Manhattan Active Supply Chain

User Guide (full)

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Manhattan Active® Supply Chain

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Manhattan Active® Warehouse Management
Receiving Enhancements
Returns against Original Order from the Return Station

The Return Station is enhanced to receive returns against the Original Order ID.
When the "*What should be the default returns mode?*" attribute in the Receiving Criteria is set to *Original Order*, the return station retrieves the shipped lines of the original order associated with the provided order ID and displays the same to the user. Users can scan or select an item to receive the returns against a blind ASN.

> **Note:** Not supported by WM mobile.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Receiving Configuration Guide
- Return Station Guide

Manhattan Active® Order Management - Manhattan Active WM **Return Order Integration**

When a Return Order (RO) is created in Manhattan Active Omni and posted to the Manhattan Active WM queue, it gets converted to a Return ASN, which the user can receive using the existing Return ASN receiving process. Manhattan Active Omni consumes the Receipt and Verifies ASNs' item level PIX to update the return order status and process the refund to the customer.

Enablement: This feature is controlled by a configuration that is disabled by default.

Creation of Multiple Process Needs for an Item

The solution allows users to create multiple process needs for an item, allowing them to add more special processing needs (such as Quality inspection, Weight Check, Cubiscan, and so on).
To achieve this functionality, enable the "*Should the system allow multiple Process needs creation per item?*" parameter on the Process Needs Creation Strategy screen.
The value of the Quantity Distribution Mode parameter "*Aggregate the need quantity and process it against any item*" is ignored when this parameter is enabled.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Process Need Guide](#)

LPN Disposition Enhancement

Unassign Putaway task when LPN Disposition is chained to Putaway

When putaway allocation happens upfront during receiving and execution occurs later from LPN-D chained to putaway, and if the user exits the transaction before completing the system-directed putaway task, the putaway task is unassigned based on the selected exception behavior reason code configured in the Exception Behavior screen.
The exception behaviors supported for this enhancement are configured with the *Locate and Unassign Task* or *Unassign Task* options.

Enablement: This feature is automatically enabled as part of the release.

Putaway Enhancements

Putaway To Empty Non-Replenishable Dynamic Active Locations

Users don't want to putaway additional inventory in a location that already has inventory until the location is empty.
To address the above problem, the system-directed putaway location determination is enhanced to suggest non-replenishable empty dynamic active locations where no inventory exists. However, system-directed putaway will not suggest non-replenishable dynamic active locations with existing inventory to avoid extra manual handling of existing inventory.

To achieve this, the "*Putaway planning to non-replenishable dynamic location mode*" parameter is added to the Putaway Planning Criteria and Putaway Priority screens.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Putaway Configuration Guide

System Directed Putaway To Drop Location - Handle Single Drop Location In Suggested Drop Zone With Same Barcode As the Target Location

The system-directed putaway is enhanced when the putaway user is directed to a drop zone where the drop location barcode is the same as the target storage location barcode. During this process, the putaway honors the drop location in the suggested drop zone and completes the putaway drop location updates. This is useful when the pick-drop location barcode is the same as the final target location barcode.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Putaway Process Guide

Allocation and Replenishment Enhancements
Deferred for Capacity Support for Held Replenishment Tasks

The solution is enhanced to create replenishment tasks in a Held status for the Deferred For Capacity (DFC) replenishments. This helps operations view all the tasks for the wave and plan their work efficiently using the Direct Task Creation flow.
To achieve this, the '*Replenishment Planned Status*' field is added to allocations to retain the original status of the replenishments during creation. Work release task creation template rules can use this field to create held replenishment tasks.

The replenishment manager is enhanced to check the held replenishment tasks and consider releasing them when a location reaches capacity or the location minimum is reached.

 Enablement: This feature is controlled by a configuration that is disabled by default. To enable it, the inventory parameter, "*What should the system consider to release?*", must be set to '*Only Held Replenishment tasks*'.

Related:

- Replenishment Process Guide

Work Release Enhancement
Force Release Allocations

The Override Threshold rules in the Task Release Template configuration can be used to force the release of allocations that do not meet the minimum task threshold criteria. The rules can be configured using attributes from Work Release Allocations and oLPN entities.

This ensures that when the minimum task thresholds are not met, the allocations are not stuck in "Ready for Tasking" status indefinitely.

Enablement: This feature is controlled by a configuration that is disabled by default. Rules can be configured using *Override Thresholds* in the Task Release Template screen.

Related:

- [Work Release Process Guide](#)

- [Work Release Configuration Guide](#)

Task Enhancement
Track User-Driven Exceptions during Task Execution

The solution is enhanced to write a Warehouse Activity Tracking (WAT) record whenever a user exits a task/transaction from WM Mobile. This helps supervisors or administrators gain visibility when users exit their work.

The Exception Behavior Code defaulted or selected during exit is saved on the WAT record to provide visibility as to why the user exited their work.

Enablement: This feature is controlled by a configuration that is disabled by default. The "*Should a Warehouse Activity Tacking record be written when a user exits a task?*" Task Parameter controls the enablement of this feature.

Related:

- [Task Assignment Configuration Guide](#)

Printing Enhancements
Use Session Printer to Print BOL during Closed Shipment

While using the Close Shipment process in WM Mobile, the solution is enhanced to find the printer details as follows:
1. Obtains the printer from the user metrics. If unavailable, then the solution considers Step 2.

2. Obtains the printers available at the location configured in user metrics. If unavailable, then the solution considers Step 3.

3. Obtains the printer details configured in the Print Criteria screen

To keep the behavior consistent with other transactions in Manhattan Active WM, the *useUserSessionPrinterForCloseShipment* parameter is added to shipment parameters. The parameter is set to *True* for new implementations by default.

Enablement: This feature is controlled by configuration that is enabled by default.

Related:

- [Close Shipment Process Guide](#)

Print Labels after Auditing oLPNS

The solution is enhanced to print labels when a variance is found after completing an oLPN audit. To support this, the following changes are made:

- The *Is a printer prompt required?* and *Which Print Criteria should the system use to print the Audit oLPN Variance Report?* parameters are added to the Audit Outbound Container Criteria screen.
- The Audit outbound container print criteria option is added to the *Print Criteria Type* drop-down list.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Audit Outbound Configuration Guide
- Packing Configuration Guide

Dedication and Capacity Tracking screens for Packing Locations

The following screens are added to view dedication and capacity tracking for Packing locations:

- Packing Location Assignment
- Packing Dedications
- Packing Location Capacity

Enablement: This feature is automatically enabled as part of the release.

Related:

- Packing Process Guide

Pick/Pack Enhancements

Asset Tracking - Serialization of Assets during Packing

Certain asset items have a unique reference number associated with each asset (that is, serialized assets). Serialized assets allow a business to track the location of the asset in the facility, store, trailer, etc. They also help determine the facility for returning an empty asset.

The solution is enhanced with the following changes to capture the serial number of an asset during the outbound packing process:

- The Asset Serial Number prompt is added to the WM Mobile pack transaction to support capturing and validating asset serial numbers during mobile packing. The *Do you want to capture the asset serial number for the oLPN?* parameter is added to the Pack Criteria screen to view the asset serial prompt in WM Mobile.
- The *AssetSerialNumber* field is added to the MHE PACKING message to support capturing and validating asset serial numbers during MHE packing.
- The *Asset Serial Number* field is added to the oLPN screen to manually capture the asset serial number and validate it in the oLPNs screen.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Asset Tracking Guide](#)

- [Packing Process Guide](#)

- [Packing Configuration Guide](#)

- [MHE Events Master List](#)

Honeywell Voice for Manhattan Active (HVMA) Offline Location Verification

The solution is enhanced to support HVMA (instead of Manhattan Active® Warehouse Management) to perform location verification (offline) and improve picking efficiency.
It allows the solution to bypass all states related to location verification after the initial pick and send all information needed for location verification to HVMA during picking execution.

Enablement: This feature is controlled by a configuration that is disabled by default. The "*Do you want location verification to be performed by HVMA?*" Pick Criteria parameter controls the enablement of this feature. To view the parameter, enable the "*Do you want the system to display/read out the Next Pick Location?*" Pick Criteria parameter.

Related:

- [Picking Configuration Guide](#)

Populate Physical Entity Code on oLPN and Send it to Labor Management (LM)

The solution is enhanced to populate the *Physical Entity Code* field on the oLPN when an oLPN is created. This field provides visibility to whether an oLPN represents a physical box or a physical pallet. Additionally, the Physical Entity Code of an oLPN is passed to the LM component during pick and pack execution.

Enablement: This feature is automatically enabled as part of the release.

Pulling of fully allocated Multi-SKU iLPN

The picking process is enhanced to allow the pulling of a fully allocated multi-SKU iLPN. The allocation process allocates the inventory from a multi-SKU iLPN having Allocation UOM less than LPN (like Units, Packs). While importing the Tasks at Pick Pack Component, the solution evaluates and marks the task details eligible for full LPN pull, if the entire iLPN is allocated and all the allocations of an iLPN are part of a single task.

Evaluating and marking the task details eligible for full iLPN pull is controlled by a "*Should the system evaluate Full Container Allocated for Multi Item iLPN?*" parameter at the Task Release Template of Picking Task Creation Strategy.
While performing picking, pulling of multi-SKU iLPN is controlled by the "*When should the system allow the user to pull a fully allocated iLPN?*" parameter in the Pick Criteria.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Picking Configuration Guide](#)

Complete Task action added on the Tasks Screen

The *Complete Task* action is added to the Tasks screen. The action is enabled only for Pick tasks that have Execution Mode set to "Pick_Into_oLPN" and Status as *Assigned* or *Ready For Assignment*. Operations that perform paper-based picking can use this feature to perform systematic task completion updates.

Enablement: This feature is automatically enabled as part of the release.

Control Shipment Assignment to an oLPN during Pack Completion

The Pick Pack parameter "*Should the system prevent assigning shipment to an oLPN having static route id on pack completion?*" is added to control the assigning of a shipment to an oLPN having static route on pack completion.
This would help the operations using fluid loading to prevent assigning a shipment to an oLPN till loading and avoid variance during the Close Shipment process.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Picking Configuration Guide](#)

Short and Force Replenishment

When there is an inventory shortage, users want to short the detail and release/trigger the replenishment for the source location without skipping the detail on the pick exception.
To achieve this, "*Do you want to Force Release Replenishment on Pick Short or on Alternate Inventory search?*" parameter is added to the Pick Pack Reason Codes screen and this parameter is applicable for Pick Exception category reason codes only.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Picking Process Guide](#)

Update Picker and Packer Fields for an oLPN

Currently, the picking process updates the olpn's picker, when the olpn is completely picked and similarly, the packing process updates the olpn's packer when the olpn is completely packed.
With this enhancement, the supervisors can have visibility on who is picking or packing the oLPN, when the picking or packing process is in progress. The solution updates the Picker field even when the picking is still in progress for the oLPN; similarly, the Packer field is updated when the oLPN is still being packed.

The following parameters are added to the Pick Pack Parameters screen:

- *Update picker on oLPN while picking is in progress?*

- *Update packer on oLPN while packing is in progress?*

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Picking Configuration Guide

Inventory Enhancement
Serial Number Tracking at Enterprise Level

Serial number tracking is enhanced to import, validate, and track the serial number at the enterprise level. The enterprise serial can be enabled using the *enterpriseSerialEnabled* parameter in the EnterpriseInventoryParameters entity.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Flexible Attribute Group Process Guide

Inventory Zone Re-balancing

Inventory re-balancing is needed to ensure inventory is always available in Primary Reserve locations for Allocations or Replenishments to Active zones.
This feature re-balances the zone inventory and replenishes it till zone maximum whenever inventory from these zones is allocated as part of wave/stream-based allocation or replenishment and even lean-time replenishment process.

To support this, the *Should system perform zone checks to validate if re-balancing is required?* parameter is added to the Allocation and Replenishment Strategy screens.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Inventory Zone Re-balancing Guide

Automated Storage Retrieval System (ASRS) Replenishment

This feature helps users to assign a limit to the maximum quantity that can be replenished to an ASRS location. Also, this feature supports locations within an ASRS zone modeled as temporary locations.
The following changes are made:

- The *Enable Zone capacity validations during replenishment* parameter is added to the Allocation Parameters screen to ensure that zone capacities are loaded before creating allocations or replenishments.

- The *How should this criteria handle zone capacities for replenishment?* parameter is added with the values, NONE, NEED, and MAX. Based on the selected option, the zone capacity checks are triggered for replenishments.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Replenishment Process Guide

- Replenishment Configuration Guide

Serial number in Inventory Sync Summary PIX

The Serial number is sent to the Host systems when the Inventory Sync Summary PIX is generated.
To achieve this, enable the "*Send Unique Inventory Attributes*" parameter from the Inventory Sync screen. Additionally, the "*Exclude Secondary Attributes*" parameter is added to restrict secondary unique attributes in the PIX.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Inventory Sync Process Guide

Inventory Management Enhancement
Count Allocated iLPN on Reserve Location

The "*How should allocated iLPN be counted and booked?*" parameter is added to the Count Criteria/Location Count Override Criteria screens with the values, *NONE* and Book if location's inventory reservation type is LPN.
The solution identifies allocated or partially allocated iLPNs in a location, removes them from the location records if not counted, and deletes or moves them to the Lost category depending on reason code configurations.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Cycle Count Configuration Guide

- Cycle Count Process Guide

Inventory Count and Inventory Count Detail screens to honor the User's BU

Currently, users from other Business Units (BU) can book the counts because the counts performed in other BUs are displayed on the Inventory Count screen.
When the parameter, "*EnforceBusinessUnitFilterOnInventoryCount*" in the Inventory Management Parameters is enabled, the count records are displayed based on the user's BU on the Inventory Count and Inventory Count Detail screen.

> **Note***: The parameter should be enabled through the API.*

Enablement: This feature is controlled by a configuration that is disabled by default.

Appointment Enhancements

Completed Appointments on the Appointment Calendar

To improve visibility, completed appointments are shown in a time slot corresponding to their appointment start date. To support this, the *Show completed appointments on Appointment Calendar* parameter is added to the Appointment Parameter Strategy.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Appointment Scheduling Configuration Guide

Capture BOL, PRO Number, Quantity, and UOM Details during Appointment Creation

The Appointment Scheduling process is enhanced to capture the Bill Of Lading Number, PRO Number, Quantity, and UOM details when the Appointment Content type is PO or SPO. These values are stored in the appointment content entity. All the values are non-mandatory fields.

> **Note**: Not supported for appointment content type of ASN, Shipment, or Empty.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Appointment Scheduling Process Guide

Yard Enhancement

Opportunistic Substitution of Trailers

To optimize trailer movement in the yard, the solution is enhanced to direct the checked-in Drop Empty trailers directly to the door to load an outbound shipment.

To support this, the *Optimize trailer movement using opportunistic substitution* parameter is added to the Yard Parameters screen. Also, after unloading a trailer, the trailer can be used to load an outbound shipment at the same door or another door when the parameters, *Optimize trailer movement using opportunistic substitution*, and *Reusing the Drop Empty trailer to load an outbound shipment* are enabled.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Yard Management Process Guide

- Yard Management Configuration Guide

Trailer selection based on Demurrage Time

The Next Trailer Determination (NTD) in Yard Management is enhanced to select a Drop Unload trailer from the yard slot based on the trailer with the least amount of time before the demurrage time.

When the *Preference Detail Attribute Demurrage Time in Hours* parameter from the Yard Preference screen is enabled, the solution does the following:

- Retrieve the list of trailers with demurrage time updated on the Trailer Visit Alert Sending Time.

- Finds a trailer based on the highest score obtained by matching the preference during NTD.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- [Yard Management Process Guide](#)

Support for Item Level ASNs in Next Trailer Determination (NTD) putaway distance calculation

When the Trailer is checked in, the Next Trailer Determination (NTD) putaway distance calculation is supported for item-level ASNs.

Enablement: This feature is automatically enabled as part of the release.

Related:

- [Yard Management Process Guide](#)

User Interface Enhancements

Highlight Display Text on the Screen

Users can use the Proactive WM Mobile Editor to highlight the display text on the screen.

Select the *Text Highlight* check box from the *Display* field and configure the following options to highlight the text:

- Color

- Weight

- Size

- Target Field

- Apply to last <N> characters

Enablement: This feature is automatically enabled as part of the release.

Related:

- Proactive Mobile Editor Documentation

Custom drop-down in Mobile Transaction

Users can add a drop-down field for custom transactions to obtain drop-down values from custom components. The lookupTextField in the Input section is enhanced with the following fields to populate the values in the drop-down field.

- Component Name

- URL

Enablement: This feature is automatically enabled as part of the release.

Related:

- Proactive Mobile Editor Documentation

Remove States in Mobile Editor

A *Delete* button is added to the Proactive WM Mobile Editor to remove the added state for an extension pack before deployment.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Proactive Mobile Editor Documentation

Display Demurrage time on the Yard Visibility Screen

The Yard Visibility screen is enhanced to display the Demurrage time on the dock door and yard slot tiles for Drop-Unload visit types. To achieve this, enable the "*Show Demurrage Time in Yard Visibility UI*" from the Yard Parameters screen.
Enablement: This feature is controlled by a configuration that is disabled by default.
Related:

- Yard Management Configuration Guide

- Unified Yard Visibility Guide

Load Builder
Display Trailer Position When Loading Pallets

The loading strategy is enhanced to display the trailer position for a pallet to the user during loading. It provides a system-directed approach to load the trailer planned by the Load Builder process.
When the *Display Trailer Position while Loading OLPNs* parameter from the Loading Criteria screen is enabled, the system displays the planned row and position to the user as the last prompt during the Load OLPN transaction. The user must select the *Tap to Confirm* action to complete the loading.
Enablement: This feature is controlled by a configuration that is disabled by default.
Related:

- Loading and Unloading Configuration Guide

- Loading and Unloading Process Guide

Resolving Overflow Actions

Overflow pallets occur when no more trailer positions are available for the pallets assigned to the shipment.
The solution is enhanced to handle overflow pallets with the following actions:

- *Unassign*: To remove pallets from the Overflow section

- *Cancel*: Cancels the oLPNs and pallets based on the selected reason code option

The following screenshot displays the Overflow Pallet section in the Load Builder screen:
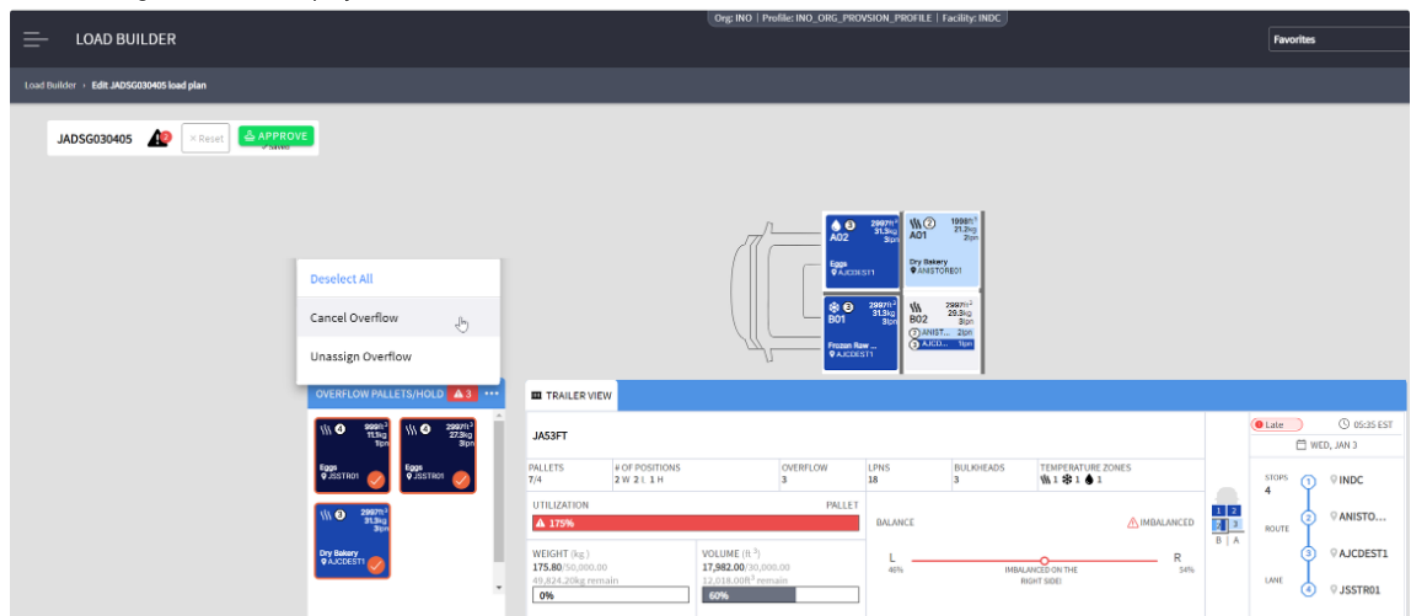
Enablement: This feature is automatically enabled as part of the release.

Related:

- Load Builder Guide

Include Trailer Position Information for Pallets during Ship Confirm

The ship confirmation process is enhanced to include pallet information. The main benefit is to communicate the trailer row, position, and compartment information for the pallets planned as a part of the Load Builder process. It also allows you to send all pallet fields in a separate dedicated section of the Ship Confirmation section.

Enablement: This feature is controlled by a configuration that is disabled by default.

Configure the "*How should pallet information be sent in the ship confirm?*" parameter to "*Send pallet details in a separate section*" in the Ship Confirm Parameters screen. Also, configure the Ship Confirmation Template as "*Generate_Ship_Confirmation_with_oLPNs*" in the Ship Confirm Export Criteria screen or modify the template to include the pallet fields that are required.

Related:

- Ship Confirmation Process Guide

- Ship Confirmation Configuration Guide

Load Plan Report

You can print the Load Plan Report (LPR) from the following screens:

- Load Builder screen: Select the *Print Load Plan Report* option from the Approved List screen.

- Shipment screen: Select the *Print Load Plan Report* option for shipments that have the Load Building Status as *Approved*. This is available at the header level (main screen) as well as the detail level.

Enablement: This feature is automatically enabled as part of the release.

Additionally, you can specify the Document Template Type and the Document Template on the Close Shipment Print Criteria screen to print the report during shipping as part of the Close Shipment process.

If you encounter any issues while printing the report (for example, the shipment did not undergo trailer cubing and therefore does not have a load plan report), you can navigate to the Message Logging screen to view the error logs.

Related:

- Load Builder

- Shipment Process Guide

- Close Shipment Configuration Guide

Manhattan Labor

Display Employee Engagement Messages

Users can customize the text for motivational and congratulatory messages to encourage their employees.

Use the *Employee Engagement Motivational Message Display* and *Employee Engagement Well Done Message Display* parameters in the UI Parameters to display the toast messages in WM mobile.

Enablement: This feature is controlled by a configuration that is enabled by default.

Related:

- Employee Engagement Process Guide

Display Activity on Labor Kiosk

Users can enable the *Show On Kiosk* parameter from the Activity, to display the activity in the Labor Kiosk.

Enablement: This feature is controlled by a configuration that is enabled by default.

Related:

- [Labor Actuals Configuration Guide](#)

Manhattan Slot

Enable Conversion to Different Slotting UOM in Manual Reslot

The Manual Reslot feature is enhanced to provide greater flexibility to users who want to move an item's assignment to a location that has a different UOM. Also, to improve usability, the *Manual Reslot* action is accessible from the following screens:

- Items

- Storage Locations

- Location Master

- Slotting Graphical UI

> **Note**: Additionally, the action is also accessible from the Item Visibility screen.

The "*Override UOMs*" parameter from the above screens lets you override the "From" location's Slotting UOM and convert it to a different Slotting UOM in the "To" location. The "To" UOM can be user-defined. If not specified, the slotting engine selects it automatically.

Enablement: This feature is automatically enabled as part of the release.

Related:

- [Manual Reslot Process Guide](#)

Advanced Filters on Item Visibility

The "*Advanced Filter*" option is accessible from the filters in the Item Visibility screen.

Enablement: This feature is automatically enabled as part of the release.

Manhattan Active® Transportation Management

Vendor Enhancements

Compute Supplier Purchase Order Sizes

Supplier Purchase Order aggregated size information, such as total weight, total volume, and total quantity, can be viewed on the supplier purchase order header. This information will be validated when a user creates a supplier routing request to plan their deliveries.

This functionality is achieved via the "*Purchase Order Visibility*" response template.

Enablement: This feature is controlled by a configuration that is enabled by default.

Related:

- Vendor Network Process Guide

- Vendor User Guide

Tracking Vendor Contact on Vendor Facility

Vendor users in each facility may differ from the vendor's primary contact, who must be informed when the tender is accepted. To facilitate this, Manhattan Active® Transportation Management allows vendor users to operate in multiple facilities and tracks the vendor contact associated with each facility to alert the vendor facility users.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Facility Configuration Guide

- Transportation Management Change Detection Use Cases

Transportation Planning

Data Loader

Simplified Lane Data Loader

The Simplified Lane Data Loader combines the critical fields into one Excel workbook, reducing the number of Excel sheets required to edit, input, or export to configure lane(s).

Supported Calculation Methods

- Standard and Tiered* (Standard Tiered Rating under the Tier Calculation Method)

When using the Tiered Calculation, specifically the Tier MIN and MAX

- Only Greater Than or Equal To for the first column

- Only Less Than for the Second Column

Supported Modes

- TL, LTL, and Intermodal Modes

Support only 1 pair of Effective & Expiration Date

- Unit of 1 only supported for Tiered Calculation Method

Enablement: This feature is automatically enabled as part of the release.

Related:

- Lane Manager Configuration Guide

Lane Carriers Screen - Rate/Route Maintenance

By selecting the "*Lane Carriers*" button for a selected lane on the *Lane* screen or using the slider menu for the specific lane, the solution offers user(s) a simplified view to verify rating and routing records on a given lane and edit existing details. The *Lane Carrier* screen consolidates rating, routing, and accessorial records with required details and allows users to edit carrier rank, routing information, and freight rates and navigate to the associated lane accessorials.

Enablement: This feature is controlled by permissions.

Related:

- Lane Manager Configuration Guide

Rank-based Extended Attribute Propagation

Rank-based extended attribute inheritance determines the extended attribute value(s) to propagate when there is more than one attribute value to choose from. Propagation rules can be defined across supplier routing requests, transportation orders, shipments,

and appointments. On the *Inherited Labels* screen, define the Target and Source Object/entity, Extended Attribute Name, and the Inheritance Calculation Strategy as *Rank* with a list of valid values and corresponding ranks.

Inherited rules are applied from source to target object/entity for the following:

- Supplier Purchase Order(s) to Supplier Routing Request.

- Transportation Order(s) to Shipment.

- Supplier Purchase Order(s) to Appointment and Shipment(s) to Appointment.

For example, "*Rank-based inheritance from transportation order(s) to shipment.*" When a shipment extended attribute rank configuration is defined, in that case, the shipment inherits an extended attribute value from a transportation order(s) based on the lowest rank (1) extended attribute value. For the value to propagate from the transportation order(s) to the shipment, the shipment extended attribute must have the same name and data type as the transportation order extended attribute.

Enablement: This feature is controlled by a configuration that is disabled by default.

Add Order to Existing Shipment for Shipments that are Tendered

Manhattan Active TM allows users to add new orders to the shipment(s) already tendered and accepted by the carrier, thereby adding flexibility to the existing Add Order to Existing Shipment (AOES) process.

This functionality is achieved when the Routing Criteria definition "*Orders can be added to existing shipments that have this status, or an earlier status*" is set to tendered or accepted and the Continuous Shipment planning parameter "*Tender status after which resources cannot be changed on the shipment*" and "*Tender Status after which new stops cannot be added to the shipment*" is set to tendered or accepted.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Shipment Configuration Guide

- Transportation Planning Routing Guide

Carrier Allocation based on Rules

The process of allocating a booking to a carrier is enhanced to follow rules that can be configured based on the booking's attributes. These rules delay the allocation of these booking(s) to carrier(s) until X number of days before a departure date, which could limit the amount of re-planning that must be done.

This functionality is achieved when the Booking parameter "*Use Rules to Control Carrier Allocation*" is set to Yes.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Booking Configuration Guide

- Booking Process Guide

Support for UOM-based and Fixed Variable Load and Unload Rates

The shipment planning engine considers both variable load and unload rate(s) along with fixed load and unload time for the combination of mode, equipment, and product class. Users can now define a variable rate per UOM and fixed rate for the combination of mode, equipment, and product class.

This functionality is configured when the Shipment Planning parameter "*Consider Both Variable and Fixed Load/Unload Time defined under Variable Handling Time*" is set to True.

Enablement: This feature is controlled by a configuration that is disabled by default. Contact your service representative to configure the shipment planning parameter.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Ability to Create Shuttle Schedule with Multiple Way-points

The shipment planning engine allows users to build multi-delivery shuttle shipment(s) and consolidate order(s) from different hubs/cross-docks into a single shipment, thereby reducing the number of shipment(s) and improving the trailer fill percentage. The shipment(s) created to deliver products at different hub/way-point locations will honor shuttle schedules defined for each day of the week and the maximum number of shipments planned for each scheduled departure time.

This functionality is achieved when the "*Multi-Stop shuttle schedule using DC and Hubs/Cross-Docks*" is configured on the *Shuttle Schedule* screen.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Consider Dock Hours during LTL Planning

The shipment planning engine considers dock hour and dock hour capacities at the origin and destination while planning Less-Than-Truckload (LTL) or direct-mode shipments. Both dock simultaneous capacity and dock hour capacity will be honored while planning LTL or direct-mode shipments.

This functionality is configured when the Shipment Planning parameter "*Honor Dock Hours for Direct Routes*" is set to True and "*Consider Dock Hour Capacity*" under Mode Setup is set to True.

Enablement: This feature is controlled by a configuration that is disabled by default. Contact your service representative to configure the shipment planning parameter.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

User-directed assignment of a Different Resource other than the Designated Resource on the Transportation Order

Manhattan Active TM is enhanced to retain user-assigned resources when shipments are modified. These resources are retained upon further modifications to the shipment, whether during user-directed shipment planning or through the "*Assign Transportation Resource*" action. Users can also assign resources (carrier/mode/service level/equipment) different from the designated resources on the shipment.

This functionality is configured by setting the User-Directed Shipment planning parameter "*Retain User Assigned Resources during Manual Shipment Planning*" to True and the Shipment Strategy parameter "Retain *User Assigned Resources upon Manual Updates on Shipment*" to Yes.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Shipment Configuration Guide

- Shipment Process Guide

Soft Time Windows Improvements

When the shipment planning parameter "*Enable Soft Time Windows*" is enabled, the shipment planning engine honors order and dock hour windows. The shipment planning engine also allows users to disable order time window extensions while extending dock hour(s) at the facilities. Order windows can only be extended when the "*Extend Order window based on Soft Time window configuration*" parameter is enabled.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Shipment Configuration Guide

- Shipment Process Guide

Auto Shipment Creation Rule(s)

The Auto Shipment Creation functionality is enhanced to override the values for shipment planning parameters. This applies only when shipments are automatically created using Automatically Create Shipment Configuration and by selecting the "*Auto Creation Shipment Planning Type*" value as "*Advanced Planning.*"

Users can define the shipment planning parameters in two places.

- Auto Shipment Creation Rule Details: This will allow the user to define shipment planning parameters for specific shipment creation Rules.

- Transportation Order Configuration: The shipment planning parameter set defined under Transportation Order Configuration will be used only when the Auto Shipment Creation Rule does not have the Shipment Planning Parameter Set defined.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Improvements to Route Generation Iterations during Static Route Planning

The Static Route planner is enhanced to consider all possible routes per resource at each iteration while building shipments using static routes. This enhancement will ensure the cheapest feasible resource options are selected if multiple resource options (Driver, Tractor, and Trailer) are available to carry the static routes.

This functionality is configured when the Static Route parameter "*Route Generation Option per Resource*" is set to "*All Possible Routes per Resource at Each Iteration.*" The parameter's default value is "*One Route per Resource at each iteration.*"

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Static Assignment of Asset Instances to Static Routes

During static route delivery planning, the shipment planning engine allows users to specify the driver/tractor/trailer asset and/or the instance on the static route. If the static route(s) has an instance assignment, then the instance assignment on the shipment(s)/trip(s) would be a post-processing step, and if the instance assignment is not available (based on the instance calendar) for the shipment/trip planned times, then an instance is not assigned.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Consider Options on Less-Specific Lane for Lane-based Shipments created using Shuttle Planning

For lane-based shipment(s) created through shuttle planning, the shipment planning engine considers routing options from less-specific lanes when the specific lane options are fully utilized during the engine run.

This functionality is enabled when the Carrier Selection parameter set tied to Shipment Planning parameter set associated with routing criteria has an attribute "*Routing Lane Search Method*" value set to "*Less Specific Lane if specific Lane out of Capacity*."

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Multi-Stop Way-Point Shipment(s) using Shuttle Schedules

Manhattan Active TM is enhanced to support user-directed action(s) for pre-planned transportation order(s), such as adding orders to an existing shipment, removing orders from an existing shipment, removing a stop from an existing shipment, moving stops, and combine shipments and user-directed actions for post-cubing transportation order(s) such as assign order to Shipment and remove stop to work with the shuttle schedules based on single or multiple cross-dock shipment(s). These actions ensure that the shuttle schedules are honored when shipment(s) are updated for pre-planned transportation order(s) and post-cubing of transportation order(s).

Enablement: This feature is automatically enabled as part of the release.

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Re-Optimize Shipment Stop Sequences upon User-directed Actions on Shipment

When user-directed action(s) on the shipment(s) such as adding orders to an existing shipment, removing orders from an existing shipment, removing a stop from an existing shipment, moving stops, and combining shipments are performed, the solution considers pickup or delivery stop(s) resequencing to determine a more optimal stop sequence.

This functionality is configured when the User Directed Shipment Planning parameter "*Re-Optimize Shipment Stops while doing manual action*" is set to True.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Initiate Broadcast when Carrier Options are Depleted across Multiple Lane Hierarchies

The solution triggers the auto-broadcast when unique resources across all the hierarchy of lanes are depleted on tender decline, even if the tender decline threshold is not reached or not configured.

This functionality is achieved when the Broadcast Criteria Definition "*Trigger Broadcast after all resource options are exhausted*" is set to Yes.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Planning Process Guide

- Transportation Planning Configuration Guide

Create Shipments without Orders using a Shipment Template

Manhattan Active TM allows the creation of shipment(s) without orders from pre-defined shipment templates. Users can create shipment(s) without orders from shipment templates from the *Shipment Template* screen or via *Unified Logistics Control* (ULC).
Enablement: This feature is automatically enabled as part of the release.
Related:

- Shipment Template

Restrict User Access to a Geographic Region

Manhattan Active TM allows shippers to manage user access control, allowing them to view supplier purchase orders, routing requests, transportation orders, and shipments for a particular geographic region. The solution allows shippers to customize these access controls by configuring inbound and outbound regions, using hierarchy IDs, and creating data access tags. By associating these tags with facilities and users, shippers can ensure that their users can access only those authorized transactions.
Enablement: This feature is controlled by a configuration that is disabled by default.

Dispatch

Create and Edit Driver Calendars and Schedule Exceptions

Manhattan Active TM allows users to enable driver calendars and schedule exceptions, which can be added/edited directly on the *Driver Instance* details screen.

- Driver calendars display a driver's planned available working and off days within the graphical view of the Dispatch Workspace and update a driver's next available time upon check-out.

- Driver schedule exceptions render the planned workdays off (vacation, sick leave, or jury duty) days as working or adjustments to the start/end times on a particular day. The solution also provides the flexibility to block time within a driver's workday (driver meetings, training, and drug tests), for which the driver will only be available for part of the planned shift.

Enablement: This feature is automatically enabled as part of the release.
Related:

- Dispatch Process Guide

Standalone Empty Moves

Manhattan Active TM supports standalone empty moves. These empty moves are single-segment trips from one facility to another without shipments/orders commonly used to reposition equipment, material handling equipment, or promotional materials from one facility to another and are created within the Dispatch Workspace.
Enablement: This feature is automatically enabled as part of the release.
Related:

- Dispatch Process Guide

Allow Users to plan Trips with Static Routes

When dispatchers assign drivers based on a static route, the Dispatch Workspace displays the static route used to plan a shipment, and the static route ID is included in the trip-out JSON sent to external systems.
Enablement: This feature is automatically enabled as part of the release.

Auto-Accept Trailer when the Trailer Number on the Shipment is Populated

Within the Dispatch Workspace, when a driver is assigned to a shipment with an assigned trailer, the assigned trailer will be automatically accepted on the trip(s) created/updated when the driver is assigned.

Enablement: This feature is automatically enabled as part of the release.

Auto Check-Out of Driver

The Dispatch Workspace is enhanced to allow drivers to check out at the end of their shift. The auto check-out feature periodically monitors drivers to check out after the scheduled end of their shifts. Suppose a driver is not actively engaged on a trip; in that case, the driver will be automatically checked out at the end of the last activity recorded for the driver.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Dispatch Process Guide

Honor Dock Hour Dispatch Distribution at Shipping Distribution Center

The shipment planning engine considers shipping dock hour capacity distribution while planning outbound or shuttle shipment(s), thereby streamlining the departure times of outbound shipment(s) out of a distribution center. Users can, therefore, choose to uniformly distribute the shipment(s) departure time across the dock hour or define specific distribution percentages for different time intervals within the dock hour.

This functionality is configured when the Shipment Planning parameter "*Enable Dock Hour Dispatch Capacity Distribution*" is set to Yes, and the "*Number of Periods to Consider for Distribution" under Dock Hour Capacity Distribution"* is set to Yes.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Shipment Configuration Guide

- Shipment Process Guide

Unified Logistics Control

Plan Relay Shipments

Manhattan Active TM allows users to choose and submit the relay path to create relay shipments via ULC. When a user selects the *single shipment* option for the first leg of a shipment, the solution will ensure that the same option is chosen on subsequent legs. Relay shipments created are planned with the same trailer on all legs of the shipment.

Users can manually add orders to existing relay shipments by selecting the related shipments and transportation order(s). Subsequent legs automatically select any corresponding network shipments. Once submitted, these transportation orders (s) are added to the existing relay shipments.

This functionality is achieved by configuring path sets between the origin and destination with a relay as a way-point.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Shipment Process Guide

Usability Improvements

Avoiding Multiple Supplier Routing Request Submissions

Manhattan Active® Transportation Management is enhanced with refresh capabilities and warning messages to avoid multiple parallel submissions of supplier routing requests. The following capabilities ensure users submit only one supplier routing request at a time:

- Warning indicator(s) to:
  - Notify the user that the selected supplier purchase order(s) with supplier routing request(s) is being processed.
  - Notify the user that they are attempting to override a supplier routing request submission before the process is complete.
  - Track any overridden submissions by displaying a warning against the supplier routing request.

- A refresh capability provides the user with the latest data once the supplier routing requests are processed.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Vendor Network Process Guide

- Vendor User Guide

Transportation Execution

Transition of Shipment Transit Status to In-Transit

Manhattan Active® Transportation Management allows shipper users to transition shipment transit status to In-Transit based on either an arrival or departure message at any stop based on the Shipment Transit Status Criteria configuration on the shipment

strategy.

This functionality is achieved when the Shipment Strategy Shipment Transit Status Criteria parameter "*Shipment transit status will move to 'In-Transit' when*" is set to either:

- "*Either Arrival or Departure tracking message is received for the first stop*'
- '*Either Arrival or Departure tracking message is received for any stop*.'

Enablement*:* This feature is controlled by a configuration that is disabled by default.

Related:

- Shipment Configuration Guide

Capture and Display Source ID on Tracking Message(s)

Manhattan Active TM allows users to capture, display, and filter the actual tracking message source created by an external system in the Shipper and Carrier Networks.

This functionality is achieved by adding the Source ID attribute to the XSLT mapping and integration mapping for the external integration.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Tracking Configuration Guide

Capture and Display BOL, PRO number, and Quantity on Purchase Order Appointments

Manhattan Active TM allows carrier users to capture the Bill of Lading (BOL), PRO number, and quantity as part of the purchase order and supplier purchase order appointments at the appointment content level created from the Carrier Network. This feature also helps users view and filter appointments based on bill of lading and PRO number.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Carrier Network Process Guide

Capture and Display Extended Attributes on Purchase Order Appointments

Manhattan Active TM allows carrier users to capture extended attributes as part of the purchase order and supplier purchase order appointments at the appointment header and content level created from the Carrier Network.

Enablement: This feature is controlled by a configuration that is disabled by default.

Re-evaluate the Tender Schedule when Shipment dates are Modified

The tender schedule date and time for shipments in Tender Scheduled status are recomputed automatically based on the first stop's planned departure date and time update via the Edit Dates action on the ULC screen.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Tendering Process Guide

Filter Shipments based on Document Category - Attached

The Document Category filter allows shipper users to filter shipments in the Unified Logistics Control (ULC) screen and the Shipment List page based on the document category "Attached." This allows users to quickly find shipments with documents attached (or, conversely, which ones are missing attachments).

Enablement: This feature is automatically enabled as part of the release.

Transportation Order and Transportation Order Facility Notes on Shipments

Notes on transportation orders, pickup stops, cross docks (for orders on network shipments), and delivery stops can now be viewed on shipments in both the Shipper and Carrier Networks. These notes will also be included in the Tender Outbound message.

Enablement: This feature is automatically enabled as part of the release and is controlled by permissions.

Display Tender Configuration on Shipments

Once shipments are tendered to a carrier, the related tender configuration name is displayed on the *Shipment Tender Details* and *View Tender History* screens.

Enablement: This feature is automatically enabled as part of the release.

Related:

- Shipment Process Guide

Update Appointments when Extensible Attributes are propagated from Shipments to Appointments

While *creating* appointments, Manhattan Active TM allows extended attribute propagation from shipments to appointments, meaning that these attributes are considered during resource evaluation on appointments. This capability has been enhanced by continuing this resource evaluation during appointment edits.

This functionality is handled by the parameter "*Re-evaluate Resource Unit on Appointment edits*." When this parameter is enabled, the resource groups are re-evaluated when the shipment's appointment or extended attributes are updated.

Enablement: This feature is controlled by a configuration that is disabled by default. To configure the parameter, contact your service representative.

Related:

- Modification Rules and Strategy

Alerts and Notifications

Contact Type Alerts for Supplier Purchase Order, Supplier Routing Request, and Transportation Order Modification Rules

Based on modification rules, Manhattan Active® Transportation Management allows users to subscribe to alerts (via contact types such as facility and/or vendor) when critical fields are updated across supplier purchase orders, supplier routing requests, and transportation order.

For example, an email alert is sent to the shipper and vendor contacts when a facility is updated. Similarly, when the size of a supplier purchase order changes, an email alert is sent to the shipper contact.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Modification Rules and Strategy

Carrier Network Alerts

The Carrier Network has been enhanced to allow carrier users to subscribe to receive alerts or web notifications. These alerts and notifications can be configured when:

- An invoice is rejected, closed, or a charge is rejected.

- An appointment is checked in, completed, or countered.

> **Note:** *Users cannot subscribe to alerts and web notifications via the TM Mobile application.*

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Carrier Network Process Guide

Appointment Alerts

Manhattan Active TM allows users to subscribe to and receive notifications when an appointment is:

- requested or created

- scheduled

- countered

- arrival date/time changes

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Management Alerts

Transportation Order Alerts

Transportation Order Missing Fields

Manhattan Active TM allows users to subscribe to and receive notifications when the following specific fields on the transportation order are missing: *Origin Facility, Destination Facility, Designated Resources, Pickup Start End Date Time, Delivery Start End Date Time, Product Class, Climate Control, Billing Method, Total weight, and Total volume.*

If additional fields or attributes need to be considered, a condition in the *Event Action* rule must be added using the sample rule "*transportationOrder.extended.extendedattribute.isNull(),*" which refers to the Alert Type "*MissingTOFieldsActionAlert.*"

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Management Alerts

Transportation Order Sizes greater than Maximum Capacity Allowed

Manhattan Active TM allows users to subscribe to and receive notifications when the planned sizes of transportation orders exceed the maximum capacity allowed within the solution. Currently, the default maximum weight of 40000 lbs. (standard weight UOM) and maximum volume of 40000 cuft (standard volume UOM) are set. If the user needs to reset, then modify the rule using the sample rule "(*transportationOrder.totalWeight > 40000*) or (*transportationOrder.totalVolume > 40000*)", which refers to the Alert Type "*TOSizeMaximumCapacityViolation.*"

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Management Alerts

Non-Event-Based Notification

Manhattan Active TM supports the following shipment non-event-based notifications:

- Shipment in tendered status but not accepted by the carrier.

- Shipment in planned status but not tendered.

- Shipment missed the scheduled appointment.

- Shipment is planned to arrive at a specific time, but the user has not received an arrival tracking message.

- Shipment is planned to depart at a specific time, but the user has not received a departure tracking message.

Enablement: This feature is controlled by a configuration that is disabled by default.

Related:

- Transportation Management Alerts

Transportation Settlement
Freight Bill

The Freight Bills screen has been enhanced to allow users to view a detailed transportation order freight charge breakdown. An interactive three-panel layout offers robust search and filtering capabilities and customization options to accommodate user preferences, allowing users to access relevant content without navigating through multiple layers of menus or screens.

Enablement: This feature is automatically enabled as part of the release and is controlled by permissions.

Create ASN from Purchase Order

Last updated: 05/06/2024

Purchase Order (PO) information is hosted from the Warehouse system. If the warehouse has not received an Advance Shipment Notice (ASN) from the vendor, information from the PO along with the trailer paperwork can be used to create an Item-level ASN. Items on a Purchase Order can be shipped at once or split among several ASNs. The user may also associate POs with an existing ASN.

1. To start with building ASN, click '**Create ASN from PO**' action on ASN UI.

2. This action requests the receiving component for the ASN next-up number and prompts the user to provide the estimated delivery date.

3. When the ASN is created in the system, the user navigates to the ' **Purchase Order Line lookup** page.

4. The lookup page can be used to search for the purchase order lines to be assigned to ASN.

PO lines can be identified by performing research using one or more of the fields below. The system also applied filters to exclude PO/PO lines that are canceled or closed or have zero remaining quantity(order - shipped)

- Purchase Order Id

- Item ID

- Purchase Order Line

- Vendor

The system will fetch the associated Purchase Orders/Lines to allow the user to select single or multiple records to be assigned to the ASN.   Following fields are displayed as the output of the search above:-

- Purchase Order

- Item ID

- Item Description

- Item Primary Barcode

- Order Qty

- Shipped Qty

- Quantity to Assign -> This defaults to the remaining quantity on the ASN line and the user can change it to a different quantity if a partial PO line needs to be added to ASN.

- Qty Assigned to current ASN

Users can view the quantity column of this UI in different UOM's. Refer to the Receiving Configuration guide under the Receiving Parameters section.

When the PO Lines are fetched, you can add PO details to ASN by invoking the '**Add to ASN**' action button, and the following scenarios are displayed:

- Assign all available quantities of all items for several Purchase orders to a single ASN (i.e, assign all details of multiple Purchase Orders).

- Assign all available quantities of all items for a single purchase order to a single ASN (i.e, assign all details of a single Purchase

Order).

- Assign all available quantities of an item for a single Purchase Order to a single ASN (i.e, assign some of the details of a Purchase Order).

- Assign some of the available quantities of an item for a single Purchase Order to a single ASN (i.e, assign some of the details of a Purchase Order, in split quantities. This is used when an item is spread across multiple ASNs).

- Assign all available quantities of different items for one Purchase Order to a single ASN (i,e, assign some of the details of a Purchase Order).

- For assigning partial PO line order quantity to an ASN, update the shipped quantity associated with an ASN line and update it by performing in-line editing

Adding more shipped quantities to ASN than the PO order quantity is possible if the over-ship percentage is set to more than 0 in the receiving parameter. i.e Assume over ship percent is set to 50. PO - Order quantity 10. ASN shall be created for up to 15 quantities. Receiving criteria's PO tolerance percentage should also be configured in such a way as to receive over-shipped quantities.

When the receiving parameter "create ASN in open status" is set to Yes, any ASNs created using the "Create ASN from PO" option will be created in Open status. The action button "Ship" is introduced to move the status of ASN from Open to In-Transit.

Validation - you can select single or multiple records to add to an ASN.

Error Code	Message	Validation	Error Level	Allow Change
NA	No PO Line found	if the user does not select any record and invokes '**Add to ASN**'	Error	NA
NA	You are about to add {Count Selected} PO Line to this ASN Are you sure you want to continue?	Once the User Selects the record and invokes '**Add to ASN**'	Warning	NA

Returned Data(ASN lines)

The user chooses the 'Assign/Unassign PO lines' action from ASN UI or when choosing the '**Add to ASN**' action from the PO line lookup page. The ASN line page is displayed. The data on this page is displayed as a group on PO and the purchase order lines under it. Users will be able to select the Purchase order or Purchase order lines from one or more Purchase orders.

The following data is displayed as output:

- Purchase order

- Purchase Order Line Id

- Item ID

- Item Description

- Vendor

- Shipped Qty

- Remaining quantity to be shipped to the Purchase order Line

- Batch Number

- Inventory Type

- Product Status

- Country of origin

In a scenario where the purchase order doesn't have inventory attributes, but the trailer paperwork has the attribute values specified, then adding new purchase order lines will allow the selection of inventory attributes, only if the item is tracking attributes

within the facility.

> **Note:** In a scenario when you are trying to change the attributes of the pre-existing ASN Line, then the system will not allow you to change the attribute values. Once the purchase information is added to ASN, the user can use **'Save'** or **'Save and Finish'** action on these lines into the ASN.

Actions

Action Name	Invoked From	Functionality	Action Button Disable Condition
Create ASN from PO	ASN UI	1. Make a call to the backend API to get the ASN next-up number (This is controlled by the receiving parameter. Refer to the Receiving configuration guide under the Receiving Parameter section). 2. Lookup with a date calendar to enter the estimated delivery date for ASN. 3. If the user chooses OK action on the estimated delivery date lookup, make a call to backend API to generate the ASN header record in 'in-planning' status. 4. The user then navigates to the PO line Lookup page.	NA
'Assign/Unassign PO lines to ASN'	ASN UI	1. The user chooses this action by selecting a single ASN 2. Users navigate to ASN Lines page	When an ASN is not selected When multiple ASNs are selected When ASN is not in the following status: In-planning, Open, In-transit, or Receiving Started
Find PO/PO Lines	ASN Line UI	This action navigates the user to the PO line lookup page.	
Add to ASN	PO line lookup page	Add the PO lines that meet the user selection criteria added to the ASN line list. These lines are associated with ASN only on the client-side and not committed to DB until saved.	NA
Save and Finish	ASN Line UI	Make a call to the backend API to persist the updates performed on the UI Navigate to the ASN UI page	NA
Save	ASN Line UI	Make a call to the backend API to persist the updates performed on the UI Stay on the same page.	NA
Unassign	ASN Line UI	The unassigned action is available at the PO grouping level or on selecting a few PO lines. On Unassign, the unassigned lines are struck through and require prevent action to persist changes.	NA
Reassign	ASN Line UI	If, on unassign action while reviewing the strike-through lines, the user realizes some lines were accidentally unassigned, he can select the strike-through ASN lines and choose Reassign action	NA
Cancel	ASN Line UI	Don't persist any changes and navigate to the ASN UI page	NA

Validations for Create ASN from PO functionality

Wave and Stream Run Process

Last updated: 11/15/2023

The Wave UI can be used to view the details of Order Planning Run Strategy. Primary card has the data from Order Planning Run Strategy Entity and the expanded card has the data displayed from Order Planning Run Summary.

There are Separate UI's to shows the data for both Order Planning Mode - "Wave" and "Stream", but the action defined only works if the selected record is Wave and not for Stream.
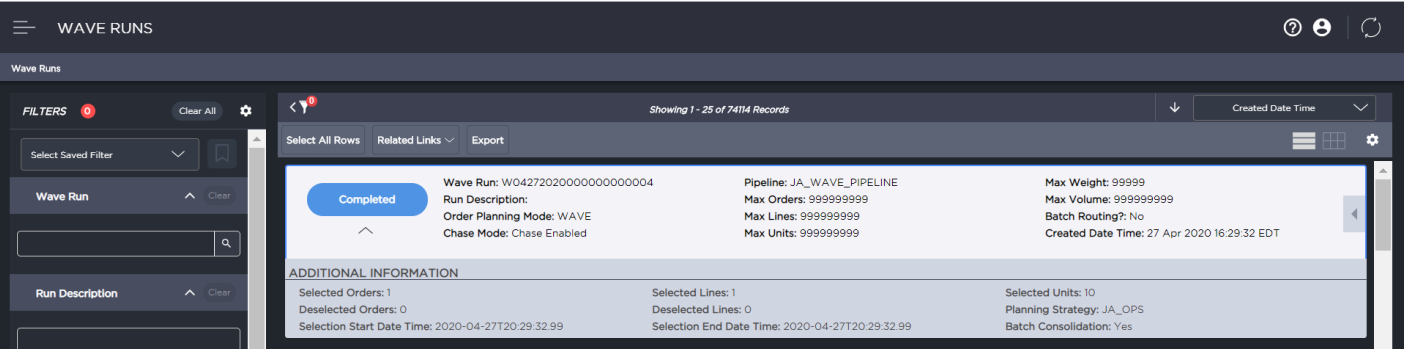
For the selected Order Planning Run Number, the related Links to below mentioned menu's are provided:

- Order Lines

- oLPNs

- Allocations

- Work Visibility

- Task Details

- Order Shortages

- Order Failures
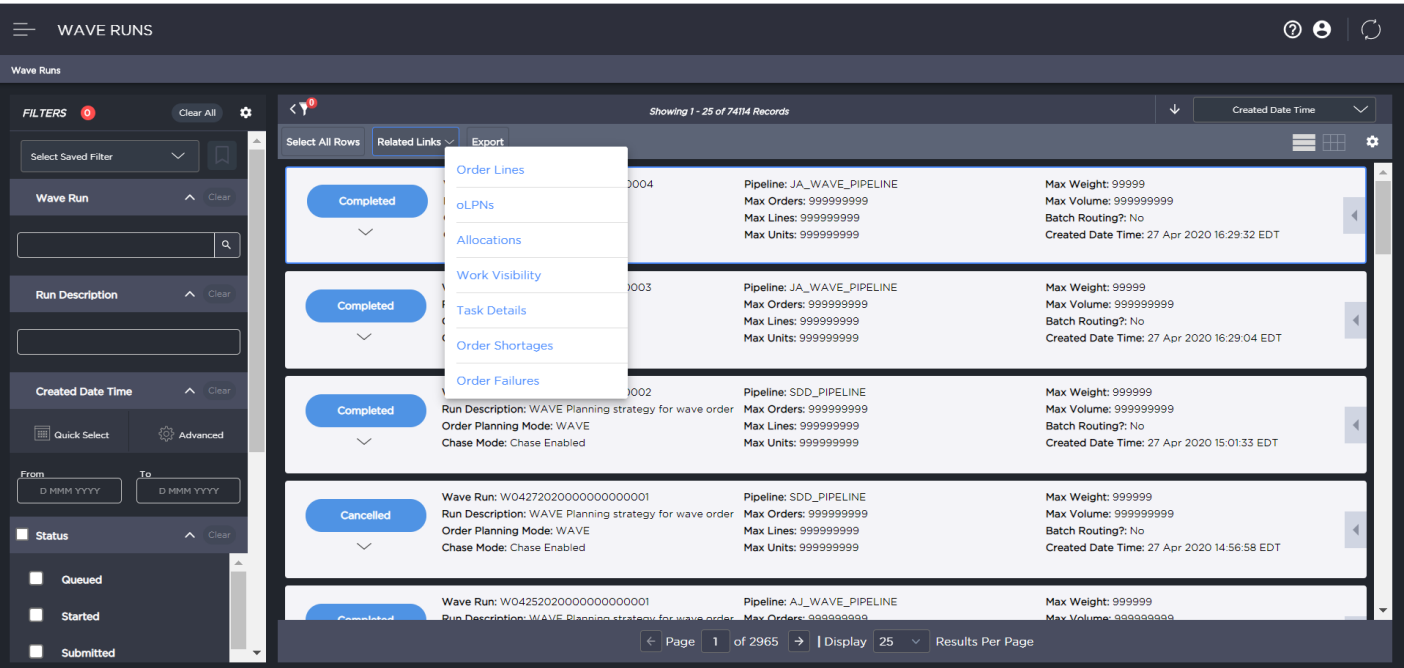
Actions

Wave Runs UI supports the following actions:

- Unplan

- Restart

- End Work

- Run Chase

- Order Exception

- Print Document

- Release Held Tasks

- Generate Tasks

Action	Description
Unplan	A waved order can be unplanned using this action. Orders can be unplanned until they are manifested. Even if one line is manifested, the whole order will not be eligible for undo
Restart	This action is used to Restart the Waves which is aborted at any point
End Work	This action is used for Cancelling/De-allocating the un-packed need.
Run Chase	This action is used to run the Chase for the Wave which has the Shortages
Order Exception	If any of the selected order line has "lastStatusChangeDateTime OR updatedDateTime > Current Date Time + "Age Timing used to Fail the orders struck as part the Run? (in minutes)" then log as "Order line %1 does not fall into the aged time frame to fail" (Skip these order lines as it would be a a sync process). Need to fail the order lines and take it to Failed Status (orderline.Status). (If the order is in 2000, then take it to 2010 or if the order line is in 3000 then take it to 3010 (orderline.pipelineStatus)). Both status and pipelineStatus has to be updated.
Print Documents	This action is used to Print the Document for all the Orders of the Order Planning Run based on the Batch Print Strategy selected by the User.
Release Held Tasks	This action is used to release any held tasks that are part of the order plan run. One or more task pool strategies that are configured with "Allowed for Manual wave task release" as true, can be used to select a subset of the held tasks for release.

Action	Description
Generate Task	This action is used to trigger task generation by manually assigning a single picking task release template and replenishment task template to all the allocation part of the order planning run ID that has failed the template assignment process. The manual assignment of templates is only for the allocations that have failed template assignment and will not override if a template is already assigned. This is applicable to both direct task creation and non-direct task creation flows.

Equipment Integration Process and Configuration

Last updated: 12/26/2023

- Equipment Integration Process and Configuration
  - What EI does post receiving a message via endpoint?

  -
    - How to set up a new message and send it through EI?
    - What is Reference Business Key and how to Configure it?
    - What is the Heartbeat Message and how to Configure it?
      - Use Case for Splitting

  -
    - How the Sequencing of messages can be achieved in EI?
    - How to add new attributes to the final payload sent to the destination endpoint?

This guide explains the Equipment Integration (EI) component that is used to communicate between WM components and WCS. The document also explains the received messages (payloads) that are processed within the EI component and the process of routing it to the destination endpoint.

Note on special characters: Refer to Restrictions on using special characters.
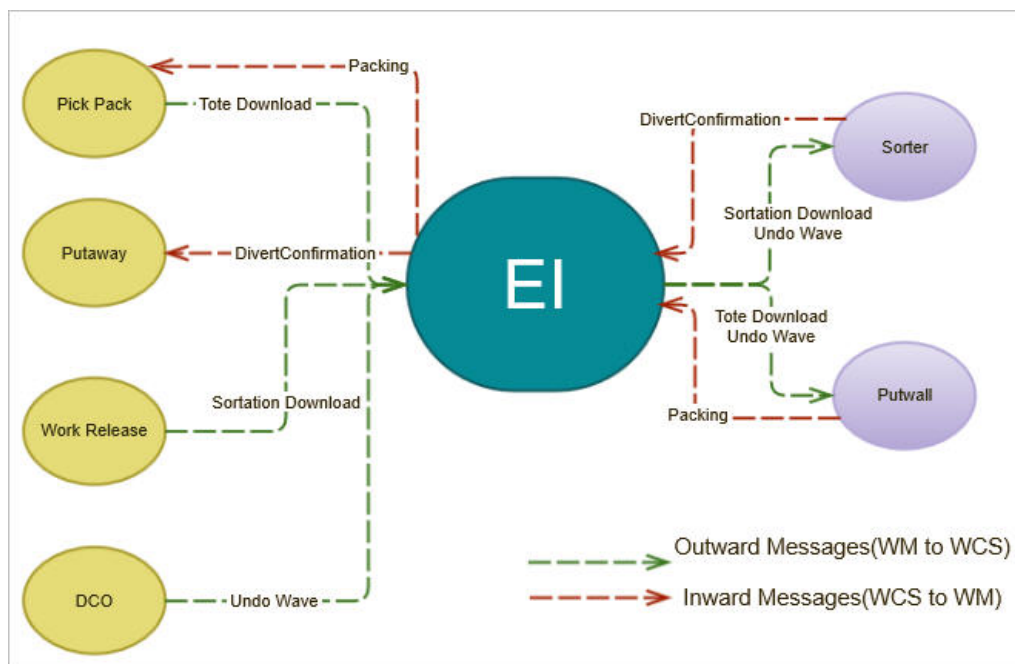
EI Internal Pipeline
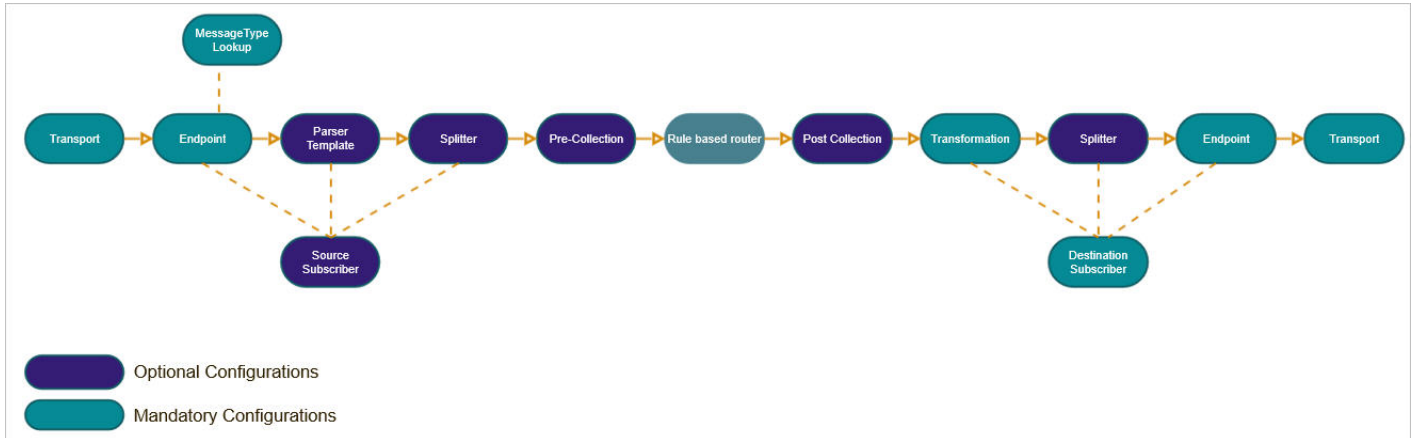
Refer to the unified configuration guide --> WarehouseExecutionConfigLandingPage for configuration UIs of each of these steps.

Flow of Messages from EI or/and into EI

Transport: Define the protocol which should be used for data exchange. EI supports these protocols:

- HTTP and HTTPS

- TCP/IP

- AWPF (Asynchronous Workload Processing Framework) is implemented in every microservice that runs as part of the Manhattan Active® Platform. These are the JSON messages that get passed between Manhattan Active® components when they make API calls to one another.

- FILE

- FTP, SFTP and FTPS

Based on the protocol chosen, the user needs to provide detailed information. However, for transports that are defined for outside world communications(pointed towards MHE/WCS systems), support is extended only for TCP, FTP and SFTP.

TCP: To process messages via socket (TCP), you will have to select the transport type as TCP and configure the properties mentioned as follows:

Attribute	Description	Mandatory
tcpTransportId	Transport name or Unique Identifier	Y
singleUse	Create a new connection for every transaction or reuse the connection	Y
connectMode	Whether the connection is acting as a server (Listen) or a client (Connect)	Y
host	Host IPV4 Address for socket	Y
port	The port on which the messages are received or sent	Y
socketReceiveBuffer	TCP buffer sizes to be used during inbound communication	N
socketSendBuffer	TCP buffer sizes to be used during outbound communication	N
framingStyle	The format of messages based on which the messages are read from the socket (Delimiter/FixedLength/LengthField)	Y
startOfMessage	The starting delimiter for the message has Delimited framingStyle	N

endOfMessage	End delimiter for the message having Delimited framingStyle	N
fixedLengthSize	Expected length of message for messages having FixedLength framingStyle	N
useKeepAlive	Setting to ensure the socket is not closed due to inactivity	Y
ackData	Acknowledgement for a message	N
nakData	Negative acknowledgement of a message	N
ackNakTimeout	Timeout within which a ACK/NAK is expected	N
heartBeatData	Non functional (Heartbeat) message to keep the socket open	N
heartBeatAckData	Value to use for acknowledgements for heartbeat messages	N

Endpoint: Endpoint defines the messages that flow through a transport layer. An endpoint can be modeled as Source or Destination Type and has a 1:1 relationship with transport.

An endpoint can support multiple message types(say Picking and Packing update can be from the same MHE Putwall endpoint). Even though the layout of all the payloads can be different, they need to be in a common format(JSON/XML/DELIMITED/FIXED). Hence, ParserType (Delimited/Fixed/Json/XML) needs to be defined at the Endpoint level.

> **Note:** The assumption here is that any single WCS connection will send all its different messages in the same format/type.

If the endpoint is handled in a single message, then you can directly configure the message type in the endpoint entity, else you need to configure the message lookup to identify the message type.

Attribute	Description	Mandatory
endpointId	Endpoint name	Y
description	Description	
direction	SOURCE/DESTINATION	Y
parserTypeId	Parser type indicates if the message to be parsed is DELIMITED/FIXED/XML/JSON	
messageTypeId	First message type config, fallback is lookup config.	
transportId	Transport	Y
enabled	Should associated transport be initialized on startup?	Y
recirculationEndpointId	To be configured only for destination endpoints which expects a response and the response needs to be recirculated to a source endpoint in EI again for processing	
recirculationMessageTypeId	To be configured only when recirculation channel id configured and the response message does not have a message type in the payload	
useDedicatedQueue	High Performance: Enable a dedicated queue if this endpoint processes messages that have steep SLA requirements	
statusChangeTimestamp	Timestamp to capture the status change of endpoint (START/STOP/RESTART)	
RouteVia	If configured, calls will be routed to the appropriate destination service matching the value given.	
mheProcessedMessageType	If configured, EI will post the successful outbound messages to a queue in a business component per the given OutboundMessageType.	

MessageType Lookup

Attribute	Description	Mandatory
endpoint	Endpoint name	Y
delimiter	Message Delimiter	
position	Message type position for delimited format	
startIndex	Fixed length message start index for message type	
fieldLength	Fixed length for message type field from start index	
xpath	Element XPATH of message type field in XML Format	

For example: Incoming message "A012938^ITEMSTATUS^ITEM01^1"

The below configuration will extract "ITEMSTATUS" as the message type and use it further processing.

Attribute	Values
endpoint	WCS_DI_INCOMING_ENDPOINT
delimiter	^
position	2
startIndex	
fieldLength	
xpath	

What EI does post receiving a message via endpoint?

1: Get the message type from the payload: Using the configuration setup in the endpoint, the messageType for the payload is determined first. If the message type is configured at Endpoint level, it will be directly used.

Else use the message type lookup setup on the endpoint, to figure out what the message type is from the payload

2: Optional - Parse the payload into JSON format: If the payload is already in JSON format and does not require any payload splitting, then Step 2 can be skipped.

However, if the payload is not in JSON format, then source subscriber needs to be configured for the message type and endpoint.

For this messageType-endpoint combination, we need to assign the parser template and also the splitter specification as required.

Parser Type

Attribute	Description	Mandatory
parserTypeId	Type of the Parser like DELIMITED, FIXED, XML, NOOP, JSON	Y
description	description of the parser type	N

Parser Template

Attribute	Description	Mandatory
parserTemplateId	Parser Template Name	Y
parserTypeId	Parser Type	Y
delimiter	Delimiter char used in delimited message like ^ or |	
isMetaCharacter	Is Delimiter a Meta Character?	
trailingChar	Trailing character used to pad fields in Fixed length message	

Parser Specification

Attribute	Description	Mandatory

parserTemplate	Parser Template name	Y
parserTemplateSpecId	Parser Template Specification Name	Y
fieldSeq	Sequence in which fields are configured	Y
fieldName	Field Name for the message on each position	Y
fieldDesc	Description of each field name	Y
fieldPosition	Position of each field in FIXED LENGTH format	
fieldLength	Length of each field from a given position in FIXED LENGTH format	
fieldXpath	Element XPATH of each field in XML Format	
isFieldNullable	is Null value allowed for field	
lineType	Defines the type of message line (ex. Chuteclose, WorkRecord etc.) in digest or header-detail messages	

Splitter

Attribute	Description	Mandatory
splitterSpecId	Splitter Specification Name	Y
token	Token that will be used to split the input String like n	
jsonPath	JsonPath at which the document needs to split	
capacity	Capacity of each split document	

3: Optional - Pre-Collection: If the payload received is enough to decide on which destination endpoint the message needs to be routed, then this step is optional. However if the payload lacks sufficient information to drive the rule for identifying the destination, pre-collection should be used.

Collection(Enrichment) can be either from a REST endpoint or from a consumer API call(Client API call) and Collector Endpoint entity must be configured accordingly.

If the REST Endpoint POST body needs certain variables that must be populated from the payload, EnrichmentSpecVariable entity can be configured with the required fields.

Similarly, for the consumer API call, the consumer API method parameters can be configured in ConsumerApiParameter entity.

Pre-collection required the following configurations.

Collector Endpoint

Attribute	Description	Mandatory
collectorEndpointId	Collector endpoint name	Y
restUrl	Http REST Url from which data needs to be collected	Y
contentType	Content type that REST API accepts	
username	HTTP Authentication username	
password	HTTP Authentication password	
requestType	HTTP Request Type GET/POST	Y
requestBody	HTTP Request Body [applicable for non GET requests]	

paginationRequired	Indicates whether REST API supports pagination	Y
pageSize	Number of entries in a page	
urlType	Type of url WM_CP/EXTERNAL	
outputDocumentKey	A key to store REST output in a document	
isEnrichmentFromConsumerApi	Use Consumer Java API if the field value is true, otherwise use HTTP REST services	Y

EnrichmentSpec

Attribute	Description	Mandatory
enrichmentSpecId	EnrichmentSpecId name	Y
collectorEndpointId	Collector endpoint Id	Y
outputDocumentKey	A key to store REST output in a document	
mergeToInputDocument	If the value is true, will merge the Http Response to the input at the specified merge path instead of simple append at the top or root of the document	
mergeInputPath	JSON Path to specify on which level/attribute, the Http Response need to be merged	
sequence	Order of CollectorEndpoint calls	
consumerApiClass	Fully Qualified Consumer API Class	
consumerApiBeanName	Consumer API class name	
consumerApiMethod	Consumer API method on class	
removeNullObject	Removes the null objects from the collected DTO if set to true	
responseObjectPath	JSON path to store single root element as a output in a outcome map	

EnrichmentSpecVariable

Attribute	Description	Mandatory
enrichmentSpecVariableId	EnrichmentSpecVariable Id	Y
variableName	Name of the variable from Collector Http Request Body	
variableValue	Input Document's Json Path	

ConsumerApiParameter

Attribute	Description	Mandatory
consumerApiParameterId	ConsumerApiParameter Id	Y
parameterName	Consumer API method parameter name	
parameterType	Consumer API method parameter type	
parameterSequence	Consumer API method parameter sequence	

Enrichment Strategy

Attribute	Description	Mandatory
enrichmentStrategyId	Name of the enrichment strategy	Y
description	Strategy description	

In case of Pre collection, enrichmentStrategyId must be defined as MessageType-PRE_COLLECTION.

For example: PPK_DEI_TaskRelease-PRE_COLLECTION

EnrichmentSpecGroup

Attribute	Description	Mandatory
enrichmentSpecGroupId	Name of the enrichment spec group	Y
description	Enrichment spec group description	

EnrichmentSpecGroupXref

Attribute	Description	Mandatory
enrichmentSpecGroupXrefId	EnrichmentSpecGroupXref name	Y
enrichmentSpecId	EnrichmentSpec Id	Y

4: Optional - Routing Strategy for messages: This is an optional step and required only if rules need to be defined to come up with the destination location. If there are no rules to be written for identifying a destination or if there is a single destination for the messageType, then this step can be skipped and only a Destination subscriber is required to be setup.

But for implementations that need to route an event to two or more destinations based on rules, the routing strategy needs to be configured as follows:
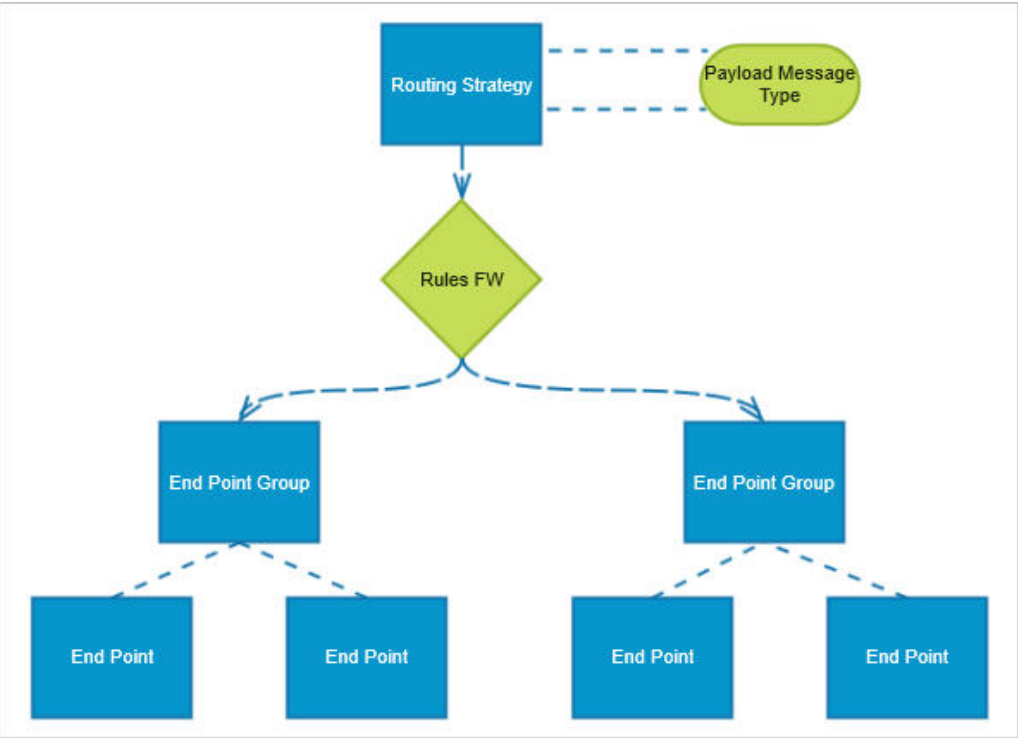
Routing Strategy

Attribute	Description	Mandatory
routingStrategyId	Message Routing Strategy Name (Should be same as Message Type)	Y
description	Description	

Endpoint Group

Attribute	Description	Mandatory
endpointGroupId	Endpoint Group Name	Y

description	Description	

Endpoint group Xref

Attribute	Description	Mandatory
endpointGroupId	Endpoint Group Name	Y
endpointId	Endpoint(destintion)	Y
endpointGroupXrefId	System Generated Xref Id	Y

5: Destination Subscriber: Destination subscriber connects a messageType to a destination endpoint along with the transformation template and splitter configuration to be used for this destination.

Every destination endpoint, we will have its own payload formats and hence transformation template needs to be configured at the subscriber level.

Subscriber

Attribute	Description	Mandatory
messageTypeId	Message Type of the payload	Y
endpointId	Endpoint (Destination endpoint Id)	Y
direction	Destination/Source	Y
description	Description	

Destination Subscriber

Attribute	Description	Mandatory
subscriber	Subscriber Id	Y
transformerTemplateId	Transformation Template Name	Y
splitterSpecId	Splitter Specification Id	N

Transformation Template

Attribute	Description	Mandatory
transformerTemplateId	Template Id	Y
templateType	Template Type (Velocity, Groovy, Mustache etc.,)	Y
templateText	Template Text	Y

6: Optional - Post-Collection for message type: If the payload being sent to the host needs to be enriched with extra information, post collection can be utilized to get the data. This process will be kicked off before the split/ transformation starts in step 5. Apart from EnrichmentStrategyId, rest of the configuration would be similar to Pre collection. In case of Post collection, enrichmentStrategyId must be defined as MessageType-POST_COLLECTION.

for example: PPK_DEI_TaskRelease-POST_COLLECTION

7. Optional - Publish Successful MHE Message to Business Components: If it is necessary for a business component such as Pick-Pack or Work Release to receive confirmation that an MHE message it generated was received by the Destination end point, it is possible to set up a queue in the business component and publish a payload back to the business component. Once a message is successfully processed or successfully sent to destination, if the field `MheProcessedMessageType` is configured in destination Endpoint (users need to configure the `OutboundMessageType` required for posting the payload to business component), a payload document containing `ReferenceBusinessKey`(if configured) will be sent to the respective business component queue. Also, a Boolean flag, `"IsSuccess,"` will be included in the payload with the value set as `true.`

The MheProcessedMessageType property of the Endpoint entity can be edited via the Endpoint UI or updated via API. It is populated with the name of the OutboundMessageType that corresponds to the business component queue to which the message must be posted.

How to set up a new message and send it through EI?

WM Components to MHE/WCS

Step 1: Events raised from WM components are posted to single endpoint: DIRECT_RECEIVER. Identify the MessageType for the new event from the payload being sent from the component.

Step 2: Setup the new message type in **inBoundMessageType**. This needs to be done via JSON import

Step 3: Setup the new messageType using "Payload Message Type" UI

Step 4: Since the message is already in JSON format and assuming no split is required, the source subscription setup can be ignored.

Step 5: In case pre-collection is required, perform the following steps:

1)Create Collector using the Collectors UI

2)Create Enrichment Spec and associate the Collector created in Step 1 and the variables (values) from the payload to be passed to this collection API.

3)Create a new Message Enrichment Strategy via UI with Strategy Name as <MessageType>-PRE_COLLECTION. Associate Enrichment Spec here.

Step 6: In-case routing needs to be performed via rules, use Message Routing Strategy UI and associate the endpoint(s) to which the message needs to be routed to.

Step 7: Incase post-collection is required, perform the below steps

1)Create Collector using the Collectors UI

2)Create Enrichment Spec and associate the Collector created in Step 1 and the variables(values) from the payload to be passed to this collection API.

3)Create a new Message Enrichment Strategy via UI with Strategy Name as <MessageType>-PRE_COLLECTION. Associate Enrichment Spec here.

Step 8: Setup the transformer template using Transformer Template UI

Step 9: Setup splitter spec in case the payload needs to break into multiple payloads to the same destination

Step 10: Setup destination transport and destination endpoint for each of the destinations

Step 11: Setup Destination subscriber for this message Type for each of the endpoints for this messageType and associate the transformer template and splitter spec.

MHE/WCS Components to WM

Step 1: Establish a payload contract with the MHE/WCS system.

Step 2: Setup the source transport configuration via Transport UI and configure the details for the transport protocol chosen.

Step 3: Setup the source endpoint and associate transport create earlier. Also, associate the message Type or message type lookup.

Step 4: Setup parser template and specification for the new message type if the payload is not in JSON format

Step 5: Setup source subscriber for the new messageType. Associate it to the source endpoint and link the parser template and splitter config(optional) to it.

Step 6: Incase pre-collection is required, perform the following steps:

1)Create Collector using the Collectors UI

2)Create Enrichment Spec and associate the Collector created in Step 1 and the variables(values) from the payload to be passed to this collection API.

3)Create a new Message Enrichment Strategy via UI with Strategy Name as <MessageType>-PRE_COLLECTION. Associate Enrichment Spec here.

Step 7: In-case routing needs to be performed via rules, use Message Routing Strategy UI and associate the endpoint(s) to which the

message needs to be routed.

Step 8: Incase post-collection is required, perform the below steps

1. Create Collector using the Collectors UI

2. Create the Enrichment Spec and associate the Collector created in Step 1 and the variables(values) from the payload to be passed to this collection API.

3. Create a new Message Enrichment Strategy via UI with Strategy Name as <MessageType>-PRE_COLLECTION. Associate Enrichment Spec here.

Step 9: Setup the transformer template using Transformer Template UI. Since the destination is a WM component, the final format needs be JSON. Since this is already in JSON format, there will be less or no template code required.

Step 10: Setup splitter spec in case the payload needs to break into multiple payloads to the same destination

Step 11: Setup destination transport and destination endpoint for each of the destinations

Step 12: Setup Destination subscriber for this message Type for each of the destinations for this messageType and associate the transformer template and splitter spec.

What is Reference Business Key and how to Configure it?

ReferenceBusinessKey is a property of the PayloadMessageType entity that can be populated with the JSON path to a field that contains some value from the business object from which the message payload is derived. For example, a payload coming from Pick Pack could have $.OrderID defined as the key. This value then persists in all transformations of the payload and can be used to perform a keyword search for messages in the "MHE Journal" UI.

This can be configured on the "Payload Message Type" UI.

What is the Heartbeat Message and how to Configure it?

HeartBeat is a message that is auto-generated at configured intervals via a scheduler. This trigger message is used to poll the health of Materials Handling Equipment (MHE) systems that provide health metrics or related information via REST APIs. The REST API response can be ingested as a new message, parsed and conditionally routed to components like Work Release to effect capacity adjustments to resources or to toggle the availability of equipment.
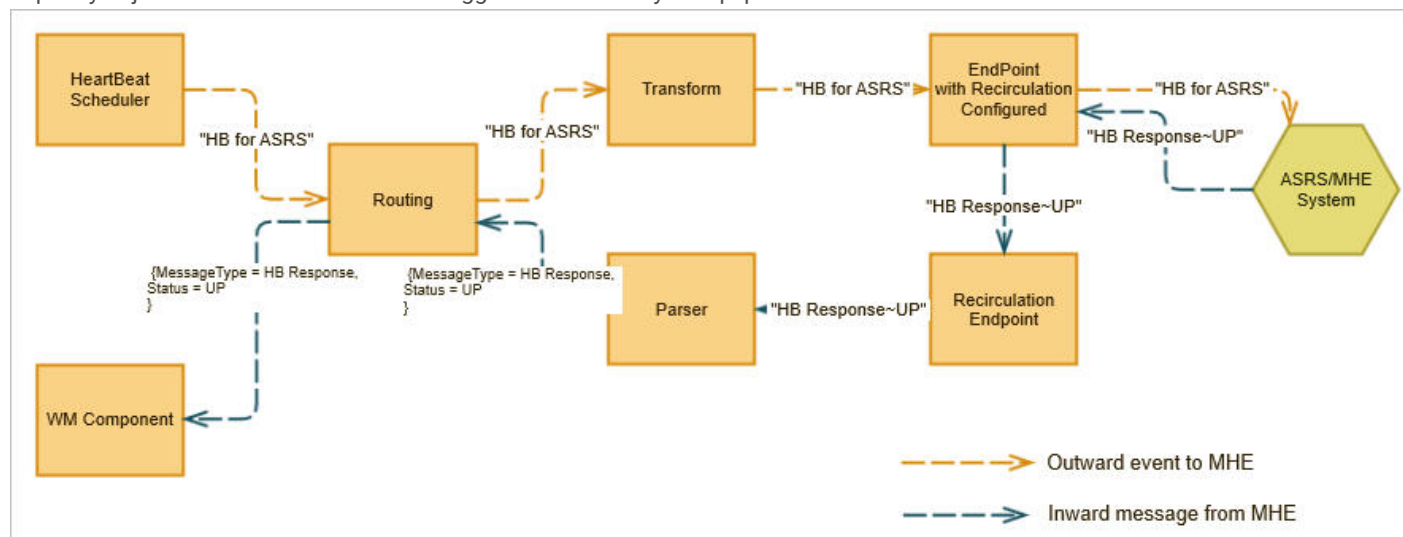
Here the configuration is exactly similar to how any other message needs to be to sent to WCS endpoint. The only difference here is that the destination endpoint(WCS endpoint) needs to be configured for recirculation.

The below attributes in the destination endpoint(pointing to WCS) needs to be defined:

Recirculation endpoint identifier - The response from MHE is expected here

Recirculation message type - Unique identifier for the MHE response for the heartbeat message.

Why Split is required and how to configure it?

Splitter functionality can be leveraged:

- If an incoming payload needs to be split based on a business object into multiple payloads so that it can be individually routed/collected and transformed to different destination endpoints.

- If an outgoing payload needs to split because the destination end-points have capacity limits (10 lines at a time) or can handle only one business object at a time.

Splitter logic has hence been introduced in the EI internal pipeline at two different points:

- **Post Parsing**: Once the incoming payload is parsed to a document, it can be split into multiple documents based on the splitter key and the capacity limit configured.

- **Post Transformation**: Once the outgoing document is transformed into a string of desired format, the string can be split into multiple strings based on the desired splitter delimiter(token) configured.

Use Case for Splitting

Post Parsing

- **Use Case**: When Collector can only accept a single business object:
  Incoming payload: Document from WM
  Incoming payload can contain an array of business objects. However, the Collector can take only one business object at a time. There is a need to split this payload into individual business objects.

- **Use Case**: Split a list of business objects so we can route each business object individually.
  Incoming payload: String from WCS
  WCS can send a batch of item statuses together in a message. We could split each item status string into its own message. And each item status message can be routed individually. For example, have a routing rule for failed item status messages.

Post Transformation

- **Use Case:** Destination can only accept a single business object:
  Incoming payload might contain a list of records. But the destination API can only process one record at a time.

- **Use case**: Destination can only accept X business objects at a time.
  for example:- Wave download message where we want to ensure each message has no more than X number of lines.

> **Note:** The details given below are for representational purpose only and not actual seeds/API in the system

Incoming Payload:

```
{
  "MessageType": "CONTAINERLABEL",
  "facilityId": "1",
  "organization": "76",
  "userId": "XXX",
  "LPNList": [
    "LPN1",
    "LPN2",
    "LPN3",
```

```
      "LPN4"
  ]
}
```

Attribute	Value
splitterSpecId	SplitLPNList
token	
jsonPath	SplitLPNList
capacity	1

Outgoing Payload:

Payload 1

```
{
  "MessageType": "CONTAINERLABEL",
  "facilityId": "1",
  "organization": "76",
  "userId": "XXX",
  "LPNList": [
    "LPN1"
  ]
}
```

Payload 2

```
{
  "MessageType": "CONTAINERLABEL",
  "facilityId": "1",
  "organization": "76",
  "userId": "XXX",
  "LPNList": [
    "LPN2"
  ]
}
```

Payload 3

```
{
  "MessageType": "CONTAINERLABEL",
  "facilityId": "1",
  "organization": "76",
  "userId": "XXX",
  "LPNList": [
    "LPN3"
  ]
```

```
}
```

Payload 4

```
{
  "MessageType": "CONTAINERLABEL",
  "facilityId": "1",
  "organization": "76",
  "userId": "XXX",
  "LPNList": [
    "LPN4"
  ]
}
```

How the Sequencing of messages can be achieved in EI?

Refer to Sequencing Message Processing Setup Guide

How to add new attributes to the final payload sent to the destination endpoint?

Incoming payload : outputDocumentKey

```json
{
  "Lpn": {
    "LpnId": "Lpn123",
    "LpnLoc": " GA",
    "LpnDetail": [
      {
        "DetailId": "D1123",
        "ItemId": "ITEM_1"
      },
      {
        "DetailId": "D1123",
        "ItemId": "ITEM_2"
```

```
    },
    {
      "DetailId": "D1123",
      "ItemId": "ITEM_3"
    }
   ]
  }
}
```

The below enrichment strategy is used to collect item information using Itemid from above payload.

Define a new enrichment strategy

Attribute	Value
EnrichmentStrategyId	Test_POST_COLLECTION
Description	Collection for MessageType test

Define a new enrichment group and xref

Attribute	Value
EnrichmentSpecGroupId	Test_enrichmentgroup

Attribute	Value
EnrichmentSpecGroupId	Test_enrichmentgroup
EnrichmentSpec	Test_itemCollection
EnrichmentSpecGroupXrefId	internally generated value

Define a new enrichment spec

Attribute	Value
EnrichmentSpec	Test_itemCollection
OutputDocumentKey	Item
mergeToInputDocument	No
mergeInputPath	

Enrichment Spec Variable

Attribute	Record 1	Record 2
enrichmentSpec	Test_itemCollection	Test_itemCollection
enrichmentSpecVariableId	LPN	Item
variableName	#LpnId	#ItemIds
variableValue	Lpn.LpnId	Lpn.LpnDetail[*].ItemId

Collector Endpoint

Attribute	Value
collectorEndpointId	**LPN From WR**
restUrl	**http://item-master/api/get/items**

contentType	application/json
username	marduser
password	password
requestType	POST

requestBody	{
	LpnID: #LpnId,
	Items : #ItemIds
	}

Output payload :

```
{
  "Lpn": {
    "LpnId": "Lpn123",
    "LpnLoc": " GA",
    "LpnDetail": [
      {
        "DetailId": "D1123",
        "ItemId": "ITEM_1"
      },
      {
        "DetailId": "D1123",
        "ItemId": "ITEM_2"
      },
      {
        "DetailId": "D1123",
        "ItemId": "ITEM_3"
      }
    ]
  },
  "Item": [
    {
      "ItemId": "1",
      "ItemVol": "0.2",
      "ItemWeight": "2 lb"
    },
    {
      "ItemId": "2",
      "ItemVol": "1.2",
      "ItemWeight": "5 lb"
    },
    {
      "ItemId": "3",
```

```
      "ItemVol": "5",
      "ItemWeight": "6 lb"
    }
  ]
}
```

Receiving Process

Last updated: 06/06/2024

- Process Flows
  - Receiving Touch Points
  - Mobile Receiving Flow
  - Mobile Pre-receipt Allocation Completion Flow
  - MHE Receiving Regular and Pre-receipt Allocated ASN

- Configuration Overview
  - Receiving Strategy
  - Receiving Criteria
  - Receiving Override Criteria
  - Receiving Line Override Criteria
  - Post Receiving Criteria
  - Receiving Parameters
  - Pre-Allocate Strategy
  - Trailer selection Criteria
  - Pre-Allocate Criteria

- Functionalities Supported and Key Features
  - LPN/Blind iLPN Receipt
  - Bulk Receipt
  - Receiving by/to Pallet
  - Receiving to Storage location
  - Disable control keys or action buttons
  - Return Receiving Using Mobile
  - MHE Receiving
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  - Verify ASN
  - Verify Inbound Delivery (Shipment)
  - Trailer Status
  - Release Door
  - Quick Receipt / Copy LPN
  - Post Receiving Rules
  - TI/HI
  - LPN Size Type/Pallet Size type Calculation

- iLPN Label

- Activity Tracking

- Purge

- LM Interactions

- ASN Export

-

- Serial Numbers
  - Minor Serial Number

- Activity Tracking

The receiving process is designed to control the receipt of inventory to the distribution center. Warehouse Management (WM) provides operational flexibility by allowing users to configure receiving options for capturing and validating the required information for their receiving process. The receiving process in WM can vary depending on the level of details provided by vendors about an incoming trailer. The receiving process begins when a trailer arrives at the dock. The inventory to be received is usually associated with some form of advanced ship notice (ASN) which details receipt information – LPN Level or Item Level ASNs. The receiving process can be configured to record and verify actual receipts at various levels of detail. Depending on the information provided on ASN, the receiver is prompted to capture a number of different ASN, LPN, or item attributes. Further, as part of 2020, there are Receiving Override and Detail Override criteria which, through rules, can dynamically set some of the receiving attribute values and thus dynamically change the flow. The following modes of receiving are:

Mobile Receiving (Regular)

- Receiving LPN level ASN by confirming the LPN or/and its details

- Receiving Item level ASN onto a blind LPNBarcode

- Bulk Receipt of LPN level ASN by a scan of ASN

- Receiving onto a pallet

- Receive a pallet for LPN level ASN having pallet details

- Blind ASN receipt

- Receiving against Inbound Delivery (Shipment) associated with multiple ASNs

- Able to perform Returns by either scanning ASN or RRN. Returns can be performed by scanning blind ASN/RRN and/or pre-existing ASN with or without RRN reference or by scanning a RRN that is tied to verified return ASN. Receiving against the Original Order is not supported in the mobile returns flow.

Mobile Receiving (Pre-receipt allocated)

- Receiving a Pre-receipt allocated item/LPN level ASN

MHE Receiving (Regular and Pre-receipt allocated)

- Receive LPN level ASN

- Receive Item level ASN (cartonized) in a warehouse using 'Create iLPN' action

- Receiving Pre-receipt allocated ASN contents

On receipt completion of all ASNs associated with Inbound trailer/dock door, the trailer is closed from Mobile receiving or Dock Door UI or through ASN verification. This triggers an event for yard management to create and move the task to the trailer. Further, the

user triggers the verification process to close ASN. The verification is triggered from ASN UI or through a mobile. If there are variances, the user has an opportunity to review the variances. Upon confirmation, a verification request can be submitted. Once ASN is verified, further receiving of inventory cannot be performed against that ASN.

Process Flows

Receiving Touch Points
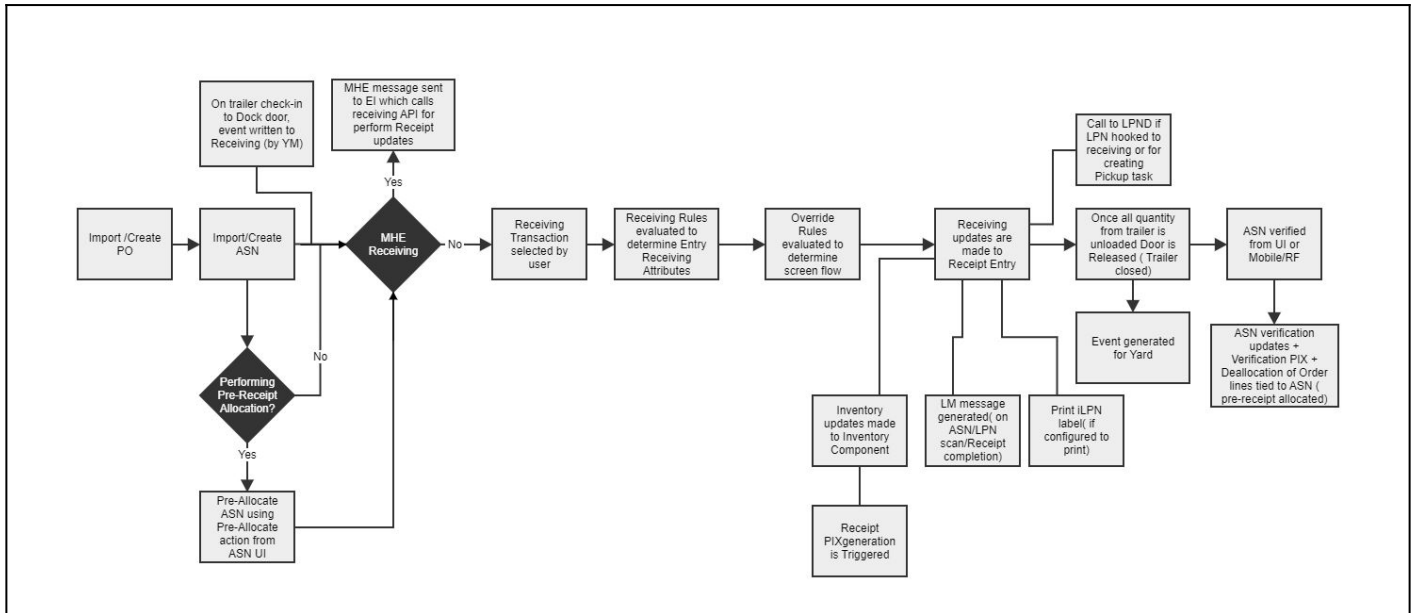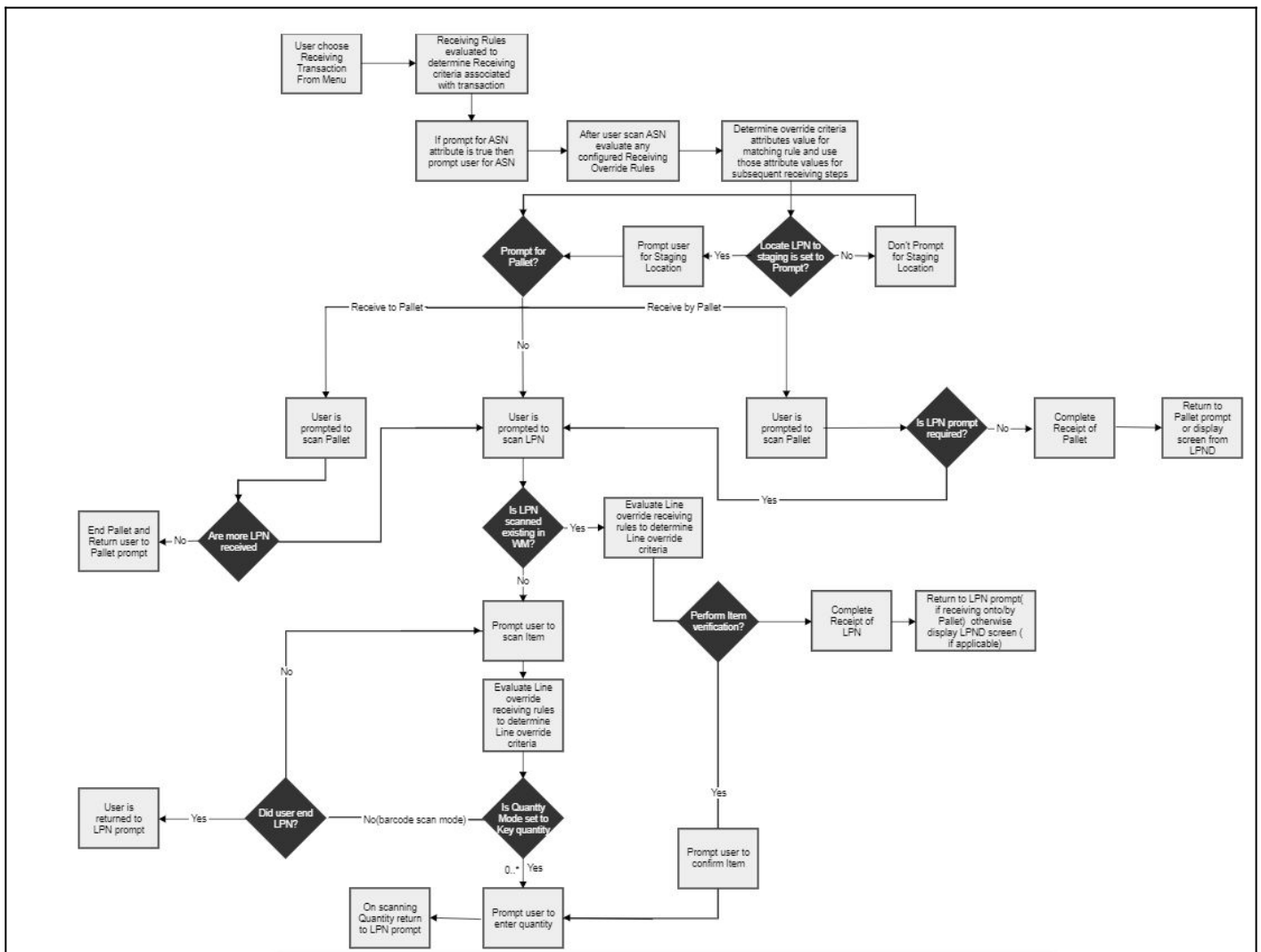
Mobile Receiving Flow

Mobile Pre-receipt Allocation Completion Flow
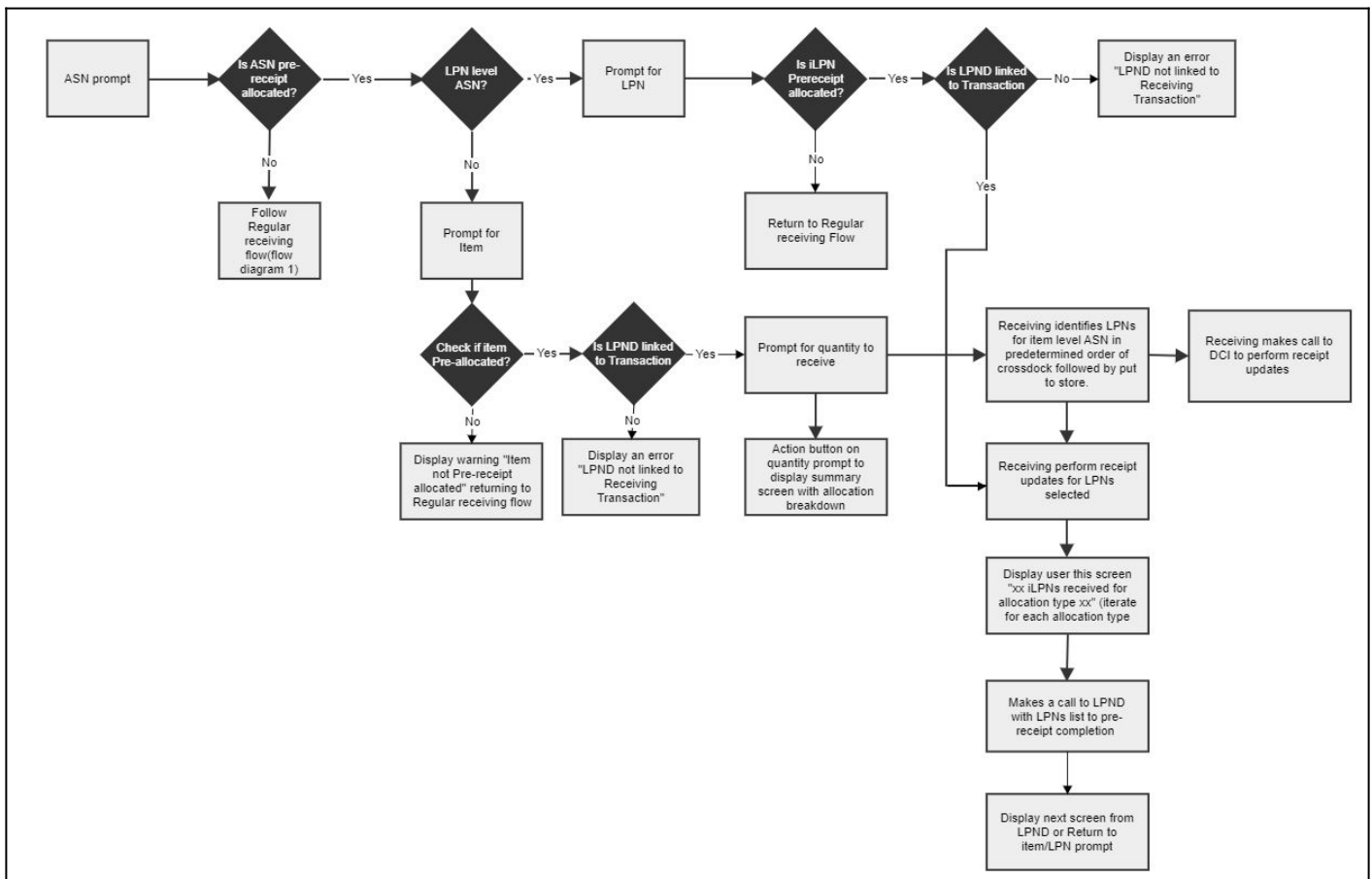
MHE Receiving Regular and Pre-receipt Allocated ASN
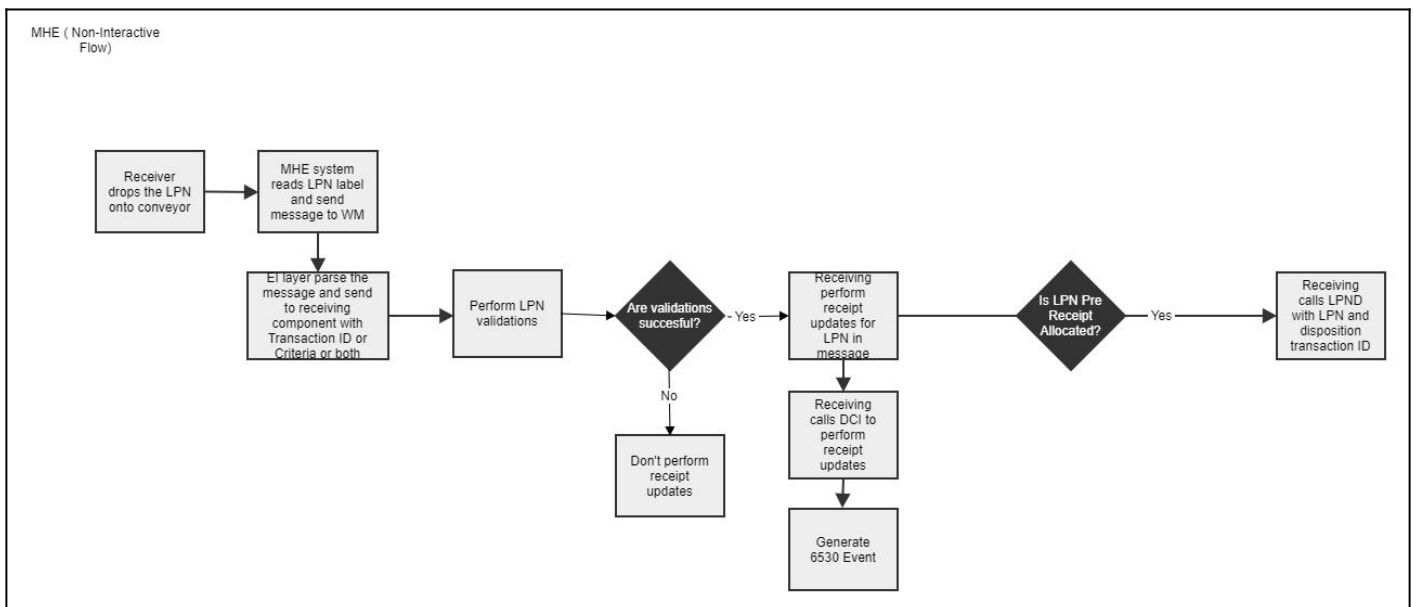
Configuration Overview

Refer to the Receiving Configuration guide for details.

Receiving Strategy

The strategy used by each receiving function. It hosts the receiving criteria and different receiving rules.

Receiving Criteria

Rule-based configuration that holds different transaction parameters value parameters.

Receiving Override Criteria

These are a predefined set of receiving criteria attributes that are evaluated at the time of ASN scan. Criteria attribute value determines if there is a matching rule. If any override criteria rule match exists, the attribute values are used instead of receiving criteria attribute values.

Receiving Line Override Criteria

These are a predefined set of receiving criteria attributes that are evaluated at the time of LPN/item/Item attribute scan. The attribute values are used instead of receiving criteria attribute values if any Line override criteria rule matches. For LPN on the ASN, the criteria are evaluated at LPN prompt. For Item level ASN, the evaluation takes place at Item/Item attribute scan.

> **Note:** Receiving Override attributes and Receiving Line Override attributes are mutually exclusive of each other and are a subset of attributes that exist as part of from the receiving criteria. Further, for a matching rule, the system picks up all the attribute values from receiving override or line override criteria.

Post Receiving Criteria

This criterion hosts the rules to be evaluated post receiving and determines the condition code, information message or either of the two to be applied. This criterion supports the evaluation of all the configured rules so that if multiple conditions are met, all the condition codes/information messages tied to the rule criteria are considered for application.

> **Note**: During the Receive by ASN transaction, the post-receiving rules are not evaluated for the LPNs unless the configured rules in the post-receiving criteria are set to *Catch All Rule*.

Receiving Parameters

These are the facility-level parameters that are to be used by receiving functions.

Pre-Allocate Strategy

This is the strategy used while performing the Pre-receipt allocation of ASN. Pre-allocate strategy hosts the trailer selection criteria and preallocate criteria. If the pre-allocate is triggered during check-in, the trailer selection criteria get evaluated. But if triggered from the ASN or inbound delivery screens, then pre-allocate criteria and rules are evaluated to determine the eligibility of the ASN line for selection. Refer "Pre-Receipt Allocations process" page for more details.

Trailer selection Criteria

This criteria has the option to evaluate the content of the trailer for preallocation eligibility only upon move task creation for Drop unload visit types. If set to no, then trailer selection criteria gets evaluated during check-in for both Live unload and Drop Unload visit types.

Pre-Allocate Criteria

This criterion lists the UOM to be used while performing the cartonization of item level ASN during Pre-receipt allocation. If no value is specified, the standard LPN UOM is used for cartonization.

Functionalities Supported and Key Features

LPN/Blind iLPN Receipt

When using the 'Receiving an iLPN' option, the user can verify receipts either at LPN level or LPN/Item/Quantity level (Receipt against and item level ASN or LPN Level ASN). For LPNs, where the quantity and item information are available prior to receiving, there is an option to receive the inventory by scanning the LPNs without scanning their contents or scanning the LPN followed by verifying the contents of the LPN. In other scenarios, vendor may only be able to provide Item/quantity level information (Item Level ASN) for an expected ASN. For this receipt, the receiver must capture the LPN, item, and quantity information. For the scenarios wherein inventory arrives in the facility with no Receipt Information (ASN information), the user needs to capture the LPN/item/quantity. ASN Capture is not required for such a flow.
the following are the key features supported as part of this functionality:

1. Receive Item Level ASN in Blind ASN scanned by the user, or generated by the system using next up number

2. Receiving LPNs on LPN level ASN with or without verifying the contents of the LPN

3. Ability to locate the LPNs received at a staging location

4. Ability to generate labor events and post the messages to LM queues

5. Pickup task creation for the received LPNs/Pallets. Once created, it acts as a direction for the user to pickup from the staging location. Once the user executes the Pickup task, LPN disposition is invoked for subsequent LPN processing.

6. Ability to chain LPN receiving to LPN D for subsequent LPN processing (Sorting/Putaway Allocation)

7. Ability to validate/capture the price of an item

8. Ability to capture/generate Size Type for LPN received

9. Quantity capture through Key Quantity mode/Barcode Scan

10. Tolerance check against the PO/ASN

11. Ability to allow/disallow receipt of an item not available on ASN/PO

12. Display TI/HI

13. Display Shipped v/s Received quantity when performing blind iLPN receipt

14. Capture and validate serial numbers when receiving Item and LPN level ASNs. For Item level ASN, serial numbers are captured every time. For LPN level ASN, serial capture depends on item verification setup and if the ASN already contains the serial number information associated with it.

15. The ability to capture ASN/Inbound Delivery attributes which includes Purchase Order and Vendor information for blind ASN. Additionally, if the PO Line has item attributes tied to it. The 'PromptForItemAttributes' is set as 'ALWAYS PROMPT'. The attribute values pre-populate on the screen for the user's confirmation.

16. Support to receive multiple pack sizes for an item.

Validate inventory being received for older expiry dates?
When enabled in the items or item facility, the system validates whether the expiration date for the inventory being received is older than the current on-hand inventory while receiving LPNs using the Receive by LPN transaction.

The system searches for inventory details across all containers (iLPN, Location, oLPN) and if an old expiration date is found, then the following error is displayed:

Receiving an older expiry date is not allowed.

 By default, the check box is disabled and no validation is done for the inventory being received.

Notes:

- The **Validate inventory being received for older expiry dates?** check box is displayed on the Items and Items Facility screens only when the Track expiry date check box is enabled.

- Items must track expiry dates or the items that track batch master must also track expiry dates.

- The validation is not applicable for Bulk modes such as Receive by ASN, Receive by Inbound Delivery, and Receive by Pallet transactions.

- The validation is done when the expiry date is imported as part of ASN or is tracked in the batch as part of ASN, or the expiry date for an item is calculated using the manufacturing date and PLID.

- Validations for multi-SKU or multi-line iLPN:
  - The expiry date of each line on the iLPN is validated against the expiry date of the oldest on-hand inventory. If the validation is successful, then the inventory is received. However, an error is displayed if the validation fails, and you can either skip receiving the LPN/item message or enter a new LPN.

  - When an item in an iLPN is received, and there is no on-hand inventory for an item, then no validation is done as there is no expiry date available for the item in the inventory.

  - For an LPN-level ASN that has the same item across multiple details during receiving, if the attribute capture is set to **Prompt if NULL**, the system automatically selects a detail to receive. In such cases, if any detail of the item has an expiry date older than what is recorded in the inventory, the system generates an error. The user must scan a specific tracked attribute during receiving to determine the correct detail for validating the expiry date if it's already available on the LPN detail.

Bulk Receipt

When Using Bulk Receipt Mode, one can receive all the LPNs associated with an ASN by simply scanning the ASN number (and not scanning the underlying LPNs). This mode is typically used when the information on inventory, expected in a facility, is available at the ASN level from a trusted vendor. Receipt in this mode can only be carried out if the vendor upfront interfaces the LPN Information for the ASN.

The following are the key features supported as part of this functionality:

1. Receive all the LPNs/Pallets associated with an ASN by scanning the ASN Number, without scanning any underlying LPN

2. Ability to locate all the LPNs received in the Bulk Mode at a staging location

3. Ability to generate pickup tasks for all the LPNs received in the Bulk Mode

4. Ability to generate labor events and post messages to LM queues

5. Ability to locate the LPNs received at a staging location

6. The ability to receive serial numbers information as long as the shipped quantities for each LPN detail match with the number of serial numbers included. If there are missing serial numbers, no Bulk Receipt is allowed.

Receiving by/to Pallet

While using the palletize mode, in the case of LPN level ASN, one can verify the receipt of the entire pallet or can receive iLPNs and

palletize them before it is being put away. This mode is typically used when similar LPNs are received and can be put away together. The following are the key features supported as part of this functionality:

1. Receiving the pallet and the associated LPNs on the pallet by scanning the pallet id from the ASN

2. Receiving the LPNs to palletize them before the LPN has been put away. A new pallet can be captured by the user or system-generated using next up number

3. Ability to locate the pallets received to a staging location while receiving

4. Ability to generate labor events and post the messages to LM queues for processing

5. Ability to generate Pickup task for the pallet located at the staging location

6. Ability to generate/capture the pallet Size Type of the pallets received

7. Ability to receive a pallet or receive iLPNs on a pallet wherein inventory arrives in the facility with no receipt OR ASN information (Blind iLPN)

8. Ability to receive the entire pallet by scanning any of the iLPN present on the pallet from the ASN (when palletize mode is 'Receive by Pallet')

9. Ability to receive the entire pallet and loose iLPN's of the same ASN through receive by pallet mode.

10. Ability to receive inventory by the pallet with serial numbers included. This requires that the pallet quantities match the number of serial numbers included. A mismatch will not allow the pallet to be received in this mode

11. Ability to receive iLPNs across ASNs within the same shipment onto a Pallet

Receiving to Storage location

Receiving to storage location enables the person to receive inventory directly to the storage location and allocate the received inventory from the storage location through wave. This is allowed only for LPN tracked location (Locations with storage UOM = Pallet / iLPN).
Validations:

1. When the receiving criteria a configured as "Prompt for Storage", validate if the location entered is Storage location, if the user is entering location of type other than Storage throw error - "Invalid Location"

2. Validate if the storage location is valid, if it is not valid throw error - "Invalid Location"

3. Validate the storage UOM of the location, if it is not "LPN" or "Pallet" throw error - "Receiving to a non-LPN tracked storage location is not supported".

Disable control keys or action buttons

This functionality provides the ability to hide action buttons or control keys from the receiving flow irrespective of user permission. All the action buttons available as part of any receiving flow will be available in the drop down for this receiving attribute named "Select actions to exclude" and chosen action buttons will be hidden for all the users during the receiving flow.

Return Receiving Using Mobile

This functionality provides the ability to perform Return of blind ASN/RRN or Return ASN using a mobile function. The mobile returns leverage the Return/Final Return disposition concept as used by the return station. If the final return disposition is set to 'Receive and Consume' WM consumes the LPN on receiving similar to return station. If set to Receive or Receive and Sort, the behavior for mobile is not driven by those values but rather based on the LPND transaction being chained or not which is similar to Regular receiving.
Further, all the functionality available through regular mobile receiving is also available when performing returns using mobile. The

regular receiving transaction can be switched to return mode by setting return mode criteria attribute to ASN/RRN and 'Return using Return Station' to False. If return mode is set to Null even in this mode if the user scans ASN (with origin type of R), then return flow will be triggered. If the user sets the return mode to Original Order, mobile returns will default to ASN as the returns against Original Orders are not supported in mobile.

Finally, in return mode, additional screen such as RRN prompt and Return/Final Return disposition prompt are added to mobile flow.

MHE Receiving

MHE receiving can be performed for ASN that has LPN existing before receipt or for ASN that is pre-receipt allocated or receiving into blind LPN for item level ASN. The EI layer makes a call to receiving component to process the MHE event along with receiving Transaction ID. Receiving component determines the receiving criteria linked to the transaction and performs receiving updates. On receipt completion, receiving component generates 6530 (LPN received) outgoing events. If LPND is linked to receiving a transaction, an event is posted for LPND for further processing such as Sorting/Putaway/Pre-receipt Allocation completion and more.

As part of receiving operations, the system generates outgoing messages that can act as touchpoints for MHE integration.

1. On Pre-Receipt Allocation of ASN, the receiving component generates Pre-Receipt Allocated outgoing event for ASN.

2. On Undo Pre-Receipt Allocation of ASN, the receiving component generates Undo Pre-Receipt Allocated outgoing event for ASN.

3. On Undo Pre-Receipt Allocation of LPN, the receiving component generates Undo Pre-Receipt Allocated outgoing event for LPN.

4. On Cancel ASN, the receiving component generates an ASN Canalled outgoing event for ASN.

Further, as part of the MHE receiving payload, it has been enhanced to include start and completion timestamps for header level messages (like receiving by scanning LPN only) and for detail receiving (Blind LPN receiving, detail receiving of existing LPN) start/complete timestamp is added to header and completion timestamp to detail message. These timestamps are used for generating labor messages.

Mobile/RF Pre-receipt Receiving

ASN that is pre-receipt allocated, can be received through MHE receiving or by using mobile receiving transaction. On ASN prompt screen, based on ASN pre-receipt status, WM determines if ASN needs to follow regular or pre-receipt screen flow. If ASN is pre-receipt allocated and of type item level, WM prompts the user for item else for LPN. On Item/LPN prompt, WM performs another check to ensure Line/LPN is pre-receipt allocated. If yes, WM prompts for quantity, item-level ASN, LPN level ASN and displays a screen with the message "LPN allocated for xxxx allocation type". On Quantity scan, WM determines the LPNs to be received based on LPN ID in ascending order. On quantity scan, the display user sees a message "LPN allocated for xxxx allocation type". The Pre-receipt flow requires LPND to be linked to receiving the transaction, or the user cannot determine the receipt of such quantity.

The following are the key features supported as part of this functionality:

1. Ability to generate labor events and post the messages to LM queues for processing.

2. Display remaining pre-receipt allocated quantity for item-level ASN.

3. Ability to display the remaining pre-receipt allocated quantity break-down by allocation type for item-level ASN.

4. Ability to call LPN and trigger subsequent screen flow like anchor etc.

Verify ASN

Once a user is done with the receiving activities, they can verify the ASN. Once the ASN is verified, the user cannot receive additional inventory for that ASN. ASN verification can be triggered in the following ways:

1. By selecting an ASN from ASN UI and choosing to verify the ASN action.

    a. On submitting the verification, a variance summary screen is displayed listing the item and LPN variances.

    b. The item variance is displayed for all ASN types (i.e., Blind, LPN level, and Item level). The LPN variance is displayed for the LPN level or blind ASN.

    c. Once the user confirms the variance, he can submit the verification process or cancel out verification.

    d. On a user accepting the variance for verification, the verification request is processed as an asynchronous request. A message is displayed to the user as: "RCV:277 Verification request has been submitted for ASN". Users can view the progress of verification through message logging UI.

    e. If a user attempts to verify the same ASN which is in progress, an error message is displayed: "RCV:276 Verification in Progress for one or more ASNs".

2. By choosing Verify ASN action from the Receiving Mobile/RF transaction.

    a. In this mode, a variance summary screen is introduced, listing the variance ASN units and LPNs.

    b. This screen is displayed after a user chooses the Verify ASN action during receiving.

    c. Once the user confirms the variance, they can submit the verification process or cancel out of verification.

    d. On the user accepting the variance for verification, the verification request is processed as an asynchronous request. A message is displayed to the user as: "RCV:277 Verification request has been submitted for ASN". Users can view the progress of verification through message logging UI.

    e. If a user attempts to verify the same ASN which is in progress, an error message is displayed: "RCV:276 Verification in Progress for one or more ASNs".

Validations

1. Validate if any Selected ASN is in Status < "In- Receiving". Prompt a warning " ASN {No} not yet received".

2. Validate if any Selected ASN is Status >="Verified". Prompt an error Message "ASN {No .} already verified"

3. If triggered from a mobile, check if ALLOW_ASN_VERIFICATION_WITHOUT_VARIANCE receiving criteria attribute is set to true, and if an ASN has a variance, then do not allow verification of ASN. Display an error "ASN has variance".

Updates

1. ASN is updated to 'Verified' status

2. Verification PIXs are generated

3. Dock door association with ASN is removed on last ASN tied to door verification

4. If ASN is associated with a PO then any unreceived quantity is reverted back to PO by reducing the shipped quantity.

5. LPNs that have not been received are updated to 'Verified Not Received' status and the following events are generated:
    a. An event for the inventory component for deletion of such LPNs

    b. If LPNs were pre-allocated, an event is created for LPN disposition component to roll back these allocations.

Further as part of ASN verification, system can be configured to generate Pickup task creation . This is enabled by setting "What pickup task creation strategy should system use on ASN verification from ASN UI?" under receiving parameters. Further, when trigged from mobile we check the receiving criteria attribute "What pickup task creation strategy should system use on ASN verification from mobile?" and if populated trigger the pickup task.

Skipped Mandatory Question Completion

While performing questionnaire execution during receiving, if the user has skipped any mandatory questions from the sections associated to the questionnaire services, system will prompt these skipped mandatory questions to be answered when user performs Verify ASN from the Mobile UI.

1. User performs receiving of ASN.

2. System prompts questions associated to ASN.

3. User skips answering mandatory questions associated to ASN during receiving when it.

4. System marks the questionnaire as **Partially Completed.**

5. User performs verify ASN from Mobile UI

6. System prompts skipped mandatory questions to be answered before ASN verification.

7. User provides answers for these mandatory questions.

8. System records answers for these questions.

9. System marks the questionnaire as **completed.**

> **Note:** System will not perform any actions associated to the mandatory questions during verify ASN questionnaire execution. It only captures answers for leading mandatory questions.

Verify Inbound Delivery (Shipment)

The Verify Inbound Delivery action is available only through mobile/RF receiving execution and while performing receiving against Inbound Delivery i.e., prompt for Inbound Delivery, the receiving criteria attribute is set true. The Inbound Delivery verification triggers verification of all ASNs associated with Inbound Delivery. Once Inbound Delivery is verified, no additional inventory can be received against the Inbound Delivery. The verification is triggered as follows:

1. By choosing Verify Inbound Delivery (CTRL-Z) action from the Receiving Mobile/RF transaction.

   a. In this mode, variance summary screen is introduced listing the variance inbound delivery units and LPNs.

   b. This screen is displayed after the user chooses the Verify Inbound Delivery action during receiving.

   c. Once a user confirms the variance, he can submit the verification process or cancel out verification.

   d. On the user accepting the variance for verification, the verification request is processed as a synchronous request. A message is displayed to the user as: "RCV:278 Verification request has been submitted for Inbound Delivery". Users can view the progress of verification through message logging UI.

   e. If a user attempts to verify the same Inbound Delivery which is in progress, an error message is displayed: "RCV:276 Verification in Progress for one or more ASNs".

Validations

1. Validate if Inbound Delivery has at least one ASN in Status - In-receiving or In-transit. Otherwise, display an error "No ASN in valid status tied to Inbound Delivery".

2. If ALLOW_ASN_VERIFICATION_WITHOUT_VARIANCE receiving criteria attribute is set to true, and if any ASN on Inbound Delivery has a variance, then do not allow the verification of Inbound Delivery, and display an error "One or more ASN on Inbound Delivery have variance". If no variance exists on any Inbound Delivery, move forward with verification of all ASNs tied to Inbound Delivery.

Updates

1. Eligible ASNs for verification tied to Inbound Delivery are updated to 'Verified' status.

2. Verification PIXs are generated.

3. Dock door association with Inbound Delivery is removed on last Inbound Delivery tied to door verification.

4. LPNs that have not been received are updated to 'Verified Not Received' status and the following events are generated:
    a. An event for Inventory component for deletion of such LPNs
    b. If LPNs were pre-allocated, an event is created for LPN disposition component to roll back these allocations.

Trailer Status

Functionality

Trailer Status is an input for the user who is receiving an ASN to select whether ASN is fully received or partially received before releasing the door. Based on this input, Trailer Status in the Yard will get updated accordingly.

Release Door

Functionality

The release door is an equivalent of a close trailer function in SCPP with the primary objective to free up the door and thus remove dock door association with trailer/appointment objects. For a yard-based implementation, this step creates a yard task to move the trailer from the dock to the yard slot. For a non-yard implementation, this step does not move the task but removes the association of dock door to ASN/Inbound Delivery. This association is maintained in the dock door record entity. This step is typically performed after all the inventory has been unloaded. Users can resume receiving inventory from a closed trailer. The release door can be triggered in the following ways:

1. By selecting an ASN from ASN UI and choosing "verify ASN action". The release happens only on the last ASN verification from the door.

2. By verifying ASN/Inbound Delivery from mobile receiving. The release happens only on the last ASN/Inbound Delivery verification from the door.

3. By choosing the release door action from the receiving mobile screens.

Validations

1. Validate if ASN is associated with the dock door. If not, then display an error.

Updates

1. Remove association of dock door to ASNs from dock door record entity.

2. Generate an event for the yard. A moving task for the trailer needs to be created to move the same from dock door to yard slot.

Quick Receipt / Copy LPN

Functionality
The Quick Receipt functionality provides the receiving user with the ability to receive multiple iLPNs that are similar to an already-received iLPN.
It is executed via the Copy iLPN action in Mobile/RF Receiving. Quick Receipt copies the attributes of a previously received iLPN to

one or more iLPNs.

This feature is available for all modes of receiving.

To replicate an iLPN, the receiving user performs the following set of actions:

1. Receives the iLPN "A" for an ASN

2. Physically determines that N number of un-received LPNs from the ASN have the same characteristics as this iLPN "A," like item, quantity, and batch number.

3. Taps Copy LPN action and enters the number "N" of LPNs to be replicated

4. Scan all "N" LPN IDs one by one if a prompt for LPN is enabled. If the prompt for LPN is disabled, the system generates "N" LPN IDs and automatically copies the data over to each.

Validations

1. Validate if LPN is already scanned. If yes then display an error

2. Validate if LPN is already received. If yes then display an error

3. Validate if total quantity received through quick receipt is more than allowed units, if yes then display error

Updates

1. Mark all LPNs as Received with the correct item, quantity, and inventory attribute details.

2. Update ASN with computed received quantity

Notes:

1. If the prompt for LPN is disabled, the user will not be able to end the Copy LPN action while the replication is in progress.

2. The interactive mode of LPN Disposition is not supported for iLPNs created through a quick receipt replication.

3. The quick receipt feature is not applicable for iLPNs containing items that require flexible attribute entry during receiving like serial numbers.

Post Receiving Rules

This functionality provides the ability to apply condition code and/or display information messages to the user on LPN receipt. The post receiving rules are evaluated for all available rule matches and if multiple rules are met, all configured messages are displayed, and condition codes are applied to the inventory.

TI/HI

TI/HI is displayed to the user during receiving, to aid the user in building a physical pallet during receiving. The TI/HI is displayed during the following flows when building a single SKU pallet/LPN.

1. If receiving (not on pallet) by confirming the LPN details, or receiving in blind iLPN
    1. Barcode Scan: Display TI/HI value on the item scan prompt screen. The TI/HI value is displayed based on the last item scanned.
    2. Key Quantity: Display TI/HI value on the quantity entry screen.

2. If receiving in a pallet, then at the end of each LPN.
    1. Display TI/HI value at LPN prompt screen based on the last scanned LPN item.

For scenario#1 above, display TI values based on item LpnPerTier and HI value from item TiersPerPallet. If either value is 0, then TI/HI is not displayed. Further if physical entity code is not set to Pallet the then also the TI/HI is not displayed.

For scenario#2 above, display TI as item package Tier quantity and HI as Standard pallet quantity/Standard Tier quantity rounded to

next whole number. If either value is 0, then TI/HI is not displayed.

LPN Size Type/Pallet Size type Calculation

The LPN/Pallet size type is calculated only for a single SKU LPN/pallet.

> **Note:** LPN Size Type determination is only applicable when the iLPN type is PALLET or iLPN with Physical Entity Code is set as PALLET.

The calculation is as follows:

Single Item iLPN (Pallet size): LPN Size Type

- Get the LpnPerTier from itemFacility and multiply that by the standardPackQuantity for the item. The product is the 'Tier Quantity'.

- Divide the quantity being received in the LPN by the 'Tier Quantity' calculated above. Round this up to the next highest integer. This gives the 'Number of Tiers' for the LPN. If the value is 0, log error "Cannot calculate LPN Size Type".

- Multiply the 'Number of Tiers' calculated above with the standardPackHeight for the item to determine the 'Tier Height' for the LPN.

- Get the defaultPalletHeight from InventoryParameters.

- Add the 'Tier Height' to the defaultPalletHeight to get the 'Putaway Height' for the LPN.

- Select the record in the lpnSizeType entity where 'Putaway Height' calculated above is = lpnSizeType.Height.
    - If not found, select the record in the lpnSizeType entity with the next higher lpnSizeType.Height and lpnSizeType.Height > 'Putaway Height'
    - If a record cannot be determined, log error "Cannot calculate LPN Size Type".

- Use the lpnSizeType for this row as the LPN's lpnSizeType.

Single Item Pallet: Pallet Size Type

- Get the Tier quantity from the Standard Item Package Tier.

- Divide the quantity being received on the pallet by the 'Tier Quantity'. Round this up to the next highest integer. This gives the 'Number of Tiers' for the pallet. If the value is 0, log error "Cannot calculate LPN Size Type".

- Multiply the 'Number of Tiers' calculated above with the standardTierHeight for the item to determine the 'Tier Height' for the pallet.

- Get the defaultPalletHeight from InventoryParameters.

- Add the 'Tier Height' to the defaultPalletHeight to get the 'Putaway Height' for the LPN.

- Select the record in the lpnSizeType entity where 'Putaway Height' calculated above is = lpnSizeType.Height.
    - If not found, select the record in the lpnSizeType entity with the next higher lpnSizeType.Height and lpnSizeType.Height > 'Putaway Height'.
    - If a record cannot be determined, log error "Cannot calculate LPN Size Type".

- Use the lpnSizeType for this row as the pallet size type.

Regular Receiving Screen Flow

For receiving, the user chooses the receiving option from the menu. The menu item has an associated transaction ID. Using this transaction ID, WM evaluates the rules associated with the receiving strategy and identifies the receiving criteria to be used for receiving. This criterion is used to determine the initial prompt screen(s). On ASN scan, WM evaluates the receiving override criteria and if there is a matching rule, WM uses all the override criteria attributes values. Further, on LPN scan (for LPN level ASN) and item scan for item-level ASN, WM evaluates the override line criteria to determine the override line criteria attributes for matching rule. If one of the criteria values is found, WM uses the attribute values for the following receiving screens:

Prompt for Dock Door

A User is prompted for the dock door if the receiving criterion 'promptForDockDoor' is set true.

Accept Input: Prompt user to enter the dock door. On dock door scan, if the receiving criteria 'locateLpnToStagingId' is set 'STAGE_LOCATION_FROM_DOCK_DOOR', determine the staging location associated with dock door. The staging location is the LPN/pallet located on receipt completion.

Display Information: Users can see the Dock door label along with the input box to scan the dock door barcode. The receiving criteria attribute named "Dock dock display type id" controls the value shown to the user upon scanning the dock door barcode. The display can be set to barcode (default value) or display location or location id.

Validations

Error Code	Message	Validation	Error Level	Allow Change
RCV:???	Invalid Barcode	if a user scans a dock door barcode that does not match the barcode type of dock door barcode format	Error	No
RCV:214	Dock Door doesn't exist	if a user scans a dock door that does not exist	Error	No
RCV:219	Dock Door is not entered	if a user does not scan the dock door upon the dock door prompt	Warning	Yes
RCV:220	Dock Door is being used for Outbound Process	if a user scans a door that is being used by an outbound process	Error	No
RCV:221	Dock Door is allocated for Outbound process. Do you want to Proceed?	if a user scans a door that is in "Pending in use" status and assigned to the outbound process	Warning	Yes

Action Keys: None

Prompt for Inbound Delivery (Shipment)

This screen is displayed if the receiving criteria attribute 'Prompt for Inbound Delivery' is set to 'true'. This mode is used when receiving needs to be performed against multiple ASNs tied to an Inbound Delivery. If the Inbound Delivery prompt is enabled, the ASN prompt is automatically disabled.

Accept Input: The system accepts the Inbound Delivery number from the user.

Display Information: Display Dock door information if the user has scanned the dock door before being prompted for Inbound Delivery.

Validations

Error Code	Message	Validation	Error Level	Allow Change

	Invalid Barcode	if a user scans a Shipment barcode that does not match the barcode type of an Inbound Delivery format	Error	No
RCV:245	No ASNs associated to Inbound Delivery	If Inbound Delivery scanned has no ASN associated with it	Error	No
RCV:269	Inbound Delivery is associated with different dock door	If a user scans a dock door followed by Inbound Delivery and Inbound Delivery is associated with different dock door	Warning	No

Prompt for RRN

This screen is displayed if the receiving criteria attribute ' Default Returns Mode' is set to 'RRN' and 'Is Returned Performed using Return Station' is set to No. This screen is only available when performing Returns

Accept Input: The system accepts the RRN number from the user.

Display information: Display Dock door information if the user has scanned the dock door before being prompted for RRN.

Validations

Error Code	Message	Validation	Error Level	Allow Change
	Invalid Barcode	if a user scans an RRN barcode that does not match the barcode type of RRN format	Error	No
RCV:225	Blind Receipt is not allowed	if receiving criteria attribute ''Should system allow blind ASN receipt' is set false and if a user scans RRN that does not exist in WM	Error	No
RCV:114	ASN {asnId} is not for returns.	If Return Mode is set to ASN/RRN then system validates if ASN/RRN scanned if exist is having Origin Type of 'R' if not, then display this error.	Error	No
RCV:341	Use detail receiving for return ASN	If receiving mode is set to ASN and user scans a Return ASN then display this error	Error	No

Action Keys

Action Button	RC Control Key	Description
Release Door	CTRL-B	Remove door association with ASN/PO and trigger event for the yard to move the trailer out of the door
ASN Scan Mode		This action is only available when receiving criteria 'Return Mode' is set to RRN and attribute Return using Return station is set to False

Prompt for Blind ASN or Inbound Delivery

This prompt is displayed if the receiving criteria attribute, **Should the user capture ASN/Inbound Delivery attributes?** is set to **True**. When a user receives a blind ASN against the PO and if the PO has a vendor ID, then when the attributes are captured while receiving, the vendor ID is automatically pre-populated from the PO for confirmation. This is applicable for receiving and during vendor performance as well.

The system prefers the existing vendor on ASN if the ASN number is scanned in these transactions. If ASN contains multiple POs/Vendors, the system populates the vendor based on the PO scanned during receiving.

By default, the validation messages are set to NON-DISPLAY and can be set to Warning or Error (if required). The following validations occur:

Error Code	Message	Validation	Error Level	Allow Change

RCV::400	Vendor ID {vendorId} doesn't match the Vendor on PO {purchaseOrderId}.	If the vendor captured during receiving doesn't match with the vendor ID on the PO.	NON-DISPLAY	Yes
RCV::401	Vendor {vendorId} is not active	If the vendor captured during receiving is not in active status.	NON-DISPLAY	Yes
RCV::402	Vendor {Vendor id} inactive during import	If the vendor is inactive while importing an ASN.	NON-DISPLAY	Yes

Prompt for ASN

This screen is displayed if the receiving criteria attribute 'Prompt For ASN' is set 'true' and 'Prompt for Inbound Delivery' is set 'false'. For most use cases, this parameter is enabled and should only be set false when receiving an LPN level ASN, where systematic identification of ASN can happen through LPN scan.

Accept Input: The system accepts the ASN number from the user.

Display Information: Display Dock door information if the user has scanned the dock door before being prompted for ASN.

Validations

Error Code	Message	Validation	Error Level	Allow Change
	Invalid Barcode	if a user scans an ASN barcode that does not match the barcode type of ASN format	Error	No
RCV:113	ASN {Actual ASN ID} doesn't exist	if receiving criteria attribute 'receiveWithoutASN' is set false and if a user scans ASN that does not exist in WM	Error	No
RCV:001	ASN i{Actual ASN ID} is in Invalid status	if ASN scanned is in canceled or verified status	Error	No
RCV:114	ASN {asnId} is not for returns.	If Return Mode is set to ASN/RRN then system validates if ASN/RRN scanned if exist is having Origin Type of 'R' if not, then display this error.	Error	No
RCV:341	Use detail receiving for return ASN	If receiving mode is set to ASN and user scans a Return ASN then display this error	Error	No

Action Keys

Action Button	RC Control Key	Description
Release Door	CTRL-B	Remove door association with ASN/PO and trigger event for the yard to move the trailer out of the door
RRN Scan Mode		This action is only available when receiving criteria 'Return Mode' is set to ASN and attribute Return using Return station is set to False

Prompt for Staging Location

This screen is to capture the staging location. User is prompted for staging location if the receiving criteria attribute 'LocateLPNToStaging' is set 'PROMPT_FOR_STAGING_LOCATION'.

Accept Input: Prompt user to enter staging location

Display Information: Display ASN Number and dock door if it was captured in the previous screen

Validations

Error Code	Message	Validation	Error Level	Allow Change
	Invalid Barcode	If a user scans a location that does not match the barcode type of location	Error	No

RCV:1121	Invalid Location	If the location is not an active staging location or if location is not for current organization/facility	Error	No

Action Keys

Action Button	RC Control Key	Description
Release Door	CTRL-B	Remove door association with ASN/PO and trigger event for the yard to move the trailer out of the door
Verify ASN	CTRL-Z	Trigger verification of ASN in context

Prompt for Pallet

This screen is displayed if the receiving criteria attribute 'promptForPallet' is set to one of the following values (i.e. AUTO_GENERATE_PALLET_PALLETIZE_LPNS , RECEIVE_BY_PALLET , PALLETIZE_LPNS, PALLETIZE_LPNS_ACROSS_ASNS) or if the user presses the' Palletize' option on the LPN prompt.

In 'Receive by Pallet' mode, the system achieves successful pallet reception by validating the presence of at least one valid LPN on the pallet. Any cancelled LPNs on the pallet will be ignored while receiving in the pallet mode.

The pallet id created during receiving or imported in the LPN level ASN shall be re-used, once the pallet is removed from the DCI component due to consumption of inventory or cancellation. If the pallet received still has a pallet record in the DCI or the associated ASN is not in verified/cancelled status, then the pallet id cannot be re-used.

Accept Input: The system accepts the pallet ID entered by the user or if set to Auto Generate mode, the user can press enter for WM to generate a blind pallet number.

Display Information: Display ASN ID if captured in previous screens.

Validations

Error Code	Message	Validation	Error Level	Allow Change
	Invalid Barcode	If a user scans a pallet that does not match the barcode type of pallet	Error	No
RCV:127	Pallet (Pallet ID) Already exists in the Inventory	if a user scans a pallet that already exists in DCLI for the current facility and is in closed status	Error	No
RCV::344	Pallet (Pallet ID) is already in use	Re-using a pallet id that is Received but not removed from the DCI as the inventory is not consumed or cancelled yet.	Error	No

Action Keys

Action Button	RC Control Key	Description
Release Door	CTRL-B	Remove door association with ASN/PO and trigger event for the yard to move the trailer out of the door
Verify ASN	CTRL-Z	Trigger verification of ASN in context
Trigger Vendor Performance	CTRL-P	Trigger Vendor Performance

Prompt for LPN

This screen is displayed to the user if the receiving criteria attribute 'promptForLPN' is set true.

Accept Input: The system accepts the LPN ID entered by the user. This could be the LPN that pre-exists in WM (created during import or using the created iLPN action) or blind LPN number.

In the blind LPN receiving flow (where "allowReceiptWithoutPreexistLpn" is set as true), based on 'allowAutoGenerateLpn' flag, the

system auto generates the LPN Id. There could be two scenarios:

- 'When 'promptForLPN' is set to true, the user can click 'Go' without entering the LPN Id. In this case, the LPN Id is generated by the system.

- When 'promptForLPN' is set to false, the system generates the LPN Id and proceeds to the next scan.

System will allow to re-use the LPN ID which were processed earlier in the system provided the LPN ID satisfies the following criteria:

- Previously processed LPN record is not present in the DCI due to consumption of the inventory or cancellation or ASN is verified.

- For any iLPN ID, if there is a corresponding oLPN id (iLPN is converted to oLPN to retain the container id), then the oLPN should be in shipped or cancelled status

- LPN's that are in 'Not received, ASN verified' status shall be re-used, provided the LPN record isn't available in the DCI in less than shipped/cancelled status.

- LPN's that are in cancelled status in receiving shall be re-used within the same or different ASN, regardless of the ASN status.

When LPN ID is re-used, the old reference to the ASN is removed and new ASN/LPN details will be updated in the existing record. For 3PL, unique LPN IDs across different BU are recommended.

Display Information: Display ASN ID, pallet, if these attribute values were scanned in previous screens.

Validations

Error Code	Message	Validation	Error Level	Allow Change
	Invalid Barcode	If a user scans iLPN, it does not match the barcode type of ILPN	Error	No
RCV:115	LPN is not present on ASN	if a user scans LPN that does not exist on ASN and receiving criteria attribute 'allowReceiptWithoutLpnLevelAsn' is set false.	Error	No
RCV:125	New LPN will be generated	If a user presses enter without providing the LPN number and receiving criteria attribute 'allowReceiptWithoutLpnLevelAsn' is set true.	Warning	No
RCV:145	1 LPN('s) will be received for allocation type CrossDock	The following error levels are available: • Non-Display: The screen to accept the LPN is not displayed when the item and LPN-level ASNs are received using the Receive XDock transaction in WM Mobile. • INFO: The screen to accept the LPN and the validation message is displayed when the item and LPN-level ASNs are received using the Receive XDock transaction in WM Mobile. **Note**: To skip the message for all allocation types: 1. Navigate to the Messages screen, and select the dmmobile-facade component from the filter. 2. Set the RCV::145 message to NON-DISPLAY.	Non-Display, INFO	YES
RCV:152	LPN exist on another ASN. Do you want to Proceed?	if user scans an in-transit LPN tied to different ASN than what is being received	Warning	No

RCV:107	LPN already exist in Inventory	If scanned LPN already exists in DCLI in status larger than in-transit and less than consumed status. This is for the blind LPN flow.	Error	No
RCV:110	Invalid LPN status	If scanned LPN already exists in DCLI in status larger than in-transit and less than consumed status. This is for the LPN level ASN flow.	Error	No
RCV:272	LPN number must be supplied to receive	If 'allowAutoGenerateLpn' is false and 'allowReceiptWithoutLpnLevelAsn' is set true and user press enter at LPN prompt without providing the LPN information	Error	No
RCV:345	LPN (LPN id) is linked to ASN (ASN id) which is not yet VERIFIED	Re-using a LPN id which is already present in the system with ASN ID not in verified status.	Error	No
RCV:346	The existing oLPN (LPN ID) has not been SHIPPED or CANCELLED, iLPN with lpnId (LPN ID) cannot be created	Re-using iLPN which has an oLPN that is not shipped or cancelled.	Error	No
DCI::433	Ilpn id is invalid as it contains unsupported characters	If the iLPN being created has invalid characters (/, !, $, etc)	Error	Yes

Action Keys

Action Button	RF Control Key	Description
End Pallet	CTRL-O	End Pallet and call LPND if linked to receiving
Palletize LPN	CTRL-N	Switch to Pallet Mode of Receiving and in mode of 'Auto Generate pallet palletize LPNs'
Release Door	CTRL-B	Remove door association with ASN/PO and trigger an event for the yard to move the trailer out of the door.
Verify ASN	CTRL-Z	Trigger verification of ASN in context
Trigger Vendor Performance	CTRL-P	Trigger vendor performance transaction

Prompt for Item

WM prompts for an item, if receiving a blind LPN or LPN exists in WM and receiving criteria attribute verify the item is set to true. Further, a user-directed mode of receiving LPN level ASN is introduced which allows the user to scan any item in LPN to receive, instead of a system-directed user to receive the item in a specific order (for multi SKU LPN).

Accept Input: The system accepts the Item ID entered by the user.

Display Information: Display ASN ID, Location, Pallet, LPN if these attributes were captured in previous screens.

Validations

Error Code	Message	Validation	Error Level	Allow Change

	Invalid Barcode	If a user scans an item barcode that does not match the barcode type of item		Error	No
RCV:116	Item doesn't exist for the barcode Item	If a user scans an item that does not exist in the system for the organization/facility		Error	No
RCV:201	Item (itemid) not in LPN(LPNID). Use Add function to add item	if a user scans an item that does not exist on LPN		Error	No
RCV:117	Item {itemId} is not present on Asn {asnId}	If the receiving criteria attribute 'Allow item not on ASN' s set is false and the user scans an item which is not tied to ASN		Error	No
RCV:9117	Item {itemId} is not present on Asn {asnId}. Do you want to proceed?	If the receiving criteria attribute 'Allow item not on ASN' s set true and user scans an item which is not tied to ASN		Warning	No
RCV:156	Item {itemId} doesn't exist on Po	If is receiving criteria attribute 'Allow item not on PO' s set false and user scans an item which is not tied to PO		Error	No
RCV:157	Item {itemId} doesn't exist on Po	If the receiving criteria attribute 'Allow item not on PO' s set true and user scans an item on ASN having no PO and PO line reference		Non-Display	Yes
RCV:189	PO {poId} is non-WM PO	if a user is receiving an item having PO reference on ASN line but PO does not exist in WM.		Warning	Yes
RCV::333	Item not on LPN	if a user scans an item or item attribute not on LPN (pre-existing LPN) then display this message.		Warning	Yes

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Trigger verification of ASN in context
End LPN	CTRL-E	Enabled when receiving criteria, quantity mode is set to barcode scan or receiving criteria 'allowBuildingMultiItemLpn' is set true.

Prompt for Inventory Attributes

Inventory attributes are characteristics of the product (item) that make the product unique from other products of the same item. There are broadly four categories of inventory attributes:

- Attributes with Finite List (Product status, Country of origin, Inventory Type)

- Attributes with non-Finite List (Batch Number, Pack quantity)

- Attributes that are free form and can hold any value (Item Attribute 1- 5)

- Dates (Manufacturing Dates, Expiration Date)

The identification of the attributes that are tracked for an item is defined on item setup. If an item is set to track a certain attribute, the attribute needs to have a value other than null before it can be received into the warehouse. If an item is tracking an attribute, WM prompts the user to enter/confirm the tracked attribute if one of the following conditions is true. The conditions are:

- If receiving criteria, "PromptforInventoryAttributes" is set as "Always Prompt"

- If an attribute is not sent by the host and receiving criteria, "PromptforInventoryAttributes" is set as "Prompt if null"

- If multiple details exist for the same item but different attributes, prompt the user for attributes if the receiving parameter

'promptOnMixedInventoryAttributeLines' is set to true.

The following logic is used to capture the expiry date:

- If the **Track Batch Date** and **Track Manufacturing Date** checkboxes are enabled in the Items UI, and if the batch master is available for an item, then the expiry date of the batch master is always considered during the receiving process.

- If the **Track Expiry Date** and **Track Manufacturing Date** checkboxes are enabled in the Items UI, and if the expiry date is available while importing ASNs, then the expiry date of the ASNs is always considered during the receiving process.

- If the **Track Expiry Date** and **Track Manufacturing Date** checkboxes are enabled in the Items UI, and if no expiry date is available while importing ASNs, but the specified value in the **Product Life In Days** (PLID) field is greater than zero, then the expiry date is automatically calculated as Manufacturing date plus Product life in days.

- If the **Track Expiry Date** and **Derive Expiry Date From Creation Date plus Product Life** checkboxes are enabled in the Items UI, if no expiry date is available while importing ASNs, and the specified value in the **Product Life In Days** (PLID) field is greater than zero, then expiry date is automatically calculated as the current date plus Product life in days.

Please note: If the host bridges a value for an attribute that is not tracked, WM persists the attribute value in the receiving component but does not pass to the inventory component. Further, non-tracked values within receiving are not used for tolerance check or for line identification during receiving.

While receiving an item-level ASN that has multiple lines for the same item, the system uses the following logic to receive the item against the line:

- By default, the **Allow Building Multi Item LPN** parameter in the Receiving Criteria Attribute section is set to **NO**, and the system pre-determines the item attributes for the ASN line that has the maximum available quantity.

  The maximum available quantity while receiving an item for an LPN is calculated as follows:
  (Shipped qty - (already received qty + session received qty))
  Wherein:

  - Shipped qty is the quantity that is shipped from the warehouse.

  - Already received qty is the quantity received irrespective of the user's session.

  - The session received qty is the quantity received during a user's session.

- If the **Allow Building Multi Item LPN** parameter in the Receiving Criteria Attribute section is set to **Yes**, and if the same item is received across multiple LPN details, then the system does the following operations:
  - Identifies the latest item attribute received by the user in the current session

  - Loads the ASN detail for which the latest item attribute was received

Accept Input: System prompts only for those inventory attributes that are tracked for an item and meet the above specified criteria.
Display Information: Display attributes and their values captured/confirmed by user.
Validations

Error Code	Message	Validation	Error Level	Allow Change
RCV:195	Invalid country of origin {countryOfOrigin}	If a user scans the country of origin which does not exist in the COO entity	Error	No
RCV:196	Invalid inventory type {inventoryTypeId}	If user scans an Inventory Type which does not exist in Inventory Type entity	Error	No
RCV:197	Invalid product status {productStatusId}	If a user scans Product Status which does not exist in the Product status entity	Error	No

RCV:198	Expiration date must be >= current date	if user scans the expiration date is greater than the current date	Warning	Yes
RCV:206	Manufacturing Date is greater than Current Date	if a user scans a manufacturing date greater than the current date	Warning	No
RCV:207	Expiration Date before Manufactured Date	if a user scans the expiration date before the manufactured date	Warning	No
RCV:117	Item {itemId} is not present on Asn {asnId}	If receiving criteria attribute 'Allow item not on ASN' s set false and user scans an item and attribute combination which are not tied to ASN	Error	No
RCV:9117	Item {itemId} is not present on Asn {asnId}. Do you want to proceed?	If receiving criteria attribute 'Allow item not on ASN' s set true and user scans an item and attribute combination which are not tied to ASN	Warning	No
RCV:156	Item {itemId} doesn't exist on Po	If receiving criteria attribute 'Allow item not on PO' s set false and user scans an item and attribute combination which are not tied to PO	Error	No
RCV:157	Item {itemId} doesn't exist on Po	If receiving criteria attribute 'Allow item not on PO' s set true and user scans an item and attribute combination on ASN having no PO and PO line reference	Non-Display	Yes
RCV:189	PO {poId} is non-WM PO	if a user is receiving an item and attribute combination having PO reference on ASN line but PO does not exist in WM.	Warning	Yes
RCV::194	Batch {batchId} doesn't exist and creation through receiving/import not allowed	if a user scans a batch that does not exist in batch master. Item configuration does not allow the creation of a new batch	Error	No
RCV::284	Expiration date is less than or equal to min receive days.	If a user scans an expiry date, which provides the minimum days to expiry as less than or equal to the minimum days to receive, that is configured on the item.	Warning	Yes
RCV::285	Expiration date is greater than max receive days.	If a user scans an expiry date, which provides the minimum days to expiry, greater than the maximum days to receive, that is configured on the item	Warning	Yes
RCV:299	Pack quantity not configured for item	At pack quantity prompt, if a user scans pack quantity that does not exist for an item	Warning	Yes
RCV:300	Pack quantity must be greater than 0	If the user scans pack quantity of 0	Error	No
RCV:382	Product Received has Expired.	If the manufacturing date is tracked but not the expiry and the item has a prod life in days defined, this message shall be configured to show a warning/error if the manufacturing date + prod life in days is less than or equal to the current date of receiving.	Error	Yes

Note: When performing a check for an item that is not on ASN/PO validation, a tracked generic null attribute value is considered a match for any value specified by the user during receiving and thus not considered a different item. For example, if the batch number on the ASN line is null and during receiving, batch with a value of 'A' is entered, the

> combination of item and batch attribute is not considered a different item.

Validations on Min/Max days to receive

The minimum days of an item expiry are calculated as (Expiration date - current system date).

The expiration can either be entered by the user or can be determined by the system using the manufacturing date.

If the manufacturing date is imported by host and product life in days is populated, then the expiry date is calculated as (Manufacturing date + product shelf life configured on the system). But if the item also tracks batch, then the batch expiry date will be inherited as the inventory expiry date.

Suppose the item tracks batch, manufacturing, and expiration dates, and if the solution is configured to create the batch record during receiving. In that case, the solution does not calculate the expiration date and the user must enter the date while receiving the item.

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Trigger verification of ASN in context
End LPN	CTRL-E	Enabled when receiving criteria quantity mode is set to barcode scan or receiving criteria 'allowBuildingMultiItemLpn' is set true.

Prompt for undetermined PO

If there are multiple lines for the same item/attribute but different POs, then based on the receiving criteria 'promptUnknownPo', if an attribute value is set to true, display PO and associated Vendor list and allow the user to choose one value otherwise pick the first ASN line.

This attribute is also applicable when receiving a blind LPN against an LPN-level ASN. When enabled, if an unexpected LPN ID is entered while receiving an iLPN-level ASN, then after each item/attribute entry, the system now provides the user with a list of PO(s) to choose from. The PO list shown to the user is made up of all PO(s) from all LPNs within the ASN, both received and unreceived, where the LPN's Item and item attributes match the user-entered item and item attribute combination. The selected PO ID is then stamped on the blind LPN detail for that item and item attribute.

Accept Input: The system lists different POs and allows users to select the purchase order from the list

Display Information: Display prompt for PO and Vendor

Validations: None

Action Keys: None

Prompt for Item Price

WM prompts the user for item price after item/item attributes/PO selection screen. This screen is displayed if the receiving criteria attribute PromptItemPriceId is set to 'PROMPT_ONCE_FOR_UNIQUE_ITEM_ON_ASN' or 'PROMPT_ONCE_FOR_UNIQUE_ITEM_ON_LPN' and retail price is populated in one of the fields i.e. ASN detail retail price or LPN detail retail price or item facility unit price.

Accept Input: Prompts user to enter the price for the item

Display Information: Displays item and prompts for price

Validations

Error Code	Message	Validation	Error Level	Allow Change
RCV::136	Price mismatch condition code will be applied to LPN	No condition code is applied to the LPN if the price entered by a user does not match the price configured in the system or sent by the host.	Warning	No

Action Keys: None

Display Item Dedicated Location Available Capacity

This screen is displayed before the quantity prompt when the receiving criteria/receiving line override criteria attribute 'Display dedication location capacity' is set to 'Permanent', 'Temporary' or 'All'. This screen displays the item (both item id and item description) being received and the permanent and temporary dedicated location available capacity along with Location ID. If not, capacity is available or no dedicated location exist this screen is not displayed. Further this screen is displayed only in detailed receiving mode/blind receiving mode. (i.e. when user is prompted to enter item or inventory attribute). If during receiving a specific attribute is received (inventory attribute) then only dedication location matching the item and the inventory attribute or no inventory attribute assignment are displayed for example , if receiving item A and batch B and if location exist with dedication type for Item A and batch C then this location is not consider but if another location exist for item A and batch null then this location is considered to determine available capacity.

This screen is to guide user to determine the size of LPN that he should use for receiving. When using this feature its recommended receiving is linked to LPND (which can be set to perform putaway).

Prompt for Quantity

This prompt is displayed to the user if the receiving criteria 'Quantity mode' is set to 'Key Quantity'.

Accept Input: The system accepts the quantity entered by the user.

Display Information: Display ASN ID, Pallet, LPN, item, if these attributes value were captured in previous screens. User is also displayed pack quantity (from ASN detail/LPN detail/item, user captured, standard pack quantity in this order) if received in a pack UOM.

Validations

Error Code	Message	Validation	Error Level	Allow Change
RCV:118	Invalid Quantity	If the quantity entered is less than or equal to 0	Error	No
RCV:175	Quantity exceeds the error tolerance limit for ASN	Quantity received for the ASN line is over the configured error tolerance limit	Error	No
RCV:270	Quantity exceeds the override tolerance limit for ASN	Quantity received for the ASN line is over the configured supervisor override tolerance limit	Warning	No
RCV:177	Quantity exceeds the warning tolerance limit for ASN	Quantity received for the ASN line is over the configured warning tolerance limit	Warning	No
RCV:179	Quantity exceeds the error tolerance limit for PO	Quantity received for the PO line is over the configured error tolerance limit	Error	No
RCV:271	Quantity exceeds the override tolerance limit for PO	Quantity received for the PO line is over the configured supervisor override tolerance limit	Warning	No
RCV:181	Quantity exceeds the warning tolerance limit for PO	Quantity received for the PO line is over the configured warning tolerance limit	Warning	No
RCV:347	Quantity exceeds maximum units allowed on LPN for the Item	Quantity received is greater than Max of (Max LPN QTY , {Standard LPN Package}.Quantity) for the Item	Non Display	No

Note: The tolerance checks are applied at item/inventory attribute scan if receiving is in barcode scan mode.

Honoring Max LPN Quantity

System honors maximum LPN quantity during receiving LPN, provided the iLPN is a single item LPN. This is applicable for receiving item level ASN, LPN level ASN, blind ASN and return ASN. The warning/error message codes are different for each flow and may have to be enabled as needed.

How to calculate max LPN quantity?

On the item master we have two configurations:

1. Max LPN Quantity – This is to handle maximum quantity on LPN for items that do not have standard LPN packages defined.

2. Standard LPN Package – This is for the items with standard LPN package defined.

Maximum allowed Quantity to honor For LPN = Max of (Max LPN QTY, {Standard LPN Package}.Quantity)

- If item master is configured with only Standard LPN package, the maximum allowed quantity to honor is {Standard LPN package}.Quantity.
  - E.g. For ItemA with Standard LPN package.Quantity =10, then system will validate receiving if we receive an iLPN with Quantity > 10

- If item master is configured with only Max LPN Quantity, the maximum allowed quantity to honor is 'Max LPN Quantity'.
  - E.g For ItemA with Max LPN Quantity =10, then system will validate receiving if we receive an iLPN with Quantity > 10

- If both are configured, whichever is maximum among the two is considered for maximum allowed quantity.
  - E.g. For ItemA with Standard LPN package.Quantity =10 and Max LPN Quantity=12, then system will validate receiving if we receive an iLPN with Quantity > 12

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Trigger verification of ASN in context
End LPN	CTRL-E	Enabled when receiving criteria allowBuildingMultiItemLpn' is set to true.

Item Verification Screen

This screen is displayed when receiving an LPN already exists on ASN and item verification mode is enabled.

Accept Input: The item existing on the LPN is displayed to the user. It prompts the user to enter the item being displayed.

Display Information: Display item and any other fields captured before.

Validations

Error Code	Message	Validation	Error Level	Allow Change
RCV:112	Scanned item doesn't match with the current Item	If a user scans an item that is different from what is being displayed to the user	Error	No
RCV:201	Item not in LPN. Use Add function to add item	On attribute prompt, if user scans an attribute which does not exist in LPN	Error	No

> **Note**: The validations of items that are not on PO/ASN, called in "prompt for item/prompt for item attributes" still apply here.

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Trigger verification of ASN in context
End LPN	CTRL-E	Enable end of LPN after all items are scanned
Add Item	CTRL-A	This action is used if a user wants to add a new item to the LPN
Skip Item	CTRL-S	User skips the item being displayed and prompts for the next item in LPN

Return/Final Return Disposition Screen

This screen is displayed to user when performing **return receiving using mobile** to capture the Return disposition. On user selecting the Return Disposition display Final Return disposition and move to next screen automatically. If multiple final dispositions are determined for the selected return disposition then list final return disposition and user select final and then system moves to next screen. The logic to derive final disposition from return disposition is similar to what's used for **Return station**. As the final return disposition determination rules are item based so for a multi SKU LPN if the rules result in 2 different final return disposition then display both and let user make a choice. Further the various trigger point when this screen is displayed as follows:

- Receive by Pallet   After Pallet Scan

- Receive onto Pallet   On End Pallet

- Receive by LPN (No detail Receiving)   After LPN scan

- Receive onto blind LPN (Item level or LPN level ASN)   On End LPN or Auto end of LPN

- Detail receiving of LPN   On End LPN or Auto end of LPN

Accept Input: The Return Disposition drop down is displayed for user to choose a value.

Display Information: Display LPN/Pallet and display listing of Return disposition for user to select.

Verify ASN Variance Screen

This screen is displayed if there is variance on ASN. This screen lists the received/shipped LPN count and quantities. The user is presented with the warning message and the user can accept in moving forward with variance or cancel the message to move back to the previous screen.

Pre-receipt Receiving Screen Flow

The following screens are specific to pre-receipt flow and do not represent the complete set of screens required to complete pre-receipt receiving. The screens that are common with regular receiving flow and supported for pre-receipt flow are Dock door prompt, ASN prompt, Staging Location Prompt, item attributes (only for item level ASN).

Prompt for Item

After the ASN prompt, if ASN is pre-receipt allocated and receiving an item level ASN, user is presented this screen. For pre-receipt, barcode scan mode is not supported.

Accept Input: The system accepts the Item ID entered by the user.

Display Information: Displays ASN ID, if these attribute values were captured in previous screens.

Validations

Apart from the following additional validation, all item validation performed during regular receiving item prompt, are also performed.

Error Code	Message	Validation	Error Level	Allow Change
RCV:153	Entering Regular receiving flow	For item level ASN, if user scans pre-allocated ASN followed by an item that is not pre-receipt allocated	Warning	Yes
RCV:150	Item Pre-receipt Allocated	For pre-allocated ASN, if item scanned is not pre-receipt allocated. When mode changes to regular receiving user, scan item that is pre-receipt allocated	Error	Yes

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Triggers verification of ASN in context
Release Door	CTRL-B	Removes door association with ASN/PO and triggers an event for the yard to move the trailer out of the door

Prompt for Quantity

This prompt is displayed to the user after the item/item attributes prompt and is available only for item level ASN.

Accept Input: The system accepts the quantity entered by the user.

Display Information: Display ASN ID, item, and remaining pre-allocated quantity

Validations

All the validations performed at quantity prompt during regular receiving are performed here as well. Following is the list of additional validations applicable to the pre-receipt flow.

Error Code	Message	Validation	Error Level	Allow Change
RCV:144	Quantity entered larger than remaining Pre-allocated quantity	If a user scans quantity larger than what is pre-receipt allocated for an ASN line	Error	No
RCV:154	Quantity being received not in multiple of LPN size ({rcvQty} units)	If a user scans quantity that is not in multiple of the LPN size quantity (created during carbonization step of pre-receipt allocation)	Error	No

Action Keys

Action Button	RF Control Key	Description
Verify ASN	CTRL-Z	Trigger verification of ASN in context
PreAllocationSummary	CTRL-P	Displays the breakdown of un-received pre-receipt allocation for an item

Prompt for LPN

For LPN level ASN, after ASN scan, user is prompted for LPN. If LPN is pre-receipt allocated, WM is presented with the pre-receipt allocation completion screen otherwise WM follows the regular receiving flow.

Accept Input: The system accepts the LPN from the user. The LPN needs to exist on ASN.

Display Information: Display ASN ID, item, and remaining pre-allocated quantity

Validations

Same as performed for regular receiving of LPN level ASN at LPN prompt.

Action Keys: None

Pre-receipt Allocation Break Down Summary

This screen is available only for item level ASN.

Accept Input: N/A

Display Information: Item, Shipped Quantity, Allocation Type, Pre-receipt Allocated Quantity, UOM

Validations: N/A

Action Keys

Action Button	RF Control Key	Description
Previous	CTRL-W	Move to the Previous prompt

Pre-receipt Allocation Completion Screen

The screen is displayed for each disposition type that is being received.

Accept Input: N/A

Display Information: ASN (Item level ASN)/LPN(LPN level ASN), Item, Allocation type, Message "xx iLPNs received for allocation type aa"

Validations: N/A

Action Keys

Action Button	RF Control Key	Description
Tap	CTRL-A	To accept the message and move to the next screen

Printing

Assumption: Ability to print LPN label for LPN generated during receiving that does not exist.

At the end of receipt of LPN, WM prints the LPN label if the receiving criteria 'printLpnLabel' is set true. The printiLPN label attribute is also available as part of the receiving override criteria. Hence, the user can define rules for the condition labels which are required to be printed. For example, a user may want to print the LPN label for item level ASN, but not for LPN level ASN (where LPNs are pre-labeled). Similarly, at the end of receipt of the pallet, WM prints the pallet label if the receiving criteria 'printPalletLabel' is set to true. The PrintPallet Label attribute is also available as part of the receiving override criteria. The other option to print is to use print criteria. When the attribute "Should Print Criteria be used to determine printing flows?" is enabled, the configured print criteria Id will be used to print the iLPN or Pallet label based on the print criteria detail.

The logic to determine the printer is a part of the printing guide.

The following labels/documents are available to be printed from base:

1. iLPN label - can be invoked from UI & automatic printing takes place based on receiving criteria.

2. Pallet Label can be invoked from receiving criteria.

3. ASN Receiving report - can only be invoked from UI

4. ASN Variance report - can only be invoked on ASN variance screen

Receiving Printer Type Eligibility

- We can narrow down the printer options that get listed in the drop-down by appropriately defining the printer type eligibility to the above documents.

Receiving Rules

The receiving rules are defined as part of the Receiving strategy. The receiving rules are user configurable data conditions that are evaluated during the receiving process and based on the matching rule pre-configured, a message is displayed. For example, the

user can define rules such as item missing unit dimension, based on match display reconfigured message. The rules can be further extended to capture item attributes such as length/width/height etc. For item level ASN, the rules are evaluated after the user has entered item/inventory attribute (such as batch, product status, and so on) and for LPN level at LPN prompt, and if verification is enabled after the capture of item/attribute. If for LPN level receiving item verification is disabled, the system forces the user to go into item verification mode, if an item attribute needs to be captured.

Not applicable for return station receiving.

Further receiving rules have been extended to add the 'Frequency' attribute. This attribute controls if the rule needs to be evaluated once per ASN or once per ASN/item or for all LPNs. The frequency attribute is further classified to be considered for a user session or overall (i.e., not session dependent).

Once per ASN -> When a rule is configured with this frequency, the rule is evaluated at ASN prompt. If ASN prompt is disabled, the rule is evaluated at LPN prompt. Once the rule is satisfied for an ASN, this rule is not evaluated again for subsequent receipts. If this rule is set to be evaluated per session, and if the user logs back in or a different user scans the same ASN after the current session, the rules met in the previous session are evaluated again.

Once per ASN/Item -> When a rule is configured with this frequency, the rule is evaluated at LPN prompt for LPN level ASN if item verification is disabled, else at item/inventory attribute prompt if item verification is enabled or receiving onto blind LPN. Once the rule is satisfied for an ASN/Item, this rule is not evaluated again for subsequent receipts of an item. If this rule is set to be evaluated per session, if the user logs back in or a different user scans the same ASN/item after the current session, the rules satisfied in previous session are evaluated again.

Once per LPN -> When a rule is configured with this frequency, the rule is evaluated at LPN prompt for LPN level ASN if Item verification is disabled, else at item/inventory attribute prompt if item verification is enabled or receiving onto blind LPN. The rules configured with this frequency are evaluated for every LPN being received irrespective of a user session.

Process Need Creation

The Process Need Creation rules are a set of rules to identify inventory that is needed to be marked for further quality processing. Only ASN that are in-transit status and are not pre-receipt allocated, are considered for rule evaluation. The rules are typically based on PO/ASN/Vendor/Item etc. These rules are part of the process need strategy and are based on matching rules the ASN, the associated item details, the process need quantity along with process need template which is passed to LPND. The rule evaluation can be triggered from one of the following touch points. For matching a rule, a record in created in the ProcessNeeds entity in LPND. The following configuration is controlled through receiving parameters attribute process need evaluation touchpoints.

1. Guard Check-In (Check In directly to Dock Door or Yard Move from Yard Slot to Dock Door).

2. User explicitly triggers 'Generate Process Need evaluating QIT Rules' Action button on ASN UI

3. On creation of ASN through UI or Import process

The details of the message sent to LPN disposition for Process Need Creation is as follows:

Attribute	Description	Source of data (not used)
Attribute	Description	Source of data
VendorId	Vendor	Vendor tied to ASN/ASN line/LPN that meets the rule criteria.
removeConditionCode	Remove Current condition Code	Derived from ProcessneedTemplate
PurchaseOrderId	Purchase Order ID	Vendor tied to ASN/ASN line/LPN that meets the rule criteria.
productStatusId	Attribute value tied to ASN line or LPN detail	Vendor tied to ASN/ASN line/LPN that meets the rule criteria.

Attribute	Description	Source of data (not used)
Attribute	Description	Source of data
priority	Priority	Derived from ProcessneedTemplate
permanentNeed	Permanent Need	Derived from ProcessneedTemplate
needUpdateStatue	Status	Derived from ProcessneedTemplate
needUomId	UOM for the need quantity	Determined from Process need criteria
needQuantity	Quantity to be fulfilled	Process Need Criteria with value derived as follows: Based on % of Process Need Quantity specified in criteria This is calculated by determining the total shipped quantity of the ASN lines/LPN details matching the rule and the % of that quantity. Process Need Quantity defined in criteria -> minimum of the (Quantity value specified in criteria or shipped quantity of ASN/Item/attribute) The above values are calculated for each unique item/attribute on the ASN and that meet the rules.
message	Message	Derived from ProcessneedTemplate
manufacturedDate	Attribute value tied to ASN line or LPN detail	Date tied to ASN/ASN line/LPN that meets the rule criteria.
itemId	Item tied to ASN or LPN detail	Item tied to ASN/ASN line/LPN that meets the rule criteria.
inventoryTypeId	Attribute value tied to ASN line or LPN detail	Attribute value tied to ASN/ASN line/LPNdetail that meets the rule criteria.
inventoryAttribute1 - inventoryAttribute5	Attribute value tied to ASN line or LPN detail	Attribute value tied to ASN/ASN line/LPNdetail that meets the rule criteria.
expirationDate	Attribute value tied to ASN line or LPN detail	Attribute value tied to ASN/ASN line/LPNdetail that meets the rule criteria.
excessPercentageAllowed	Excess Percentage Allowed	Derived from ProcessneedTemplate
diversionCodeId	Diversion Code	Derived from ProcessneedTemplate
displayNeed	Display Need	Derived from ProcessneedTemplate
countryOfOrigin	Attribute value tied to ASN line or LPN detail	Attribute value tied to ASN/ASN line/LPNdetail that meets the rule criteria.
conditionCodeId	Condition Code	Derived from ProcessneedTemplate
batchNumber	Attribute value tied to ASN line or LPN detail	Attribute value tied to ASN/ASN line/LPNdetail that meets the rule criteria.
ASNID	ASN Number	ASN for which rule evaluation is performed

The evaluation of such Process Need Records is performed by LPND either in standalone mode or linked through receiving. Please check process need evaluation guide for more details on process needs.

Receiving Exceptions

Tolerance Check

WM allows users to configure a system to allow over-receipt of inventory into the warehouse. The configuration to limit the percentage of over-receipt allowed is defined by a set of 4 attributes which can be configured as receiving criteria or receiving line override criteria. The availability of these attributes at the line override level provides the ability to define rules, and for different rules, it defines different tolerance limits. For example, for an expensive item, the tolerance limit might be set to 0, and for a cheap it might be set to a higher value. These four attributes basically define the warning and error limit for ASN and additional two against PO.

The tolerance checks are performed for all flavors of receiving, such as receiving a pallet, LPN (with or without item verification), blind LPN by confirming item/quantity, Blind LPN by scanning item (barcode scan mode). Also this tolerance check can be completely turned OFF by setting the "Disable tolerance check" to be true in the receiving criteria.

Item not available on ASN

1. Receiving Criteria attribute "Allow receipt of item not on ASN" controls if an item not available on ASN, can be received.

   - If the receiving criteria attribute is false, display an error "Item not on ASN" when the following conditions are true:
     - If the item scanned does not exist on the ASN Line/ASN LPN and ASN is not a blind ASN.

     - If inventory attributes exist on ASN line or ASN LPN, but the user scans an inventory attribute that does not exist on ASN.

   > **Note**: In case the attribute is tracked and but sent by the host on ASN/PO, the inventory attribute captured by a user is not validated against the null value and the error is not displayed.

If the receiving criteria attribute is true, display the warning "Item is not on ASN" when following conditions are true and allow the user to move further.

1. If the item scanned does not exist on the ASN Line/ASN LPN and ASN is not a blind ASN

2. If inventory attributes exist on ASN line or ASN LPN, but the user scans an attribute that does not exist on ASN

Item not available on PO

1. Receiving Criteria attribute "Allow receipt of item not on PO" controls if an item not available on PO, can be received.

   - If the receiving criteria attribute is false, display an error "Item not on PO" when following conditions are true:
     - If the item scanned does not exist on the PO Line (i.e., ASN line have no PO reference)

     - If inventory attributes exist on the PO line, but the user scans an inventory attribute that does not exist on PO.

   > **Note:** In case the attribute is tracked but not sent by the host on ASN/PO, the inventory attribute captured by the user is not validated against the null value and the error is not displayed to the user.

If the receiving criteria attribute is true, display a warning (seeded as non-display) "Item is not on PO " when the following conditions are true and allow the user to move further.

- If the item scanned does not exist on the PO Line (i.e., ASN line is not linked to PO)

- If inventory attributes exist on PO line, but the user scans an attribute that does not exist on PO Line

> **Note:** In case the ASN line is tied to PO but not in WM, the warning "PO is non-WM PO?" is displayed to the user and allowed to move forward with the receipt process.

Receiving Updates

As part of 2020, the receiving updates are captured in a separate entity called Receipt. The various updates performed on receiving completion are as follows:

Receiving Component

1. The **receipt entity** is introduced to capture the **quantity received** against Purchase Order/Purchase Order Line/ASN /ASN detail and their association to LPN rather than updating the ASN. The record is created on receipt in the Receipt entity table with details of PO Line, ASN line, LPN, quantity received, inventory attributes, and so on. The entry in the receipt entity is illustrated through the following example:

   Entry in **Receipt Entity** if this quantity received over 3 LPNs of 33 units each with lots of A, B, and C.

2. ASN is updated to Receiving Started on the first receipt. As part of 2020, received quantity is not updated on the ASN/ASN line entity but rather maintained in the receipt entity.

3. For LPN level ASN, LPN is updated to 'Received' status. For item level ASN, LPN, and LPN detail, a record is created, and status set to 'Received'.

4. If LPN is received onto a pallet, a pallet record is created.

Inventory Component

1. LPN is created in LPN entity maintained in the DCI component if one does not exist.

2. LPN estimated weight, volume, is updated by the receiving component which was sent. If null, then it is calculated in DCI.

3. If LPN is received on a pallet, a pallet record is also created and associated with LPN.

4. If LPN is located at staging, the staging location is updated on LPN and LPN status is updated.

5. LPN status is updated to represent the state of the inventory.

6. Receipt completion PIX event is generated.

Vendor Performance

Vendor performance is a separate function that can be triggered from receiving function using the 'Trigger Vendor Performance' action. The vendor performance trigger action is available from Pallet LPN, item, item attributes, quantity prompt, inventory/LPN detail expiration date/manufacturing date receiving screens. Depending on the screen/data captured, the context of captured information is passed to vendor performance transactions. On completion of vendor performance, the user returns to receiving screen from where the VP transaction was triggered. For additional information on the vendor performance function and validations, please refer Vendor Performance Process Guide.

Question, Answers and Actions

Question, answe,r and action is a separate function. When invoked, it displays a configured set of questions to the warehouse user and captures their responses.

The 'question, answer, and actions' feature is supported using the provided service framework. Please refer to the Provided Services

documentation for details.

Configuring Questions, Answers and Actions

This feature provides the ability to configure different types of questions. Questions can be either static, where there are pre-defined answers, or dynamic, where the user provides free-form answer for the question during execution. Through configuration, the answers can also be connected to actions, in which the user performs some action based on the answer for a given question. Actions supported prompts another question, displaying an instruction, bypassing next question, bypassing current section, bypassing next section, or exiting the questionnaire service.

Associating Questions to ASN

A questionnaire service can be associated to an ASN, an ASN Line or an LPN. This can be achieved directly (static assignment), where the assignment is made either through the ASN import or through the ASN, ASN Line, or LPN UIs. The association can also be made dynamically through a rule-based strategy.

Questionnaire Exécution

The execution of questionnaire service is available as a standalone transaction, or through the receiving process on the WM Mobile execution application. The user can skip a question during execution. The questions prompted to the user during execution, and the answers provided by the user for the questions, are all recorded as the answer history. These recorded questionnaire details can be viewed through the Answer History UI.

Reports/Label

Receiving Report

Receiving report is to aid the receiver with the receiving process. The report lists the item being received along with key attributes and shipped quantity.

Variance Report

ASNs intimate D.C. on the inventory to expect. After receiving is complete, clients verify the ASN. This report gives information on variances for the ASN (differences in what was expected on the ASN in relation to what was actually received).

iLPN Label

Most clients use pre-printed labels (printed externally) during receiving. Currently there is no functionality to print such blind labels in WM. Although, if client needs to print iLPN label after receiving content on the license plate, the label will be available.

Activity Tracking

The activity tracking is primarily to provide visibility into the various actions performed by the user. The activity tracking is written in following scenarios:

1. During receiving performed through mobile/rf

2. On return receiving using return station

3. On vendor performance execution

Purge

Purge provides the ability to mark purge date on the following receiving entities based on reaching certain status. Once the purge date reaches the current date, the data is removed from the various receiving entities. By default, the purge date is set at global level and is configured to 90 days.

1. Purchase Order/Purchase Order Line -> On PO moving to Closed/Canceled status

2. ASN/ASN Line -> On ASN moving to Verified/Canceled status

3. LPN/LPN Detail -> On ASN associated to LPN moving to Verified/Canceled status

4. Receipt -> On ASN associated to receipt record moving to Verified/Canceled status

LM Interactions

WM writes LM events at various touchpoints during receiving. The LM events are primarily of the following 3 categories:

LM start event   The LM start event is triggered at the start of receiving (at ASN prompt and for subsequent receipts on Pallet or LPN prompts). The event contains information such as transaction ID, transaction type, transaction start time, user executing the transaction, LM activity name.

LM Detail event   The detail events are written on confirmation of received quantity. For example, for barcode scan mode on item scan and for key quantity mode on quantity prompt, the event contains information such as criteria ID, item, item attributes, quantity, execution time.

LM End event   On completion of receipt (after quantity scan for single SKU LPNs, end LPN or end pallet). The end event contains information about the time when the transaction was completed.

Further the Loaded flag is added to the LM detail event to communicate If equipment is Loaded. For Receiving its always defaulted to Loaded as true. Further, the Chained flag on the LM end is communicated to LM to indicate if the receiving is chained to a subsequent transaction for LM to determine if at end of receiving if the equipment is empty or not. If Receiving is chained in Interactive mode then chained flag of true is sent otherwise its set as false.

Please refer LM process guide for further details.

ASN Export

Ability to generate ASN export have been added. The ASN export can be configured to be generated at the following touchpoints through rules.

Function	Update Method	ASN Export to Generate
Verify ASN (ASN moved to verified status)	Within WM through Mobile/UI verify action	Y
Edit/Update of ASN	Host Import	N
	ASN created within WM using ASN UI or using Create ASN from PO action	Y
Cancel ASN	Host Import	N
	Within WM through ASN UI	Y
Creation of ASN	Host Import	N
	ASN created within WM using ASN UI or using Create ASN from PO action	Y
Receipt Initiate (ASN status change from in-tranist to Receiving Started)	Within WM	Y

Please note that currently there is no UI to change rules, but the above rules are seeded. To enable ASN export following functional configuration step is required.

Step1(Required):- Use the following API to mark the strategy used for ASN export as active. It is seeded as Inactive.

POST /receiving/api/eventProducer/eventStrategy/save

{

"EntityStrategyId": "Asn",

"Component": "com-manh-cp-receiving",

"Active": true,

"TemplateId": "AsnExportAttributesTemplate"

}

Step2(optional) :- By default the ruleCondition that is seeded for ASN export will be "asn.asnStatusDescription = "In Receiving" or

asn.asnStatusDescription = "Verified"" (Which implies we trigger ASN export on ASN verification or receipt)

If the user needs to modify the rule condition, use the following API.

POST /receiving/api/rules/ruleCondition/save

{

"RuleConditionId": "AsnExportRuleCondition",

"ConditionValue": "asn.asnStatusDescription = "Verified""

}

Please check interface documents for ASN export Json format.

Serial Numbers

When an item is set for serial number capture (please refer to the flexible attribute group documentation for details), during receiving this information is captured and validated.

Item Level ASN receiving with serial numbers

Serial numbers capture is supported for both receiving quantity modes:

- Key Quantity: Serial prompt is triggered after the user enters or confirms the quantity which is to be received.

- Barcode scanning: After scanning the item's barcode, a serial prompt is triggered, capturing the corresponding serial information with each scan.

Validations

The following validations are performed when a serial number is captured by the user:

- If the receiving criteria attribute "Allow attribute group not on ASN" is set as "Yes", user can confirm a serial number value which is not present in the original ASN information. This applies to serial numbers imported in the system via ASN import but does not apply to the standalone import mode.
  If the attribute is set as "No", only serial values included in the ASN import can be accepted.

- If the user initiates a blind ASN receiving through mobile (regular ASN or return ASN) and the receiving criteria attribute "Allow attribute group not on ASN" is set as "Yes" or "No" plays no role in receiving mode. As long as the item tracks serial numbers, user can capture the serial numbers during blind receiving mode. Note: Serial number capture is not supported for blind receiving at the return station UI.

- The receiving criteria attribute "Prompt to capture attribute group" plays no role in this receiving mode because serial numbers are defined as primary attributes and item level ASN requires confirmation of the inventory that is part of the iLPN to be received, including serial numbers.

- Validations against a master list are required based on the attribute group detail configuration. This applies to serial numbers.

LPN Level ASN receiving with serial numbers

Serial numbers capture is supported for both receiving quantity modes:

- Key Quantity: Serial prompt is triggered right after the user enters or confirms the quantity to be received. This is when item verification mode is enabled, and LPN details are required to be confirmed, including quantities.

- If user receives quantity less than or more than shipped quantity, then user is forced to confirm the serial number

- If serial shipped are less than the shipped quantity, then during receiving user is forced to confirm the serial numbers

Validations

The following validations are performed when a serial number is captured by the user:

- If the receiving criteria attribute "Allow attribute group not on ASN" is set to "Yes", user can confirm a serial number value that is

not present in the original ASN information. This applies to serial numbers imported in the system via ASN import. This does not apply in standalone import mode.
If the attribute is set "No", only serial values included in the ASN import can be accepted.

- If item verification mode is enabled and "Prompt to capture attribute group" is set "ALWAYS PROMPT" along with the inventory information requirements, all serial numbers are required to be captured for the specific LPN/LPN detail which is being received. This applies to the serials which were imported in the ASN but does not apply to standalone import mode.

- If item verification mode is enabled and "Prompt to capture attribute group" is set "PROMPT IF NULL" along with the inventory information requirements, all serial numbers are required to be captured for the specific LPN/LPN detail which is being received if such serial information is not present in the ASN. This applies to the serials which were imported in the ASN but does not apply to the standalone import mode.

- If an LPN is received as part of the ASN receiving process with the item set to be serial number enabled, and item verification is disabled, the system defaults the behavior to confirm all LPN information and details, including serial numbers.

- Validations against a master list are required based on the attribute group detail configuration. And this applies to serial numbers being captured during the LPN level ASN receiving process.

Returns ASN (Item or LPN level)
For return ASN

1. If ASN being returned is of origin type **R** then check if the item being received have an attribute group with unique attribute associated to it and **Return Capture is true or Full Capture is true**. if true then follow the **unique attribute** capture screen flow similar to regular receiving.

Bulk (ASN) and Pallet modes
For these modes, serial numbers are not required to be captured, regardless of the receiving criteria attributes configuration for "attribute groups". The system only needs to validate:

- If Bulk (ASN) mode, all shipped quantities for each LPN included in the ASN has to match the number of serial numbers included in the imported ASN information. This applies to the serials which were imported in the ASN but does not apply to the standalone import mode.

- For Pallet mode, all shipped quantities for each LPN included in the pallet, as part of the ASN, has to match the number of serial numbers included in the ASN document imported. This applies to the serials which were imported in the ASN but does not apply to the standalone import mode.

Minor Serial Number

Minor serial number tracking is enabled when the Attribute Group associated with the Item has minor serial number as a secondary attribute to be tracked. If the attribute is configured with allowMultipleCapture = true, then the user will be allowed to capture any number of minor serial numbers. The action "**End secondary Inventory Attribute scan**" ends the capture of the minor serial number and "**Undo last secondary attribute scan**" removes the last scanned minor serial number.
Note:

- Import of minor serial numbers is not supported as part of ASN import.

- The captured minor serial number will not be stored in the receiving component but in DCI.

Activity Tracking

Activity tracking is captured for all receiving flows such as receiving against lpn level asn, item level asn, receiving by pallet, receiving into pallet, receiving returns through mobile or return station. Activity record is created for every item that was received as part of the LPN or Pallet.

The following is the list of activity tracking attributes captured during the receiving flow:

Attributes	Description
Employee	User executing the Receive transaction
Container	Identifies the inbound LPN on which the activity was performed.
Pallet ID	Pallet id of the inbound LPN (only during receive by pallet or receive into pallet mode)
Item ID	Identifies the item associated with the activity
Current Location	Location will be populated, if the returns was received using return station
Transaction Type	**Receive**
Transaction ID	Transaction ID of receiving strategy used
Criteria	Criteria ID of the Transaction ID
Quantity	Quantity that was received as part of the inbound LPN
Activity Datetime	Date / Time when the activity was performed.
Component	com-manh-cp-receiving
Facility Id	Facility Id in which transaction was performed
Old Status	Status of inbound LPN before receiving (In transit)
New Status	Status of inbound LPN after receiving (Not Allocated)
Purchase Order Id	Purchase order Id as per iLPN record.
ASN	ASN Id as per iLPN record.

The following is the list of activity tracking attributes captured for performing standalone vendor performance transaction:

Attributes	Description
Employee	User executing the Putaway transaction
Container	Identifies the inbound LPN on which the activity was performed.
Item ID	Identifies the item associated with the activity.
Transaction Type	**Vendor Performance**
Activity Datetime	Date / Time when the activity was performed.
Component	com-manh-cp-vendor
Purchase Order Id	This is purchase order Id as per iLPN record.
ASN	This is ASN Id as per iLPN record.
Vendor Id	Vendor Id for which transaction was performed.

Receiving Configuration

Last updated: 06/12/2024

- Configuration Hierarchy
- Receiving Strategy
- Receiving Criteria
- Receiving Criteria Rules
-
- Receiving Criteria Attributes
- Receiving Override Rules
- Receiving Line Override Rules
- Post Receiving Criteria
- Post Receiving Rules
- Receiving Rules Criteria
- Receiving Rules - Item verification attributes
- Receiving Rules Criteria Rules
- Process Need Strategy
- Process Need Rules
- Trailer Selection Criteria
- Final Return Disposition Strategy
-
- Final ReturnDisposition Criteria
- Final Return Disposition Rules
- Return Disposition
- Final Return Disposition
- Receiving Parameters
- Vendor Performance Code
- Vendor Performance Strategy
- Vendor Performance Criteria/Override Criteria
- Vendor Performance Auto Trigger Strategy
- Vendor Performance Auto Trigger Criteria
- ASN Planning Strategy
- ASN Planning Criteria
- ASN Planning Criteria Rules
- ASN Planning Criteria Attributes

This document describes the configuration and settings required to perform receiving operations.

Configuration Hierarchy
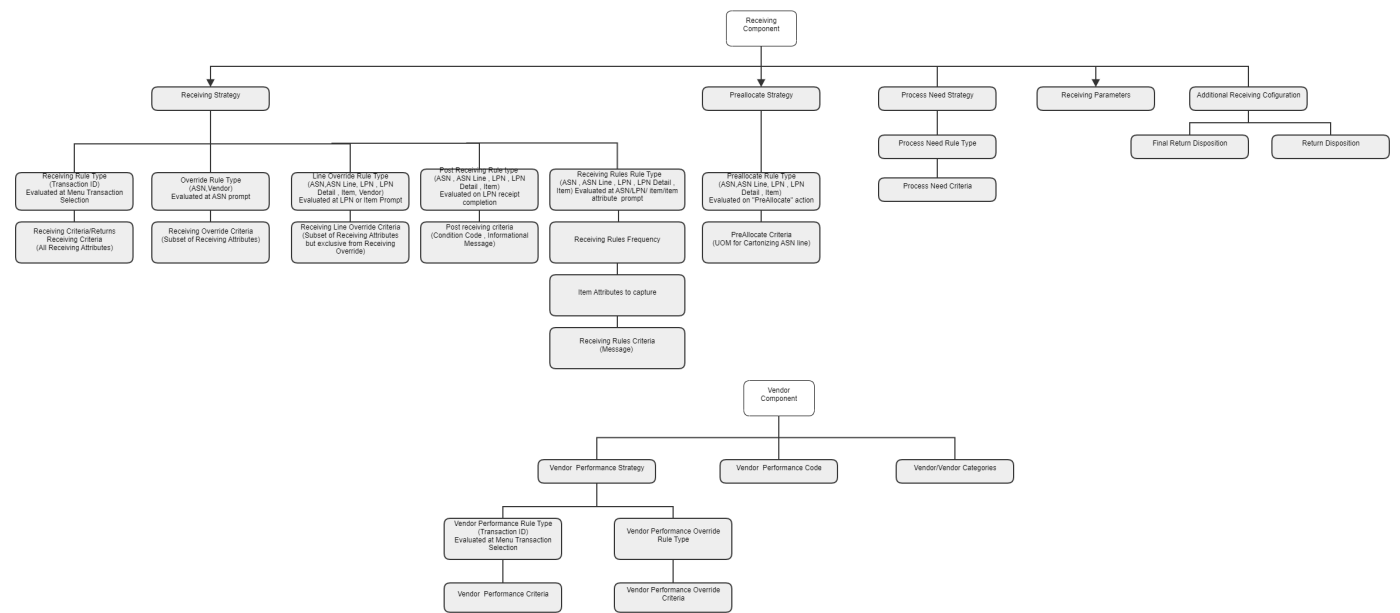
Receiving Strategy

The receiving strategy defines the receiving attribute configuration for the receiving function.

Name	Required	Description
Description	No	Description of the Receiving Strategy
Receiving Strategy	Yes	Name of Receiving Strategy

Receiving Criteria

Receiving criteria hold the configuration(value) for the different receiving attributes(transaction parameters) which control the receiving behavior.

Receiving Criteria Rules

Receiving criteria rules link the Receiving Strategy to a criteria. The seed receiving criteria and rules are as called below. The rules for linking strategy to criteria are based on the transaction ID field.

Receiving Strategy	Receiving Criteria Rules	Receiving Criteria
Receiving Strategy	Transaction.TransactionID = "Receive LPN Level"	SEED Receiving LPN Level Criteria
	Transaction.TransactionID = "Pallet Level Receipt"	SEED Pallet Receipt Criteria
	Transaction.TransactionID = "Receive by ASN"	SEED Received by ASN
	Transaction.TransactionID = "Receive Item Level"	SEED Receive Item Level Criteria
	Transaction.TransactionID = "Blind Receipt"	SEED Blind ASN Receipt Criteria
	Transaction.TransactionID = 'Receive Returns'	SEED Return Receiving Criteria

Receiving Criteria Attributes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Disable sending off Outward Events to EI?	Yes (Do not generate MHE events as part of the Receiving Transaction) No (Generate MHE events as part of Receiving) (Additionally, the condition expression for the events you do not want to generate should be set as "IsOutwardEventDisabled == null || IsOutwardEventDisabled == false")	No	No		
Receiving Mode	ASN (Receive Entire ASN by just ASN scan(Bulk Mode)) LPN (For non-bulk modes of receiving)	Yes	No		Only LPN mode
Prompt for Dock Door	Yes (Prompt for dock door is displayed) No (Prompt for dock door is not displayed)	No	No		No
Dock Door Display Type id	Show dock door display location Show dock door Location barcode Show dock door location id	No	No	This is applicable when "prompt for the dock door" is enabled. When the display type id is NULL, the display is always defaulted to Location Barcode. During receiving, the user will scan the barcode but the display is controlled using this attribute.	No
Prompt for Unknown PO	Yes: The PO information is prompted when multiple lines or LPNs exist for the same item/attribute combination while receiving an item-level ASN or blind LPN on the LPN-level ASN. No: While receiving an item-level ASN, the PO information is systematically selected from the ASN detail and updated on the blind LPN. However, while receiving a blind LPN on an LPN-level ASN, the PO information is not prompted or updated on the LPN.	No	Yes		No
Prompt For Inbound Delivery	Yes (Prompt for Inbound Delivery is displayed). If Inbound Delivery prompt is enabled, then ASN prompt is automatically disabled. No (Prompt for Inbound Delivery is not displayed)	No	No		No
Prompt For ASN	Yes (Prompt for ASN is displayed) and Prompt for Inbound Delivery is set to false. No (Prompt for ASN is not displayed)	No	No		No
Receive without ASN	Yes (Blind ASN receipt is allowed i.e... ASN is created during the receiving process) No (Blind ASN receipt is not allowed i.e.. ASN needs to pre-exist for receiving)	No	No	Not applicable for Original Order return receiving flow. The system will verify whether the original order is in the system and will enable users to proceed with receiving using a blind ASN regardless of this parameter.	Yes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Prompt for Pallet	DO_NOT_PROMPT_FOR_PALLET - Pallet prompt is not displayed PALLETIZE_LPNS - Pallet prompt is displayed and the operator is required to enter Pallet . The system doesn't auto-generate the pallet number by pressing enter AUTO_GENERATE_PALLET_PALLETIZE_LPNS - Pallet prompt is displayed and the operator can press enter for the system to auto-generate the pallet number. RECEIVE_BY_PALLET - Pallet needs to exist and the user is required to scan a pallet tied to LPNs on ASN PALLETIZE_LPNS_ACROSS_ASNS - Pallet prompt is displayed and the operator can press enter for the system to auto-generate the pallet number. This mode allows receiving iLPNs from different ASNs within the same shipment / inbound delivery.	Yes	No	**Note**: PALLETIZE_LPNS_ACROSS_ASNS mode is supported with Inbound Delivery prompt only	No
Allow Receipt without LPN level ASN	Yes (LPN doesn't need to exist prior to receipt) No (LPN has to exist prior to receipt)	Yes	No		No
Allow Auto generation of LPN	Yes (User can press enter at LPN prompt to generate LPN) No (User is not allowed to generate an LPN and LPN numbers need to be scanned by the user)	No	No		Yes
Prompt for LPN	Yes (Prompt for LPN Number ; user can provide an LPN number or press enter for system to generate LPN assuming the attribute 'Allow Receipt without LPN level ASN' attribute set to Yes and allow auto generation of LPN is true) No (Don't prompt the user for LPN but generate the next-up number as LPN number. This requires the 'Allow Receipt without LPN level ASN' attribute set to Yes and allowing auto generation of LPN is true)	No	No		Yes
Allow Receipt of Item not on PO	When disabled, the system allows you to receive an LPN irrespective of whether the LPN is referred to the PO. When enabled, the system allows you to receive an LPN only if the LPN has a reference to the PO.	No	Yes		Yes
Allow Receipt of Item not on ASN/Inbound Delivery/Original Order	When set to **Yes** and an item not part of ASN is received, the system updates the ASN header with the received quantity but doesn't create a new ASN line for the item received. Also, you can view the received item to which the LPN details are assigned on the Receipt screen. No (Don't allow receipt of an item not on ASN).	Yes	Yes	When set as yes, this parameter controls receiving unexpected items against the original order from the return station. The Original Order ID reference will be tracked with no Original Order Line ID reference on the receipt. Returns against the original order are not supported by mobile flow. When set as No, don't allow receipt of unexpected items against the Original Order from the return station.	Yes
Quantity Mode	Key quantity: Enter Quantity to perform the receipt. Barcode scan: Scan the barcode to get the receipt **Note**: Not supported for LPN-level ASN.	No	Yes		No

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Display UOM	Drop-down listing any standard quantity UOM which can be used for receiving along with None. If specified as none, then receiving a display UOM from item.	No	Yes		Yes
Remainder UOM	Drop down listing any standard quantity UOM. If Remainder UOM is specified, then on quantity, the prompt user is presented with two quantities prompt to enter quantity in Display and Remainder UOMs.	No	Yes		Yes
Condition Code	Drop down the listing inventory condition code. This condition code is applied when receiving all LPNs having this criteria associated with the condition code.	No	No		Yes
Should users be prompted to confirm details of LPN?	Applicable for LPN existing in WM prior to receiving it. Yes (Requires to verify details of item) No (Item verification not required)	No	Yes		No
Locate LPN to Staging	STAGE_LOCATION_FROM_DOCK_DOOR (If dock door is scanned during receiving, then determine staging location associated to dock door) PROMPT_FOR_STAGING_LOCATION (Prompt user to scan the staging location) STORAGE_LOCATION_FROM_DOCK_DOOR (If dock door is scanned during receiving, then determine storage location associated to dock door) PROMPT_FOR_STORAGE_LOCATION (Prompt User to scan the storage location)	No	No	This attribute is required if "Pickup Task Strategy ID" is specified.	No
Allow Building Multi Item LPN	Yes (User can build multiple item LPN as screen flow iterates on item/quantity until user ends LPN) No (User cannot build multi SKU LPN)	No	No	**Note**: if this parameter is disabled, then after quantity scan the LPN is auto end and this is applicable for both pre-existing LPN and blind LPN created during receiving,	No
Disposition post receipt in non-interactive mode	No (Disposition is triggered in interactive/chained mode) Yes (Disposition triggered in non-interactive mode). Receive by LPN, and Receive by Pallet are controlled by this attribute. Received by ASN is always triggered in non-interactive mode, regardless of this parameter. Enable this parameter to trigger Copy LPN disposition in non-interactive mode to stop force confirmation of iLPNs on the LPN-D screen. Palletize LPN during receiving always triggers the disposition in interactive mode (synchronously).	Yes	Yes	Disposition Transaction ID - will be used to trigger the disposition in non-interactive mode.	No
Disposition Transaction ID	Disposition Transaction ID to link the receiving transaction to LPN disposition for performing chained operations such as "Sorting" , " Putaway".	No	No		No
Pickup Task Strategy ID	Pickup task strategy ID to create Pickup task. If no pickup task strategy is configured, then the pickup task is not created. The system should be configured either to use the Pickup task strategy or the disposition transaction ID. If both are configured, then disposition takes precedence and pickup task creation is not triggered.	No	No		Yes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Verify ASN Disposition Transaction ID	Disposition Transaction ID is used if LPNs need to be dispositioned after ASN verification. This attribute value is used to determine LPND transaction ID when triggering disposition post verification and verification triggered through Mobile.	No	No		No
Verify ASN Pickup Task Strategy ID	Pickup task strategy ID to be used if triggering pickup task creation as part of ASN verification triggered through mobile.	No	No		No
LPN Size Type	DO_NOT_PROMPT_FOR_LPN_SIZE_TYPE - LPN Size Type is not captured PROMPT_FOR_LPN_SIZE_TYPE - Prompt user to enter LPN size Type CALCULATE_LPN_SIZE_TYPE - Calculate LPN Size type CALCULATE and PROMPT FOR LPN SIZE TYPE - System calculates the lpn size type that is displayed to the user during receiving and the user must override the system's calculated value if need be.	No	No		No
Pallet Size Type	DO_NOT_PROMPT_FOR_PALLET_SIZE_TYPE - Pallet Size Type is not captured PROMPT_FOR_PALLET_SIZE_TYPE - Prompt user to enter Pallet Size type CALCULATE_PALLET_SIZE_TYPE - Calculate Pallet Size type	No	No		No
Prompt for Item Price	No - User is not prompted to item price PROMPT_ONCE_FOR_UNIQUE_ITEM_ON_ASN - User is prompted for item prices only once per item on ASN PROMPT_ONCE_FOR_UNIQUE_ITEM_ON_LPN - User is prompted to item prices only once per item on LPN **Note:**- Apart from the above attribute setting, the prompt is displayed only when the price is based by ASN line retail price , LPN detail retail price or item facility unit price)	No	Yes		No
LM Activity Name	Drop-down listing configured LM activity names This activity is communicated as part of a message to LM	No	No		Yes
Prompt for Inventory Attributes	Always Prompt (Tracked attributes for an item are prompted by the user) Prompt if Null (Tracked attributes for which the system cannot determine the value of ASN detail or LPN detail are prompted by the user)	No	Yes		Yes
Item Attribute Override template	Drop-down listing configured item attribute override templates	No	Yes	To suppress prompts for certain attribute values if they are already imported as part of the ASN. This allows the user to bypass redundant attribute capture steps when receiving attributes that have a known value already populated.	No

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Should allow unique attributes not on ASN	Yes - During receiving, the user can scan a unique inventory attribute (SERIAL NUMBER) that is not part of the ASN information. No - During receiving, if the user captures a unique inventory attribute (SERIAL NUMBER) , if the identifier for such attribute is not part of the ASN, the system will not allow it	No	Yes	This is applicable if the unique attributes, like serial numbers, are imported into the system as part of the ASN interface. If unique attributes are imported as a bulk stand-alone process, then this flag does not have any impact.	Yes
Prompt to capture unique attribute	ALWAYS PROMPT - When receiving inventory associated with items tracking unique inventory attributes (SERIAL NUMBER), such information has to be provided PROMPT IF NULL - When receiving inventory associated with items tracking unique inventory attributes (SERIAL NUMBER), such information has to be provided only if the value for the specific unique attribute is not present in the ASN information	No	Yes	During Item Level ASN receiving, if the item is tracking unique inventory attributes (SERIAL NUMBER), this information will be prompted all the time. If, user is receiving a LPN level ASN and item verification is enabled , then this attribute will dictate if the user needs to provide the unique inventory attribute information.	Yes
Allow ASN Verification	ALLOW_ASN_VERIFICATION_WITHOUT_VARIANCE - When executing verification from a mobile, don't allow verification if variance exists ALLOW_ASN_VERIFICATION_WITH_VARIANCE - When executing verification from mobile, allow verification if variance exists.	No	No		No
Skip return disposition prompt	When enabled, allows users to skip entering a disposition code in both return station UI and mobile flows. The default return disposition configured will be used by the system. **Note**: The **Select Disposition** drop-down list is disabled for editing in the Returns Station UI and is hidden for the mobile flow.	Yes	No		Yes
Default return disposition	Select the disposition code that you want to default on the **Select Disposition** drop-down when receiving returns in the Returns Station UI or mobile. The default disposition code can be changed while receiving returns only if the Skip return disposition prompt parameter is not enabled. If no default code is set, you must manually select the code when receiving returns. To configure the disposition code, see the Return Disposition section.	Yes	No		Yes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Require Catch weight during pre-receive	Possible Values: • Yes - An error message is displayed if the LPN has an item that tracks catch weight and catch weight information is not present in the ASN detail or LPN detail. • No - Allow pre-receipt with or without catch weight information being available. Item level ASN *RCV::406 - Some Items track catch weight and Pre-Receive catch weight is required on item level ASN {asn id}.* By default, the level is set to **Error** and can be changed to warning to allow receiving after user confirmation. LPN level ASN *RCV::407 - Some Items track catch weight and Pre-Receive catch weight is required on LPN Level ASN {asnId}* By default, the level is set to **Non-Display** for LPN-level ASN. To display the error message, set the error code to **Error**.	Yes	Yes	Items on the ASN or LPN must track catch weight and must have Inbound Tracking enabled. The Receiving Criteria parameter, **Should user be prompted to capture the non unique attribute group?** must not be set to "**Calculate**". The catchweight validation is not applicable for the following: • Return stations and MHE • Multi-SKU LPNs • The Receive by ASN mode, Receive by Pallet, Receive by Inbound Delivery, and Blind LPN on LPN level ASN are not supported.	No
Should Print Criteria be used to determine printing flow?	Yes (Print criteria should be configured to print the iLPN/Pallet Label) No (Print iLPN Label/ Print Pallet Label) should be configured to print.	Yes	No	Receiving print criteria should be linked when this attribute is enabled.	Yes
Print iLPN Label	Yes (LPN label is printed on receipt completion) No (LPN label is not printed) **Note**:- The printing of the blind iLPN label (on LPN generation during receiving) is not available.	Yes	No		Yes
Print Pallet Label	Yes (pallet label is printed on receipt completion) No (pallet label is not printed)	Yes			Yes
Print Criteria Id	Print Criteria to print the iLPN and Pallet Label	Yes		Dependent on "Should Print Criteria be used to determine printing flow?"	Yes
Printer	Listing of label printer This printer is used for label prints, if the printer cannot be determined by user session or user location.	No	No		No
Disable Tolerance check	Yes (Disables the tolerance check validation against PO and ASN. Strikes out step 5 of receiving criteria.) No - tolerance check shall be performed for PO AND ASN per the tolerance attributes.	No	Yes		Yes
Trailer Status	Yes - With this, the user will have the option to partially/fully receive an ASN before releasing the door No - .With this, the user has to fully receive an ASN before releasing the door	No	No		No
Over Receipt ASN/Original Order Warning	Define over receipt percentage allowed against ASN line/item after which warning is displayed. For the Original Order return flows, this attribute defines the over-receipt percentage allowed against the Original Order Line/Item after which a warning is displayed.	No	Yes		Yes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Over Receipt ASN/Original Order Override	Define over receipt percentage allowed against ASN line/item, after which supervisor override is required For the Original Order return flows, this attribute defines the over-receipt percentage allowed against the Original Order Line/Item after which a supervisor override is required.	No	Yes		Yes
Over Receipt ASN/Original Order Error	Define the over-receipt percentage allowed against the ASN line/item after which a warning is displayed. For the Original Order return flows, this attribute defines the over-receipt percentage allowed against the Original Order Line/Item after which a warning is displayed.	No	Yes		Yes
Over Receipt PO Warning	Define over receipt percentage allowed against PO line after which the warning is displayed	No	Yes		Yes
Over Receipt PO Override	Define over receipt percentage allowed against PO line, after which supervisor override is required	No	Yes		Yes
Over Receipt PO Error	Define over receipt percentage allowed against PO line after which the warning is displayed	No	Yes		Yes
Actions to exclude	The dropdown lists all the action buttons or control keys available to disable/hide during the receiving flow. All the selected action buttons/control keys will be hidden from all users, irrespective of the user permission.	No	No	Only for Mobile flow	No
Should the system determine the item from the LPN/ASN when the item shares barcode	Setting yes to this attribute will contextually receive the item from ASN(determines item from asn when the barcode is scanned during receiving) when the imported ASN/item shares a barcode with multiple other items.	No	No		No
Physical Entity Code	Drop down the listing physical entity code values of: iLPN Pallet Tote	No	No		Yes
Vendor Performance Transaction	Drop down the listing of the vendor's performance transaction. This transaction is used when triggering Vendor performance transaction from receiving.	No	No		No
Sort Transaction ID	Sort Transaction used by Return Station UI is called sorting (Recommendation is to configure sorting transaction. If both the sorting transaction and sorting strategy are configured, then preference will be given to sorting transaction.)	No	No	Only for Returns flow.	Yes
Sort Strategy ID	Sort Strategy used by Return Station UI to call sorting	No	No	Only for Returns flow.	Yes
End Container Strategy ID	End container Strategy used by Return Station UI to call end container	No	No	Only for Returns flow.	Yes

Attribute Name	Possible Values/Description	Receiving Override Criteria	Receiving Override Line Criteria	Dependency	Applicable for Return Station
Returns Mode	Define Default Returns mode of RRN/ASN/Original Order. Returns mode is not specified for regular receiving flow.	No	No	Only for Returns flow. For non-Returns flow this attribute value is set as null(Select). The Original Order option is not supported for mobile returns receiving and is applicable only for return station flow.	Yes
IncubationTransactionId	Incubation transaction ID if chaining to Incubation transaction required	No	No		No
Prompt For ASN Inbound Delivery Attributes	Parameter which controls the ASN/Inbound Delivery attributes like PO and vendor information	Yes	No	Only for Blind ASN receiving	No
User Directed Mode	This attribute controls if pre-exisiting LPN if received in Item verification mode should result in user telling system which item to receive v/s system directing user to receive a specific item (in some order) . True -> User directed mode is enabled False -> User directed mode disabled	Yes	No	This attribute is visible only when item verification (verify Item) mode is enabled. Not applicable for item level ASN receiving as the LPN is blind. Whereas applicable for cartonized item level ASN	No
Display Shipped quantity for LPN level ASN	true -> Display shipped quantity at quantity prompt false -> dont display shipped quantity at quantity prompt	Yes	No	This attribute controls if shipped quantity need to be displayed for LPN level receiving	No
Perform Return using Return Station	true -> Display attributes applicable to Return Station false -> Display attributes applicable to Return using Mobile	No	No	This attribute is enabled only if the Return Mode is set to ASN/RRN/Original Order	No
Use Location Printer from Return Station	True - Return station prints the label using the return station's location printer (Return station location mapped with Printer zone -> linked to the logical printer). No - Return station prints labels using a session printer or receiving criteria printer.	No	No	This attribute is enabled only if Perform return using the return station is set as Yes. Also, the system will print using the printer if the print LPN Label attribute is turned ON.	Yes
The default quantity should be used by the return station to receive	Values are 0 and 1. 0 - Return station always default the quantity to 0 and the user will have to manually use the + an - to increase or decrease the quantity to be received. 1- Quantity always defaults to 1 for any item scan.	No	No		Yes
Display item dedicated Location Capacity	Permanent -> Display Permanent Dedicated Location available capacity for an Item Temporary -> Display Temporary Dedicated Location available capacity for an Item All -> Display both Temporary/ Permanent Dedicated Location available capacity for an item	No	Yes		No

Receiving Override Rules

The receiving override rules are used to link the override criteria to the receiving strategy. The Override rules support writing rules based of attributes from ASN, VENDOR, VENDORCATEGORY entities.

Receiving Line Override Rules

The receiving line override rules are used to link the line override criteria to the receiving strategy. The line Override rules support writing rules based of attributes from ASN , ASNLINE , VENDOR , VENDORCATEGORY , ITEM ,LPN , LPNDETAIL entities

Post Receiving Criteria

#	Property Name	Type	Description	Nullable?	Additional Details
1	Post Receiving Criteria ID	Alphanumeric	Unique Identifier for Post Receiving Criteria	No	
2	Description	Drop down	Description of the Post receiving criteria	Yes	
3	Condition Code ID	Drop down	Condition Code	Yes	
4	Error Definition ID	Search and list	Informational Message pre-defined for receiving	Yes	

Post Receiving Rules

The receiving override rules are used to link the post receiving criteria to the receiving strategy. The post receiving rules support writing rules based of attributes from ASN, ASN line , Item , LPN , LPN detail , Purchase Order , Purchase Order Line. Not applicable for return station receiving.

Receiving Rules Criteria

#	Property Name	Type	Description	Nullable?	Additional Details
1	Receiving Rules Criteria ID	Alphanumeric	Unique Identifier for Receiving rules Criteria	No	
2	Description	Drop down	Description of the Receiving rules criteria	Yes	
3	Message Definition ID	Search and list	Message pre-defined for receiving	Yes	

Receiving Rules - Item verification attributes

The item verification attributes are the set of item and item facility attributes that can be configured to be captured during receiving.

Receiving Rules Criteria Rules

The receiving rules criteria rules are used to link the receiving rules criteria to receiving strategy. The receiving rules support writing rules based of attributes from ASN,ASN line, Item , LPN, LPN detail. Not applicable for return station receiving.

Process Need Strategy

This defines the process that needs attributes that are used during the process that need creation from receiving.

	Property Name	Type	Description	Nullable?	Additional Details
1	Process Need Strategy ID	Alphanumeric	Unique Identifier for process needs strategy	No	
2	Description	Alphanumeric	Description for process needs strategy	Yes	
3	IsActive	Radio Button	Identify the active process needs strategy	No	There can be only one active process that needs strategy and this flag is to identify the active one.

Process Need Rules

This defines the set of attributes that are available to define the rules to identify ASN/ASN details for which process need is created

Process Need Criteria

The process need criteria defines the following set of attributes that are evaluated during the process that need needs creation payload for LPND.

Property Name	Attriute Type	Description	Nullable
Process Need Criteria ID	Alphanumeric	Unique Identifier for process needs criteria	No
Description	Text Box	Description of the process needs criteria	Yes

Property Name	Attriute Type	Description	Nullable
Process Need Quantity	Big Decimal	Process need quantity to be passed to LPND for ASN/Item for process needs creation in LPND	Yes
Process Need Percentage	Big Decimal	Process need quantity is evaluated based on the percentage specified. This percentage is applied to each Item/attribute combination on ASN	Yes
Quantity UOM ID	Id	Two possible values of LPN or Unit.	No

PreAllocate Strategy

This defines the Pre-receipt attributes that are used during pre-receipt allocation.

#	Property Name	Type	Description	Nullable?	Additional Details
1	Preallocate Strategy ID	Alphanumeric	Unique Identifier for Pre-allocate strategy	No	
2	Description	Alphanumeric	Description of Pre-allocate strategy	Yes	
3	Disposition Transaction ID	Drop down	Disposition Transaction ID dropdown. The value configured is sent during the Pre-receipt allocation	No	This is listing of the disposition strategy from LPN disposition
4	Handling Unallocated LPN	Radio button	Attribute to determining if system generated LPNs need to be preserved or deleted if the LPNs cannot be Pre-receipt allocated for an order. The two possible values are: 1. Preserve system generated LPNs 2. Rollback system generated LPNs	No	
5	Auto Receive LPN(Pre-allocated/In-transit)	Radio button	This parameter is used to complete auto pre-receipt allocation and if LPN is not pre-receipt allocated, then auto receives a LPN. The two possible values are:- 1. True - Perform auto receiving 2. False - Dont perform auto receiving	No	
6	Auto Receive Transaction	Drop down	Receiving Transaction ID dropdown. This transaction is used to auto receive an LPN. The supported receiving mode of this transaction is 'ASN'	Yes	This is required only if Auto Receive LPN parameter is set to True

Trailer Selection Criteria

This defines the eligibility of the trailer for pre-receipt allocation. During the check-in, the trailer gets evaluated for pre-receipt allocation for Live unload or Drop Unload visit types through the criteria, provided, the yard parameter "**Evaluate PreAllocate upon check-in**" is set to yes. Trailer content type PO is not supported for this process. Only inbound delivery and ASNs are eligible. The trailer selection criteria gets evaluated only upon trailer check-in and not when preallocated strategy is triggered from the ASN screen or inbound delivery screen.

#	Property Name	Type	Description	Nullable?	Additional Details
1	TrailerSelectionCriteriaId	Alphanumeric	Unique Identifier for Trailer Selection criteria	No	

#	Property Name	Type	Description	Nullable?	Additional Details
2	TriggerPreReceiptOnMoveTask	Radio button	Determines if the contents of the trailer should be evaluated for prereceipt during check-in or move task creation to dock door for drop unload visit type. Not applicable for Live Unload visit type.	Yes	

Preallocate Criteria

This defines the attribute of UOM to be used when cartonizing item level ASN during Pre-receipt allocation

#	Property Name	Type	Description	Nullable?	Additional Details
1	PreAllocateCriteriaID	Alphanumeric	Unique Identifier for Preallocate criteria	No	
2	UOMforCartonize	Drop down	The standard UOM is used for creating LPNs when triggering prereceipt allocation. If UOM is not configured, then standard LPN UOM quantity is used for cartonization.	Yes	

Preallocate Rules

The Preallocate rules are used to link Preallocate Strategy to Criteria. The rules are also used to determine what ASN lines are eligible for Pre-receipt allocation. Only lines that match the rule are considered for pre-receipt allocation. The entities supported for rule definition are ASN , ASNLine, LPN , LPN Detail and Item

Final Return Disposition Strategy

This defined the final return disposition strategy that can be used to determine the final return disposition based on rules.

#	Property Name	Type	Description	Nullable?	Additional Details
1	Final Return Disposition Strategy ID	Alphanumeric	Unique Identifier for Final Returndisposition strategy	No	
2	Description	Alphanumeric	Description for Final Returndisposition strategy	Yes	

Final ReturnDisposition Criteria

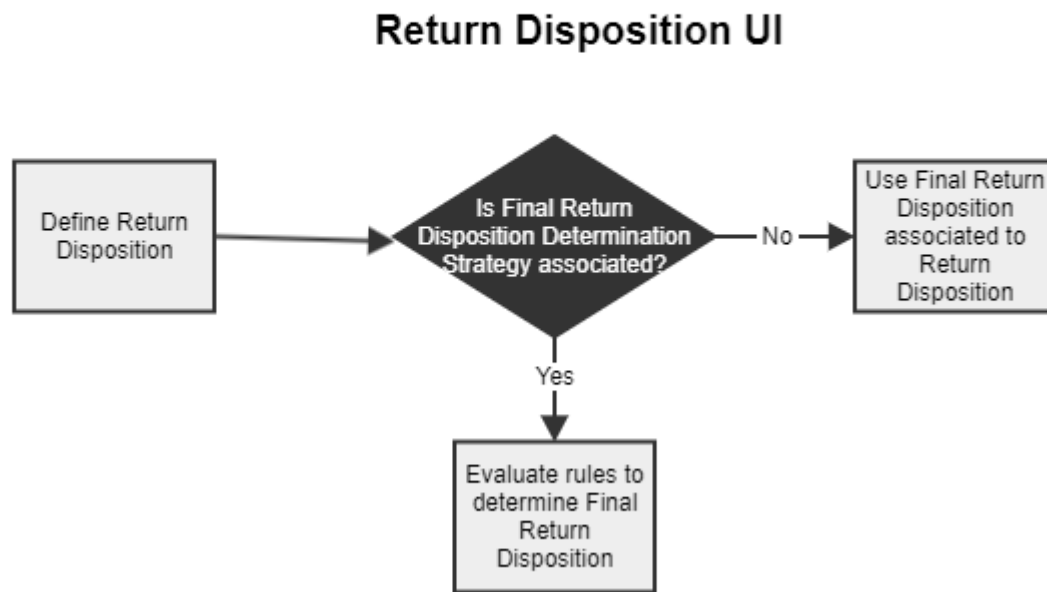This defines the Final Return disposition to be used by Return station based on the rules.

	Property Name	Type	Description	Nullable?	Additional Details
1	Final Return Disposition Criteria ID	Alphanumeric	Unique Identifier for Final Returndisposition Criteria	No	
2	Description	Alphanumeric	Description for Final Returndisposition Criteria	Yes	
3	Final Return disposition ID	Alphanumeric	Final Return Disposition	No	

Final Return Disposition Rules

The Preallocate rules are used to link Finalreturndisposition Strategy to Criteria. These rules are used to determine the final return disposition based on the return disposition selected by the user and the product being received. The rules can be written based on item.

Return Disposition

The return disposition UI lets users define various conditions in which the returned inventory can arrive in the warehouse, such as 'Damaged' etc. This UI also
link return disposition to the final disposition. The final disposition can be either determined from the rules by that case, return disposition is associated to final return disposition strategy, or if no rule evaluation requires, the final disposition is specified itself on the UI.

Final Return Disposition

The final disposition UI lets users define the final disposition code . The various attributes are as follows:-

Property Name	Attribute Type	Description	Nullable
Final Return Disposition	text box	User entered final disposition code	No
Condition Code	Drop Down	Condition code applied to inventory being returned	Yes
Disposition Mode	Drop Down	Various modes in which returns can be performed. The various values supported are as follows:- 1. Receive 2. Receive and Sort 3. Receive and Consume	No
Reason Code	Drop Down	The reason code applied to Inventory on Consume of LPN. This reason code is also included as part of PIX	Yes

Receiving Parameters

The receiving parameters are component level attributes available to be used across all receiving functions.

Attribute Name	Required	Description	Dependency
Prompt On Mixed Inventory Attribute Lines	No	Default value as Yes This parameter, if set to Yes, then overrides the prompt for Inventory attribute value and prompts the user for attributes that are different across details for same item	

Attribute Name	Required	Description	Dependency
Allow Over ship Percentage	No	Default value of 0. This parameter controls whether ASN can ship more than what was ordered on PO and up to what percentage. This parameter is evaluated through the "ASN import" or from the "Create ASN from PO" screen.	
LPND Transaction id(Post Verification)	No	LPN disposition transaction ID to be used when triggering verification of ASN UI. This is to create Putaway/Flowthrough allocation for all LPNs verified.	
Pickup Task Strategy(Post verification)	No	Pickup task strategy to be used post verification when triggering verification from ASN UI	
Allow Verify of ASN from UI on Variance	Yes	This parameter controls if user is allowed to verify ASN from UI if variance exists. Two possible values 1. True - Verify ASN from UI is allowed even if variance exists 2. False - Verify ASN from UI is not allowed if variance exists	
Process Need Evaluation Points	No	This list the proces need evaluation touch points with the following values:- 1. ASN Creation -> During ASN import or Creation using ASN/ASN details UI or Using Assign/unassign action 2. Guard Check-in -> Check In directly to Dock Door or Yard Move from Yard Slot to Dock Door.	
Default UOM for PO,ASN, LPN UI	No	Determines the default UOM to be used to display the quantity in PO, ASN and LPN UI. Possible values: Bridged UOM Display/Remainder UOM **Note**: The default value is set to Bridged UOM.	
Default UOM for Create ASN from PO, Create iLPN, Catch Weight UI (capture non-unique attribute UI)	No	Determines the default UOM to be used to display the quantity in Create ASN from PO, Create iLPN, Catch Weight UI. Possible Values: Bridged UOM Display/Remainder UOM Units **Note**: The default value is set to Units.	
Auto Generate ASN# on "Create ASN" and "Create ASN from PO" action	No	This parameter is set to true, ASN# will be auto generated (Pre-populated) by the system on the Create ASN and Create ASN from PO action. Setting the parameter to false will allow the user to manually enter the ASN#.	
Close Order on verify ASN	No	This parameter, if set to true, cancels unallocated quantities associated with orders which have an allocation source type as ASN and an Allocation source ID as ASN is verified.	
Close Order on Close PO	No	This parameter, if set to true, cancels unallocated quantities associated with orders which have Allocation source type as PO and Allocation source ID as PO being closed.	
Close Order on Cancel ASN	No	This parameter, if set to true, cancels unallocated quantities associated with orders which have an Allocation source type as ASNand Allocation source ID as ASN being canceled.	
Prompt for ASN on Inbound Delivery having multiple Lines across ASN with same item/attribute.	No	This parameter is applicable when receiving against Inbound Delivery. If set to true then if multiple ASNs on Inbound Delivery have the same item/attribute/PO then system prompt for ASN list otherwise the system determines on its own.	

Attribute Name	Required	Description	Dependency
Verify ASN/Inbound Delivery message Logging Level	No	Functional Logging turned off Functional Logging turned on for all levels except INFO , NON-DISPLAY Functional Logging turned on for all levels except NON-DISPLAY	
Allow ASN upto Status	No	Default is In-transit; In transit -> ASN upto intransit status can be updated through import/UI In receiving -> ASN upto Inreceiving status can be updated through import/UI	
How to determine ASN lines while receiving item-level ASN?	No	This parameter determines which ASN line needs to be received when an item-level ASN having the same item with different attributes is present across multiple lines. • Max Available Quantity (Default value for the parameter) The system checks the maximum available quantity between the ASN lines for the item being received and receives the line that has the maximum quantity to be received. The same check is used to determine the subsequent line to be received as well. However, the user can edit the pre-populated item attributes to continue receiving against a different line. • Last Received Line For the first scan of the item, the system received against the line having the maximum quantity to be received for the scanned item. For subsequent scans of the same item, the system prioritizes the last received line among the ASN lines being received, irrespective of the remaining quantity, and continues to receive the line until the user changes the item attribute or the whole line is received. When the ASN lines present are not generic(no tracked attributes are pre-populated in the ASN lines regardless of PO/POLineId), the system defaults to the Max Available Quantity logic regardless of this parameter. **Note**: When the parameter is set to **Last Received Line**, the user is prompted for attributes when the **Prompt for attributes** parameter is set to **Prompt if Null** and the **Should the system prompt the user for inventory attributes when multiple details exist for the same item but different attributes?** parameter is set to **Yes**.	
Method for transferring Item Attributes from the Purchase Order to ASN during import	No	This parameter allows you to select the method for automatically deriving ASN attributes from a purchase order during an ASN import. The following option is available: • Transfer NON-NULL PO detail attributes to ASN detail If the attribute values in the ASN details are null or empty during import, the system replaces them with the corresponding non-null tracked attribute values from the Purchase Order. **Notes** • Non-tracked attributes aren't copied to ASN. • The attributes are transferred only when the PO is imported before the ASN import. • Only applicable for item-level ASN imports.	
Allow image capture during receiving	No	When enabled, the Camera icon is only displayed on WM Mobile for receiving transactions.	
Should the system create ASN in open status on Create ASN and Create ASN from PO action?	No	This parameter, if set to true, ASN created through "Create ASN" or "Create ASN from PO" action will create ASN in the Open status. The default value of this parameter is No.This parameter does not have any impact on the import flow. Ship action button on ASN UI can be used to move the status from Open to InTransit.	

Attribute Name	Required	Description	Dependency
Select ASN origin types to validate PO during ASN import	No	This parameter, if set with ASN origin types, the system will validate the PO to be WM PO if mentioned during the ASN import.	
Should the system switch to non-interactive modes of receiving applicable modes?	No	Pre-requisites to enable an asynchronous mode of receiving: • User Directed mode in Receiving Criteria Attributes is set to **No** • DO_NOT_PROMPT_FOR_PALLET is selected from the **Prompt for Pallet** drop-down in the Receiving Criteria Attributes section. • Disposition post receipt in non-interactive mode is set to **No**. When set to **Yes** and when an LPN or Pallet number (that is, only Pallet ID and no ASN) is scanned during receiving, the LPN details (such as quantity, item number) are updated in asynchronous mode. While receiving an item-level ASN, the item-level details are updated in asynchronous mode after you select **End LPN**. Supported flows for the asynchronous mode of receiving: • Receiving LPN-level ASN by scanning only the LPN number without LPN details. • Receiving Item-level ASN (after you select End LPN from the Item Level Receiving screen of WM mobile). Flows that don't support an asynchronous mode of receiving: • Returns Receiving • Pre-receipt allocated to Item-level ASN • LPN-Level ASN that is a pre-receipt allocated and received while scanning details such as items and quantity.	

Vendor Performance Code

This UI lets users define various Vendor Performance codes to be selected during Vendor performance transaction execution to identify the reason for product discrepancy. The Vendor performance code can be associated with the condition code , diversion code and/or responsibility (shipper/vendor/other).

An additional attribute, "Auto Process", is added to the Vendor Performance Code UI. This can be set to true or false. If set to true, it means that the VP transaction is autoprocessed and VP PIX are generated automatically. If set to false , the VP transaction needs to be approved from UI.

Vendor Performance Strategy

The Vendor Performance strategy defines the Vendor Performance attribute configuration for Vendor performance functions.

Name	Required	Description
Vendor Performance Strategy	Yes	Name of Vendor Performance Strategy
Description	No	Description of the Vendor Performance Strategy

Vendor Performance Criteria/Override Criteria

Vendor Performance criteria hold the configuration(value) for the different attributes(transaction parameters) which control the Vendor Performance behavior. In addition, there is an override criteria that allows variation of screen flow by writing rules of the Vendor performance code value , scanned by user during execution of this function.

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Name	Possible Values/Description	Vendor Perfromance Override Criteria
Prompt for ASN	True - Prompt for ASN False - Dont prompt for ASN	No
Prompt for PO	True - Prompt for PO False - Dont prompt for PO	No
Prompt for LPN	True - Prompt for LPN False - Dont prompt for LPN	Yes
Prompt for Item	True - Prompt for Item False - Dont prompt for Item	Yes
Prompt for Quantity	True - Prompt for Quantity False - Dont prompt for Quantity	Yes
Display UOM ID	Drop down listing various standard UOMs	Yes
Actions to exclude	Drop down listing various action buttons or control keys available as part of this flow, which can be disabled/ hidden. All the selected action buttons/control keys will be hidden from all users, irrespective of the user permission.	No
Require Comments	True - Prompt for user to enter Comments False - Dont prompt for user to enter Comments	Yes
Labor Activity	Drop down listing various Labor activity ID	No

Vendor Performance Auto Trigger Strategy

The Vendor Performance Auto trigger strategy defines the Vendor Performance auto trigger attribute configuration for automatically writing Vendor perfomance transaction when rule condition is met.

Name	Required	Description
Vendor Performance Auto Trigger Strategy	Yes	Name of Vendor Performance Auto Trigger Strategy
Description	No	Description of the Vendor Performance Auto Trigger Strategy
Is Active	Yes	To enable the default strategy

Vendor Performance Auto Trigger Criteria

Vendor Performance Auto trigger criteria hold the configuration(value) for the different attributes(transaction parameters) which control what values need to be populated when writing the Vendor Performance Transaction and how those values are derived.

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Name	Possible Values/Description	Comments
vendorPerformanceCodeId	Vendor Performance Code defined under VP code UI	This is required
vendorSourceAttributeId	Sourced from one of the below fields LPN.VedorID ASN.VendorID	This is required. The value can be sourced from an LPN entity or ASN entity
asnSourceAttributeId	Sourced from one of the fields LPN.AsnID ASN.AsnID	These are optional, so if the source (possible value) is not specified, then null value is populated in Vendor Performance Transaction
poSourceAttributeId	Sourced from one of the fields LPNDetail.PurchaseOrderId ASNLine.PurchaseOrderId LPN.PurchaseOrderId	These are optional, so if the source (possible value) is not specified, then null value is populated in Vendor Performance Transaction
lpnSourceAttributeId	LPN.LPNID	These are optional, so if the source (possible value) is not specified, then null value is populated in Vendor Performance Transaction
itemSourceAttributeId	LPNDetail.ItemID ASNLine.ItemID	These are optional, so if the source (possible value) is not specified, then null value is populated in Vendor Performance Transaction

Name	Possible Values/Description	Comments
quantitySourceAttributeId	ASN.TotalReceivedQuantity ASNLine.ReceivedQuantity LPNDetail.ReceiptReceivedQuantity	These are optional, so if the source (possible value) is not specified, then null value is populated in Vendor Performance Transaction

The seeded rules for scenarios are as follows:

1. LPN having item not on ASN

2. LPN having item not on PO

3. ASN lines with variance on verification (only for item level ASN)

4. ASN with variance on verification

5. LPN overshipped (Preexisting LPN)

6. LPN undershipped (Preexisting LPN)

7. LPN having item not shipped (Prexisiting LPN)

> **Note:**The seeded rules don't have an associated VP code, so they need to be configured by implementation before the system starts writing the VP transaction when the rule conditions are met during receiving.

ASN Planning Strategy

ASN planning strategy defines the planning attribute configuration post ASN import.
When an ASN is imported, the system will look for an active ASN planning strategy and run ASN data-based rules to identify ASN planning criteria.

Name	Required	Description
Description	No	Description of the Receiving Strategy
ASN Planning Strategy	Yes	Name of Receiving Strategy
Is Active	Yes	This denotes if the current strategy is active or not. The system supports a single active strategy.

ASN Planning Criteria

ASN planning criteria hold the configuration(value) for the different planning attributes which control the ASN-based planning functions.

ASN Planning Criteria Rules

ASN planning criteria rules link the ASN Planning Strategy to a criteria. The rules are based on attributes related to ASN, ASN Line, LPN and Item business objects.

ASN Planning Criteria Attributes

Attribute Name	Possible Values/Description	Dependency
ASN Service Assignment Strategy	Either blank or any pre-configured ASN Service Assignment Strategy	The ASN Service Assignment Strategy needs to be configured prior to assigning the strategy to criteria.