2 | 09/18/2 |

The same Wave Template that was described under *Make to Stock* flow can be used, ensuring that the Wave Search criteria is modified to pull the new Work Order. When the wave is run, it allocates one LPN from reserve which has three units of P1.

A task is created to move the LPN from a reserve location to an assembly location.

# Task Execution

Execute the task to replenish the assembly location with parent units from the reserve location.

1. Pick IBLPN containing parent items from reserve location and place on a pallet.
2. Move and Replenish contents of the IBLPN to the assembly location.

```
  Oracle WMS DC1/NS_TEST1

Repl Loc:  AS-1-1-1
LPN: IBLPN0925_03
Item:    P1
Parent Item 1
Qty:  1 LPNS
LPN :IBLPN0925_03_______
```

```
Env: ns_test1
Ctrl-D: Skip Location
Ctrl-L: Skip LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

The assembly location now has three units of parent item P1.

```
  Oracle WMS DC1/NS_TEST1

Repl Loc:  AS-1-1-1
LPN: IBLPN0925_03
Item:    P1
Parent Item 1
Qty:  1 LPNS
LPN :IBLPN0925_03_________




Env: ns_test1
Ctrl-D: Skip Location
Ctrl-L: Skip LPN
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

From the Work Order Inquiry View screen, you will see that the Work Order is in Picked status.

# Dis-Assembling the Kit

Now that the parent items are in the assembly location, dis-assembly of parent items can start using RF Work Order Kit Processing. After dis-assembling, child units for all parent items can be placed in a single IBLPN or placed separately in different IBLPNs. In this example, all three units of C1 and all three units of C2 have been placed in a single IBLPN.

```
  Oracle WMS DC1/NS_TEST1
Assembly Location: AS-1-1-1
Work Order Number: WO1107_01
IBLPN: IBLPN1107_01
P1
Parent Item 1
Pending Qty: 3 (3)
Qty: 3_____



Env: ns_test1
Ctrl-D: Skip Kit
Ctrl-E: End LPN
Ctrl-K: Cancel Kit
Ctrl-T: View Components
Ctrl-V: View Instructions
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

The Inbound LPNs with child items C1 and C2 are in Received status and can later be putaway to a reserve location or items replenished to an active location.

# 6 Extra Configuration

## Sequence Counters

System counters keep track of record numbers (for example, ASN Numbers) that are automatically generated by the system. Additionally, sequence counters allow you to configure the record number generated for each label/document/output file, such as Inbound Shipment numbers, BOL numbers, and Outbound Load files.

You can only create new sequence counters by copying from existing ones. To do this, from the Sequence Counter screen, select the sequence counter that will be created, and click “Copy” ().

> **Note:** Oracle WMS Cloud does not guarantee that the next up sequence counters will always be next up (for example, in instances where multiple processes use the same counter, or when there are processes with high concurrency and caching of data.)"

### Description of Fields

- **Sub_code:** This field is used in conjunction with Company Parameter “OBLPN_COUNTER_SUB_CODE_FIELD”. See description of this parameter for details.
- **Counter Description:** The sequence counter description.
- **Recycle_flg:** When the max number (“End Number”) is reached in the current sequence counter, this flag determines whether or not the system automatically restarts the counter back to the “Start Number”.
    - If CHECKED, WMS automatically resets the counter when the max number is reached.
    - If UNCHECKED, WMS does not reset the counter when the “End Number” is reached. When this happens, you will not be able to create the new record until its sequence counter is reset.

If the current number is at 1,000 and the “Max Number” is 1,000, the system returns an error message when attempting to generate a new number.

- **Prefix:** Defines the prefix value that displays for the current record. For example, if the prefix is “BOL”, the system generates the number as “BOLXXXX”.
- **Start/End Number:** Defines the start and max number for the given sequence counter. When the End Number is reached, you must either reset the counter by checking the ‘recycle_flg’ or increase the “End Number” value manually.
- **Nbr_suffix:** Hardcodes a suffix to every sequence in that counter.
- **Current Number:** Denotes the current number that the sequence counter is on.
- **Sequence Length:** Denotes the string length of the sequence counter. Note that the prefix is NOT included in this count.
- **Append Facility Code to Prefix:** Flag that automatically appends the facility code to the sequence counter.
- **Increment:** The increment value in which the sequence counter increases.
- **Check Digit Method:** The method that calculates the last digit of the LPN number. Supported methods are SSCC, BOL, and EAN13.

- **Destination Company/Facility:** You can also make sequence counters exclusive to a Company and Facility. NOTE: Since this may lead to duplicate sequence counters, it is highly recommended to use a unique prefix for every Company/Facility sequence counter combination.

# Barcode Types

You can also configure the company to have a fixed barcode format depending on the barcode type. The configurable barcode types are:

- Asset
- Seal
- Batch
- Cart
- Inbound LPN
- Inbound Shipment
- Item
- Location
- Outbound LPN
- Pallet

## Description of Fields

- **Barcode Type:** Denotes the barcode type that is being edited/created.
- **Sequence Nbr:** Used as a number identifier for a group of Barcode Types.
- **Description:** Displays the barcode type's description.
- **Length:** Denotes the string length required for the barcode type. Note that the Prefix is included in this count. For example, if the Prefix = "LPN" and Length = 10, the system accepts the value "LPN0000001" (10 digits total). NOTE: If you want to disable to the barcode type validation in the system, the length must be set to "-1". This will override any other configuration existing for that barcode type.
- **Prefix:** Denotes the prefix used for the barcode type.
- **Remove Prefix:** If this flag is checked, the barcode type ignores the "Prefix" field.
- **Numeric_flg:** Forces the barcode type to only accept numeric values.

**Custom_barcode:** Calls custom scanning logic for scanning inbound LPNs into the system.

# Configuring Barcode Types

Barcode Types are used for situations where the company requires a fixed barcode prefix/length for a given label.

The company only accepts barcodes of prefix "LPN" and "CS", each of length 10.

The configuration would be as follows:

| Barcode Type | Sequence Nbr | Description | Length | Prefix |
|---|---|---|---|---|
| NJ_COMP/Asset | 1 | Asset 10 | 10 | LPN |
| NJ_COMP/Asset Seal | 2 | Seal 10 | 10 | CS |

With the configuration above, the system only accepts Inbound Containers that have the barcode of prefix LPN and CS. For example: “LPN0000001” & “CS00000001”. Scanning a barcode that is different from either one of these formats produces the following error message in the RF:

"Invalid Barcode for type IBLPN"

# Printers

## Types of Printers

Oracle WMS Cloud supports four types of printers/printing options:

1. **Label Printers**: Oracle WMS supports the Zebra Printing Language, ZPL. Printers manufactured by Zebra as well as many other companies that support the ZPL printing language should work. The client is required to test it and verify that label printing works as expected. Some typical models in use by current clients are Zebra / ZM400, Zebra 105SL, INTERMEC /PD42. This application prints to label printers at client locations via network access that must be configured as described in the network configuration section below. These printers must be configured in the Oracle WMS application.
2. **Laser printers for reports:** Report documents are typically generated as a PDF by the Oracle WMS application desktop web interface and can be printed to a local printer by the user. As such these printers typically do not need to be configured in the Oracle WMS application. If the ability to print certain PDF documents from the handheld RF interface is used, then laser printers also need to be setup in the application and accessed by the Oracle WMS application over the network similar to label printers.
3. **GDD Printers:** These are dot matrix or line matrix printers that use the ESCP printing language. We have a GDD.txt that serves as a template and we generate the actual file to be printed based on this, (somewhat like the .lbl template) and then printed from the server via lp, just like for label printers. GDD printers also have to be defined on the server. These must be setup as network accessible printers similar to laser printers. Some sample models used by current clients are PRINTRONIX/P7220, EPSON / DFX 9000, EPSON / FX890, OKI/ Pacemark 4410.
4. **Print to Email Address:** You have the option to print to an email address. To set this up, configure the printer in the **Printer** screen with protocol (mailto) , domain / IP (John.doe@mail.xyz). Then in the **User Config** screen, in the **Default Printer** section (email: John.doe@mail.xyz). Next, log out and login and you should be able to print labels as emails.

## Configuring Printers in the Printer UI

To configure Printers from the Printer UI, complete the following steps:

1. From the **Printer** UI, click **Create.**
2. Select the printer type (DOCUMENT, ZEB, ESCP.)
3. Add the printer name.
4. Add the description name.
5. Choose the printer protocol (lpd, socket.)

6. Add the domain_or_ip with printers IP.
7. Add the port field.
8. Add the printer_queue_name field, same as printer name.
9. Click **Save**.

You need to configure Primary and Secondary IPs for your instance (PRODUCTION, PREPRODUCTION, UAT). These are provided by the Oracle WMS Cloud team.

The IP Addresses for the Oracle WMS Cloud Print Servers can be found in your welcome letter. If you do not have these you can log a SR with Oracle Support and request these. When you print a label from Oracle WMS Cloud, the print job leaves our cloud servers from these IP addresses to reach customer printers in a warehouse. Customer networks and more specifically firewalls need to make sure they can accept traffic from above two Oracle Cloud-WMS IPs.

Make sure you are allowing traffic within your firewall from these two IPs on a specific port. Those ports are customer defined. Default ports used are 9100 or 515 but they are controlled by the customer printer or print server configuration.

> **Note:** You must whitelist the printer IP addresses that are provided in your welcome letters. You can then test connectivity, send test prints etc. from there. Once the Firewall is open you can test it using the WMS **Print** screen by checking the status. If you are unable to connect, submit an SR to *My Oracle Support* for assistance.

## Additional Notes

- In case the Oracle WMS Cloud **Print** screen shows that the label printer status is ok but nothing gets printed, make sure that Oracle Cloud WMS Printer screen has the same protocol selected for the affected printer as configured on the customer print/print-server. If it does not match, you will see the behavior that nothing gets printed. If your physical printer/print-server is configured as LPD in the Oracle WMS Cloud **Print** screen, select the affected printer and make sure that the protocol is selected as LPD. The other protocol that is supported is Socket/Raw. Please make sure both ends match the protocol to avoid printing issues.
- Print Servers: We recommend that you use a print server to manage printers that the Oracle WMS application needs to access. Printers connected to an external dedicated print server (typically a Windows Server or a Linux Server) are more robust and can handle larger volumes of labels. Printers that use a built in print server (network card or dongle) may have trouble with higher volumes and may have issues with lost labels or repeated labels etc. Based on the expected volume and type of use the right choice must be made. For example, if you are going to routinely print dozens or hundreds of label at a time from the wave, they should have a dedicated print server to avoid problems. In addition, print servers avoid the need to have multiple public IP addresses for printers.
- Take into consideration that the print service is not encrypted.

# Print Custom Reports from UI

If you have designed custom reports using Web Reports, you can trigger some of these custom reports directly from relevant UI screens instead of manually launching and printing them from Web Reports.

In order to achieve this, you need to configure these reports in the “Company Report Type” UI with a sub report type of “WebReport”.

# Configure and Generate Custom WebReport for OBLPN Packing Slip

For example, if a custom OBLPN Packing Slip has been designed using Web Reports and if you need this custom report to be printed by clicking “Packing List” button on OBLPN UI, the following configuration needs to be in place.

1. From the **Web Report** UI:
   - Create a web report for category : “AllocationToContainer”.
   - User can also add other categories with AllocationToContainer_ID
2. From the **Company Report Type** UI select the following:
   - Report type: OBLPN_PACKING
   - “Report Sub Type” = WebReport
   - “web report path” = folder_name\web_report_name ,OR folder_name/web_report_name
   - “Web report format”: select your preference
3. From the **OBLPN Inquiry**
   - When you select single/multiple records and click on 'Packing List' button, the system generates the custom OBLPN packing slip for the selected record(s)
   - o PDF format will be displayed in a Dashboard
   - o CSV and XLS format will get auto-downloaded
4. **From RF Print Ship Label (Module: rf.outbound.cwrfprintshiplbl)**
   - When the screen parameter “print-packing-slip” is set as “OBLPN”, the system generates the custom OBLPN packing slip for scanned OBLPN in the “Output interface file UI.”
     - When screen parm “print-packing-slip” is set as “Both” system generates the custom OBLPN packing slip for scanned OBLPN in “Output interface file UI”.
     - Along with the OBLPN packing slip, system generates ORDER Packing Slip w.r.t the configuration mentioned below.
5. **From RF Print Packing Slip (Module: rf.outbound.cwrfprintlpnpackingslip)**

- When the screen parameter “packing-slip-type” is set as “OB LPN packing”, the system generates the custom OBLPN packing slip for the scanned OBLPN in “Output interface file UI.”
- When the screen parameter “packing-slip-type” is set as “Both”, the system generates the custom OBLPN packing slip for the scanned OBLPN in the “Output interface file UI”.
- Along with the OBLPN packing slip, the system generates the ORDER Packing Slip with respect to the configuration mentioned below.

# Configure and Generate Custom WebReport for ORDER Packing Slip

1. From the **Web Report** UI:
   - Create a web report for category: “Order”.
   - You can also add other categories with Order_HDR ID
2. From the **Company Report Type** UI:
   - Report type: ORDER_PACKING

- “Report Sub Type” = WebReport
- "web report path" = folder_name\web_report_name ,OR folder_name/web_report_name
- "Web report format" : select as preference

3. From the**Order Header View** UI:
   - When you select single/multiple records and click on the 'Packing Slip' button, the system generates the custom ORDER packing slip for the selected record(s)
   - PDF format will be displayed in a Dashboard
   - CSV and XLS format will get auto-downloaded
4. From **RF Print Ship Label** (Module: rf.outbound.cwrfprintshiplbl)
   - When the screen parameter “print-packing-slip” is set as “Order” system generates the custom ORDER packing slip for the Order associated with the scanned OBLPN in the “Output interface file UI”
   - When the screen parameter “print-packing-slip” is set as “Both”, the system generates the custom ORDER packing slip for the Order associated with the scanned OBLPN in the “Output interface file UI”.
   - Along with the ORDER packing slip, the system generates the OBLPN Packing Slip with respect to the configuration mentioned above
5. From **RF Print Packing Slip** (Module: rf.outbound.cwrfprintlpnpackingslip)
   - When the screen parameter “packing-slip-type” is set as “Order LPN packing”, the system generates the custom ORDER packing slip for the Order associated with the scanned OBLPN in “Output interface file UI”.
   - When the screen parameter “packing-slip-type” is set as “Both”, the system generates the custom OBLPN packing slip for the Order associated with the scanned OBLPN in the “Output interface file UI”.
   - Along with the ORDER packing slip, the system generates the OBLPN Packing Slip with respect to the configuration mentioned above.

     **Note:** The generation of custom OBLPN/Order packing slip might fail:

     - If the web report category is not valid
     - If the web report category has a filter, which doesn’t match the RF scanned/UI selected record(s).

# Reports Supported

“Company Report Type” UI supports sub report type “WebReports” for the following reports:

- **OBLPN Packing Slip** – Generated by clicking “Packing List” on the OBLPN UI. “OBLPN_PACKING” in “Company Report Type” needs to be configured with the sub report type “WebReports”.
- **Order Packing Slip** - Generated by clicking “Packing Slip” button on the Order Header UI. “ORDER_PACKING” in “Company Report Type” needs to be configured with sub report type “WebReports”
- **Task Report** – Generated by clicking “Task Reports” on the Wave Inquiry UI. “TASK” in “Company Report Type” needs to be configured with the sub report type “WebReports”.
- **Inbound Receipt Report** - Generated by clicking “Inbound Receipt” on the IB Shipment UI. “INBOUND_RECEIPT_REPORT” in “Company Report Type” needs to be configured with the sub report type “WebReports”.
- **Pallet Packing List** - Generated by clicking “Pallet Packing List” on the Pallet View UI. “PALLET_PACKING” in “Company Report Type” needs to be configured with the sub report type “WebReports”.
- **Pick Travel Report** - Generated by clicking “Pick Travel Report” on the Wave Inquiry UI. “PICK_TRAVEL” in “Company Report Type” needs to be configured with sub report type “WebReports”.

- **Receiving Variance Report** - Generated by clicking “Receiving Variance Report” button on the Appointment UI. “RCV” in “Company Report Type” needs to be configured with sub report type “WebReports”
- **BOL** - Generated by clicking “Bill of Lading” button on the OB Load UI. “BOL” in “Company Report Type” needs to be configured with sub report type “WebReports”
- **Commercial Invoice** - Generated by clicking “Commercial Invoice” on the OB Load UI. “COMM INV” in “Company Report Type” needs to be configured with sub report type “WebReports”.
- **Export Shipment Packing List** - Generated by clicking “Export Shipment Packing List” on the OB Load UI. “EXPL” in “Company Report Type” needs to be configured with the sub report type “WebReports”.
- **Shipper’s Export Declaration** - Generated by clicking “Shipper’s Export Declaration” on the OB Load UI. “SED” in “Company Report Type” needs to be configured with sub report type “WebReports”

**Note:** Custom reports designed through WebReports cannot be invoked from RF. (This note is only applicable for reports that can be printed via RF). Also, Custom Reports should not have parenthesis.

# 7 Appendix

## Definitions

- **WMS:** Computer System utilized to manage inventory within a Distribution Center, managing Receipt through Shipment of goods.
- **ASN (Advanced Shipment Notice):** A notification of pending deliveries, similar to a packing list, sent in an electronic format or uploaded manually. Usually represents the entire contents of an inbound trailer.
- **License Plate Number (LPN):** Unique barcode assigned to trailers so that they can be traced in WMS.
- **Inbound LPN:** A unique LPN is required for each inbound receipt (Trailer) and for outbound shipments.
- **SKU:** A Stock Keeping Unit (Item)
- **Reserve Location:** Systematic locations used to track IBLPNs in the warehouse.
- **Drop Zone:** An intermediary location. Orders cannot be allocated to Drop Zones.
- **Wave:** Waves are records that match open Orders with allocatable inventory in the warehouse. When an allocation is created, WMS also creates a Picking Task.
- **Allocation:** The process of matching an Outbound Order with LPNs available in the inventory.
- **Outbound LPN (OBLPN):** An LPN that is packed for shipping. For Full LPN allocations, the IBLPN equals the OBLPN.

## Description of Statuses

See these topics for a description of various statuses in WMS:

*Related Topics*

- IBLPN Statuses
- OBLPN Statuses
- Task Statuses
- Cycle Count Adjustment screen Statuses

### IBLPN Statuses

- **Quality Check:** LPN pending Quality Check.
- **In Receiving:** LPN is in the process of receiving at the Receiving Station. Only applies to flows using the “Sort and Receive” RF module.
- **Received:** This status defines an LPN received with no location specified (i.e. LPN not received at a dock).
- **Located:** LPN is located to a WMS location (Dock, Reserve, Drop, etc.).

- **Reserved:** IBLPN is pending distribution (only applies to IBLPNs in Put To Store flows).
- **Partly Allocated:** Part of the LPN's contents are allocated to orders.
- **Allocated:** LPN is allocated to orders.
- **Consumed:** This status defines an LPN received and located to an active location
- **Lost:** LPN is lost during cycle counting.

## OBLPN Statuses

- **Outbound Created:** OBLPN is created from a wave (either through Full LPN or cubed allocation).
- **In Picking:** OBLPN is in the process of being picked (only applies when LPN has an intermediate "Picked" status).
- **Picked:** OBLPN is picked.
- **In Packing:** OBLPN is in the process of being packed.
- **Packed:** OBLPN is packed.
- **Loaded:** OBLPN is currently loaded into an Outbound Load.
- **Shipped:** OBLPN is shipped.
- **Delivered:** OLBPN is delivered to its destination facility (another warehouse).
- **Cancelled:** OBLPN is cancelled (when a packed OBLPN is converted back to an IBLPN).

## Task Statuses

- **Ready:** Task is generated in "Ready" status when the "Create Held Flg" in the Task Template is disabled. This Task appears in the RF's Task List.
- **HELD:** Task is generated in "HELD" status when the "Create Held Flg" in the Task Template is enabled. This Task does NOT show up in the RF's Task List.
- **Processing Started:** User started the Task (at least one LPN is scanned).
- **Completed:** User ended the Task (all OBLPNs are placed in the drop location).
- **Cancelled:** User cancels the Task from the UI (*Tasks* screen).

## Cycle Count Adjustment screen Statuses

- **In Progress:** This status only applies to counts performed in non-active locations. This status is triggered when you scan the first LPN in a location.
- **No Variance:** When a Cycle Count is complete and the count did not have ANY inventory discrepancies, the record is updated to 'No Variance' status.

- **Approved:** Record in 'Pending' status changes to 'Approved' status after approving a record by clicking the 'Approve' button, provided that all validations are passed. Note that inventory adjustments and Inventory History records are posted at this point.
- **Rejected:** Record in 'Pending' status changes to 'Rejected' status after rejecting a record by clicking the 'Reject/ Recount' button, provided that all validations are passed. Rejecting a record triggers another CC task.
- **Cancelled:** Record in 'Pending' status changes to 'Cancelled' status after rejecting a record by clicking the 'Cancel' button. Cancelling a record does not trigger a CC task.

# Roles and Permissions

Refer to the following sections (by Role) for more details about permissions.

*Related Topics*

- Administrator Permissions
- Management Permissions
- Supervisor Permissions
- Guard Permissions
- Employee Permissions

## Administrator Permissions

| **Permissions for role: ADMINISTRATOR** | | | | | |
|---|---|---|---|---|---|
| 1 | Add company | 11 | Change facility | 21 | Modify view columns |
| 2 | Delete company | 12 | Delete facility | 22 | Reorder view columns |
| 3 | Change company | 13 | Modify view columns | 23 | Save group view |
| 4 | Add user | 14 | Reorder view columns | 24 | Save user view |
| 5 | Delete user | 15 | Save company view | 25 | Modify menus |
| 6 | Change user | 16 | Save group view | 26 | Save company menu |
| 7 | Add group | 17 | Save user view | 27 | Save group menu. |
| 8 | Delete group | 18 | Modify menus | | |
| 9 | Change group | 19 | Save company menu | | |
| 10 | Add facility | 20 | Save group menu | | |

**Note:** By default, Administrators have access to all companies that the facility is eligible for.

# Management Permissions

| Permissions for role: MANAGEMENT | | | |
|---|---|---|---|
| 1 | Change user | 11 | Save group menu |
| 2 | Add user | 12 | Modify view columns |
| 3 | Add facility | 13 | Reorder view columns |
| 4 | Change facility | 14 | Save group view |
| 5 | Delete facility | 15 | Save user view |
| 6 | Modify view columns | 16 | Modify menus |
| 7 | Reorder view columns | 17 | Save group menu. |
| 8 | Save group view | | |
| 9 | Save user view | | |
| 10 | Modify menus | | |

# Supervisor Permissions

| Permissions for role: SUPERVISOR | |
|---|---|
| 1 | Change user |
| 2 | Change facility |
| 3 | Modify view column |
| 4 | Reorder view columns |
| 5 | Save group view |
| 6 | Save user view |
| 7 | Modify menus |
| 8 | Save group menu. |

## Guard Permissions

| Permissions for role: GUARD | |
|---|---|
| 1 | Read-only access; users cannot create, copy, edit or delete. |

## Employee Permissions

| Permissions for role: EMPLOYEE | |
|---|---|
| 1 | Read-only access; users cannot create, copy, edit or delete. |

# Inbound Sorting Criteria

| Inbound Sorting Criteria | Description |
|---|---|
| Destination Area | Directed Putaway Area |
| Destination Aisle | Directed Putaway Aisle |
| Destination Allocation Zone | Directed Putaway Allocation Zone |
| Location Size Type | Directed Putaway Location Size Type |

# Task Template Type: Regular

## Selection Criteria Fields

| Item Fields | Location Fields | Inventory (LPN) Fields | Order Fields |
|---|---|---|---|
| Putaway Type | To Task Zone | IB LPN Nbr | Shipto Facility Code |
| Item External Style | From Active Task Zone | LPN is Pallet | Dest Company Code |

| Item Fields | Location Fields | Inventory (LPN) Fields | Order Fields |
|---|---|---|---|
| Item Sortable Flag | From Reserve Task Zone | Pallet Number | Dest Facility Code |
| Item Conveyable Flag | From Active Aisle | | Customer Address |
| Item Custom Attribute 1 | From Active Area | | Customer Number |
| Item Hierarchy Code 1 | From Inventory Item Code | | Customer Name |
| Item Hierarchy Code 2 | From Reserve Aisle | | Order Nbr |
| Item Hierarchy Code 3 | From Reserve Area | | Order Type |
| Item Hierarchy Code 4 | From Reserve Level | | Cust PO Nbr |
| Item Hierarchy Code 5 | Location Pick Sequence | | Cust Field 1 |
| VAS Group Code | From Location Barcode | | |
| | Location Alloc Zone | | |

# Ordering Criteria Fields

| Item Fields | Location Fields | Inventory (LPN) Fields | Order Fields |
|---|---|---|---|
| Putaway Type | To Task Zone | IB LPN Nbr | Shipto Facility Code |
| Item External Style | From Active Task Zone | LPN is Pallet | Dest Company Code |
| Item Sortable Flag | From Reserve Task Zone | Pallet Number | Dest Facility Code |
| Item Conveyable Flag | From Active Aisle | | Customer Address |
| Item Custom Attribute 1 | From Active Area | | Customer Number |
| Item Hierarchy Code 1 | From Inventory Item Code | | Customer Name |
| Item Hierarchy Code 2 | From Reserve Aisle | | Order Nbr |
| Item Hierarchy Code 3 | From Reserve Area | | Order Type |
| Item Hierarchy Code 4 | From Reserve Level | | Cust PO Nbr |
| Item Hierarchy Code 5 | Location Pick Sequence | | Cust Field 1 |
| VAS Group Code | From Location Barcode | | |
| | Location Alloc Zone | | |

# Task Template Type - CC

## Selection Criteria Fields

| Location Fields | Item Fields | Inventory (LPN) Fields |
|---|---|---|
| Dedicated company | Calculated code | Batch |
| Area | Alternate code | Expiry Date |
| Aisle | Description | |
| Bay | Barcode | |
| Level | Unit cost | |
| Position | Hazmat | |
| Type | Create Timestamp | |
| Barcode | Mod Timestamp | |
| To be counted flag | Mod User | |
| Create Timestamp | Part a | |
| Mod Timestamp | Part b | |
| Lock Code | Part c | |
| Last Count Timestamp | Part d | |
| Last Count User | Part e | |
| Size Type | Part f | |
| Allow Reserve Partial Pick Flag | External Style | |
| Alloc Zone | VAS Group Code | |
| Lock for Putaway Flag | Pre Pack Code | |
| Pick Zone | Short Description | |
| Replenishment Zone | Putaway Type | |
| Task Zone | Is Parent Flag | |
| Cust field 1 | Product life | |

| Location Fields | Item Fields | Inventory (LPN) Fields |
|---|---|---|
| Cust field 2 | Velocity Code | |
| Cust field 3 | Season Code | |
| Cust field 4 | Brand Code | |
| Cust field 5 | Hierarchy 1 Code | |
| Pick Sequence | Hierarchy 2 Code | |
| Putaway Sequence | Hierarchy 3 Code | |
| | Hierarchy 4 Code | |
| | Hierarchy 5 Code | |
| | Require Batch flag | |
| | Conveyable Flag | |
| | Sortable Flag | |

# Ordering Criteria Fields

| Location Fields | |
|---|---|
| Dedicated company | Pick Zone |
| Area | Replenishment Zone |
| Aisle | Task Zone |
| Bay | Cust field 1 |
| Level | Cust field 2 |
| Position | Cust field 3 |
| Type | Cust field 4 |
| Barcode | Cust field 5 |
| To be counted flag | Pick Sequence |
| Create Timestamp | Putaway Sequence |
| Mod Timestamp | |
| Lock Code | |

| Location Fields | |
|---|---|
| Last Count Timestamp | |
| Last Count User | |
| Size Type | |
| Allow Reserve Partial Pick Flag | |
| Alloc Zone | |
| Lock for Putaway Flag | |

# Serial Number Transactions

The following is a list of RF transactions that support Serial Number validation:

## Inbound Transactions

- Receive Shipment
- Receive Load
- Create LPN and Create LPN Location
- Split Inbound LPN
- Modification of Inbound LPN
- Putaway to Active/Reserve Location
- Distribute LPN
- Cycle Counting
- RF Audit Inbound LPN

## Outbound Transactions

- Pack OB LPN
- Pick Cart
- Pack NC Active LPN
- Pick from Reserve
- Bulk Pick from Reserve/Active
- Distribute LPN
- RF-Repack OBLPN
- Split Combine OBLPN

- RF Loading
- Modify/Cancel OB LPN
- RF Audit OBLPN