



Release Notes: Release 1.6.0

RedPrairie On-Demand WMS (SmartTurn)

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Wave Fulfillment

If you have a high volume of outbound orders, in many circumstances you may want to group sales orders together for processing. New in Release 1.6, SmartTurn includes several wave fulfillment options. Wave fulfillment refers to several different fulfillment processes in SmartTurn that allow you to group sales orders together to achieve more efficient picking and/or packing.

If you are interested in taking advantage of the new wave fulfillment features, you can contact your Customer Experience Manager to discuss if your operation and volume would benefit from this functionality, and to arrange for additional training if necessary.

Pick to Staging Wave

This type of wave operation, new in Release 1.6, helps optimize your picking operations by combining the goods to be picked from across many sales orders. This type of wave works well for operations that have many orders but relatively low numbers of different item masters, or for operations that have a small number of very large orders.

In a Pick to Staging Wave operation:

- The user selects a set of sales orders.
- The system generates a pick plan to pick goods to a forward or staging location.
- From the pick plan, the user creates pick tickets and assigns pickers to each.
- After all of the goods have been picked to the staging location, the user still needs to fulfill each sales order. This can be done using shipments to ship each sales order (either one by one or in batch), and using a pick policy that looks just at the contents of the staging location.

For more information on Pick to Staging Waves, see the section **Getting Started with Wave Fulfillment**, below. Or, see *Online Help>Wave Fulfillment>Creating waves of work: pick to staging*.

Pick/Pack Wave

This type of wave operation, new in Release 1.6, helps optimize both your picking operations and your packing operations. It optimizes your picking operations by combining the goods to be picked from across many sales orders. Separately, it optimizes your packing operations by combining the goods to be shipped from across many sales orders. This type of wave works well for operations that have a large number of orders, many of which may be going to the same place, and for operations that have a large number of item masters. This type of wave also allows you to record information for multiple packages.

In a Pick/Pack Wave operation:

- The user selects a set of sales orders.
- The system generates a pack plan and several bills of lading. Each bill of lading may combine items from several sales orders. The system also generates a pick plan to pick all of the goods to a packing station.
- From the pick plan, the user creates pick tickets and assigns pickers to each.
- After all of the goods have been picked and delivered to the packing station, then all of the packages on a bill of lading are packed and the bill of lading is closed. The inventory leaves the warehouse and the sales orders are fulfilled.

For more information on Pick/Pack Waves, see the section **Getting Started with Wave Fulfillment**, below. Or, see *Online Help>Wave Fulfillment>Creating waves of work: pick/pack*.

Batch Shipping

This type of wave helps reduce work in the SmartTurn user interface, but is otherwise identical to shipping each sales order individually. It is available in both the existing release (Release 1.5.4C) and this new release (Release 1.6.0).

In batch shipping, the user selects a set of sales orders. The system creates one or more shipments to fulfill each sales order. You can choose to create the shipments in `SAVED` status, meaning inventory is allocated, but each shipment document needs to be manually closed, or in a `CLOSED` status. When each shipment is closed, the inventory leaves the warehouse and the sales orders are fulfilled.

For more information on batch shipping, see *Online Help>Fulfillment>Creating shipments from sales orders in batch* and *Online Help>Fulfillment>Shipping sales orders in batch*.

Getting Started with Wave Fulfillment

If you are interested in taking advantage of the new wave fulfillment features, you can contact your Customer Experience Manager to discuss if your operation and volume would benefit from this functionality, and to arrange for additional training if necessary.

In general, the steps for getting started with wave fulfillment follow the same Plan-Configure-Run sequence of your original implementation.

Plan-Configure-Run: Pick to Staging

A Pick to Staging Wave allows you to optimize your picking operations by combining the goods to be picked from across many sales orders. After the picking is complete you still need to fulfill each sales order, for example using shipments.

There are three main steps to creating a Pick to Staging Wave:

1. **Plan:** The planning step is where you consider your operation and your goals in using wave processing. You need to:
 - Decide what you want your waves of work to look like. For example, you may create a wave each morning from all of the open sales orders. You may create a wave of work for the orders for one or two large customers. Or you may create a wave of work based on sales order Priority, or Carrier.
 - Decide what you want your pick tickets to look like. For example, you may have several different kinds of picking equipment which have different capacities or that work in different areas of your warehouse. You may want your pick tickets sorted by Group and/or by Location and/or by Item #, depending on what kind of goods you are picking and what the layout of your warehouse is.
 - Decide how you are going to fulfill your sales orders after you have picked all of the goods to a staging location. You may decide to ship each sales order individually, either one at a time, or by creating or shipping the shipments in batches.
2. **Configure:** The configuration step is where you instruct the system based on the decisions you make during the planning step. You need to:
 - Create pick ticket templates
 - Create a pick policy to use in creating each wave and in sales order fulfillment
3. **Run:** The run step is where you actually create the wave and execute it on the warehouse floor. You need to:
 - Review your pending sales orders, perhaps creating a filter for your wave
 - Create the wave, that is, select the sales orders and create a pick plan
 - Create one or more batches of pick tickets from the pick plan
 - Monitor the progress of the wave while the picking is completed
 - Fulfill the sales orders

For more information, see *Online Help>Wave Fulfillment>Creating waves of work: pick to staging*.

Plan-Configure-Run: Pick/Pack

A Pick/Pack Wave allows you to optimize both your picking operations and your packing operations. It optimizes your picking operations by combining the goods to be picked from across many sales orders. Separately, it optimizes your packing operations by combining the goods to be shipped from across many sales orders. This type of wave also allows you to record information for multiple packages.

There are three main steps to creating a Pick/Pack Wave:

1. **Plan:** The planning step is where you consider your operation and your goals in using wave processing. You need to:
 - Decide what you want your waves of work to look like. For example, you may create a wave each morning from all of the open sales orders. You may create a wave of work for the orders for one or two large customers. Or you may create a wave of work based on sales order Priority, or Carrier.
 - Decide what you want your bills of lading to look like. For example, you may combine sales orders into bills of lading based on Ship To Address and Carrier, or also based on Priority. Within each bill of lading, you may split items into packages based on item attributes such as Item # or Group. You may limit the size of each package based on the Cube or Dim Wt of the items included.
 - Decide what you want your pick tickets to look like. For example, you may have several different kinds of picking equipment which have different capacities or that work in different areas of your warehouse. You may want your pick tickets sorted by Group and/or by Location and/or by Item #, depending on what kind of goods you are picking and what the layout of your warehouse is.
2. **Configure:** The configuration step is where you instruct the system based on the decisions you make during the planning step. You need to:
 - Create bill of lading templates
 - Create pick ticket templates
3. **Run:** The run step is where you actually create the wave and execute it on the warehouse floor. You need to:
 - Review your pending sales orders, perhaps creating a filter for your wave
 - Create the wave, that is, select the sales orders and create the pack plan, bills of lading, and pick plan
 - Create one or more batches of pick tickets from the pick plan
 - Monitor the progress of the wave while the picking and packing are completed

For more information, see *Online Help>Wave Fulfillment>Creating waves of work: pick/pack*.

Location Improvements

Each Location in your warehouse has a Location Type that describes the uses of that location. New in Release 1.6.0, there are changes to Location Type to clarify the purposes of different kinds of locations.

- **Change to existing Location Type:** All of the existing WIP locations in the system now have a Location Type of Kit WIP. As in previous releases, this type of location is used for assembly or manufacturing. Each kit document may specify a Kit WIP location. When you Start Building the kit, the component items are transferred to the Kit WIP location.

Important: This naming transition from WIP to Kit WIP should happen automatically for locations that are already set up in the application. However, if you use import templates to make updates to existing locations, make sure to check the Location Type of your imported locations.

- **Addition of new Location Type:** The new Location Type of WIP is a work in progress location where you work with goods (as opposed to a location where you store goods), for example when they are being received into or shipped out of the warehouse, or when they are being transported through the warehouse. Typically you use WIP locations during a Pick to Staging Wave (for example, a forward or staging location) or a Pick/Pack Wave (for example, a dock or packing station). You also use WIP locations for inventory that is in transit (in the process of being picked) during a Pick to Staging Wave or a Pick/Pack Wave.

For more information, see *Online Help>Administration>Managing Locations>Creating locations*. For information on using WIP locations in Pick to Staging Waves or Pick/Pack Waves, see *Online Help>Wave Fulfillment*.

Reporting Improvements

Release 1.6.0 includes several enhancements to lists and reports in the system.

Wave #s

New in Release 1.6.0, every time that you create a wave of work, all of the documents involved in fulfilling this set of work are given the same Wave #.

- For a Pick to Staging Wave, this includes: the sales orders, the pick plan, and the pick tickets.
- For a Pick/Pack Wave, this includes: the sales orders, the pack plan, the bills of lading, the pick plan, and the pick tickets.
- For a batch of shipments, this includes: the sales orders and the shipments.

You can use the Wave # to help you monitor the progress of the wave by filtering and sorting based on Wave # in lists and reports throughout the system.

Activity Line Managers

Activity line managers allow you to create custom reports of all of the transactions being carried out in the system. You can use activity line managers to view transaction lines based on personalized sort and filter criteria.

New in Release 1.6.0, several additional fields have been added to or enhanced in the activity line manager:

- **Line #:** The document line item's **Line #** is now available when viewing the results of an activity line manager.
- **Line Type:** When the **Document Type** is **Shipment**, a **Line Type** of **Anomaly Item** indicates that this is a line from the Voided Items of the shipment. When the **Document Type** is **Pick Ticket**, a **Line Type** of **Anomaly Item** indicates that this is a line from the Rejected Picks of the pick ticket. As in previous releases, when the **Document Type** is **Kit Order** or **Kit**, the **Line Type** indicates if this is a line from the products, by-products, or components section. **Line Type** is available when viewing the results of an activity line manager, and when creating activity line manager criteria (Sorting and Filtering).
- **Business Process:** This new field describes the overall 'direction' (relative to the warehouse) of the business process in which the activity line is involved. It is available when viewing the results of an activity line manager.
 - **Inbound lines** include purchase orders, receipts, kit order products and by-products, kit products and by-products, adjustments up, cycle counts up, and voided shipment items (if the voided shipment line is marked **Return to Inventory**).
 - **Outbound lines** include sales orders, shipments, pack plans, bills of lading, pick plans, pick tickets, kit order products (if the kit specification is for disassembly) and components, kit products (if the kit specification is for disassembly) and components, adjustments down, cycle counts down, and rejected picks (if the rejected pick line is marked **Remove from Inventory**).
 - **No effect lines** include bin transfers, license edits, storage documents, edit documents, voided shipment items (if the voided shipment line is *not* marked **Return to Inventory**), and rejected picks (if the rejected pick line is *not* marked **Remove from Inventory**).

Important: As in previous releases, the **Qty** listed on each reported activity line is *not* the amount that was brought into inventory or removed from inventory; the **Qty** is the result of the transaction on the line. For example: for adjustments, the **Qty** reported in the activity line manager is the **New Qty** (*not* the increase or decrease from the **Current Qty**); for cycle counts, the **Qty** reported on the activity line manager is the **Counted Qty** (*not* the increase or decrease from the **Previous Qty**).

- **Product ID:** The document line item's **Product ID** is now available when viewing the results of an activity line manager.

- **Wave #:** The **Wave #** field from the document header is now available when viewing the results of an activity line manager, and when creating activity line manager criteria (Sorting and Filtering).

For more information, see *Online Help>Operations>Working with activity line managers*, especially the sub-topic *Activity line manager field descriptions*.

Billing Line Managers

Billing line managers allow Third-Party Logistics providers (3PLs) to easily manage particular subsets of billing lines from across all documents. You can use billing line managers to view billing lines based on personalized search criteria, and export sets of billing lines to use in creating invoices.

New in Release 1.6.0, several additional fields have been added to the output of billing line managers. You can see these fields when you are exporting a billing line manager. The additional fields include: **Document Status**, **External #**, **Last Modified Date**, **Last Modified User**, **Line #**, **Line Type**, **Owner Code**, and **Unit of Measure**.

Web Services Improvements

Release 1.6.0 introduces several new web services operations in support of the wave fulfillment feature. Additionally, several lookup operations are enhanced to allow query by both a manager and a warehouse.

For additional details on the web services improvements, contact your Customer Experience Manager to request the complete Web Services API documentation, and access to a test environment (such as the “STDEMO” server) with the updated wsdl and schema files.

Improvements for Lookups

In previous releases, for the `lookUpInventory`, `lookUpBillingItems`, and `lookUpActivityLines` operations, the lookup request could contain either a manager or the criterion. (If you supplied both, you got an error.) In Release 1.6.0, the lookup request can still contain either a manager or the criterion. Additionally, new in this release, the lookup request can supply *both* the manager *and* the criterion, if and only if the criterion is structured as follows: `propertyName` is `warehouseName`; `operator` is `equal`; and `stringValue` is either a warehouse name or the string `'All warehouses'`. This change allows a lookup request under a username with one default warehouse to search more easily for inventory items, billing lines, or activity lines in a different warehouse.

New Operations in Support of Wave Fulfillment

Release 1.6.0 introduces several new web services operations in support of the wave fulfillment feature.

Looking up pick tickets. The new `lookupPickTickets` operation retrieves pick tickets from SmartTurn based on the criteria used. The operation requires a username/password and optionally a criteria for selecting pick tickets from across the system. If no criteria are passed, then information for the first 1000 pick tickets available in the system is returned.

Looking up bills of lading. The new `lookUpBOLs` web service operation retrieves bills of lading from SmartTurn based on the criteria used. The operation requires a username/password and optionally a criteria for selecting bills of lading from across the system. If no criteria are passed, then information for the first 1000 bills of lading available in the system is returned.

Updating bills of lading: package information. The new `updateBOLPkgAttributes` web service operation updates the fields of the packages for the specified bill of lading in SmartTurn. This is most useful for example if a third party system is generating shipping charges or tracking numbers and this data needs to be input into SmartTurn. This operation requires a username/password; the `BOL #` and optionally the warehouse of the bill of lading; and information about the packages to update, including the new field values. This operation fails if the selected document is in `Committed` or `Consumed` status.

Updating bills of lading: custom fields. The new `setBOLCustomFields` web service operation updates the custom fields for custom field `Type` of `Inventory` and `Outbound` for the specified bill of lading in SmartTurn. This operation requires a username/password; the `BOL #` and optionally the warehouse of the bill of lading; the `Outbound` (header level) custom field values; and the `Inventory` (line item level) custom field values. The line items must be arranged in packages as they are on the bill of lading. This operation fails if the selected document is in `Committed` or `Consumed` status. This operation fails to update the line items if the selected document is in `Closed` status, however, header fields can still be updated at this time.

Updating bills of lading: changing the document status. The new `closeDocuments`, `shipClosedBOLPackages`, `commitDocuments`, and `consumeDocuments` web service operations change the status of the specified bill of lading in SmartTurn. The operations require a username/password; the type of document; an identifier for the document (`BOL #`); and optionally the warehouse of the document.

- The `closeDocuments` operation puts the selected document in a `Closed` status and executes any side effects of the status change; for bills of lading, calling this operation means that all `Ready` packages are automatically `Closed` and then all inventory in `Closed` packages is decremented from the quantity on hand and leaves the warehouse. This operation fails if the document is not already in `In Progress`, or if there are any packages that are not yet `Ready` or `Closed`.
- The `closeDocuments` web service operation closes the document in a “happy path” scenario. For bills of lading (Document #: BOL-nnnn), this means closing all packages with a Status of `Ready` or `Closed`, and performing associated side effects, such as decrementing the inventory on hand.

Sometimes, business rules will require a little more specificity. For bills of lading, you can use the `shipClosedBOLPackages` operation. Calling this operation only ships the packages that are already `Closed`. This means:

- Any packages with a Status of `Ready` become `Cancelled`. The inventory from the `Cancelled` packages is “dropped” at the `Destination Location` (packing station) for this bill of lading.
- Any packages with a Status of `Closed` are shipped out: all inventory in `Closed` packages is decremented from the quantity on hand and leaves the warehouse.

This operation fails if the selected document is not already in `In Progress` status, or if there are any packages that are not yet `Ready` or `Closed`.

- The `commitDocuments` operation puts the selected document in a `Committed` status; the operation fails if the document is not already `Closed`.
- The `consumeDocuments` web service operation puts the selected document in a `Consumed` status; the operation fails if the document is not already `Committed`.

Other Improvements

Release 1.6.0 also includes several additional, minor improvements.

PDF Printing Improvements

In addition to the  **Print** button at the top of all screens, some screens in SmartTurn also have a  **Print PDFs** button. This allows you to print some documents and reports as a PDF report. (A PDF report is the combination of a report template or printout and the data from a specific document or report within SmartTurn.)

New in Release 1.6.0, PDF Printing is now available for additional documents and reports:

- Inventory managers (`Operations>Inventory Managers>View`)
- Activity line managers (`Operations>Activity Line Managers>View`)
- Billing line managers (`Operations>Billing Line Managers>View`)
- Adjustments (`Inventory>Adjustments and Inventory>Adjustments>View`)
- Bin transfers (`Inventory>Bin Transfers and Inventory>Bin Transfers>View`)
- Bills of lading (`Wave Fulfillment>Bills of Lading and Wave Fulfillment>Bills of Lading>View Bill of Lading #: BOL-nnnn`)
- Pick tickets (`Wave Fulfillment>Pick Tickets and Wave Fulfillment>Pick Tickets>View Pick Ticket #: PT-nnnn`)

Default report templates are available for each of these options. If you are using Custom PDF Reporting, you can also make your own report templates. For more information, see *Online Help>Resources and Tips>Printing>Printing PDF reports* and *Online Help>Operations>Managing PDF report templates*.

Item Master Import Template Changes

When importing item masters (*Operations>Item Masters>Import*), if you specify a vendor, you now need to specify the vendor's code as well. Specifically: if you fill in the Preferred Vendor column with the Name of an existing business affiliate already set up in the system, then you must also fill in the Preferred Vendor Code column with the Code of that business affiliate. The new column is required to be in the uploaded .xls file, even if you do not need to include data in it.

When you export the item master list, both the Preferred Vendor and Preferred Vendor Code are exported, as in previous releases.

An updated version of the item master import template is available from *Online Help>Resources and Tips>Downloadable import templates*.

Receipt Items Import Template Changes

When importing receipt items (*Receiving>Expected Receipts>Add>Import*), the import template now includes columns for Dim Wt, Dim Wt Unit, Cube, Cube Unit, Pallets, Putaway Unit, Putaway Dim Wt, Putaway Dim Wt Unit, Putaway Cube, and Putaway Cube Unit.

The columns behave just like the existing columns in the desktop user interface. They describe the weight and volume of the item as you are receiving it and as you are storing it. See *Online Help>Receipts>Receipt screen field descriptions* for details of each field.

The new columns are required to be in the uploaded .xls file but including data in them is optional.

An updated version of the receipt items import template is available from *Online Help>Resources and Tips>Downloadable import templates*.