

Order Management

Overview

Order Management Overview

This is a brief overview of the order management model employed by Oracle Transportation Management (OTM). This document is intended to provide an overview of order management functionality as well information for configuring OTM to process orders. Users migrating from versions prior to 6.2 should review the migration chapter.

Order Bases & Releases

Orders may be entered into OTM as order bases or order releases.

- **Order Base:** The total amount of product to be shipped, generally in intervals over a period of time. You can also enter an order base using the Rapid Order Base page.
- **Order Release:** The amount of product to be planned for shipping by OTM. Order releases may be entered directly into OTM via the user interface or XML integration, or they may be created from order bases using various actions. You can also enter an order base using the Rapid Order Release page.

Lines & Ship Units

Order bases and order releases may be entered with line items or with ship units.

- **Lines:** Use when information is known about the product itself such as net weight or net volume and not much is known about how it will be packed for shipping.
- **Ship Units:** Use when it is known how the product will be packed for shipping. For example, ship units would be an ideal mechanism to model 10 pallets each with a known gross weight, gross volume, or dimensions.

Note: When you create order releases from an order base, you may use portions of an order base line to create order release lines. Similarly, you may use portions of order base ship units to create order release ship units.

Orders By Line

On the Order Configuration Manager Header tab, choose Line in the Order Base/Release Creation field. On the Order Release tab, the releasing logic will indicate how ship units will be built from lines.

Orders By Ship Unit

On the Order Configuration Manager Header tab, choose Ship Unit in the Order Base/Release Creation field.

On the Order Release tab, you can choose whether or not to calculate Gross Weight/Volume, Total Package Count, Packing Unit Count on Ship Unit Line as well as designate how to calculate Gross/Net/Total Weight/Volume on a ship unit.

Order Planning

The OTM planning algorithm determines optimal shipping based on order release ship units. If an order is created with lines, OTM will create ship units based on a user-defined configuration.

Order Configuration

Use the Order Configuration page in Order Management Power Data to configure both the types of orders that will be entered and determine how OTM will calculate various fields. For example, this is where you can indicate whether orders will be entered by line or by ship unit. Each order base and order release entered in OTM must have an order configuration attached.

The following properties are used with integration data. If the data does not include a release configuration, these tell Oracle Transportation Management which release configuration to use:

- glog.releasemethod.line.default
- glog.releasemethod.shipunit.default

Related Topics

Order Base Line Item

Order Base Ship Unit

Order Release Line Item

Order Release Ship Unit

[Order Model Overview](#)

glog Properties

List of Parameters

[Order Management Guide PDF](#)

Order Model Overview

Order Model Overview

Order Base and Order Release

Orders may be entered into Oracle Transportation Management as order bases or order releases. An order base represents the total amount of product to be shipped, generally in intervals over a period of time. An order release represents the amount of product to be planned for shipping by Oracle Transportation Management. Order releases may be entered directly into Oracle Transportation Management via the user interface or XML integration, or they may be created from order bases using various actions.

Lines and Ship Units

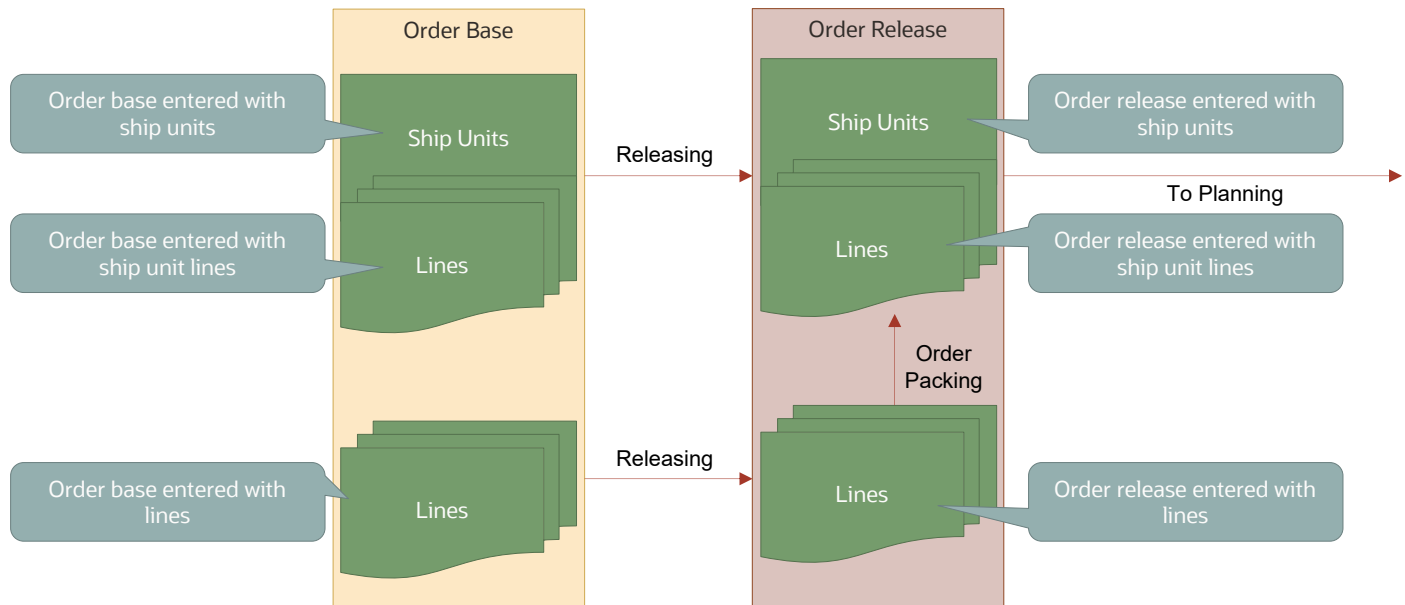
Order bases and order releases may be entered with line items or with ship units. In general, line items (or lines) should be used when information is known about the product itself such as net weight or net volume and not much is known about how it will be packed for shipping. Ship units should be used when it is known how the product will be packed for shipping. For example, ship units would be an ideal mechanism to model 10 pallets each with a known gross weight, gross volume, or dimensions.

When creating order releases from an order base, portions of an order base line may be used to create order release lines. Similarly, portions of order base ship units may be used to create order release ship units.

Order Planning

The Oracle Transportation Management planning algorithm determines optimal shipping based on order release ship units. As described above, order releases may be created with line items or with ship units. If the order is created with line items, Oracle Transportation Management will create ship units based on the packing algorithm using Ship Unit capacities and order line consumption values. Details on this configuration are described later in this document.

The below diagram summarizes the interaction of order bases and releases and the various entry points to load orders in Oracle Transportation Management.



Related Topics

[Order Management Overview](#)

[Order Configuration](#)

[Order Management Guide PDF](#)

Configuring OTM for Order Processing

Configuring for Order Processing: Order Configuration

The Order Configuration page in Order Management power data should be used to configure the types of orders that will be entered and how Oracle Transportation Management should calculate various fields. For example, this is where you can indicate whether orders will be entered by line or by ship unit. Each order base and order release entered in Oracle Transportation Management must have an order configuration attached.

On the Order Configuration Header tab, the Order Base/Release Creation field indicates whether order release lines or ship units will be entered.

Default Order Configurations

The table below describes the PUBLIC order configurations included with OTM. These can be used as-is, or copied and further configured.

The public order configurations represent a sample way to set up an order configuration entry to model a specific business case in OTM. Based on one of these samples the client can copy this configuration and modify it as needed.

These order configurations are designated as line or ship unit based. All orders in OTM consist of both order lines and ship units. Here the designation of line or ship unit based is on how they are managed and manipulated externally. The line-based orders can be considered as orders that are entered into OTM as an order with lines and the ship units are the associated order entities that are created in OTM. So here the lines are the input and the ship units are the output. The ship unit-based orders can be considered as orders that are entered into OTM already packaged in their ship unit for transport. Here the ship units with the contents are the input and the order release lines are managed within OTM as well for consistency.

The order configurations are used by the order base business object and well as the order release. The order configuration defined on the order base governs how that order base is managed as well as the rules that govern how the order release is generated. The order releases from that order base will inherit the order base configuration. If the business process is starting with the order release then this object will be entered into OTM with an order configuration. These configurations are used for both.

AGGREGATE LINE PREPACK

Line Based.

Same as PREPACK but the Aggregate Lines checkbox is selected. Lines with the same packaged item category will be aggregated into one order release line.

AUTO_CALC

Line Based.

Oracle Transportation Management determines the number of transport handling units to create.

AUTO_CALC is used when OTM is calculating the ship units for the order release. The order release is a line-centric order and OTM will automatically calculate the number of ship units that are needed based on the ship unit building business logic. This business logic takes the order line quantities and builds transport handling ship units based on the reference data defined in OTM.

The AUTO_CALC order configuration makes use of the ship unit count feature on the order release ship unit. This configuration has the parameter create individual ship units set to false. If based on the quantity defined on the lines the AUTO_CALC ship unit building business logic determines that it needs 4 pallets than a single ship unit record with a count of 4 will be created.

The AUTO_CALC configuration can be used for implementations that take order base lines and release them to order release lines and then use the ship unit building logic to auto calc the number of order release ship units.

The AUTO_CALC configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release lines are used in the same manner with the ship unit building logic called to AUTO_CALC the number of order release ship units.

AUTO_CALC_UNIQUE

Line Based

Oracle Transportation Management determines the number of transport handling units to create with each having its own record.

AUTO_CALC_UNIQUE is used when OTM is calculating the ship units for the order release. The order release is a line-centric order and OTM will automatically calculate the number of ship units that are needed based on the ship unit building business logic. This business logic takes the order line quantities and builds transport handling ship units based on the reference data defined in OTM.

The AUTO_CALC_UNIQUE order configuration varies from the AUTO_CALC configuration in that it does not make use of the ship unit count feature on the order release ship unit. If based on the quantity defined on the lines the auto-calc ship unit building business logic determines that it needs 4 pallets then it will build 4 unique ship unit records. This configuration has the parameter create individual ship units set to true.

This configuration is recommended when distinct serial numbers and processing needs to occur for each ship unit.

The AUTO_CALC_UNIQUE configuration is used to support the same types of order base and order release configurations as the AUTO_CALC configuration. The only difference with these two is how the ship unit output is created.

INSTRUCTED PREPACK

Line Based.

Similar to PREPACK, but the ship unit calculation is independent of the lines.

INSTRUCTED PREPACK is the order configuration used to take the order base lines and when forming the order release the method of creating the prepacked ship units is supplied in the release instructions. This configuration is intended for implementations that start with an order base and generate the order release in OTM. The order base is line-centric. When creating the order release this order configuration controls how OTM generates the ship Units. This order base release instruction specifies the details for the ship unit and the lines that are to be packed into it.

Here the business logic of the ship unit building is not auto-calculating the order release ship units, but is looking to the release instructions specified to determine the number and content of the ship units. There are no feasibility logic checks here. This configuration follows the same approach as PREPACK.

Oracle recommends that you do not use OMD (Edit Shipment or Propagate) with INSTRUCTED PREPACK. This configuration currently supports users manually instructing the creation of order release ship units via the Order Base Line Packing action.

ONE_TO_ONE

Line Based.

Each line goes onto a single transport handling unit.

The ONE_TO_ONE order configuration is used to model the business implementation where each order release line is used to generate a distinct ship unit.

The ONE_TO_ONE configuration can be used for implementations that take order base lines and release them to order release lines and then use the ONE_TO_ONE rule to create an order release ship unit for each order release line.

The ONE_TO_ONE configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release lines are used in the same manner with the ONE_TO_ONE rule creating an order release ship unit for each order release line.

ONE_TO_ONE_PACK

Line Based.

Each item goes onto a single transport handling unit.

The ONE_TO_ONE_PACK order configuration is used to model the business implementation where each item on the line is packed into a distinct transport handling unit.

The ONE_TO_ONE_PACK configuration can be used for implementations that take order base lines and release them to order release lines and then use the ONE_TO_ONE_PACK rule to create an order release ship unit for each order release line item.

The ONE_TO_ONE_PACK configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release line items are used in the same manner with the ONE_TO_ONE_PACK rule creating an order release ship unit for each order release line item.

PREPACK

Line Based

All lines go onto a single transport handling unit without checking capacity.

The PREPACK order configuration is used to model the business implementation where each all of the order release lines are placed into a single ship unit transport handling record. The transport handling unit to be used can be set on the order configuration record.

The PREPACK configuration can be used for implementations that take order base lines and release them to order release lines and then use the PREPACK rule to create an order release ship unit that contains all of the order release lines.

The PREPACK configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release lines are used in the same manner with the PREPACK rule creating an order release ship unit that contains all of the order release lines.

SIMPLE

Line Based.

Special case used by integration to map TransOrder interface to the Release interface.

SHIP_UNITS

Ship Unit Based

You specify ship unit information; Oracle Transportation Management updates a line.

The SHIP_UNITS order configuration is used to model orders within OTM that come into the product already packaged as shipping units for transport. For these orders the ship unit and the ship unit line values are used as input. The ship unit and ship unit line level information that comes into OTM can have various ways of specifying the associated quantity level information. The SHIP_UNITS configuration specifies this data at the ship unit level.

The SHIP_UNITS configuration can be used for implementations that take order base ship units and create order releases that are ship unit centric from these order base ship units.

The SHIP_UNITS configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release ship units are entered in directly.

SHIP_UNIT_LINES

Ship Unit Based

You specify ship unit line information; Oracle Transportation Management calculates ship unit totals.

The SHIP_UNIT_LINES order configuration is used to model orders within OTM that come into the product already packaged as shipping units for transport. For these orders, the ship unit and the ship unit line values are used as input. The ship unit and ship unit line level information that comes into OTM can have various ways of specifying the associated quantity level information. The SHIP_UNIT_LINES configuration specifies this data at the ship unit line level and it is summed up to the ship unit level.

The SHIP_UNIT_LINES configuration can be used for implementations that take order base ship units and create order releases that are ship unit centric from these order base ship units.

The SHIP_UNIT_LINES configuration can also be used for implementations that do not need the order base but start processing with the order release. Here the order release ship unit lines are entered in directly.

Orders by Line

For orders created by line, the Ship Unit Creation field may be used to configure when ship units will be created. If "On Create" is selected, Oracle Transportation Management will create ship units from the lines when the order is saved. If "User Initiated" is selected, the order may be saved with lines only; however, ship units must still be created before planning these orders into shipments. This can be done via the Order Management > Change Order > Generate Ship Unit action, or by [Manually Releasing Orders](#) in the Order Manager. The "User Initiated" option can be useful if it is expected that modifications will come in before the order will be ready for planning.

On the Order Base tab, Releasing Logic will indicate how ship units will be built from lines. The field Aggregate Lines on this tab will indicate that the order base lines should be aggregated. When this checkbox is selected, the packaged items with the same category will be aggregated when generating order release lines.

By aggregating lines with the same packaged item category, fewer order release lines will be generated. This will improve the performance of Bulk Plan and other downstream shipment processing features. This aggregate capability is intended to address the orders in OTM that have a large number of order lines. These occur when the order management or purchase orders are entered into OTM with very detailed SKU level data. From a transportation standpoint we need to consider the lines at the shipping commodity level in respect to temperature, hazardous, and freight classification. These are typically only a few different items and not at the detailed SKU level which can be hundreds per order. The aggregate lines capability will be to take the detailed level line information that was entered on the order base line and then aggregate this to the higher level shipping commodity item when creating the order release lines. The aggregated lines on the order release can follow the same rules for creating Ship Units (One Ship Unit for All Lines – PREPACK, One Ship Unit per Line – ONE TO ONE, Determine Number of Ship Units – AUTOCALC) as a non aggregated order release line. These are defined below.

On the Order Release tab, Releasing Logic will indicate how ship units will be built from lines.

1. One Ship Unit for All Lines (PREPACK): All order lines will be placed into a single ship unit. This option will create one ship unit that contains all of the lines on the order release. The ship unit that will be used is either entered in the order release line transaction or specified on the Package Item table. This option is used when the order management system or the integration layer does not specify the ship units thereby having OTM construct them in this simplistic manner. There is an additional use case for this scenario that utilizes the Allow repack and the Initial Transport Handling Unit specified below. This case is when the decision on what ship unit is best for the order release cannot be made at the order management or integration layer because the transportation decision itself impacts the correct ship unit that needs to be used. The decision of mode and cost determine what ship unit is to be used when the ship unit is repacked during the planning phase.
 - Allow Repack: When selected during the One Ship Unit for All Lines configuration option, this will set the Allow Repack checkbox on the newly created order release ship unit to Yes. This checkbox tells the planning engine to repack the Shipment Ship Unit potentially differently than the order release ship unit. The Planning engine might pack it differently as it considers the mode the order is being shipped on, the rates returned by the rating engine, or possible consolidations with other shipment lines going to the same destination.
 - Initial Transportation Handling Unit: This field will appear on the Order Configuration screen only if the Allow Repack checkbox is set to Yes. Since the decision of selecting the appropriate Ship Unit is delayed until the Planning phase, the initial transportation handling unit specified here is used to create the placeholder order release ship unit GID. For this field you could set it to the mostly widely-used transport handling unit thus having it match the Shipment Ship Unit's transport handling unit that was selected for many of the orders. Alternatively you could choose to have the initial transport handling unit be a dummy default value and will quickly see if the Shipment Ship Unit transport handling unit was selected correctly.
 - Allow Mixed Freight During Repack: While performing the repack during the planning engine, this checkbox indicates if mixed ship units may be created. Ship units are considered mixed freight if they do not have the same or "Like" packaged items.
2. One Ship Unit per Line (ONE_TO_ONE): Each order line will be placed into its own ship unit.
 - Splittable: The Splittable field on the configuration screen controls how the splittable checkboxes are set on the order release ship unit. The splittable checkboxes on the order release ship unit indicate if and how the ship units may be split across multiple pieces of equipment. The order release header first indicates if this order may be split or not. If it is No then all contents of that order must be placed into a single piece of equipment. If the order release indicates that it

may be split then we look to the split checkboxes on the ship unit to see how to split it. The configuration fields defined here together with this option of One Ship Unit for all Lines work in the following manner:

- On: If On is specified, the order release split checkbox will be set to Yes and the bulk split checkbox on the order release ship unit will be set to Yes. The bulk split checkbox indicates that the logic to split this order release across the different pieces of equipment will look at the order release line quantity information while splitting.
- Off: If Off is specified, the order release and all the ship unit split checkboxes will be set to No.
- Leave Alone: If Leave Alone is specified, OTM does not look at the order configuration to get the rules for setting the split checkboxes. Instead it looks to the order release itself to determine how the checkboxes need to be set.
 - Order Release Header Split: Retains the value that was entered on the order release.
 - Order Release Ship Unit Bulk Split:
 - Yes: If the order release line is split field = Yes
 - No: If the order release line is split field = No

3. Determine Number of Ship Units (AUTO_CALC): Oracle Transportation Management will determine the ship units based on static and transactional information provided on the order that is sent to the packing algorithm. The following options control how these ship units are built:

- Allow Repack: When selected during the Determine Number of Ship Units configuration option, this will set the Allow Repack checkbox on the newly created order release ship unit to Yes. This checkbox tells the planning engine to repack the Shipment Ship Unit potentially differently than the order release ship unit. This field is used together with the Repack Percent Threshold field. The ship unit quantities are first checked against this threshold prior to setting the allow repack checkbox. If the ship unit is below this threshold then the Allow Repack checkbox is set to Yes. During this repack the planning engine might pack it differently as it considers the mode the order is being shipped on, the rates returned by the rating engine or possible consolidations with other shipment lines going to the same destination.
- Repack Percent Threshold: This is the percentage that is checked against before setting the allow repack. There are multiple ways to define the consumption and capacity of the ship unit; weight, volume, package reference units. The most constrained of the ship unit quantities is applied to this threshold.
- Splittable: The Splittable field here on the configuration screen controls how the splittable checkboxes are set on the order release ship unit. The splittable checkboxes on the order release ship unit indicate if and how the ship units may be split across multiple pieces of equipment. The order release header first indicates if this order may be split or not. If it is No then all contents of that order must be placed into a single piece of equipment. If the order release indicates that it may be split then we look to the split checkboxes on the ship unit to see how to split it. The configuration fields defined here together with this option of Determine Number of Ship Units work in the following manner:
 - On: If On is specified, the Order Release Split checkbox will be set to Yes and the Count Splittable checkbox on the order release ship unit will be set to Yes. The Count Splittable checkbox indicates that the logic to split this order release across the different pieces of equipment will look at the ship unit count field while splitting.
 - Off: If Off is specified, the order release and all the ship unit split checkboxes will be set to No.

- Leave Alone: If Leave Alone is specified OTM does not look at the order configuration to get the rules for setting the split checkboxes instead it looks to the order release itself to determine how the checkboxes need to be set.
 - Order Release Header Split: Retains the value that was entered on the order release.
 - Order Release Count Splittable:
 - Yes: If all of the Order Release Line is split field = Yes for the lines contained in that ship unit.
 - No: If any one of the Order Release Line is split field = No for the lines contained in that ship unit.
- Create Individual Ship Units: When selected, if n ship units are needed for this order, n ship units will be built, each with a count of 1. If not selected, all homogeneous ship units will be represented as a single ship unit record with a count n to indicate the quantity.
- Allow Mixed Freight During Repack: While performing the repack during the planning engine this checkbox indicates if mixed ship units may be created. Ship Units are considered mixed freight if they do not have the same or 'Like' packaged items.

The following formulas are available for calculating the value of each field (Ship Unit Calculation available formulas may change depending on the Ship Unit Calculation selection):

Ship Unit Calculation Section

- Gross Weight:
 - Sum Gross Weight from Lines/Count
 - Total Gross Weight/Count
 - Net Weight per Ship Unit + Tare of THU
 - Same as Net Weight per Ship Unit
- Gross Volume: This will always be the maximum of calculated volume from below formulas and volume by ship unit's dimension.
 - Sum Gross Volume from Lines/Count
 - Total Gross Volume/Count
 - Calculate Using Line Net Volume Accounting for THU Volume
 - Calculate Using Net Volume per Ship Unit Accounting for THU Volume
 - Calculate Using Ship Unit Dimensions
 - Same as Net Volume per Ship Unit
- Net Weight:
 - Sum Net Weight from Lines/Count
 - Total Gross Weight / Count – Tare of THU
 - Gross Weight per Ship Unit – Tare of THU
 - Sum Gross Weight from Lines/Count
- Net Volume:
 - Sum Net Volume from Lines/Count
 - Gross Volume per Accounting for THU Volume
- Total Gross Weight:
 - Sum Gross Weight from Lines
 - Gross Weight per Ship Unit x Count
- Total Gross Volume:
 - Sum Gross Volume from Lines

- Gross Volume per Ship Unit x Count

Ship Unit Line Section

- Gross Weight
- Gross Volume
- Total Packaged Count
- Packaging Unit Count

Note: Either the Total Packaged Count or Packaging Unit Count should be provided, so Oracle Transportation Management will be able to calculate the other one.

Orders by Ship Unit

1. To create orders by ship unit, choose Ship Unit for Order Base/Release Creation on the Order Configuration's Header tab.
2. On the Order Release Tab view the Splittable field:
 - Splittable: The Splittable field on the configuration screen controls how the splittable checkboxes are set on the order release ship unit. The splittable checkboxes on the order release ship unit indicate if and how the ship units may be split across multiple pieces of equipment. The order release header first indicates if this order may be split or not. If it is No then all contents of that order must be placed into a single piece of equipment. If the order release indicates that it may be split then we look to the split checkboxes on the ship unit to see how to split it. The configuration fields defined here together with this By Ship Units Order Configuration Option works in the following manner:
 - On: If On is specified, the Order Release split checkbox will be set to Yes and the Count Splittable checkbox on the order release ship unit will be set to Yes. The Count Splittable checkbox indicates that the logic to split this order release across the different pieces of equipment will look at the ship unit count field while splitting.
 - Off: If Off is specified, the order release and all of the ship unit split checkboxes will be set to No.
 - Leave Alone: If Leave Alone is specified OTM does not look at the order configuration to get the rules for setting the split checkboxes instead it looks to the order release itself to determine how the checkboxes need to be set.
 - Order Release Header Split: Retains the value that was entered on the order release.
 - Order Release Count Splittable: Retains the value that was entered on the order release.
3. On the Order Release tab, select a value for Ship Unit Calculation to indicate whether Oracle Transportation Management should sum ship unit line information up to the ship unit, or if ship unit information should be "pushed" down to a line that is kept in sync with the ship unit. The following options are available:
 - Create/Update Single Ship Unit Line for Ship Unit: You enter ship unit details; Oracle Transportation Management will build/update ONE ship unit line for the ship unit.
 - Calculate Ship Unit Metrics from Ship Unit Line: You provide Ship Unit Line details; Oracle Transportation Management will use this info to calculate ship unit gross/net/total weight/volume, width/length/height.

- Calculate Ship Unit Metrics Within Ship Unit/Ignore Lines: Lines are for information only and will not be used to calculate the ship unit fields, nor will ship unit data be pushed down to the lines.
- 4. Also on the Order Release tab, select whether or not to calculate the ship unit's gross weight/volume, net weight/volume, and total weight/volume. You may also select whether or not Oracle Transportation Management should calculate the ship unit line's gross weight/volume, total package count, and packaging unit count. The options for whether or not to calculate a field are as follows:
 - Always: Oracle Transportation Management should always attempt to calculate the value for this field, regardless of whether or not it is already valued.
 - Only if Null: Oracle Transportation Management should only attempt to calculate the value for this field if it is not already populated.
 - Never: Oracle Transportation Management should leave this field unchanged.

If "Always" or "Only if Null" is selected, Oracle Transportation Management may prompt for a formula if more than one is available. For example, some implementations may require ship unit net weight be calculated by summing the net weight from the lines and dividing by the ship unit count. Others may require the ship unit net weight be simply the gross weight of the ship unit less the tare weight of the transport handling unit.

The following formulas are available for calculating the value of each field (Ship Unit Calculation available formulas may change depending on the Ship Unit Calculation selection):

Ship Unit Calculation Section

- Gross Weight:
 - Sum Gross Weight from Lines/Count
 - Total Gross Weight/Count
 - Net Weight per Ship Unit + Tare of THU
 - Same as Net Weight per Ship Unit
- Gross Volume: This will always be the maximum of calculated volume from below formulas and volume by ship unit's dimension.
 - Sum Gross Volume from Lines/Count
 - Total Gross Volume/Count
 - Calculate Using Line Net Volume Accounting for THU Volume
 - Calculate Using Net Volume per Ship Unit Accounting for THU Volume
 - Calculate Using Ship Unit Dimensions
 - Same as Net Volume per Ship Unit
- Net Weight:
 - Sum Net Weight from Lines/Count
 - Total Gross Weight / Count – Tare of THU
 - Gross Weight per Ship Unit – Tare of THU
 - Sum Gross Weight from Lines/Count
- Net Volume:
 - Sum Net Volume from Lines/Count
 - Gross Volume per Accounting for THU Volume
- Total Gross Weight:
 - Sum Gross Weight from Lines
 - Gross Weight per Ship Unit x Count

- Total Gross Volume:
 - Sum Gross Volume from Lines
 - Gross Volume per Ship Unit x Count

Ship Unit Line Section

- Gross Weight
- Gross Volume
- Total Packaged Count
- Packaging Unit Count

Note: Either the Total Packaged Count or Packaging Unit Count should be provided, so Oracle Transportation Management will be able to calculate the other one.

Related Topics

[Order Management Overview](#)

[Order Model Overview](#)

[Static Data Setup](#)

About Modeling Orders with a High Volume of Lines

[Order Management Guide PDF](#)

Configuring for Order Processing: Static Data Setup

The packaged item, package unit, and transport handling unit can be set up with static data, such as weight, volume, and dimensions. These static data will be used in the calculation, when transactional data are not provided.

Packaged Item

Packaged item can be defined in two ways.

Have Package Unit Defined on Packaged Item

In this case, the packaged item is packaged in this defined package unit. Inner count on the packaged item indicates how many items are packed in the packaged unit, it is informational only. In the Units section, you define how to pack these packaged items onto pallet using Number of Layers and Quantity per Layer.

Example 1: Packaged Item 12PACKCOLA

- One 12PACKCOLA is a box of 12 cans of COLA.
- This has package unit 12PACK defined.
- 12PACKCOLA can be packed 4 layers onto PALLET-A, and each layer has 6 packs of 12PACKCOLA.
- 12PACKCOLA can also be packed 2 layers onto PALLET-B, and each layer has 8 packs of 12PACKCOLA.

Packaged Item	Packaging Unit	Description
12PACKCOLA	12PACK	12PACKCOLA packaged item associated with 12PACK packaging unit.

Transport Handling Unit	Packaging Unit	Inner Pack Count	Number of Layers	Quantity per Layer	Description
PALLET-A	N/A	N/A	4	6	12PACKCOLA can be packed 4 layers on-to PALLET-A, and each layer has 6 packs of 12PACKCOLA.
PALLET-B	N/A	N/A	2	8	12PACKCOLA can also be packed on 2 layers onto PALLET-B, and each layer has 8 packs of 12PACKCOLA.

Weight defined on packaged item includes weight from package unit. In the above example, it is for the whole package of 12PACKCOLA. Volume for the packaged item follows this hierarchy: effective volume on packaging unit on the packaged item, volume calculated using dimensions from packaging unit on the packaged item, the packaged item volume, and the volume calculated using dimensions from the packaged item.

Have Packaged Unit Defined on the Packaged Item Table

In this case, the packaged item is just the product information and does not have the notion of packaging contained within it. There can be multiple ways to package this item, so the concept of packaging unit must be introduced along with the package item so that OTM can fully understand how to ship this item. The inner count of the packaged item table indicates how many items are packed in the package unit, and this information will be used when calculating package count.

Weight defined on packaged item does not include package unit. In the following example, weight is for a single can of COLA.

Example 2: Packaged Item COLA

- Package Unit is defined on TIHI table.
- COLA can be packed into 12PACK and put on PALLET-A (12 inner count, 4 layers, 6 12PACK per layer).
- COLA can also be packed into 24PACK and put on PALLET-B (24 inner count, 2 layers, 8 24PACK per layer).

Packaged Item	Packaging Unit	Description
COLA	N/A	Packaged item COLA

Transport Handling Unit	Packaging Unit	Inner Pack Count	Number of Layers	Quantity per Layer	Description
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PALLET-A	12PACK	12	4	6	COLA can be packed into 12PACK and put on PALLET-A (12 inner count, 4 layers, 6 12PACK per layer).
PALLET-B	24PACK	24	2	8	COLA can also be packed into 24PACK and put on PALLET-B (24 inner count, 2 layers, 8 24PACK per layer).

Package Unit

Package unit is the packaging of the shipped goods, such as boxes. Package unit has tare weight, effective volume and dimensions. Oracle Transportation Management will use the data you provided to do the calculation, but not verify if goods will fit in the package unit.

In above Example 2, cans of COLA can be packed into 12PACK box or 24PACK box. Here, 12PACK box and 24PACK box is package unit.

- Weight of '12PACK of COLA' = Weight of COLA X 12 + Tare Weight of 12PACK box
- Volume of '12PACK of COLA' = Volume of 12PACK
- Weight of '24PACK of COLA' = Weight of COLA X 24 + Tare Weight of 24PACK box
- Volume of '24PACK of COLA' = Volume of 24PACK

Defining Items as Like

The Item Type on the Packaged item table is used to define the Like item relationship in OTM. Packaged items with the same type take on the characteristics of like items when building the Ship Units. This Like feature is used for TiHi configurations and Package Reference Units.

Defining the TiHi information

The TiHi information describes how a ship unit is configured in respect to a specific packaged item and packaging unit. This information describes how many of the packaged item/packaging units are contained in a layer and how many of these layers may fit on the transport handling unit. Number of Layers and Quantity per Layer from TIHI table will be used to build ship unit. The packing algorithm can use this TiHi information to build ship units of the Same PI/PU or Like PI/PU, where the Like relationship is described in the packaged item table above. When building the Ship Unit the packing algorithm checks that the Like items have the same TiHi configuration (number of layers and quantity per layer) before using the TiHi information. They must have the same configuration to build the pallet using this information. If they do not then they will follow a building pattern for mixed freight.

Defining the Package Reference Unit

The package reference unit (PRU) information describes how a ship unit is configured in respect to a specific packaged item and packaging unit. This information is at a more abstract level than the TiHi data and therefore can be used to describe different dimension of the transportation handling unit capacity and the packaged item/package unit consumption. The transportation unit defines how many of the PRUs it can hold and the packaged item/package unit defines how many units it consumes. The dimension here can be of quantity, value of goods, hazardous, etc. The packing algorithm can consider multiple PRUs simultaneously. The

PRU can be applied to all types of transport handling units that are built, or just when the same item is packed together, or like items, as well as just applying for mixed freight. This is covered by the PRU application rule.

Packaged Item Category

The Packaged Item Category can be defined on the Packaged Item; it is an optional capability and is used only for orders that have an order configuration defined with the aggregate lines option selected. During the order release process the order base lines with the same packaged item category are aggregated to the same order release line. The screen for Packaged Item Category is where you define the representative packaged item for the category. When order base lines are aggregated during order releasing, the representative packaged item for the category becomes the packaged item defined on the order release line. This Representative Packaged Item ID can refer to an existing Packaged Item ID that has the characteristics for temperature, commodity, etc. that should be used during the planning phase on the order release, or this Representative Packaged Item can be a separate Packaged Item ID that is added to model these aggregated lines. For example:

- Packaged Item = Pens and Category ID = Office Supplies
- Packaged Item = Paper and Category ID = Office Supplies
- Packaged Item = Notebooks and Category ID = Office Supplies
- Packaged Item = Pencils and Category ID = Office Supplies
- Category ID = Office Supplies

Option 1: You can set the representative packaged item to be Pens. In this case the order release line packaged item will say PENS.

- Category ID = Office Supplies and Representative Package Item = Pens

Option 2: You can add a new Packaged Item for Office Supplies; although this is not an actual ordered item. In this case the order release line packaged item will say OFFICE SUPPLIES.

- Packaged Item = Office Supplies and Category Id is blank
- Category ID = Office Supplies and Representative Packaged Item = Office Supplies

Transport Handling Unit (THU)

Transport handling unit or THU can be thought as a pallet which holds boxes of COLA. It also has tare weight, effective volume, and dimensions. A THU can be defined as IN, ON, or Max. IN means the goods are filled inside the THU, eg. THU is a bin; the gross volume of the ship unit is the volume of THU. ON means the goods sit on top of the THU, eg. THU is a pallet; the gross volume of the ship unit is the volume of the goods and the volume of the THU. When THU is MAX, and gross volume calculation formula is 'Calculate Using Net Per' or 'Calculate Using Line Net', the gross volume of the ship unit is the max of THU volume and net volume of the goods.

Number of Layers and Quantity per Layer defined on Packaged Item Manager Units grid will be used together with THU dimension to calculate the dimension of the ship unit. When THU is IN, the dimension of the THU is the dimension of the ship unit. When THU is ON, the height of the ship unit is THU height plus goods height. When THU is MAX, the height of the ship unit is the max of THU height and goods height.

User-defined UOMs

User-defined UOMs (units of measure) can be created and used within OTM providing more flexibility. If using user-defined UOMs, a conversion must be created to a standard UOM. See the help topic Units of Measure.

Related Topics

[Order Management Overview](#)

[Order Model Overview](#)

[Order Configuration](#)

[User Interface Configuration](#)

[Order Management Guide PDF](#)

Configuring for Order Processing: User Interface Configuration

Order Base/Order Release Manager

The Order Configuration field on the order base and order release manager layouts should be set to default to the desired configuration.

Oracle Transportation Management provides various fields on the line and ship unit such as Total Gross Weight/Volume, Gross Weight/Volume per Ship Unit, and Net Weight/Volume per Ship Unit. Since the settings on the order configuration will indicate the data to be entered and data to be calculated, it may be helpful to make some of the calculated fields read-only or hide them.

Actions

A few actions allow you to configure them. They work much like the managers which have been made configurable. One of the actions which has been made configurable is the Ready to Ship action on both the order base line and order base ship unit managers. To configure one of them you would:

1. Open the Manager Layout manager.
2. Search for READY_TO_SHIP_OB_LINE or READY_TO_SHIP_OB_SHIP_UNIT.
3. Select the action you wish to configure and click Copy Manager Layout.
4. From here you can hide/move sections, hide fields, set fields to read-only/required, give fields a default value, etc.
5. Click Finished to save your new screen layout.
6. Open the Actions manager.
7. Click New to create a new action.
8. In the Action Definition ID field select either READY_TO_SHIP_OB_LINE or READY_TO_SHIP_OB_SHIP_UNIT.
9. In the Manager Layout ID field select the layout you created above.
10. Click Finished to save your new action.

11. Open the Screen Set Manager.
12. Search for OB_LINE or OB_SHIP_UNIT.
13. Select the manager you wish to add your action to and click Copy Screen Set.
14. On the Actions tab add the action you created above.
15. Add your new screen set to the menu.
16. When you use your new screen set your new action will now be available.

The other configurable actions are the order release lines and order release ship units actions on the Order Base Line and Order Base Ship Unit managers respectively. The steps are the same as above except for different IDs in steps #2 and #8.

1. Open the Manager Layout manager.
2. Search for RELEASE_LINES or RELEASE_SHIP_UNITS.
3. Select the action you wish to configure and click Copy Manager Layout.
4. From here you can hide/move sections, hide fields, set fields to read-only/required, give fields a default value, etc.
5. Click Finished to save your new screen layout.
6. Open the Actions manager.
7. Click New to create a new action.
8. In the Action Definition ID field, select either CREATE_AND_RELEASE_OB_LINE or CREATE_AND_RELEASE_OB_SHIP_UNIT.
9. In the Manager Layout ID field select the layout you created above.
10. Click Finished to save your new action.
11. Open the Screen Set manager.
12. Search for OB_LINE or OB_SHIP_UNIT.
13. Select the manager you wish to add your action to and click Copy Screen Set.
14. On the Actions tab add the action you created above.
15. Add your new screen set to the menu.
16. When you use your new screen set your new action will now be available.

The additional configurable action Packing Order Base Lines is on the Order Base Line Manager. The steps are the same as above except for different IDs in steps #2 and #8.

1. Open the Manager Layout manager.
2. Search for PACKING_OB_LINE.
3. Select the action you wish to configure and click Copy Manager Layout.
4. From here you can hide/move sections, hide fields, set fields to read-only/required, give fields a default value, etc.
5. Click Finished to save your new screen layout.
6. Open the Actions manager.
7. Click New to create a new action.
8. In the Action Definition ID field, select PACKING_OB_LINE.
9. In the Manager Layout ID field select the layout you created above.
10. Click Finished to save your new action.
11. Open the Screen Set manager.
12. Search for PACKING_OB_LINE.
13. Select the manager you wish to add your action to and click Copy Screen Set.
14. On the Actions tab add the action you created above.

15. Add your new screen set to the menu.
16. When you use your new screen set your new action will now be available.

Related Topics

[Order Management Overview](#)

[Order Model Overview](#)

[Static Data Setup](#)

[Bundling](#)

[Order Management Guide PDF](#)

Configuring for Order Processing: Bundling

From an order management perspective, Oracle Transportation Management will attempt to bundle lines and ship units during releasing, as well as try to bundle order releases during planning. Bundling is controlled by the rule set assigned to parameters.

Order Base During Releasing

The ORDER BASE BUNDLING RULE SET parameter indicates the rule set to be used during releasing to bundle lines and ship units. The rule set may be configured to remove undesired rules or sequence rules for better performance. Ideally, simpler checks that would more frequently cause lines or ship units to be incompatible should be moved higher in the list so they are evaluated earlier.

All rules available for re-sequencing or removal may be found in the set named basebundlescen. To configure the bundling rules, you should run the copy action on either the basebundlescen rule set or another rule set and create a new rule set. In addition to the rules, the following order base fields must match in order for lines or ship units from different order bases to bundle:

- Locations and Load/Unload Points
- Bundling Type
- Default Stowage Mode
- Dim Rate Factor
- Equipment Group and Equipment Group Profile
- External System ID
- Fixed Buy/Sell Itinerary
- Inco Term
- Mode Profile GID
- Payment Method Code
- Pickup/Dropoff Routing Sequence
- Planning Group
- Buy/Sell Rate Record
- Buy/Sell Rate Offering
- Rate Service and Rate Service Profile

- Release Method
- Schedule
- Service Provider and Service Provider Profile
- Transport Mode
- Time Window Emphasis
- Priority
- Ignore Location Calendar
- Must Ship Direct
- Must Ship Through Pool
- Must Ship Through Cross-Dock
- Buffer Type
- Ship With Group

The OPTIMIZED ORDER BASE BUNDLING parameter controls which bundling algorithm to use. Non-optimized bundling would bundle with the given sequence of bundles while optimized bundling uses container optimization to produce better bundles. For example, if MAX WEIGHT PER BUNDLE is set to be 1000 LB and 4 bundles passed in with weight 500LB, 400LB, 600LB and 500LB, non-optimized bundling will produce 3 bundles: (500LB, 400LB), (600LB) and (500LB) while optimized bundling would generate only 2 bundles (500LB, 500LB), (400LB, 600LB).

Order Release During Planning

The ORDER RELEASE BUNDLING RULE SET parameter indicates the rule set to be used for bundling when planning orders into shipments. The rule set may be configured to remove undesired rules, but unlike the rules for order base, cannot be sequenced.

All available rules may be found in the set named ordbundlescen. To configure the bundling rules, you should run the copy action on either the ordbundlescen rule set or another rule set and create a new rule set.

Related Topics

[Order Management Overview](#)

[Order Model Overview](#)

[User Interface Configuration](#)

[Business Number Generator](#)

[Order Management Guide PDF](#)

Rule Sets

Configuring for Order Processing: Business Number Generator

The following Business Number Types may be configured as needed to generate IDs for the order base and child records:

- Order Base ID - ORDER_BASE_XID
- Order Base Line ID - OB_LINE_XID
- Order Base Line Release Instruction ID - OB_RELEASE_INSTR_XID
- Order Base Ship Unit ID - OB_SHIP_UNIT_XID
- Order Base Ship Unit Release Instruction ID - OB_SU_RELEASE_INSTR_XID
- Order Release ID (released from a base) - ORDER_RELEASE_XID
- Order Release ID (created without an order base) - ORDER_RELEASE_XID_STANDALONE
- Order Release Line ID - ORDER_RELEASE_LINE_XID
- Ship Unit ID - SHIP_UNIT_XID

See the help topic Business Number Context for more information on the Business Number Context assigned to each Business Number Type and the available replacement values

Note: Optionally, business numbers may be generated from an Oracle Sequence Number which can help performance.

Related Topics

[Order Management Overview](#)

[Order Model Overview](#)

[Bundling](#)

[Order Configuration's Role](#)

[Order Management Guide PDF](#)

Order Creation

Order Creation: Order Configuration's Role

Order releases may be created either by releasing portions of an order base, or directly without an order base. The [Order Model Overview topic](#) describes the various entry points for an order, and how it ultimately results in an order release with ship units that can be planned into shipments.

Order Configuration's Role

Regardless of whether the order will be released from an order base or created directly, it is important to understand the [Order Configuration](#) options, as a configuration must be selected when entering an order base or order release. For example, the Order Base/Release Creation field indicates whether the order base/order release will be entered with lines or with ship units.

If lines are entered, the Ship Unit Creation field indicates whether or not Oracle Transportation Management should automatically create ship units from order release lines when an order release with lines is created. The selections on the Order Configuration's Order Release tab indicate how those ship units should be built.

If ship units are entered, the selections on the Order Configuration's Order Release tab indicate which ship unit and line fields should be derived, and in some cases, the formula to derive them.

The sections below describe the various ways an order release can be created.

By Ship Unit

If it is already known how an order is packed (the shippable units are known), the order should be entered by ship unit. There are three ways you can create an order release by ship unit:

1. Create an order base with ship units and release the order base. This will create an order release with one or more ship units. Please see below for additional information on releasing an order base using the [Release Order Process](#) and/or [Releasing Actions](#).
2. On the Order Release manager Ship Unit tab there is a New Ship Unit button. Clicking this button will bring up the Ship Unit edit page where you can manually add all of the information associated with the new ship unit.
3. Use the Select Line field on the Order Release manager Ship Unit tab to select one or more order base ship units to pull into the order release (see [Manually Releasing Orders](#) below).

By Line

If the shippable units are not known, and it is desired that Oracle Transportation Management create them from a list of items to be shipped, the order should be entered by line. There are three ways you can create an order release by line item:

1. Create an order base with line items and release the order base. Please see below for additional information on releasing an order base using [Release Order Process](#) and/or [Releasing Actions](#).
2. Click the New Line Item button on the Order Release manager Line Item tab. This will bring up the Line Item edit screen where you can manually add all of the information associated with the new line item. This button will only appear if the order release is being created by line items.
3. Use the Select Line field on the Order Release manager Line Item tab to select one or more order base line items to pull into the order release (see [Manually Releasing Orders](#) below).

Once order release line items have been created, they must then be assigned to ship units before the order can be planned into a shipment. This will be done automatically if the Ship Unit Creation field on the order configuration is set to "On Create." If Ship Unit Creation is set to "User Initiated," it is up to you to create the ship units. This may be done via the UI or agent action "Generate Ship Units," or manually from the Ship Unit edit screen. The Ship Unit edit screen has a Select Line section that can be used to select one or more order release lines to move into the current ship unit. This button will only appear if the order release is being created by line items.

Related Topics

[Order Management Overview](#)

[Business Number Generator](#)

[Generating Ship Units](#)

Order Creation: Generating Ship Units

For order releases that are entered as lines, OTM will generate the associated ship units from these lines. There are multiple methods that can be used to generate the ship units that are addressed in the [order configuration topic](#). These methods are PREPACK, ONE_TO_ONE and AUTO_CALC. The AUTO_CALC method utilizes the CONOPT algorithms in OTM to build ship units in an optimal manner. The following is an overview of the data that is used by the CONOPT algorithm to build ship units at the time of order release creation as well as shipment ship unit building. The shipment ship unit building time is for the repack capabilities. Repack allows the OTM ship unit building logic to repack the ship units at the time of shipment planning thus enabling it to make better transportation decision that are related to how the ship units are packed.

The property `glog.business.order.packing.allowMixedTHUWithAllSameItems` impacts grouping of mixed freight ship units. This property needs to be set to true to allow same items to go in mixed transport handling units (THU). The default is false.

Key Data Utilized by Ship Unit Building

1. Order Configuration: The Allow Repack and Allow Repack of Partial Ship Unit indicators control the shipment ship unit repacking logic.
2. Transport Handling Units to be used for Ship Unit Building
 1. Can be specified directly on the order line.
 2. Can be defined on the packaged item .
 3. Can be restricted by location to only allow certain transport handling units.
 4. Can be restricted by mode to only allow certain transport handling units.
3. Transport Handling Unit Capacity restrictions
 1. The maximum dimensions used to generate ship units can be restricted by the receiving location.
 2. The ability to build mixed freight ship units can be controlled at the packaged item and the receiving locations.
 3. The maximum number of mixed items allowed on a ship unit can be restricted by the receiving location.
 4. The Capacity and consumption of transport handling units can be described in terms of Package Reference Units (PRUs).
4. Transport Mode
 1. During shipment ship unit building the rated cost can vary based on how the ship units are generated. Transport modes that support this type of rating can be designated with the Consider Cost during SSU repack option.

Related Topics

[Order Management Overview](#)

[Order Configuration's Role](#)

[Releasing from an Order Base](#)

Order Creation: Releasing from an Order Base

Release Order Process

The Release Orders process is used to create order releases for any order base whose release instructions have not been processed. Oracle Transportation Management scans for a set of releasable order bases meeting a user-specific query. A releasable order base is defined as any order with release instructions that are not processed. The release instructions may have a "not processed" status due to an inactive Effective/Expiration Date time window that is defined on the base order, or if the Release Date on a particular Release Instruction has not occurred.

For more information, see the help topic Release Orders.

Release Instructions

Release instructions on the order base line or ship unit tell Oracle Transportation Management how much of the line to release.

Release instructions may be created two ways:

- User: Release instructions may be added manually via the user interface or XML integration. When using this approach, Shippable on the line or ship unit should not be selected. If it is desired that these release instructions not be processed, the Allow Releasing checkbox should be cleared.
- Automatically: If the Shippable checkbox is selected on the order base line or ship unit, Oracle Transportation Management will create the release instruction for you for the full amount of the line or ship unit. You should not create release instructions if shippable is checked. After Oracle Transportation Management creates the release instruction, it will uncheck the Shippable checkbox for you.

Note: Automatically releasing the full amount of a line or ship unit is generally supported for backward compatibility. If the entire order base will be released in a single transaction, a preferred alternative is to enter the order release directly without an order base.

When an order base is saved via the user interface, or an agent or manual action is triggered to release the order base, Oracle Transportation Management will attempt to process any release instructions where Processed is not selected and Allow Releasing is selected. After processing the release instruction, Oracle Transportation Management will check the Processed checkbox.

Releasing Actions

The following are user interface actions that support this releasing process. Some of these actions are configurable as a manager layout defined in the [User Interface Configuration](#) section. This allows you to select the action that best fits the order configuration and the business process needed and then configure the fields that are displayed for the action.

Hold/Allow Releasing

Applies to: Order Base

Toggles the RELEASE CONTROL status between “hold” and “allow” releasing.

Order Configurations Supported: All except for INSTRUCTED_PREPACK

OB Line Packing

Applies to: Order Base Line

Allows you to select order base lines from single or multiple order bases to build an order release. Prompts with ship unit building instructions to create order release ship units from order base lines.

Order Configurations Supported: INSTRUCTED_PREPACK

Release Lines

Applies to: Order Base, Order Base Line*

Prompts with Order Base Line page allowing you to add release instructions or mark the line shippable. This action will attempt to bundle lines from different order bases.

Order Configurations Supported: PREPACK, ONE_TO_ONE, AUTO_CALC

Release Ship Units

Applies to: Order Base, Order Base Ship Unit*

Prompts with Order Base Ship Unit page allowing you to add release instructions or mark the line shippable.

Order Configurations Supported: SHIP_UNITS, SHIP_UNIT_LINES

Release Order Base

Applies to: Order Base

If there are order releases that exist for that order base, they will be deleted. It then re-processes the existing release instructions.

Order Configurations Supported: All except for INSTRUCTED_PREPACK

Ready to Ship

Applies to: Order Base Line, Order Base Ship Unit

Prompts for line/ship unit information, defaulting to the remaining amount to release. Data entered is used to create and process a new release instruction.

Order Configurations Supported: PREPACK

Release Remaining Order Amount

Applies to: Order Base Line*, Order Base Ship Unit*

Creates and processes a release instruction for the remaining unreleased amount.

Order Configurations Supported: All except for INSTRUCTED_PREPACK

Release Total Order Amount

Applies to: Order Base Line*, Order Base Ship Unit*

Creates and process a release instruction for the full amount, regardless of existing release instructions.

Order Configurations Supported: All except for INSTRUCTED_PREPACK

Simple Ready to Ship

Applies to: Order Base Line

Prompts for a small amount of line/ship unit information that is used to create and process a new release instruction.

Order Configurations Supported: PREPACK

* Will attempt to bundle lines from different order bases if run from the detail (order base line/order base ship unit) page.

Manually Releasing Orders

By Ship Unit

On the Order Release manager Ship Unit tab there is a Select Line field. You can use this field to select one or more order base ship units to pull into the order release. This field will only appear if the order release is being created by ship units.

By Line

Similar to the “By Ship Unit” example described above, the Order Release manager Line Item tab has a Select Line field allowing you to select one or more order base line items to pull into the order release. This field will only appear if the order release is being created by line items.

Related Topics

[Order Management Overview](#)

[Generating Ship Units](#)

[Workflow](#)

Release Orders

[Order Management Guide PDF](#)

Order Creation: Workflow

Agent Actions

ORDER BASE – INSERT

The ORDER BASE – INSERT agent action is intended to be used in agents that listen for an order base to be created by XML Integration. The Before Persist checkbox on the event restriction should be selected to indicate that this agent should handle persistence of the order base. When executed, the order base will be released. It may also be configured to create a buy and/or sell shipment from the releases that are created. Oracle Transportation Management ships with PUBLIC agent ORDER BASE – INSERT that may be copied and used as a template.

ORDER RELEASE – INSERT

The ORDER RELEASE – INSERT agent action is intended to be used in agents that listen for an order release to be created by XML Integration. The Before Persist checkbox on the event restriction should be selected to indicate that this agent should handle persistence of the order release. Oracle Transportation Management ships with PUBLIC agent ORDER RELEASE – INSERT that may be copied and used as a template.

GENERATE SHIP UNITS

The GENERATE SHIP UNITS agent action is useful when the order configuration is set to not create ship units automatically. This enables an order with only lines to be modified more easily since there is no impact to ship units. Ship units may then be created when the order is ready for planning. This action may also be used to re-create the ship units from the lines.

Related Topics

[Order Management Overview](#)

[Releasing from an Order Base](#)

[XML Integration](#)

[Order Management Guide PDF](#)

Order Creation: XML Integration

Inbound order base and order release XML integrations should include the ReleaseMethodGid element. If not provided, Oracle Transportation Management will default the release method to SHIP_UNIT_LINES for orders with ship units and ONE_TO_ONE for orders with order lines only. These defaults may be changed via the glog.releasemethod.shipunit.default and glog.releasemethod.line.default properties.

Inbound order releases must always include order lines regardless of whether or not ship units are included. One order release line should be created for every ship unit line.

The Order Base/Release Creation setting from the [order configuration](#) defined on the order configuration should be set to Ship Unit if ship units will be specified. If only order lines will be provided and Oracle Transportation Management is to building the ship units, the Order Base/Release Creation on the order configuration setting should be set to Line.

Note: If creating the order via XML Integration, the Generate Ship Unit agent action must still be used immediately process the order (calculate ship unit fields, build ship units from lines, etc.) according to the settings on the order configuration.

Related Topics

[Order Management Overview](#)

[Order Creation: Workflow](#)

[Order Modification: Workflow](#)

[Order Management Guide PDF](#)

Order Modification

Order Modification: Workflow

Agent Actions

The following agent actions may be used to process order modifications in Oracle Transportation Management. Depending on the status of the shipment and type of modification, different agent actions could be used in different situations.

ORDER RELEASE - MOD - NO PROCESSING

Order release will not be persisted and order's status ORDER MODIFIED is set to ORDER MODIFIED_DENIED. If the order is sent in from integration, the ORDER - INTEGRATION UNSUCCESSFUL event will be raised.

ORDER RELEASE - MOD - FUTURE PROCESSING

This will persist the order changes without modifying the related shipment and set order's status ORDER MODIFIED to ORDER MODIFIED_MODIFIED.

When you click on the Edit icon, you can view the parameter, Always Generate Ship Units for Line Based Order. This parameter is optional and when it is set to true, new ship units will be generated and old ship units will be deleted for the line-based order. Default is false.

ORDER RELEASE - MOD - FULL IMPACT

The ORDER RELEASE - MOD - FULL IMPACT agent action will impact everything related to the order release. It will do the following:

1. Delete bills.
2. Delete unmatched shipment invoices.
3. Remove tender offers.
4. Unassign the order release from shipments.
5. Delete the order's ship unit if ship units are created from order release lines or order base lines.
6. Recreate/calculate order ship units.
7. Build shipments for the order release.

ORDER RELEASE - MOD - EDIT SHIPMENT

If quantities are changed on an order release, and existing ship units on the order release are created from order release lines originally, ship units will be regenerated from order release lines for non-fleet order releases. The rebuild of ship units will use the Ship Unit Building logic as defined in order configuration.

Otherwise, ship units will be recalculated according to order configuration defined on the order release.

Then, shipments will be edited according to the changes on the order release. The changes include quantity changes on the order's ship units, special service changes, and order stop changes (for fleet orders). Shipment cost and service time will be recalculated according to parameters for the action. These are Recalculate Service Time and Retender Shipment.

This action only applies to orders that have not been split, either across shipments or shipment equipment.

ORDER RELEASE - MOD - PROPAGATE CHANGES

The ORDER RELEASE - MOD - PROPAGATE CHANGES agent action should be not turned on if the ORDER RELEASE - MODIFY agent action is turned on.

Formerly, this agent action could only be configured as a post-persist agent action. This limited the transactional control over the updates. Starting with 6.4.2 this agent can be configured as a pre-persist agent action in a similar fashion as ORDER RELEASE - MOD – EDIT SHIPMENT. When configured as a pre-persist agent action, some limitations of using post-persist agent actions will be removed so you can remove ship units or order release lines.

When setting up this agent action, you can choose to propagate the following changes:

1. Propagate ship unit quantity.
2. Propagate pickup dates.
3. Propagate delivery dates.
4. Propagate equipment change.
5. Recalculate cost.
6. Propagate special service change.

The first step in ship unit quantity propagation is to check if there are order release lines without ship units on this order release. If there are, new ship units will be built for these order release lines using the order configuration on the order release. Then, quantity changes will be propagated to up/down stream shipments and order movements. If it is a line-based order, changes on the lines (including line insertion/deletion) will be propagated to the order release ship unit and further propagated to the shipment. For ship unit based orders, changes on the ship unit (including modification/insertion/deletion) will be propagated back to the order release line and back to the shipment ship unit. For order release line modification off a line-based order, use the ORDER RELEASE - MOD - EDIT SHIPMENT agent action.

IF ON EDITABLE SHIPMENT FOR ORDER RELEASE

Oracle Transportation Management business logic will check if the order release is on an editable shipment. The following conditions must be satisfied for a shipment to be editable.

1. Event has to be ORDER – MODIFIED.
2. Allowed Children Event:
 - Order – Customer Service Modified
 - Order – Quantities Modified
 - Order – Dates Modified
 - Order – Special Service Modified
 - Order – ShipUnit PD Stop Modified
 - Order – OR Stop Added or Removed
 - Order – ShipUnit Added or Removed
 - Order – Line Added or Removed
3. The related shipment is not editable if one of the following cases is true.
 - Order is split across shipments or shipment equipment.
 - No order movements or shipments found for order release.
 - Order release's time window is not compatible with some stops.

ORDER RELEASE – MOD – EDIT SHIPMENT and ORDER RELEASE – MOD – PROPAGATE CHANGES

The following situations apply.

Ship Unit Actual Status

You may have orders that start with line-based order configuration. For these order, the system packs the lines into ship units. Then the orders are planned and placed onto shipments. Next, if you want to add the actual ship unit packing information, you will want to send order changes on a line and ship unit independent of one other. In order to achieve this, you need to set the following parameters:

- STATUS TYPE ENABLES SHIP UNIT ACTUAL: specifies the status type of the order to enable actual ship unit processing.
- STATUS VALUE ENABLES SHIP UNIT ACTUAL: specifies the status value of the order to enable actual ship unit processing.

These parameters specify in the external status that an order is in actual ship unit state. Then, when order modification comes in, the Order Move Delete process will make changes to the ship units and the lines independent of each other without looking at the order configuration.

Shipment Cannot Accept Changes

When an order modification comes in, certain shipments may have already received actuals where changes on such a shipment are not allowed. These following parameters specify the external status type/value for a shipment when it can no longer accept changes:

- STATUS TYPE PREVENTS SHIPMENT MOD: the status type for shipment that cannot accept changes
- STATUS VALUE PREVENTS SHIPMENT MOD: the status value for shipment that cannot accept changes

When an order modification comes in, the Order Mod Propagator or Edit Shipment will look at all of its related shipments. If they all have the status that does not accept the changes, the order modification will be rejected. Otherwise, it will find the shipments that accept changes and propagate the changes to the shipments.

Related Topics

[Order Management Overview](#)

[XML Integration](#)

[Saved Conditions](#)

[Order Management Guide PDF](#)

Order Modification: Saved Conditions

As mentioned in the [Order Modification: Workflow topic](#), the desired agent action may vary depending on the state of the shipment and type of modification. A saved condition may be used with the IF agent action to control which agent action should be used depending on the circumstance. The below saved conditions are included with Oracle Transportation Management and address some of the most common conditions.

OR ON SHIPMENT

OR ON SHIPMENT is a saved condition which uses a saved query 'OR ON SHIPMENT' to check if this order release is on a shipment.

```
select o.order_release_gid from ORDER_RELEASE o, SHIPMENT SHP, SHIPMENT_S_EQUIPMENT_JOIN SSEJ,
S_EQUIPMENT_S_SHIP_UNIT_JOIN SESSUJ, S_SHIP_UNIT_LINE SSUL where SHP.SHIPMENT_GID =
SSEJ.SHIPMENT_GID AND SSEJ.S_EQUIPMENT_GID = SESSUJ.S_EQUIPMENT_GID AND
```

SESSUJ.S_SHIP_UNIT_GID = SSUL.S_SHIP_UNIT_GID AND SSUL.ORDER_RELEASE_GID IS NOT NULL and (o.order_release_gid=ssul.order_release_gid) and (o.order_release_gid=?)

OR ON SHIPMENT IN TRANSIT

OR ON SHIPMENT IN TRANSIT is a saved condition which used a saved query 'OR ON SHIPMENT IN TRANSIT' to check if this order release is on a shipment which the carrier has already started to execute.

```
select o.order_release_gid from shipment shp,shipment_s_equipement_join
ssej,s_equipement_s_ship_unit_join sessuj, s_ship_unit_line ssul,order_release_line orl,order_release
o,shipment_status ss,status_value sv where shp.shipment_gid = ssej.shipment_gid and
ssej.s_equipement_gid = sessuj.s_equipement_gid and sessuj.s_ship_unit_gid = ssul.s_ship_unit_gid and
ssul.or_line_gid = orl.order_release_line_gid and orl.order_release_gid = o.order_release_gid and
shp.shipment_gid = ss.shipment_gid and ss.status_value_gid = sv.status_value_gid and sv.status_value_xid
in
('ENROUTE_COMPLETED','ENROUTE_DELAYED','ENROUTE_DIVERTED','ENROUTE_ENROUTE','ENROUTE_MERGED','EN
- FULL','ENROUTE_UNLOADED - PARTIAL')
```

OR ON SHIPMENT WITH RESOURCES TENDERED/SECURED

The OR ON SHIPMENT WITH RESOURCES TENDERED/SECURED is a saved condition which used a saved query 'OR ON SHIPMENT WITH RESOURCES TENDERED/SECURED' to check if this order release is on a shipment which has been tendered to a carrier.

```
select o.order_release_gid from shipment shp, shipment_s_equipement_join ssej,
s_equipement_s_ship_unit_join sessuj, s_ship_unit_line ssul,order_release_line orl,order_release
o,shipment_status ss,status_value sv where shp.shipment_gid = ssej.shipment_gid and
ssej.s_equipement_gid = sessuj.s_equipement_gid and sessuj.s_ship_unit_gid = ssul.s_ship_unit_gid and
ssul.or_line_gid = orl.order_release_line_gid and orl.order_release_gid = o.order_release_gid and
shp.shipment_gid = ss.shipment_gid and ss.status_value_gid = sv.status_value_gid and sv.status_value_xid
in ('SECURE RESOURCES_ACCEPTED','SECURE RESOURCES_BOOKED','SECURE RESOURCES_PICKUP
NOTIFICATION','SECURE RESOURCES_TENDERED','SECURE RESOURCES_BOL')
```

Related Topics

[Order Management Overview](#)

[Workflow](#)

[Order Management Guide PDF](#)