Oracle® Transportation Management

Integrating Oracle Transportation Management with Oracle E-Business Suite

Release 12.1

Part No. E13432-02

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Oracle Transportation Management Integrating Oracle Transportation Management with Oracle E-Business Suite, Release 12.1

Part No. E13432-02

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Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Transportation Management Integrating Oracle Transportation Management with Oracle E-Business Suite.*

See Related Information Sources on page x for more Oracle Applications product information.

TTY Relay Access to Oracle Support Services

To reach AT&T Customer Assistants, dial 711 or 1.800.855.2880. An AT&T Customer Assistant will relay information between the customer and Oracle Support Services at 1.800.223.1711. Complete instructions for using the AT&T relay services are available at http://www.consumer.att.com/relay/tty/standard2.html. After the AT&T Customer Assistant contacts Oracle Support Services, an Oracle Support Services engineer will handle technical issues and provide customer support according to the Oracle service request process.

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Structure

Related Information Sources

Oracle Order Management User's Guide

Oracle Order Management Implementation Guide

Oracle Shipping Execution User's Guide

Oracle Payables User's Guide

Oracle Purchasing User's Guide

Oracle BPEL Process Manager Quick Start Guide

Oracle BPEL Process Manager Developer's Guide

Oracle Applications User's Guide

Oracle Transportation Management 5.5 Documentation Library

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for

integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle Applications Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using an Oracle Applications form can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

1

Introduction

Overview of Oracle Transportation Management Integration with Oracle E-Business Suite

Oracle Transportation Management integrates with Oracle E-Business Suite to enable transportation features and functionality by adding to existing Oracle E-Business Suite products, including Oracle Order Management, Oracle Shipping Execution, Oracle Payables, Oracle Warehouse Management, and Oracle Purchasing.

Oracle Transportation Management combines transportation planning and execution with freight payment, inbound freight logistics, and freight rating and routing.

Oracle Transportation Management adds the following features and enhancements to Oracle E-Business Suite:

- Carrier selection and tender
- Freight rating and routing
- Actual ship quantities update and re-rate
- Freight payment, freight payment audit, and approval
- Visible in-transit statuses
- Inbound carrier selection
- Inbound in-transit statuses

Oracle Transportation Management and Oracle E-Business Suite Requirements

To use Oracle Transportation Management, you must have the following Oracle

Applications installed:

- Oracle Order Management
- Oracle Shipping Execution
- Oracle Payables
- Oracle Purchasing

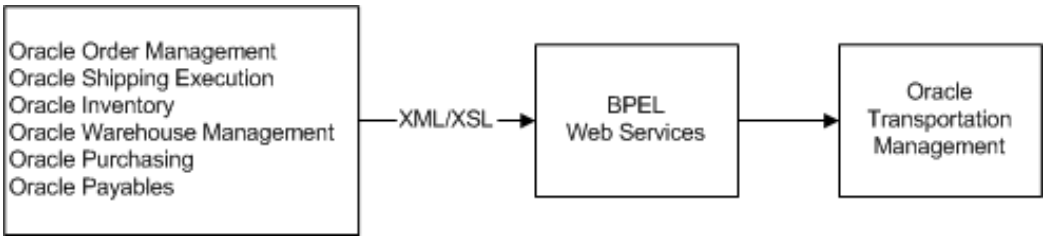
Other Oracle applications, such as Oracle Warehouse Management, can further enhance your supply chain management processes.

See:

- *Oracle Purchasing User's Guide*
- *Oracle Shipping Execution User's Guide*
- *Oracle Order Management User's Guide*
- *Oracle Order Management Implementation Guide*
- *Oracle Payables User's Guide*
- *Oracle Applications User's Guide*
- *Oracle BPEL Process Manager Quick Start Guide*

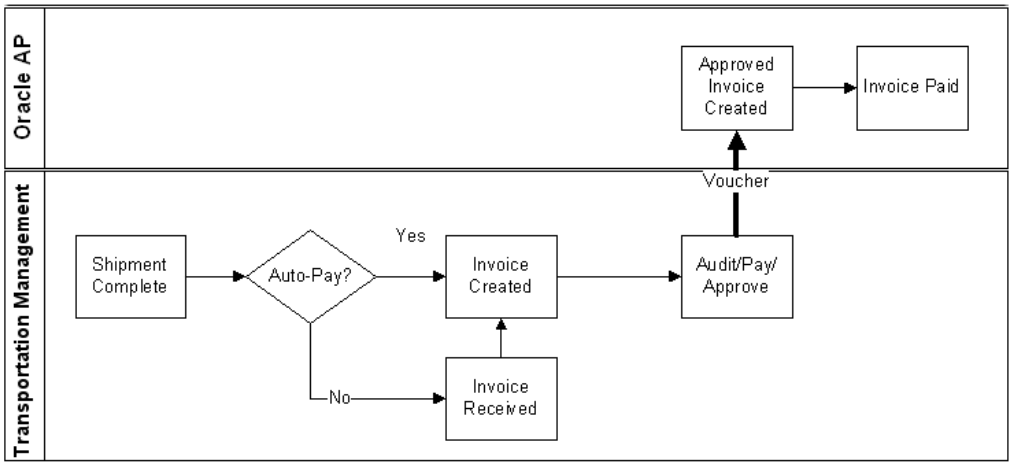
> **Note:** The integration of Oracle E-Business Suite and Oracle Transportation Management replaces Oracle Transportation Execution and Oracle Transportation Planning. Once Oracle Transportation Management is enabled, you cannot use Oracle Transportation Execution and Oracle Transportation Planning.

This figure shows the integration of Oracle Transportation Management with Oracle E-Business Suite Applications as well as the services used to transact the data between Oracle Transportation Management and Oracle E-Buisiness Suite Applications:

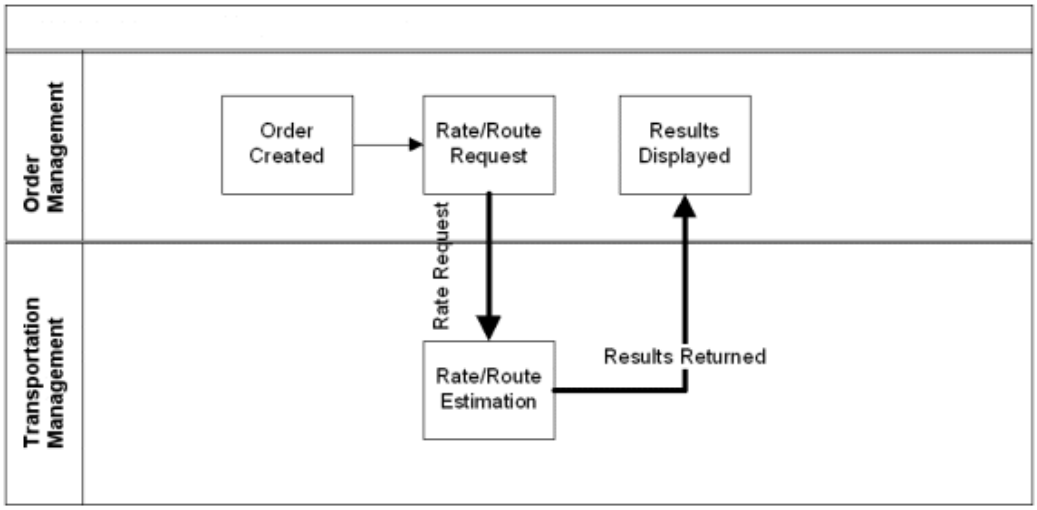


This figure shows the integration of Oracle Transportation Management with Oracle

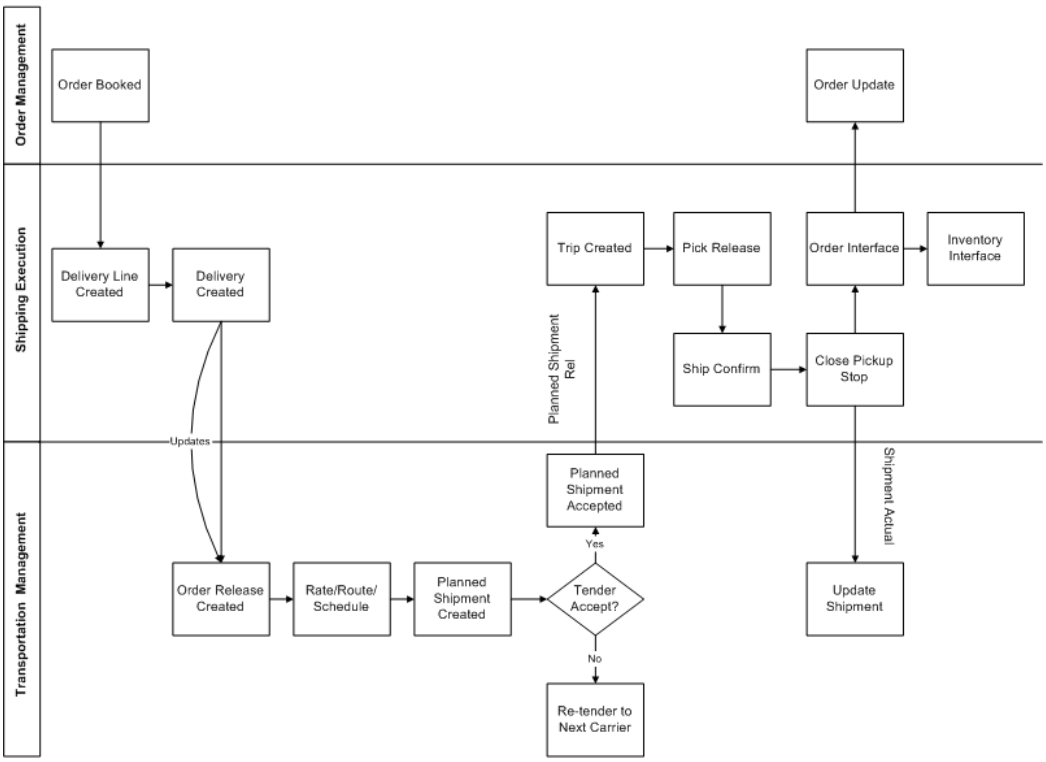
Payables, including audit/pay/approve and invoice paid:



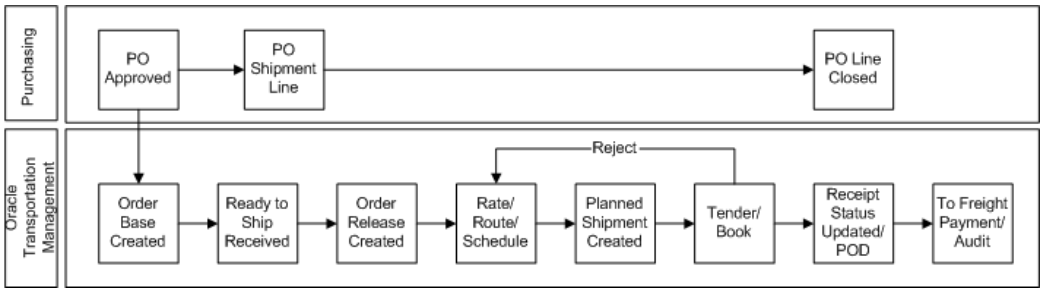
This figure shows the integration of Oracle Transportation Management with Oracle Order Management, including rate and route flow and estimation:



This figure shows the integration of Oracle Transportation Management with Oracle Shipping Execution, including trip creation, ship confirm, order interface, and inventory interface:



This figure shows the integration of Oracle Transportation Management with Oracle Purchasing, including PO creation and PO close:



BPEL Introduction

The Oracle BPEL (Business Process Execution Language) processes are delivered through Oracle*MetaLink* patches. Patch application does not deploy the .jar files into the BPEL middle tier. You must manually deploy the BPEL processes.

See Oracle*MetaLink* note: Oracle Transportation Management Integration with Oracle E-Business Suite Post-Update Steps for more information.

2

Oracle Order Management

Overview of Oracle Transportation Management Integration with Oracle Order Management

Oracle Transportation Management integrates with Oracle Order Management to enable transportation rating and routing at the time of order entry. Oracle Order Management also provides outbound data to Oracle Transportation Management that Oracle Transportation Management uses to plan shipments.

Rating and Routing at Order Booking

The implementation of Oracle Transportation Management enables you to offer an estimate of the shipping rate and route at the time of order entry. After you have entered the order line, you select the appropriate action as needed.

Oracle Transportation Management leverages the following Oracle Order Management actions, which are enhanced by the introduction of Oracle Transportation Management:

- Choose Ship Method: Enables you to select the ship method, costs, and transit times
- Get Ship Method: Returns the ship method
- Get Ship Method and Rates: Returns the ship method and rate
- Get Freight Rates: Returns the freight cost for the ship method returned

Each action returns the appropriate ship method and rate for the given order line.

Implementation of Oracle Transportation Management with Oracle Order Management

You must define the following profile options to enable the Oracle Order Management to Oracle Transportation Management integration:

- OTM: Integration Enabled
- OTM: Domain Name
- OTM: Domain User
- OTM: Domain Password
- OTM: Proxy Server
- OTM: Proxy Port
- OTM: Servlet URI

For information on Oracle Order Management XML mapping, see Oracle Order Management XML Mapping, page A-2

3

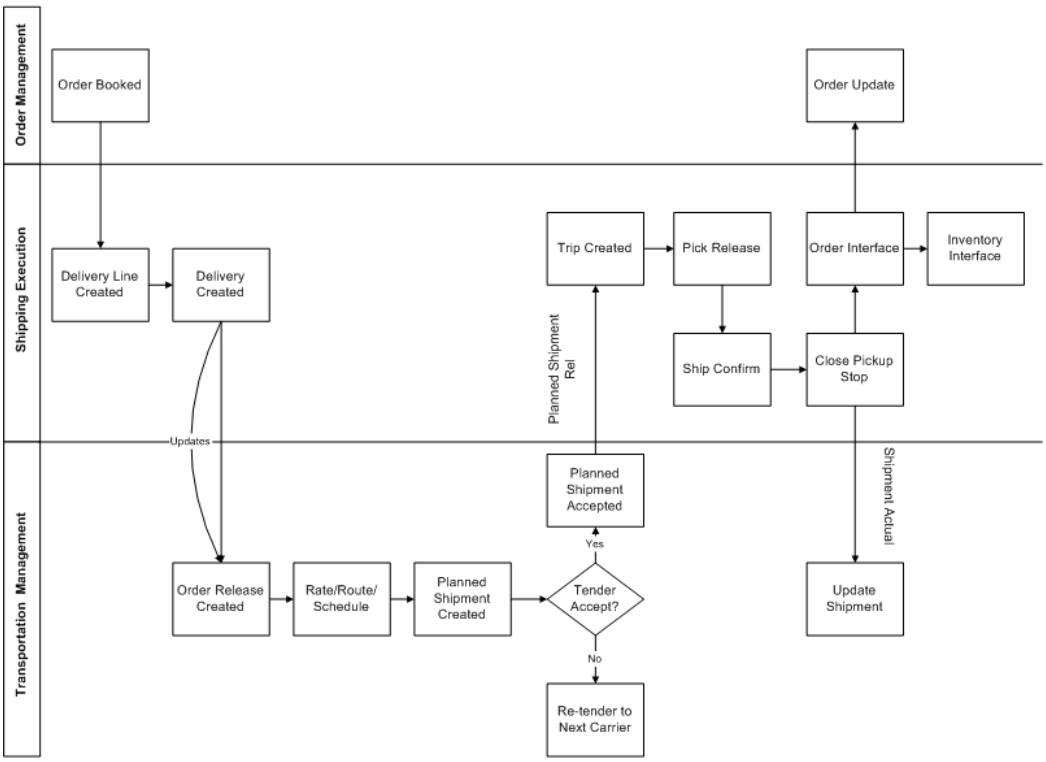
Oracle Shipping Execution

Overview of Oracle Transportation Management Integration with Oracle Shipping Execution

The integration of Oracle Transportation Management with Oracle Shipping Execution includes reference data synchronization, release transactions, planned shipment transactions, and actual shipment transactions. All of these transactions enable Oracle E-Business Suite to send and receive information to and from Oracle Transportation Management.

Transaction Cycle Between Oracle Shipping Execution and Oracle Transportation Management

The following figure shows the integration of Oracle Transportation Management with Oracle Shipping Execution, including trip creation, ship confirm, order interface, and inventory interface.



The figure displays the following steps to illustrate how deliveries are marked for internal processing:

1. Delivery creation: When a delivery with contents is created as Include for Planning, it is marked as Creation Required.

2. Shipping-Transportation Outbound interface concurrent request runs with the appropriate interface action parameter (Create or All Except ActualShipment). The concurrent request selects the creation-required deliveries and sends them to Oracle Transportation Management using the OTM XML release transaction. Order Releases are updated in Oracle Transportation Management based on these transactions.

3. Transportation planning activities then take place in Oracle Transportation Management for the new order releases, including carrier selection, rating, tendering, and so on, which results in the creation of shipments (equivalent to trips in Oracle Shipping Execution) to which the order releases are assigned.

4. After the shipment is created, and the tender is accepted, an automation agent can be activated in Oracle Transportation Management to trigger the PlannedShipment interface to an external system (BPEL) and sets its status in Oracle Transportation Management to SENT TO EBS_SENT. Default automation agents are delivered inactive in the E-Business Suite (EBS) domain and must be reviewed and copied

into the operational domain. An external system must also be defined for each outbound flow from Oracle Transportation Management. (Step by step instructions for this setup are available in OTM > Help > How To > EBS to OTM). This interface is used to transmit the shipments from Oracle Transportation Management to Oracle Shipping Execution to create the corresponding trips and trip stops and to assign the deliveries to them.

5. If the delivery is updated with changes that are relevant to transportation planning decisions (for example, change in delivery details weight), then the delivery is marked as Update Required.

6. The next run of the Shipping-Transportation Outbound interface concurrent request with the appropriate interface action parameter (Update or All Except ActualShipment) selects the update-required deliveries and sends them to Oracle Transportation Management using the OTM XML release transaction. Order Releases are updated in Oracle Transportation Management based on theses transactions.

7. Update to order releases might provoke changes in the routing decision and therefore change in the shipments configuration. Based on Oracle Transportation Management Automation agents, these changes trigger the PlannedShipment interface to update the corresponding trips in Oracle Shipping Execution.

8. Eventually, once deliveries of a trip are ship confirmed and all pick up stops of this trip are closed in Shipping Execution, the last pick up stop is marked as ActualShipment Required.

9. The next run of the Shipping-Transportation Outbound interface concurrent request with the appropriate interface action parameter (ActualShipment) selects the ActualShipment Required stops and sends their corresponding details to Oracle Transportation Management using the OTM XML ActualShipment transaction. Shipments and order releases are updated in Oracle Transportation Management based on these transactions (actual shipped quantities, vehicle information, and so on).

Ignore for Planning Trips and Deliveries

To allow "out of the cycle" expedited shipments, you create a delivery and set the status to Ignore for Planning, or set the status of an existing delivery to Ignore for Planning (for example, by unassigning the delivery from the Oracle Transportation Management issued trip).

Deliveries set to Ignore for Planning are not sent to Oracle Transportation Management for planning activities.

You can then create Ignore for Planning trips, assign deliveries to them, and ship confirm. After the pickup stops are closed, the deliveries are marked as Actual Shipment Required and are sent to Oracle Transportation Management through the next run of the Shipping-Transportation Outbound interface.

Visibility on Interface Activities Through Shipping Exceptions

For each interface operations (required or executed) shipping exceptions are logged against the delivery. For example, when a delivery is created in Shipping Execution, WSH_OTM_DEL_CREATE_REQ is logged, indicating that creation is required in Oracle Transportation Management. After the Shipping-Transportation Outbound interface concurrent has processed this delivery, the WSH_OTM_DEL_AWAITING_TRIP is logged against the delivery, indicating that the transaction has been transmitted and the delivery is now awaiting a planned trip from Oracle Transportation Management; however, interface processes are driven by delivery level and stops level interface flags, which are not visible to the user.

Changes for Allowed Actions and Updates to Shipping Entities

- Trips and trips stops: With the integration Oracle Transportation Management can be considered the "master system" for Include for Planning trips. Therefore, certain actions or updates to trips are not allowed in Shipping Execution when they are marked as Include for Planning (issued from Oracle Transportation Management). For example, it is not possible to add new stops or change their sequence.

- Deliveries and delivery details: Conversely, Shipping Execution is the "master system" for deliveries. Therefore, the majority of actions and updates are allowed. Certain actions have been disabled (for example Select Carrier and Get freight Costs) or function differently (assigning a delivery line with non-null weights to delivery marks the delivery as Update Required) or are prevented on Include for Planning deliveries, such as Assign to Trip.

Delivery Splitting

Oracle Transportation Management includes algorithms that split large deliveries across multiple parallel shipments or assign multiple equipments to the same trip. To avoid this, the integration avoids sending large deliveries to Oracle Transportation Management. Instead, integration:

1. Splits delivery lines with a net weight exceeding a defined net weight limit, ensuring that once packed, the delivery does not exceed the gross weight limit. This split is performed at delivery line import from Order Management or other sources.

2. Splits deliveries that exceed a defined gross weight limit. This split is performed during the Shipping-Transportation Outbound interface concurrent request on deliveries sent to the interface for creation or update.

Both weight limits are part of the shipping parameter setup.

Enabling Organizations

Oracle Transportation Management integration can be enabled at the organization level using the Shipping Parameters. Note the following behavior differences:

- Enabled organizations:

- Delivery details are created with the Include for Planning status by default. Integration with Oracle Transportation Management functions as described in this documentation.

- Enabled Organizations can be selected in the Shipping Transportation Outbound interface for transaction processing (if no organization is selected only transactions relative to enabled organizations will be transmitted to Oracle Transportation Management).

- Disabled organizations:
  - Delivery details are created as Ignore for Planning for planning

  - Disabled organizations cannot be selected in the Shipping Transportation Interface concurrent request for any interface actions

  - Delivery details, deliveries, and trips cannot be changed to Include for Planning.

Reference Data Integration

Certain data must be synchronized between the two systems using one of the following three methods:

- Manual synchronization: This data must be set and synchronized manually between the two systems:
  - Freight terms, FOB codes

  - UOMs: Weight UOM, Dimensions UOM, Distance UOM, Volume UOM, Quantity UOM, Time UOM

  - Currency codes

  - Service levels, Transport modes

  - Vehicle items

  - LPN types

  - Country codes

  The ID entered in Oracle Transportation Management and code entered in Oracle Shipping Execution must match exactly.

- Carrier and carrier sites: The carrier must be primarily set in Oracle E-Business Suite. A stand alone interface enables the interface to create the carriers in Oracle Transportation Management.

- Ship from ship to location customers; organizations; and items: No separate synchronization is needed for this information. Information needed by Oracle Transportation Management for these entities is sent along with the operational transactions (XML Release and ActualShipment).

XML Messages

The following XML messages are used to pass order information to and from Oracle Transportation Management:

- Location transaction: Location XML transaction is used to send carrier information to Oracle Transportation Management. This is achieved by running the Shipping-Transportation Carriers synchronization.

- Release transaction: Release XML transaction is used to send delivery information to Oracle Transportation Management by running the Shipping-Transportation Outbound Interface. After the interface has run, the XML can be viewed in the BPEL Process Manager.

- PlannedShipment transaction: PlannedShipment XML is used to send confirmation to Oracle Shipping Execution when a delivery or group of deliveries has been planned by Oracle Transportation Management and is ready to ship. This transaction is used to create trips, stops, and delivery legs in Shipping Execution based on the shipments created in Transportation Management. After the interface has run, the incoming PlannedShipment XML message is viewable in the BPEL Process Manager.

- ActualShipment transaction: ActualShipment XML is used to send ship confirmation information to Oracle Transportation Management when the pickup trip-stops of a trip are closed. The Shipping-Transportation Outbound Interface delivers the information. After you run the interface, you can view the XML in the BPEL Process Manager.

Related Topics

Oracle Shipping Execution XML Mapping, page A-40

Functional Changes with Oracle Transportation Management Installed

Delivery Splitting

Delivery splitting occurs after a delivery has been created in Oracle Shipping Execution and before the delivery information is sent to Oracle Transportation Management, whenever a delivery gross weight exceeds the Gross Weight Limit.

Delivery Splitting does not occur when delivery lines are packed, even if the packed line exceeds the weight limit. You must manually unpack and split these lines before sending to Oracle Transportation Management.

Delivery Splitting Example Max Gross Weight limit is set at 20 LBS:

Delivery Name (Before Split)	**Weight (Before Split)**
DL4451	35 LBS
Delivery Name (After Split)	**Weight (After Split)**
DL4451	20
(DL4460)	15

Two shipping parameters (located on the Delivery tab) are used to determine when a delivery or delivery line must be split to accommodate a carrier's capacity. See Shipping Parameters, page 3-27

Delivery Splitting Rules

Only Include for Planning deliveries are considered for splitting. LPNs are not split, instead, LPNs are added to child deliveries after the split takes place. Splitting cannot take place if:

- The delivery is assigned to a trip
- The delivery has Released to Warehouse or Staged lines
- The delivery's weights have been manually overridden
- The split cannot be performed without splitting an LPN
- The split cannot be performed without splitting delivery details
- Delivery is Content Firm

Delivery Line Splitting Rules

Delivery lines are split when the net weight of a line exceeds the Net Weight field on the Shipping Parameters window. The line is split to be equal to the Net Weight limit. If the split fails (due to an indivisible quantity), then the WSH_OTM_DET_SPLIT_FAILED exception is logged.

Note: The Gross Weight must exceed the Net Weight, otherwise the split will fail.

Packing

Any packing operation involving non-null weights in an enabled organization requires an update to Oracle Transportation Management and changes the delivery status to Update Required (UR). Overpick and underpick, in a pick-pack-ship flow, also requires an updated plan from Oracle Transportation Management, changing the status to UR.

Shipping Transactions Form Actions

When Oracle Transportation Management is implemented, some actions available on the Shipping Transactions Form function differently than they do without Oracle Transportation Management installed for Include for Planning deliveries and trips. Certain delivery actions, however, are disabled, prevented, or will function differently.

All Include for Planning deliveries that have been interfaced to Oracle Transportation Management are controlled by Oracle E-Business Suite; you can update them until ship confirmation.

All Include for Planning trips are controlled by Oracle Transportation Management until ship confirmation is run. All delivery assignments to trips are performed in Oracle Transportation Management; therefore, restrictions to what modifications you can make to trips within Oracle E-Business Suite will occur. These restrictions include the following:

- You cannot delete or cancel Include for Planning trips
- You cannot remove or add from/in trip stops Include for Planning trips
- You cannot change Trip stop sequences in Include for Planning trips
- Trips cannot be Firm or Firm Routing.
- All trips created in Oracle E-Business Suite are Ignore for Planning
- You cannot change Ignore for Planning trips to Include for Planning
- You cannot change Include for Planning trips to Ignore for Planning

The following tables describe (by trip, trip stop, delivery, and delivery details) how the Actions function with Oracle Transportation Management implemented. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite).

Note: The following tables include: Allowed (controlled by exception), which indicates that the ability to ship confirm is driven by the setup of OTM exceptions. For example, a delivery assigned to an OTM Trip Not Current might have the WSH_OTM_UPDATE_REQ or the WSH_OTM_DEL_AWAIT_TRIP exception logged, therefore ship confirm is possible if the setup is Information Only or Warning for theses exceptions.

Include for Planning Trips Changed Actions

Action	Delivery Created Not Assigned to Trip (Sent to OTM or Not)	Delivery Assigned to Trip, Not Current	Delivery Assigned to Trip, Current
Firm Routing	NA	Not Allowed	Not Allowed
Firm Routing and Contents	NA	Not Allowed	Not Allowed
Ignore for Planning	NA	Not Allowed	Not Allowed
Ship Confirm	NA	Allowed (controlled by exception)	Allowed (controlled by exception)
Unfirm	NA	Not Allowed	Not Allowed

Include for Planning Trips Allowed for Maintenance Attributes

Attribute
Trip Name
Seal Code
Routing instruction, operator
Vehicle information (organization code, item name, prefix, vehicle number)
Flex Fields

Include for Planning Trip Stops Changed Actions

Action	Delivery Created Not Assigned to Trip (Sent to OTM or Not)	Delivery Assigned to Trip, Not Current	Delivery Assigned to Trip, Current
Delete	NA	Not Allowed	Not Allowed
Insert New Stops	NA	Not Allowed	Not Allowed

Include for Planning Trip Stops Allowed for Maintenance Attributes

Attribute
Weight / Volume
Actual arrival / departure date
Departure fill %
Departure seal code
Unloading start end time
Flex fields

Include for Planning Deliveries Changed Actions

Action	Delivery Created Not Assigned to Trip (Sent to OTM or Not)	Delivery Assigned to Non-Current Trip (Waiting for OTM Re-Planning)	Delivery Assigned to Current Trip (Trip from OTM Up to Date)
Assign to Trip	Not Allowed	Not Allowed	Not Allowed
Auto-create Trip	Not Allowed	Not Allowed	Not Allowed

Cancel Ship Method	Disabled (Not available in role definition when OTM is installed).	Disabled	Disabled
Get Freight Costs	Disabled (Not available in role definition when OTM is installed).	Disabled	Disabled
Ignore for Planning	Allowed	Allowed	Delivery will be Ignore for Planning if unassigned from the OTM trip.
Pick Release Form	Allowed	Allowed	Allowed
Pick and Ship	Allowed (controlled by exception)	Allowed (controlled by exception)	Allowed
Pick, Pack, and Ship	Allowed (controlled by exception, delivery will be ignored for planning in the process)	Allowed (controlled by exception)	Allowed Packing will update tms_interface_flag of the delivery. Based on the exception setting, the delivery may or may not be ship confirmed.
Select Carrier	Disabled (Action is not available in role definition when OTM is installed).	Disabled	Disabled
Send Outbound Message	Allowed for Third Party Warehouse. Disabled for Carrier Manifesting	Allowed for Third Party Warehouse. Disabled for Carrier Manifesting	Allowed for Third Party Warehouse. Disabled for Carrier Manifesting
Ship Confirm	Allowed (controlled by exception, delivery will be ignored for planning in the process)	Allowed (controlled by exception)	Allowed (controlled by exception)

Unassign from Trip	NA	Allowed. Will set the delivery to Ignore for Planning	Allowed. Will set the delivery to Ignore for Planning
UPS Address Validation	Disabled. (Action is not available in role definition when OTM is installed).	Disabled	Disabled
UPS Rate and Service	Disabled. (Action is not available in role definition when OTM is installed).	Disabled	Disabled
UPS Time in Transit	Disabled. (Action is not available in role definition when OTM is installed).	Disabled	Disabled

Include for Planning Deliveries Allowed for Maintenance Attributes

Attribute	Allowed / Disallowed
Delivery name	Allowed
Freight term code	Allowed
Weights / volume	Allowed
Reason of transport	Allowed
Description	Allowed
Ship method	Allowed if delivery is not assigned to a trip. Disabled if assigned to a trip.

Carrier ID	Allowed if delivery is not assigned to a trip. Disabled if assigned to a trip.
Service level	Allowed if delivery is not assigned to a trip. Disabled if assigned to a trip.
Mode of transport	Allowed
Number of LPNs	Allowed
Earliest / latest pickup dates	Allowed
Earliest / latest drop off dates	Allowed
Flex field update	Allowed

Include for Planning Delivery Lines (Details) Changed Actions

Action	Delivery Detail Not Assigned to Delivery	Delivery Created Not Assigned to Trip (Sent to OTM or Not)	Delivery Assigned to Trip, Not Current	Delivery Assigned to Trip, Current
Auto-create Trip	Not Allowed	Not Allowed	Not Allowed	Not Allowed
Pick and Ship	Allowed (Delivery details will be changed to Ignore for Planning).	Not Allowed	Not Allowed	Not Allowed
Pick, Pack, and Ship	Allowed (Delivery details will be changed to Ignore for Planning).	Not Allowed	Not Allowed	Not Allowed

UPS Address Validation	Disabled (Action is not available in role definition when OTM is installed).	Disabled	Disabled	Disabled
UPS Rate and Service	Disabled (Action is not available in role definition when OTM is installed).	Disabled	Disabled	Disabled
UPS Time in Transit	Disabled (Action is not available in role definition when OTM is installed).	Disabled	Disabled	Disabled

Include for Planning Delivery Details Allowed for Maintenance Attributes

Attribute	**Allowed / Disallowed**
Requested Quantity	Allowed from Order Management
Cancelled Quantity	Allowed from Order Management
Shipped Quantity	Allowed
Secondary Quantities	Allowed from Order Management
Lot Number	Allowed
Serial Number / to Serial Number	Allowed
Weights and Volumes	Allowed
Requested / Schedule Ship Date	Allowed from Order Management

Customer PO	Allowed from Order Management

Related Topics

Shipping Exceptions, page 3-28

Delivery Interface Statuses

The following interface statuses are used by Oracle Shipping Execution to track the required actions for Oracle Transportation Management integration. These interface statuses are internal and not visible through the user interface.

Delivery Interface Statuses:

- CREATION_REQUIRED (CR): Delivery must be created in Oracle Transportation Management
- UPDATE_REQUIRED (UR): Delivery has been updated and must be sent to Oracle Transportation Management
- DELETE_REQUIRED (DR): Delivery has been emptied or has been ignored for planning (no delivery lines or delivery lines with empty LPNs only) and must be deleted in Oracle Transportation Management
- AWAITING_ANSWER (AW): Create or Update has taken place on a delivery and an answer is expected from Oracle Transportation Management
- ANSWER_RECEIVED (AR): An answer has been received from Oracle Transportation Management
- NOT_TO_BE_SENT (NS): Delivery is either Ignore for Planning or has no delivery lines (or has delivery lines empty LPNs)
- COMPLETED (CMP): Delivery has been ship confirmed and pick up trip stops are closed
- CREATE_IN_PROCESS (CP): Creation is in process
- UPDATE_IN_PROCESS (UP): Update is in process
- DELETE_IN_PROCESS (DP): Deletion is in process

Trip Stops Interface Statuses:

- ACTUAL_SHIP_REQUIRED (ASR): Last pickup trip stop is set to this status after it is closed.

The TMS interface flag of the last pick up stop is set to ASR when the stop is closed as long as the following conditions are met:

- Trip does not include any deliveries that belong to third party warehousing
- Trip does not include any consolidated deliveries
- Trip includes at least one delivery that belongs to an Oracle Transportation Management enabled organization

- COMPLETED (CMP): Last pickup trip stop is set to this status once the ActualShipment transaction has been sent to Oracle Transportation Management
- Shipment in Process (ASP): The trip and stop is in the process of being sent to Oracle Transportation Management.
- NOT TO BE SENT (NS): Used when a trip stop is not to be sent to Oracle Transportation Management.

Planned Shipment Interface Message Corrections

You view and correct interface errors on the Shipment Message Corrections window. Any Oracle Transportation Management interface error corrections are viewed and corrected in Oracle Shipping Execution Interface Message Corrections window. The integration of Oracle Transportation Management PlannedShipment includes changes to the Shipment Message Corrections window. The Trip tab includes the following new fields:

- Freight Terms
- Vehicle Item Name
- Mode of Transport
- Service Level

The Trip Stops tab includes the new field Time Zone Code.

Viewing Oracle Transportation Applied Freight Costs

Oracle Transportation Execution applied freight costs are viewed on the Freight Costs window within Oracle Shipping Execution. (From the Shipping Transactions form, find your delivery and invoke the Action Assign Freight Costs). After the PlannedShipment message has been received, the freight costs are viewable at the delivery level as OTM Freight Cost.

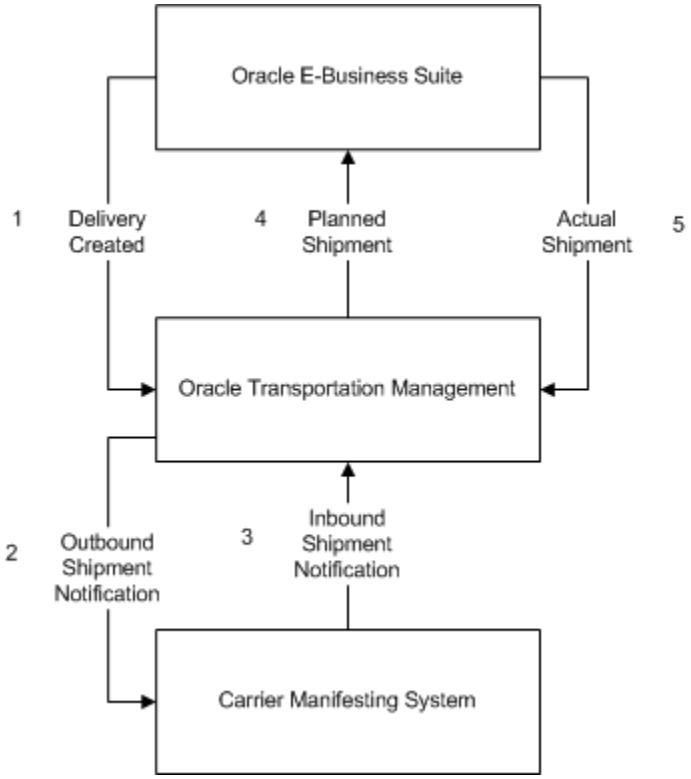
Applied freight costs are allocated to order lines through the use of the Order

Management interface.

Carrier Manifesting

When Oracle Transportation Management is integrated, all Oracle E-Business Suite enabled carrier manifest features are disabled. All carrier manifest deliveries are sent to Oracle Transportation Management as non-carrier manifesting deliveries. Oracle Transportation Management manages the carrier manifest system outside of the Oracle E-Business Suite.

Carrier Manifesting with Oracle Transportation Management



Third Party Warehousing

Third party warehousing functionality remains the same in Oracle E-Business Suite with or without Oracle Transportation Management integrated. Oracle Transportation Execution is not required to use Third Party Warehousing.

> **Note:** Deliveries created by the third party warehouse instance, when Oracle E-Business Suite is used to manage the third party warehouse) are communicated to Oracle Transportation Management for planning.

See: *Oracle Transportation Execution User's Guide*

Oracle Warehouse Management

Oracle Warehouse Management supports several methods to ship, also called mobile ship confirm, the deliveries using radio frequency (RF) devices. The methods include the following:

- Quick Ship
- LPN Ship
- Dock Door Ship
- Direct Ship

If the delivery lines and deliveries are created with Include for Planning, but are not yet sent to Oracle Transportation Management for planning, then Oracle Warehouse Management will allow ship confirmation using any of the above methods after changing the deliveries and delivery lines to Ignore for Planning.

If the associated delivery is Include for Planning and the delivery is not yet planned, then either a Warning (proceed and complete the transaction) or Error (cannot proceed) message is issued depending on the severity of the TMS_Flag status for the delivery. The following exceptions determine the severity:

- WSH_OTM_DEL_CREATE_REQ
- WSH_OTM_DEL_UPDATE_REQ
- WSH_OTM_DEL_AWAIT_TRIP

> **Note:** For example, a delivery assigned to an OTM Trip Not Current might have the WSH_OTM_UPDATE_REQ or the WSH_OTM_DEL_AWAIT_TRIP exception logged, therefore ship confirm is possible if the setup is Information Only or Warning for theses exceptions.

See: Shipping Exceptions for more detail.

Automated Shipping (Oracle Shipping Execution)

Oracle Shipping Execution enables automated shipping flows to speed the various shipping processes. The automated flows are available through actions on the Shipping Transactions Form. See: *Oracle Shipping Execution User's Guide* for information on One Step Shipping.

The automated flows are enabled with the integration of Oracle Transportation Management; however, in some cases the functionality of the flows changes with the

integration of Oracle Transportation Management, including the following:

Action	Delivery – Ignore for Planning	Delivery not on a Trip Waiting for OTM Planning	Delivery on a Trip Waiting for OTM Re-Planning	Delivery on a Trip Planned by OTM	Delivery Details
Auto Ship Confirm	Allowed	Allowed (controlled by exception, delivery will be ignored for planning in the process)	Allowed (controlled by exception)	Allowed (controlled by exception)	NA
Process Deliveries SRS	Allowed and creates Ignore for Planning Trip	Not Allowed	Not Allowed	Not Allowed	Allowed

Implementation of Oracle Transportation Management with Oracle Shipping Execution

Oracle Transportation Management (OTM) External System Configuration

Creating External Systems in Oracle Transportation Management to receive the OTM Outbound messages (Planned Shipment and Voucher)

An external system is required for each flow coming out of Oracle Transportation Management, for example the Voucher Interface.

To create an External System:

1. Retrieve the WSDL for the BPEL flow and save the WSDL locally to your hard drive. Note that the endpoint location will be used as the Service Endpoint when setting up the external system.

2. Create the external system in Oracle Transportation Management with Web Services defined.

    1. Enter the External System ID.

    2. Navigate to the Web Services region and click N to create a new web service.

3. Within the Web Service Manager page, click N to create a new WSDL document.

4. Click Document Detail.

5. Within the ID field, enter an ID, for example WSHRECEIVEPSHIPMENTFROMOTM or OTMVOUCHERTOORACLEAPINVOICE.

6. Within the Storage field, select Text.

7. Click Upload to upload the WSDL file you retrieved from the BPEL server.

   Mime Type is automatically populated after the WSDL file is uploaded.

8. Click Finished.

9. Click Service Details.

10. Within the Web Service Details page, click Service Details.

11. Enter a Service ID, for example WSHRECEIVEPSHIPMENTFROMOTM or OTMVOUCHERTOORACLEAPINVOICE.

12. Review the Operations section. The process operation should, by default, be designated as For Integration.

    At least one operation must have For Integration enabled.

3. Enter the Service Endpoint and click Save and Finished.

   The Service Endpoint is the URL from the BPEL WSDL endpoint location.

4. On the External System, enable the Trans Ack Expected check box.

   Enabling the Trans Ack Expected check box indicates that a TransmissionAck XML is expected to be returned by the BPEL flow. WshReceivePShipmentFromOtm and OtmVoucherToOracleApInvoice both return the TransmissionAck.

5. Enable the Use Ack Status check box (for Voucher External System only).

   Enabling the Use Ack Status check box indicates that the status in the TransmissionAck should be used as the status of the transmission, for example PROCESSED or ERROR.

6. Click Finished to save your work.

Note: When sending transmissions to these external systems, you

must use the Notify Type of SERVICE.

Profile Options and Parameters

During implementation, you set a value for each user profile option to specify how Shipping Execution controls access to and processes data. Generally, the system administrator sets and updates profile values. See: Setting User Profile Options, *Oracle Applications System Administrator's Guide*.

The following table indicates whether you (the user) can view or update profile options and at which System Administrator level that profile options updated. The System Administrator level includes User, Responsibility, Application, and Site levels. Profile options are considered either optional or required:

- Optional: An optional profile option indicates that a value is not mandatory. You can either provide a value or leave the default value as is.
- Required: A required profile option indicates that a value is mandatory.

> **Note:** If you are using a multi-organization structure, your system administrator must change the OM Item Validation Organization profile option to be visible and updatable at the responsibility level. This change enables Shipping Execution to apply the default tax code and revenue account information correctly. See: Setting Up, Multiple Organizations in Oracle Applications.

The following terms are used in the table to identify if you can view or update profile option information:

- Updatable: You can update the profile option
- View Only: You can view the profile option value but you cannot change it
- No Update or View: You cannot view or change the profile option value

Profile Option	User	Resp	App	Site	Required?	Default Value
OTM: Integration Enabled				Updatable	Yes	Neither

Profile Option	User	Resp	App	Site	Required?	Default Value
OTM: Domain Name				Updatable	Yes	Blank/Empty
OTM: Domain User				Updatable	Yes	Blank/Empty
OTM: Domain Password				Updatable	Yes	Blank/Empty
OTM: Proxy Server				Updatable	Yes	Blank/Empty
OTM: Proxy Port				Updatable	Yes	Blank/Empty
OTM: Servlet URI				Updatable	Yes	Blank/Empty
OTM: Corporation Country Code				Updatable	Yes	Blank/Empty
WSH: BPEL Domain Name				Updatable	Yes	Blank/Empty
WSH: BPEL Webservice URI for OTM				Updatable	Yes	Blank/Empty

Profile Option	User	Resp	App	Site	Required?	Default Value
WSH: Currency Conversion Type for OTM				Updateable	No	Corporate
WSH: Default Shipping User for OTM				Updatable	Yes	Blank/Empty
WSH: Default Shipping Responsibility for OTM				Updatable	Yes	Blank/Empty
Server Timezone				Updatable	Yes	Blank/Empty
Client Timezone	Updatable				Yes	Blank/Empty
Enable Timezone Conversions				Updatable	Yes	Blank Empty

Profile Option	Used By
OTM: Integration Enabled	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data) and Purchasing Integration
OTM: Domain Name	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data) and Purchasing Integration

Profile Option	Used By
OTM: Domain User	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data) and Purchasing Integration
OTM: Domain Password	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data) and Purchasing Integration
OTM: Proxy Server	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data)
OTM: Proxy Port	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data)
OTM: Servlet URI	Outbound (Sales Order Integration)
OTM: Corporation Country Code	Outbound (Ref Data)
WSH: BPEL Domain Name	All outbound from WSH to OTM integration
WSH: BPEL Webservice URI for OTM	All outbound (Sales Order Integration, Outbound Deliveries Integration, and Ref Data)
WSH: Currency Conversion Type for OTM	Planned Shipment Request to process the inbound requests coming from OTM and in RIQ
WSH: Default Shipping User for OTM	Only for inbound from OTM to WSH integration
WSH: Default Shipping Responsibility for OTM	Only for inbound from OTM to WSH integration
Server Timezone	All
Client Timezone	All
Enable Timezone Conversions	All

OTM: Integration Enabled

Oracle Shipping Execution and Oracle Purchasing use this profile to determine which components of the Oracle Transportation Management integration are enabled.

Valid Values include:

- Neither: Oracle Transportation Management integration with Order Management and Purchaisng is not enabled.
- Order Management Only: Only the sales order outbound flow is integrated with Oracle Transportation Management; inbound purchasing flow is not.
- Purchasing Only: Only the purchase order flow is integrated with Oracle Transportation Management; outbound sales orders are not.
- Both Order Management and Purchasing: Both Order Management and Purchasing transactions integrations are enabled with Oracle Transportation Management.

OTM: Domain Name

Oracle Shipping Execution and Oracle Purchasing use this profile. It is communicated on the outbound messages from Oracle E-Business Suite Applications and used by Oracle Transportation Management to identify an instance of Oracle E-Business Suite. The profile must be a valid domain name defined in Oracle Transportation Management.

OTM: Domain User

Oracle Shipping Execution and Oracle Purchasing use this profile. It must be a valid user in Oracle Transportation Management and is not case sensitive.

OTM: Domain Password

This profile contains the password for the Oracle Transportation Management domain user name used by Oracle Shipping Execution and Oracle Purchasing. This profile is case sensitive.

OTM: Proxy Server

This profile is used to store the HTTP proxy server on the Oracle E-Business Suite instance. Oracle Shipping Execution uses this profile to make a connection to an Oracle Transportation Management instance.

OTM: Proxy Port

This profile is used to store the port number for the HTTP proxy server on Oracle E-Business Suite instance. Oracle Shipping Execution uses this profile to make a connection to an Oracle Transportation Management instance.

OTM: Corporation Country Code

This profile is used by Oracle Shipping Execution for customer and carrier synchronization. The code in this profile identifies the default country code of the headquarters' carriers and customers.

OTM: Servlet URI

This profile is used to store Oracle Transportation Management Servlet URI for the Oracle E-Business Suite instance to connect to Oracle Transportation Management. This is used for freight estimation at sales order integration only.

WSH: BPEL Domain Name

This profile is used to store the BPEL domain information, which is used by the outbound and carrier synchronization concurrent programs to enable the system to invoke corresponding programs. The default value is Default.

WSH: BPEL Web Service URI for OTM

This profile is used by freight estimation at sales order, outbound orders, and reference data integration. It stores the HTTP location of the BPEL Process Manager and tells the concurrent request where the BPEL outbound processes are located.

WSH: Currency Conversion Type for OTM

This profile is used for currency conversion type in RIQ and Planned Shipment. The profile provides a list of values containing all conversion types defined in the system.

WSH: Default Shipping User for OTM

This profile determines the default user that receives the inbound messages from Oracle Transportation Management. The BPEL process sends the inbound message to the Oracle E-Business Suite user identified by this profile. This profile option is required and there is no default value.

WSH: Default Shipping Responsibility for OTM

This profile determines the user responsibility required to receive inbound messages from Oracle Transportation Management. The BPEL process sends the inbound message to the default Oracle E-Business Suite user with the responsibility defined by this profile. This profile option is required and there is no default value.

Server Timezone

This profile determines the time zone in which the server has been set to run, or the standard corporate time zone. This profile should be set at the site level and should not be changed once set, as existing data will not be updated.

Client Timezone ID

This profile specifies the user preferred time zone. This profile is used when your corporate time zone differs from your local time zone. This profile is set at the user level and is available from the self service Preferences window and from the forms-based Profiles window.

Enable Timezone Conversions

This profile enables the automatic conversion of all date and time fields to the preferred user time zone. If set to No, then the date and time fields default to the corporate time zone.

This profile option must be set when integrating your applications with Oracle Transportation Management. If it is not set, then the BPEL process will fail in Purchasing because of the lack of time zone conversions.

Shipping Parameters

When Oracle Transportation Management is installed, the Shipping Parameters window is modified as follows:

- The Transportation tab is disabled.
- The Delivery tab includes the Transportation region and the Delivery Weight Limits region. These regions contain the following:
  - **Enabled:** The Enabled check box determines whether Oracle Transportation Management integration is enabled for a given organization. This parameter can be enabled only if Oracle Transportation Management is installed and the profile option: OTM: Integration Enabled is set to Order Management Only or Both Order Management and Purchasing.

    Note: Enabling an organization is not reversible: An enabled organization cannot be disabled.

  - **Delivery Detail Max Net Weight:** The Max Net Weight is compared to the weight of a delivery line to ensure that the delivery line weight is not greater than the Max Net Weight, and that splitting is done at delivery line import. This field is not mandatory, and the default value is null; however, if a Max Gross Weight is entered, then the Max Net Weight becomes a required field (and vice versa). The Max Net Weight must be less than or equal to the Max Gross Weight.
  - **Delivery Max Gross Weight:** This weight is compared to the total weight of the delivery lines within a delivery to ensure that it is not greater than the Max

Gross Weight. This field is not mandatory and the default value is null; however, if a Max Net Weight is entered, then the Max Gross Weight becomes a required field (and vice versa). The Max Gross Weight must be greater than or equal to the Max Net Weight.

- **UOM:** This field is automatically populated from the Global Shipping Parameters window, if specified. This field cannot be updated in the Shipping Parameters window.

  Note: The Global Parameters UOM is not a mandatory field in the Global Shipping Parameters window. Therefore, the user will have to enter it manually in Global Parameters window.

Global Shipping Parameters

The Global Shipping Parameters window is modified by the installation of Oracle Transportation Management. The modifications are as follows:

- The Transportation tab is completely disabled. This tab is used with the installation of Oracle Transportation Execution only.
- The Delivery Date Calculation Method field is moved from the Transportation tab to the General tab.

Shipping Exceptions

During the shipping and transportation of goods, unforeseen shipping exceptions can occur that conflict with the actual requirements of the shipper, transportation carrier, or customer. Tracking exceptions can also be helpful to identify and correct defects in the business process. Seeded exceptions are logged automatically against delivery lines, LPNs, deliveries, and trip stops when specific events occur. The following exceptions are seeded with the integration of Oracle Transportation Management:

Note: Oracle Transportation Management exceptions cannot be logged manually.

- **Oracle Transportation Management Interface Exceptions:**
  - WSH_OTM_DEL_DELETE_REQ: This exception is a delivery level exception that is logged when a Delete transaction must be sent to Oracle Transportation Management. Seeded value is Information Only, recommended setting is Information Only.

- WSH_OTM_DEL_CREATE_REQ: This exception is a delivery level exception that is logged when a Create transaction must be sent to Oracle Transportation Management. Seeded value is Warning, recommended setting is Error, Warning, or Information Only.

- WSH_OTM_DEL_UPDATE_REQ: This exception is a delivery level exception that is logged when a Update transaction must be sent to Oracle Transportation Management. Seeded value is Warning, recommended setting is Error, Warning, or Information Only.

- WSH_OTM_DEL_AWAIT_TRIP: This exception is a delivery level exception that is logged when a Create or Update transaction has been sent to Oracle Transportation Management. Seeded value is Warning, recommended setting is Error, Warning, or Information Only.

- WSH_OTM_DEL_DELETED: This exception is logged when the delivery is set to Ignore for Planning or the delivery has no associated delivery lines and has been deleted in OTM. Seeded value is Information Only as is the recommended setting.

- WSH_OTM_UOM_SETUP: This exception is logged when the trip fails the ActualShipment interface because the Shipping Parameter weight or volume UOM Class or because corresponding inventory base UOMs were not set up. Seeded value is Information Only as is the recommended setting.

- WSH_OTM_SHIPMENT_ERROR: This exception is logged when an error occurs while processing data from Oracle Transportation Management. Seeded value is Error as is the recommended setting.

- WSH_OTM_SHIPMENT_REC: This exception is logged when a response message has been received from Oracle Transportation Management. Seeded value is Information only, as is the recommended setting.

- WSH_OTM_INVALID_LOC_ERROR: This exception is logged when the response message from Oracle Transportation Management includes an invalid stop location. Seeded value is Error as is the recommended setting.

- **Delivery Detail Import Splitting Exception:**

  WSH_OTM_DET_OVERSIZED: This exception is logged when the delivery detail failed to be split at delivery detail import. Seeded value is Information Only, recommended setting is Error, Warning, or Information Only.

- **OTM Interface Splitting Exceptions:**

  - WSH_OTM_DEL_SPLIT_FAIL: This exception is logged when Oracle Shipping Execution failed to split a delivery. Seeded value is Information Only,

recommended setting is Error, Warning, or Information Only.

- WSH_OTM_DEL_SPLIT: This exception is logged when Oracle Shipping Execution has successfully split a delivery. This exception is used when the delivery is split into five or less child deliveries. The exception is logged against the parent delivery. Seeded value is Information Only as is the recommended setting.

- WSH_OTM_DEL_SPLIT_LARGE: This exception is logged when Oracle Shipping Execution has successfully split a delivery. This exception is used when the delivery is split into six or more child delivery lines. The exception is logged against the parent delivery. Seeded value is Information Only as is the recommended setting.

- WSH_OTM_DEL_SPLIT_CHILD: This exception is logged when Oracle Shipping Execution has created the child delivery after the split. The exception is logged against the child delivery. Seeded value is Information Only as is the recommended setting.

- WSH_OTM_DEL_OVERSIZED: This exception is logged when Oracle Shipping Execution transportation interface rejects a delivery that exceeds the gross weight limit, while the interface parameter Auto Split Deliveries is set to No. Seeded value is Information Only, recommended setting is Error, Warning, or Information Only.

Concurrent Programs

Oracle Transportation Management provides the Oracle E-Business Suite with the following concurrent programs:

- Shipping - Transportation Carrier Synchronization

- Shipping - Transportation Outbound Interface

- Shipping - Transportation Planned Shipment Interface

  Note: If an order release is not deleted in Oracle Transportation Management after running the Shipping-Transportation outbound *Delete* interface, ensure that the delete transaction is processed before the other delivery related transactions. For example, you could create a concurrent request set that includes the different interface actions in the following order:

  1. Delete

2. Update

3. Create

or, alternatively:

1. Delete

2. All except actual shipment

Shipping - Transportation Carrier Synchronization

Carriers and carrier sites are defined in Oracle Shipping Execution; however the implementation of Oracle Transportation Management includes changes to the Carrier form. The following changes are part of the integration of Oracle Transportation Management:

- When Oracle Transportation Management is not installed, all fields on the Rating, Payment tab are disabled with the exception of the Enable Manifesting field.
- When Oracle Transportation Management is installed, all fields on the Rating, Payment tab are disabled with the exception of the fields in the Freight Payment and Audit region (that is, the Supplier and Default Supplier Site fields).
- When Oracle Transportation Management is installed, the Mode Limits tab is disabled.
- When Oracle Transportation Management is installed, the Mode Limits tab, within the Services tab, is disabled.
- When Oracle Transportation Management is installed, the Transportation tab within the Addresses/Sites tab, is disabled with the exception of the Supplier Site field.

The Shipping - Transportation Carrier Synchronization concurrent program enables Oracle E-Business Suite to communicate carrier and carrier site information to Oracle Transportation Management through the use of the Location XML transaction. The carrier and carrier site information from the Oracle E-Business Suite tables/columns is interfaced to Oracle Transportation Management tables/columns through the concurrent program.

During the implementation of Oracle Transportation Management, the Shipping - Transportation Carrier Synchronization concurrent program is executed to move all carrier and carrier site data from the Oracle E-Business Suite tables / columns to the Oracle Transportation Management tables/columns. After the implementation is complete, the concurrent program can be run whenever a Carrier/Carrier Site is updated or new Carriers and Carrier Sites are created.

BPEL is used to control the flow of data sent by the concurrent program.

Interface Parameters

The Shipping - Transportation Carriers Synchronization is executed from the Interfaces menu. The program includes the following parameters:

- Carrier Name From: Carrier name range low.
- Carrier Name To: Carrier name range high.
- Last Date Update From: If left blank, then the program will apply to all carriers within the restrictions of the other parameters defined.
- Last Date Update To: If left blank, then the program will apply to all carriers within the restrictions of the other parameters defined.

Transferred Carrier Data

The following table details all carrier data, whether Oracle E-Business Suite or Oracle Transportation Management owns the data, and details how (if at all) the data is transferred from one to the other. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Transferred Carrier Data

EBS Entity	OTM Entity	Owner	Transfer Data Method
Vehicle Types	Equipment Types / Groups	OTM	None
Carrier Commitments	Carrier Commitments	OTM	None
Vehicle Availability	Carrier Capacity	OTM	None
Carriers	Corporation ID	EBS	From EBS to OTM
Carrier Sites	Location ID	EBS	From EBS to OTM
Service Levels	Rate Service	EBS	Manual
Modes	Mode	EBS	Manual

Calendars (Shipping, Receiving, and Carrier)	Calendars	OTM	None

Shipping - Transportation Outbound Interface

The Shipping-Transportation Outbound Interface is executed to pass Oracle Shipping Execution information to Oracle Transportation Management. The interface passes the information to BPEL using XML.

The Shipping-Transportation Outbound Interface includes the following actions:

- Delete: Send all Ignore for Planning deliveries and deliveries with no delivery lines (exception being empty LPNs as delivery lines) that must be removed from Oracle Transportation Management.
- Create: Send all Include for Planning created deliveries to Oracle Transportation Management using the Release XML transaction.
- Update: Send all updated Include for Planning deliveries to Oracle Transportation Management.
- ActualShipment: Collect all of the Include for Planning and Ignore for Planning trips and send the trips to Oracle Transportation Management. Only trips with all pickup stops closed are included in the ActualShipment interface.

Shipping-Transportation Outbound interface includes the following parameters:

The interface is triggered at the BPEL process.

Interface Parameters

- Interface Action:
  - Create: Send all Include for Planning created deliveries to Oracle Transportation Management
  - Update: Send all Include for Planning updated deliveries to Oracle Transportation Management
  - Delete: Send all deliveries that must be removed from Oracle Transportation Management
  - ActualShipment
  - Create, Update: Send all Include for Planning created or updated deliveries to Oracle Transportation Management

    - All Except Actual Shipment: Send all Include for Planning created and updated deliveries to Oracle Transportation Management and all deliveries that must be deleted in Oracle Transportation Management

- Auto Split Deliveries: If set to Yes, then deliveries with weight greater than the gross weight specified in Shipping Parameters is split automatically. If set to No, then deliveries with a weight greater than the weight specified in Shipping Parameters are not automatically split. This parameter is disabled if ActualShipment or Delete is the selected Interface Action.

- Ship From Organization: Specify the organization from which you are submitting deliveries and stops. If left as Null, then all Transportation enabled organizations are selected. This parameter is disabled when the interface action is Actual Shipment.

- Trip Range: The range of trips to be submitted. This field is disabled unless ActualShipment is the Interface Action.

- Delivery Range: The range of deliveries to be submitted. These fields are not applicable when ActualShipment is selected as the Interface Action. If entered while action is Actual Shipment, then a warning message is issued by the concurrent request. The value entered is ignored by the process.

- Pick Up Date Range: Delivery pick-up date range. These fields are not applicable and not used for processing when ActualShipment is selected as the Interface Action.

- Number of Child Processes: The number of child batches to be run in parallel.

- Transactions Per Batch: Number of delivery or trip transactions that are run per batch. If this number is exceeded, then another concurrent request is run in parallel to execute the remaining transactions.

When scheduling the Shipping-Transportation outbound interface, it is recommended that you ensure that the Delete action is processed with the highest priority. For example, by scheduling the action with a higher frequency, or by creating a concurrent request set that performs the action ahead of other interface actions. This lowers the risk of double assignment of ship units or order release lines in Oracle Transportation Management, which might prevent proper deletion of the order release.

Reference Data and Mapping

Item, Customer/Customer Site, and Organizations/Ship From Locations are included as reference data that is sent as part of the Shipping-Transportation Outbound Interface concurrent request.

Related Topics

Item XML Mapping, page A-62

Customer XML Mapping, page A-62

Customer Site XML Mapping, page A-62

Organization XML Mapping, page A-62

Carrier XML Mapping, page A-54

Carrier Site XML Mapping, page A-54

4

Oracle Payables

Overview of Oracle Transportation Management Integration with Oracle Payables

Oracle Transportation Management integrates with Oracle Payables to enable freight payment. Oracle Transportation Management performs an audit and approval of freight payments, and then passes the payment information to Oracle Payables, through the use of the Send Voucher interface. The Send Voucher interface transmits the voucher data to Oracle Payables through BPEL. The Payables Open Interface Import interface is run to import the vouchers into the Oracle Payables tables. The invoice is then created, validated, and ultimately paid in Oracle Payables.

Send Voucher Interface

The Send Voucher interface enables you to send freight payment vouchers from Oracle Transportation Management to Oracle Payables through the use of Oracle Transportation Execution external systems and BPEL

Interface Parameters

The following defines the setup for the Voucher Interface.

1. Within Oracle Transportation Management, define an external system to send to the BPEL instance. See: Oracle Transportation Management External System Configuration.

   The BPEL instance will be configured as a web service in Oracle Transportation Management and each outbound flow requires its own web service and external system. Further details regarding how to configure the OTM External System are available in the OTM Help documentation (Help > How To > EBS to OTM).

2. Select the voucher that you are sending.

3. Run the Action Send Voucher Interface.

4. Select the External System that is configured with the Web Service for BPEL.

5. Set the Notify Type to Service.

You can also configure an automation agent to trigger the voucher to be sent to E-Business Suite automatically.

Implementation of Oracle Transportation Management with Oracle Payables

The implementation of Oracle Transportation and Oracle Payables consists of the APInvoice XML transaction. The XML mapping is detailed in the Oracle Payables XML Mapping, page A-7 section of the XML Mapping appendix.

5

Oracle Purchasing

Overview of Oracle Purchasing Integration with Oracle Transportation Management

Oracle Transportation Management integrates with Oracle Purchasing, enabling you to manage inbound freight from your suppliers.

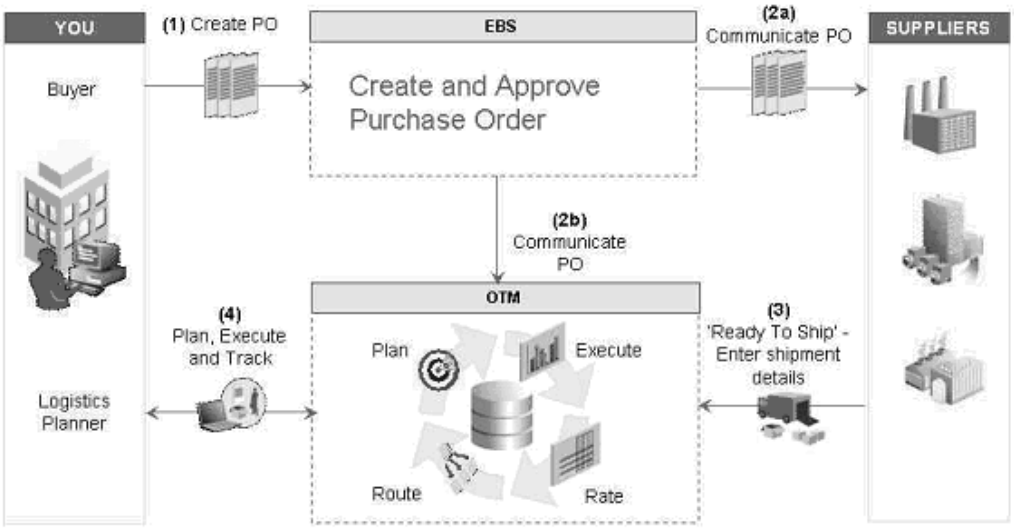
The integration of Oracle Transportation Management enables you to plan and track the progress and status of inbound purchase order-related shipments. Purchase orders created in Oracle Purchasing are communicated to Oracle Transportation Management after approval, enabling you to execute (rate, route, track, and reconcile) the related shipment. Purchase order changes are also communicated to Oracle Transportation Management upon re-approval in Oracle Purchasing.

As part of the shipment process, Oracle Transportation Management enables suppliers to submit "ready to ship" information.

After shipping takes place, purchasing agents access carrier-provided shipment status updates within Oracle Transportation Management. After goods are delivered, invoices for freight payment are collected and processed for payment.

> **Note:** You must define item weights and volumes as well as item container weights, volumes, and dimensions in Oracle E-Business Suite. The accuracy of Oracle Transportation Management planning is decreased if these attributes are not properly defined.

Inbound Purchase Order Flow



Functional Changes with Oracle Transportation Management Installed

Responsibility for Inbound Freight

Purchasing is enhanced with the Professional Buyers Work Center and web-based user interfaces. These interfaces are in addition to the forms user interfaces. The Purchase Order can be authored both in the web-based user interface as well as in application forms. In the forms version of the Purchase Order the inbound freight responsibility is determined by the purchase order header attribute named Transportation Arranged. This attribute is set in the Terms and Conditions window through the Purchase Orders window in Oracle Purchasing. In the web based user interface of the Purchase Order, the attribute is Transportation Arranger and is available in the Terms region of the Purchase Order Header tab. The attribute has the following values:

- Buying Organization: The payment method code for inbound shipments in Oracle Transportation Management is set to Collect (buying organization is responsible for managing and paying for inbound transportation).

- Supplier: The payment method code is set to Prepaid (supplier is responsible for managing and paying for inbound transportation).

- Blank value or None: Purchase orders are not communicated to Oracle Transportation Management.

Note: Purchase Orders that have Progress Payments will not be

communicated to Oracle Transportation Management.

Impact of Purchase Order Status Changes on Oracle Transportation Management

Purchase Order Event	Impact in Oracle Transportation Management
Cancel Purchase Order	Prevents future releasing against all relevant PO shipments.
Open PO Shipment for Receiving	Allows future releasing against this PO shipment.
Close PO Shipment for Receiving	Prevents future releasing against this PO shipment.
Close Purchase Order	Prevents future releasing against this PO.
Finally Close Purchase Order	Prevents future releasing against this PO.
Place Purchase Order on Hold	Prevents future releasing against this PO.
Release Purchase Order Hold	Allows future releasing against this PO.

Implementation of Oracle Transportation Management with Purchasing

Profile Options

All Profile options, page 3-21 specific to the integration of Oracle Transportation Management with Oracle E-Business Suite are documented in the Shipping Execution chapter of this guide.

The following is a list of profile options that are specific (and required) to the integration with Oracle Purchasing:

- OTM: Integration Enabled
- OTM: Domain Name
- OTM: Domain User
- OTM: Domain Password

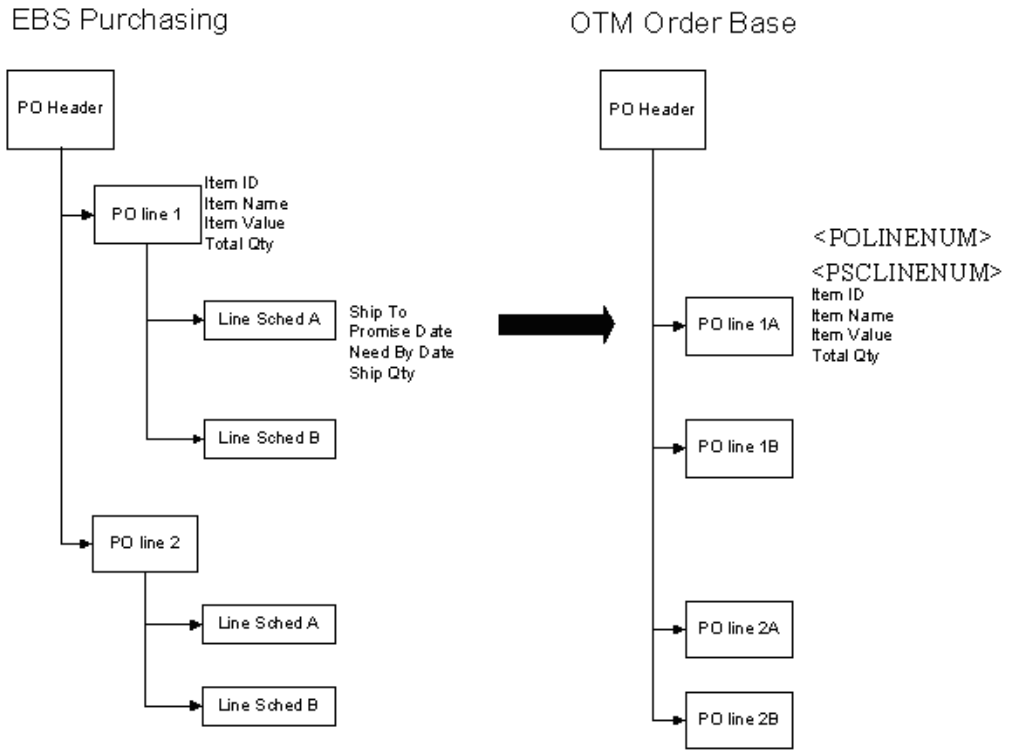
- Server Timezone
- Client Timezone
- Enable Timezone Conversions

See Profile Options and Parameters, page 3-21 for details on the profile options.

Mapping Oracle Purchasing to Oracle Transportation Management

In Oracle E-Business Suite, the purchase order or blanket release schedule is concatenated with the relevant line information to create an orderbase line in Oracle Transportation Management, as shown in the following figure:

Mapping Purchase Order Shipments to Order Base Lines



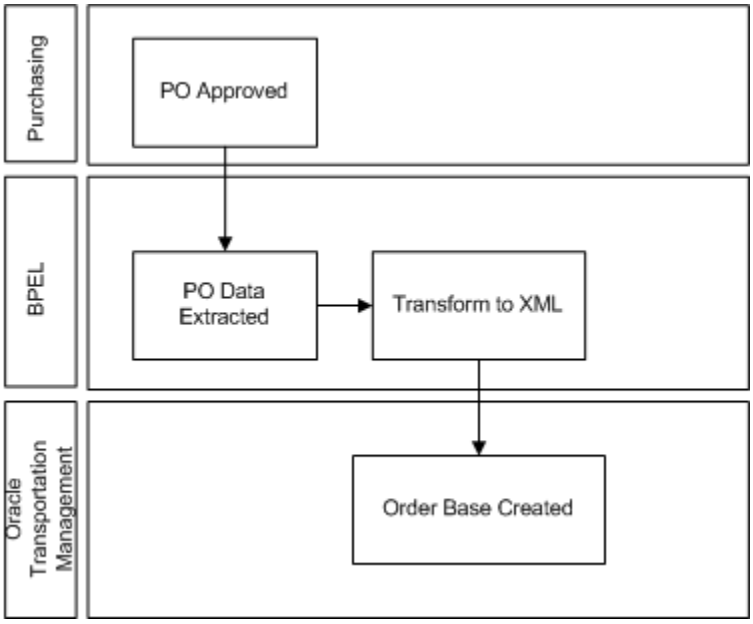
For detailed mapping of Oracle Purchasing to Order Base XML, see the Purchasing Fields to Order Base XML Mapping, page A-16 section of the XML Mapping appendix.

Note: Purchase Orders that have Progress Payments will not be communicated to Oracle Transportation Management.

BPEL Process Manager

All communication between Oracle Purchasing and Oracle Transportation Management is through the BPEL process PoSendPoToOtm. The Oracle E-Business Suite Business Event "oracle.apps.po.event.document_action_event" activates this process. Upon activation, the process calls an Oracle Purchasing API to extract the appropriate document data. It then converts the document data to a message in the Oracle Transportation Management schema and invokes the Oracle Transportation Management servlet.

Oracle Purchasing to XML



XML Translation via XSL in BPEL

Oracle Purchasing purchase order and release data are extracted from Oracle E-Business Suite in the database object PO_OTM_ORDER_TYPE. In the BPEL process, an XSL translation converts the data to an Oracle Transportation Management transmission.

The form of the transmission depends upon the action performed. In the case of a document approval or re-approval, the transmission consists of an Oracle Transportation Management TransOrder object, along with a set of Location and Contact objects. For control actions on existing documents, such as cancellation or closure, a GenericStatusUpdate object is transmitted.

The XSL translation implements integration-specific business logic, such as rounding quantities and selecting the appropriate contact methods for involved parties. The XSL step also performs some Oracle Transportation Management specific transformations to

Oracle E-Business Suite data, such as generation of unique keys.

Web Services

The BPEL process communicates with Oracle E-Business Suite through the Business Event queue and the PO_OTM_INTEGRATION_PVT API. It terminates with a call to the Oracle Transportation Management servlet.

6

Oracle Warehouse Management

Overview of Oracle Transportation Management Integration With Oracle Warehouse Management

Integrating Oracle Transportation Management with Oracle Warehouse Management can improve shipment processing and capacity usage by providing more accurate committed dock appointments and load sequencing information.

To use the Oracle Transportation Management appointment and load sequencing features in Oracle Warehouse Management, you need to synchronize dock door information and organization location information with Oracle Transportation Management (OTM). When you synchronize the dock door information, the organization's default location is sent along with the dock door details to Oracle Transportation Management.

Dock door scheduling and load sequencing integration are controlled by setups in the Shipping Parameters window at the organization level. These setups are applicable only if the organization has installed and enabled Oracle Warehouse Management and Oracle Transportation Management.

Dock Scheduling

Integrating with Oracle Transportation Management helps you optimize dock door usage, keep dock doors synchronized with the transportation plan, and ensure that material is staged to the correct dock door.

Load Sequencing

Load sequencing is the order in which the LPNs are loaded onto a carrier's truck or vehicle. Typically, the LPNs that need to be dropped off first should be loaded last onto the vehicle (last-in first-out method).

To manage order releases based on shipment itinerary, you can use the shipment itinerary feature in Oracle Transportation Management to sequence loads in Oracle

Warehouse Management. You can direct outbound staging based on loading sequence, validate loading sequence during trailer loading, and minimize material handling during loading and unloading.

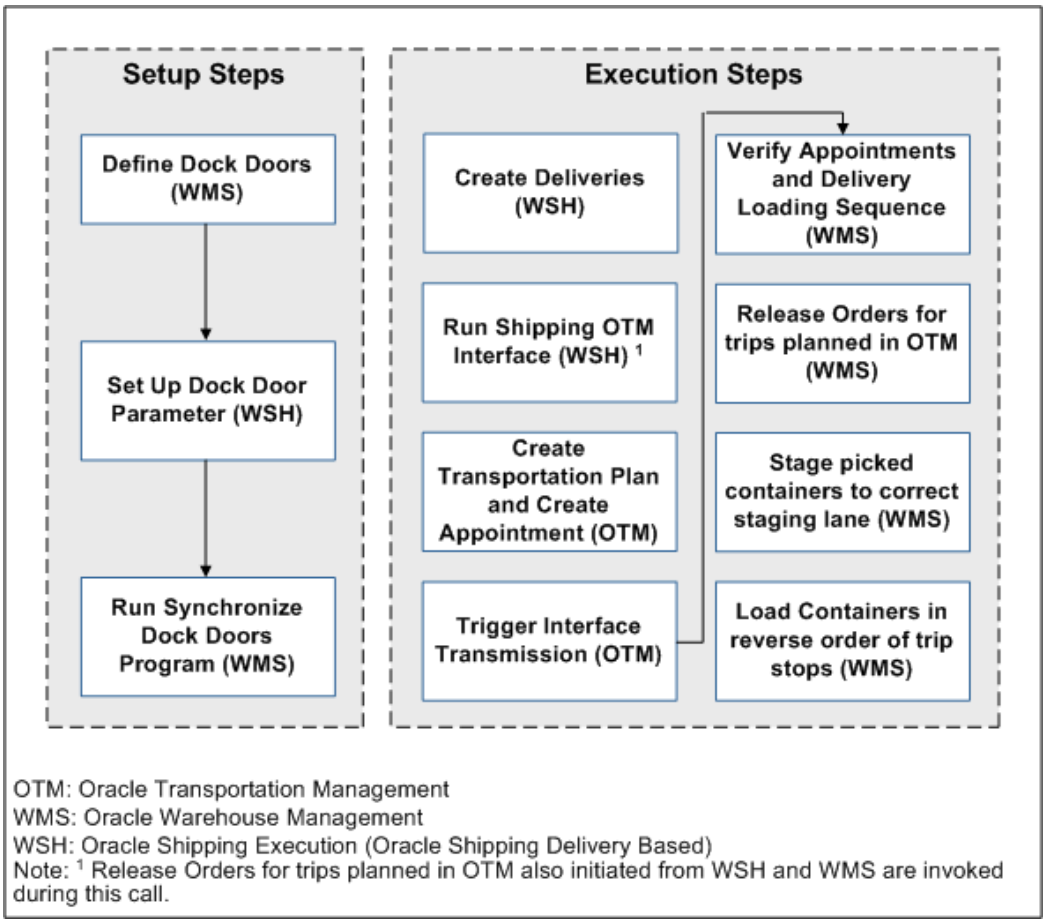
> **Note:** No extra setup is required for load sequencing integration with Oracle Transportation Management. If the organization is Oracle Transportation Management- enabled and it is an Oracle Warehouse Management organization, then load sequence information is available.

Setting Up Dock Door Synchronization with Oracle Transportation Management

The following steps describe how to synchronize dock door information from Oracle Warehouse Management to Oracle Transportation Management by using setups in both Oracle Warehouse Management and Oracle Transportation Management. For setting up Oracle Warehouse Management features, see the Oracle Warehouse Management documentation.

The following graphic shows the steps for integrating Oracle Warehouse Management with Oracle Transportation Management:

Integration Steps for Oracle Warehouse Management and Oracle Transportation Management



1. Define dock doors (Oracle Warehouse Management).

2. Enable dock door parameters (Oracle Shipping Execution).

   Select the *Enabling the Dock Door Appointment Scheduling* check box on the Shipping Parameters window for the organization. Even if the organization is enabled for Oracle Transportation Management, if this option is not selected, the dock door appointments from Oracle Transportation Management will not be synchronized with the Oracle E-Business Suite.

3. Run the *Synchronize Dock Doors with Transportation Management* concurrent program (Oracle Warehouse Management).

Related Topics

Oracle Warehouse Management Implementation Manual, Setting Up Dock Door to Staging Lane Relationships

Oracle Inventory User's Guide, Defining Stock Locators

Defining Dock Doors in Oracle Warehouse Management

In Oracle Warehouse Management, dock doors and staging lanes are defined as stock locators. Locators identify physical areas within subinventories where you store item such as rack/bin or aisle/row/bin locations, storage locations, consolidation locations, and packing stations.

When you synchronize dock door information with Oracle Transportation Management, the organization's default location is sent along with the dock door information. This enables you to use door scheduling and load sequencing integration features in Oracle Transportation Management.

> **Important:** Dock doors must already be set up in Oracle Inventory (use the Stock Locators window to create a dock door) before you can synchronize dock door information with Oracle Transportation Management.

Related Topics

Oracle Inventory User's Guide, Defining Stock Locators

Oracle Warehouse Management Implementation Guide, Setting Up Dock Door to Staging Lane Relationships

Synchronizing Dock Doors with Oracle Transportation Management

In Oracle Transportation Management, dock doors are linked to a location. When the dock door information is synchronized between Oracle Warehouse Management and Oracle Transportation Management, the default location of the organization is also sent with the dock door to Oracle Transportation Management. After the dock door information is synchronized with Oracle Warehouse Management, you can complete the following actions in Oracle Transportation Management:

- Select staging lane based on dock appointment.
- Select lines for wave creation based on dock appointment.

Prerequisites

❒ Dock doors must already be set up before you can synchronize them with Oracle Transportation Management. For more information see, *Oracle Inventory User's Guide*, Defining Stock Locators

To synchronize dock doors using the Synchronize Dock Doors with Transportation Management concurrent program:

1. Navigate to the Submit Request window.

   (N) From the Warehouse Manager responsibility, select Outbound Logistics, then select *Synchronize Dock Doors with OTM*.

2. Enter the parameters such as the Organization and update dates.

3. Click Submit to run the concurrent request to synchronize the dock doors.

   The *Synchronize Dock Doors with Transportation Management* concurrent program sends all the selected dock doors and their corresponding location information from Oracle Warehouse Management to Oracle Transportation Management.

4. After you run the concurrent program, verify that it has completed successfully by reviewing its status in the Requests window.

   After the dock door information is synchronized, you can view the dock doors in Oracle Transportation Management when viewing or setting up appointments (typically in the Manage Appointments page).

Synchronizing Dock Appointments with Oracle Transportation Management

When Oracle Transportation Management is integrated with Oracle Warehouse Management, you can optimize dock door usage, ensure dock doors are synchronized with the transportation plan, and stage material accurately to the correct dock door. You can use Oracle Transportation Management to maintain all dock door appointments and send the trip-related appointments to Oracle Warehouse Management.

The following steps outline the process for synchronizing dock door appointments with Oracle Transportation Management:

Step Number	Step	Set Up/Run This Step in Following Oracle Application
1	Create deliveries. Create deliveries and view delivery information associated with the trip in the Shipping Transactions window. **Important:** Deliveries must be in the status of *Ready to Release.* Do not pick release the deliveries otherwise if you want to send .	Oracle Shipping Execution
2	Run the *Shipping-Transportation Outbound Interface* program to send the delivery information to Oracle Transportation Management.	Oracle Shipping Execution
3	Create appointments in Oracle Transportation Management. After the appointment is created, you can view the available appointment in the Manage Appoints page.	Oracle Transportation Management
4	Running the interface transmission. Oracle Transportation Management maintains all dock door appointments and sends the trip-related appointments to Oracle Warehouse Management.	Oracle Transportation Management
5	View or change dock door appointments. You can use Oracle Warehouse Management to modify the dock appointments at any time. If the material has been loaded to the dock door or staging lane, you will have to manually modify the dock appointments. This may include changes to Dock Door.	Oracle Warehouse Management

Step Number	Step	Set Up/Run This Step in Following Oracle Application
6	Load Sequencing: Verify appointments and delivery load sequencing Load Sequencing is the order in which the LPNs are loaded onto a carrier's truck or vehicle. Usually, the LPNs that need to be dropped off first are loaded last onto the vehicle (last-in first-out method). As part of the existing integration between Oracle Shipping Execution and Oracle Transportation Management, the stop sequence numbers are sent from Oracle Transportation Management to create the trip stops in shipping. The same sequence will be used as the Loading Sequence (in reverse).	Oracle Shipping Execution
7	Load Sequencing: Release the trip for pick release execution. After the load sequence is determined and the trip stops are returned to Oracle Shipping Execution, you can then release the order for picking.	Oracle Shipping Execution
8	Load Sequencing: Associate the staging lane to dock door.	Oracle Warehouse Management
9	Load Sequencing: Stage the delivery.	Oracle Warehouse Management

Creating the Transportation Plan and Managing Appointments in Oracle Transportation Management

After you run the *Shipping-Transportation Outbound Interface* program to send the delivery information to Oracle Transportation Management, you can create transportation plans and manage the dock door appointments in Oracle Transportation Management.

In Oracle Transportation Management, you can reserve a time period (or *appointment*) for unloading or loading a trailer at the dock door. Appointments can be created at the following levels:

- Organization level
- Dock door level

External users such as suppliers, carriers, and customers can create appointments only at the organization level; internal users such as facility managers can create appointments at both the organizational and dock door levels. An appointment can be created at the organization or dock door levels only if:

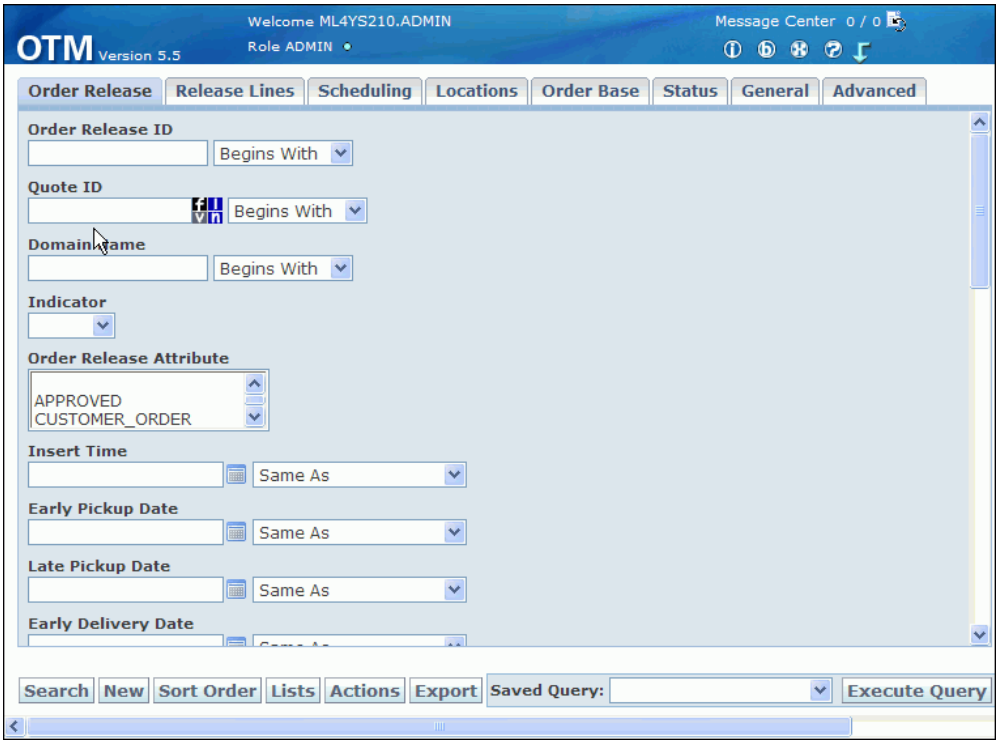
- there is an availability in the warehouse calendar for the time slot requested.
- a dock door is available and not reserved by existing organization level and dock door level appointments.

Note: Overbooking dock doors is not permitted.

To create the transportation plan and manage appointments:

1. Navigate to the Order Release page in Oracle Transportation Management.

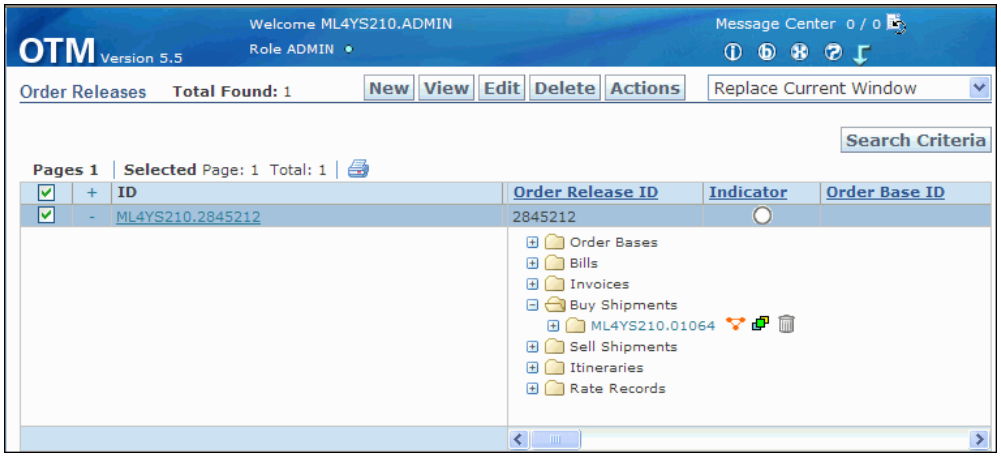
Order Release Search page



2. Enter your delivery number in the Order Release ID field and click Search to display the search results.

3. Select the ID from the navigation tree, and then expand the Order Release ID.

Order Releases page

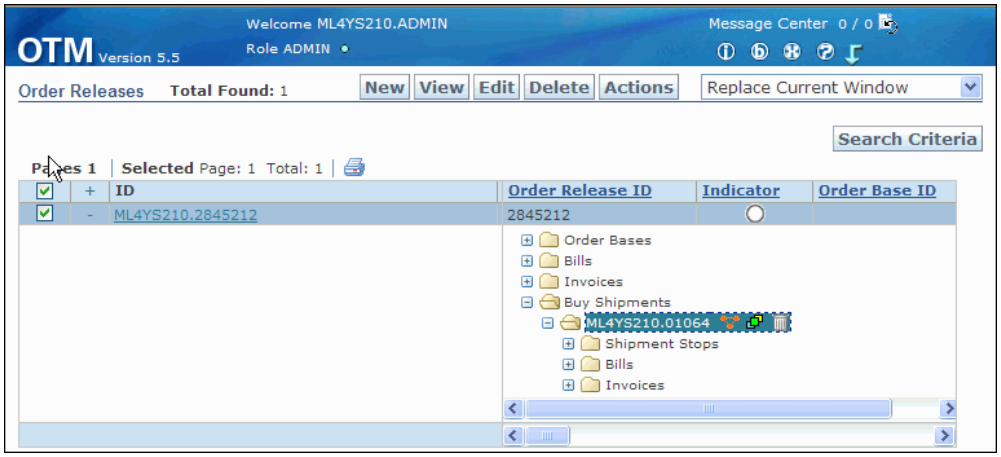


4. Select one of the following:

   - To build a shipment: From the Actions menu, select Create Buy Shipment, then select Build Buy Shipment on Primary Leg.

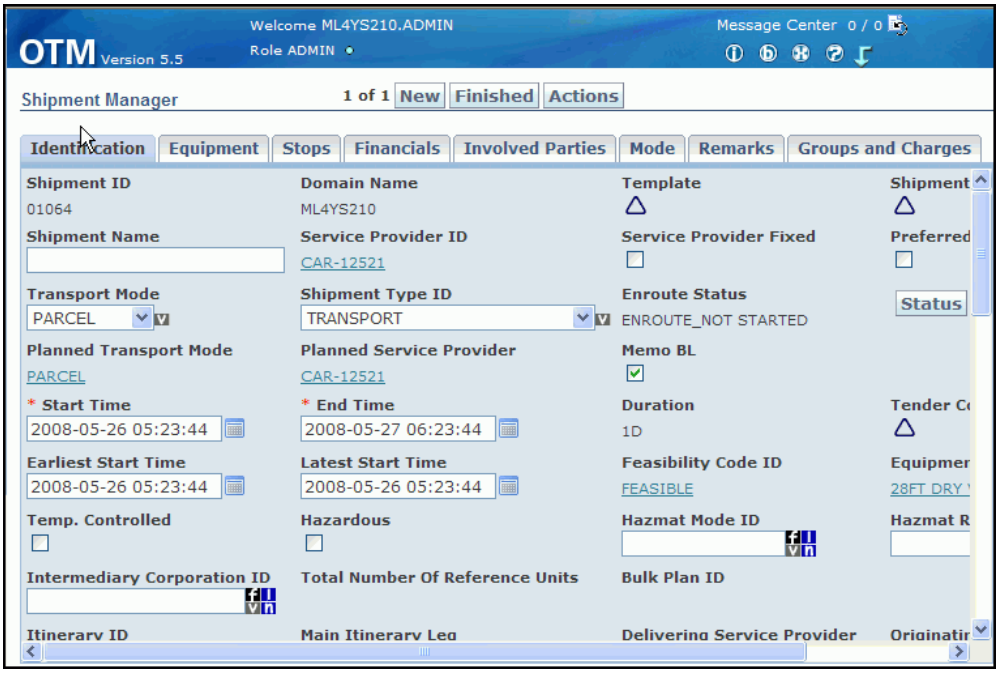
   - If you have already built a shipment, select Buy Shipments and select the buy shipment number. Alternatively, to maintain an appointment for a particular stop, expand the Shipment Stops tab to select a shipment stop.

Order Releases-Buy Shipments



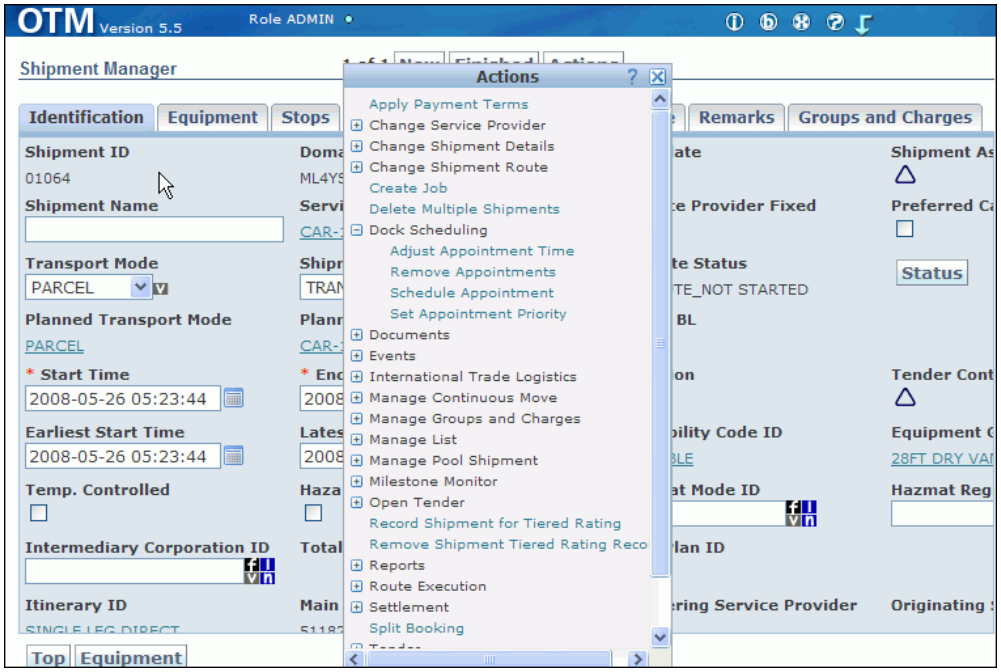
5. Double-click the buy shipments ID to display the shipment in the Shipment Manager page.

Shipment Manager page



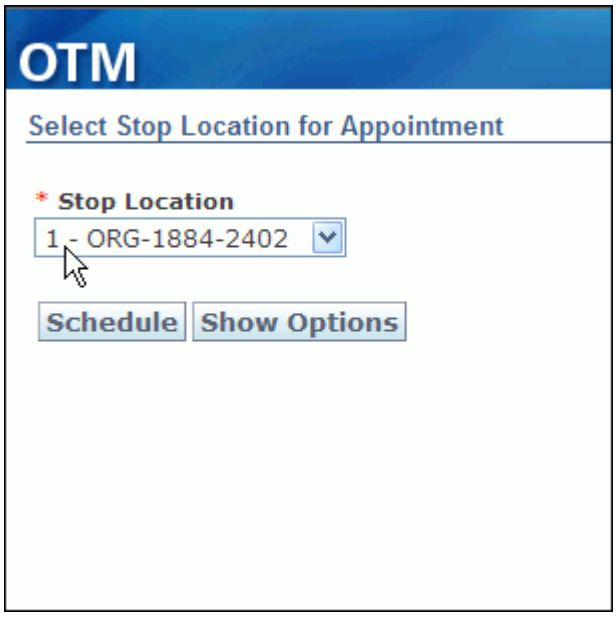
6. To schedule dock appointments for the shipment: From the Actions menu, select Dock Scheduling, then select Schedule Appointment.

Shipment Manager page



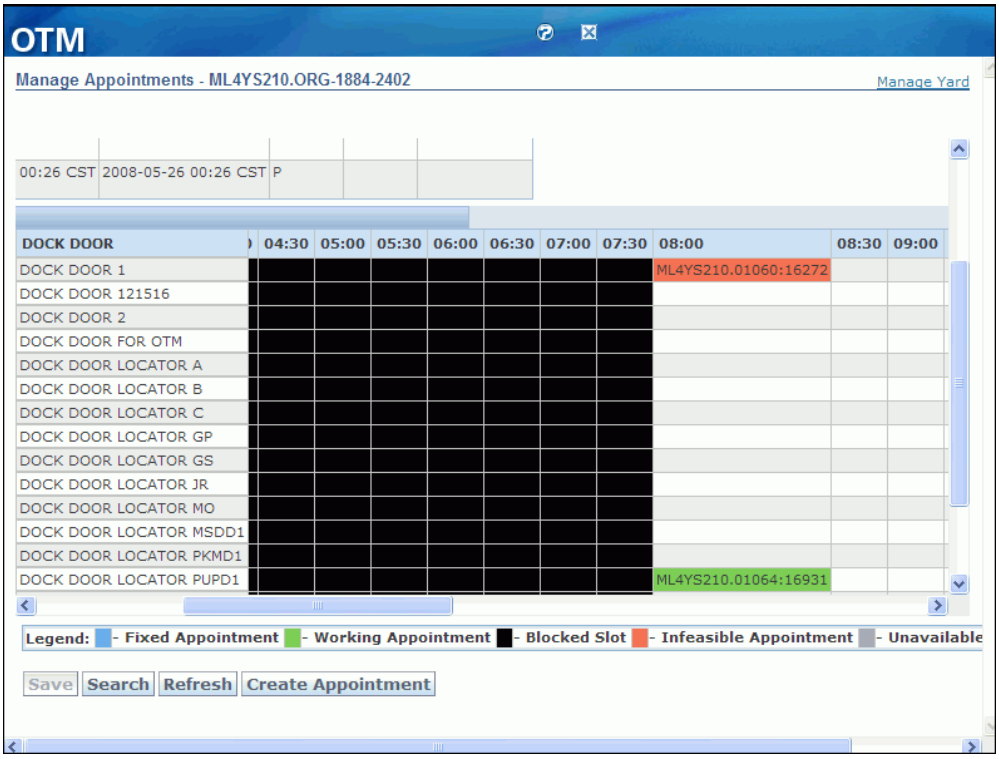
7. Select the stop location for the appointment. You can define additional search options by clicking Show Options.

Select Stop Location for Appointment page



8. Click Schedule to schedule the dock door appointment. You can then click View Appointment to view the appointment details.

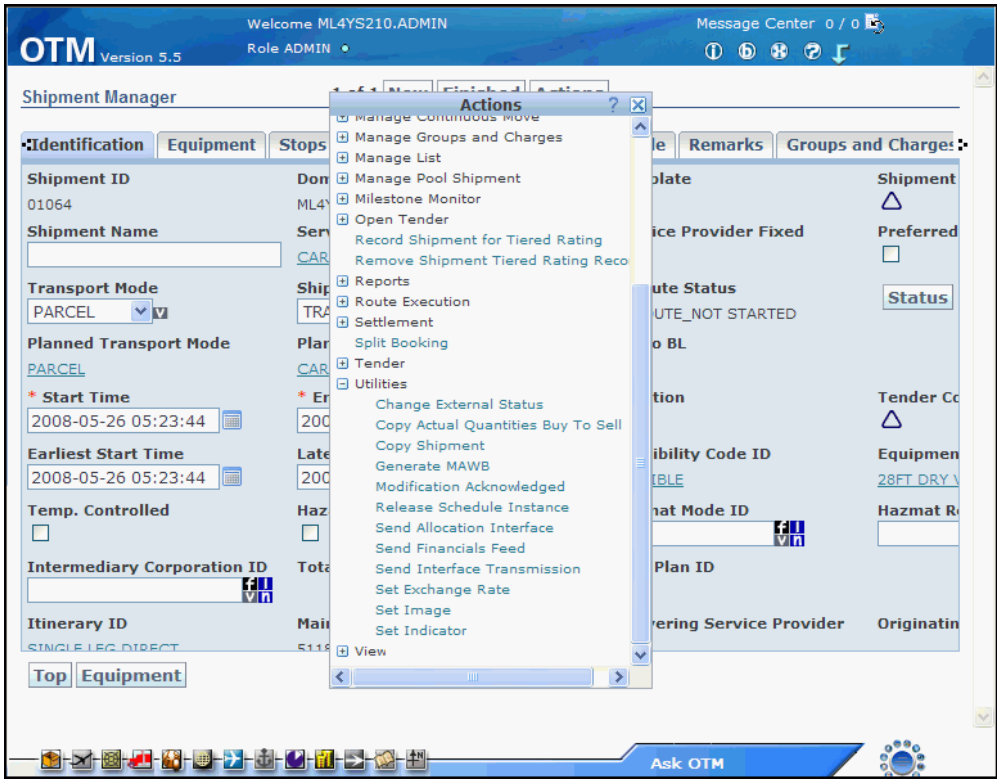
   After the dock door information is sent Oracle Warehouse Management (by running the Send Interface Transmission program), you can modify the dock appointments at any time from Oracle Warehouse Management. If the material has been loaded to the dock door or staging lane, you will have to manually modify the dock appointments.



9. Oracle Transportation Management maintains all dock door appointments and sends the trip-related appointments to Oracle Warehouse Management. These appointments are sent as part of the existing planned shipment updates to Oracle Warehouse Management at the pickup stop(s).

   To send the information from Oracle Transportation Management to Oracle Warehouse Management, run the Send Interface Transmission program. On the Shipment Manager page, from the Actions menu, select Utilities, then select Send Interface Transmission.

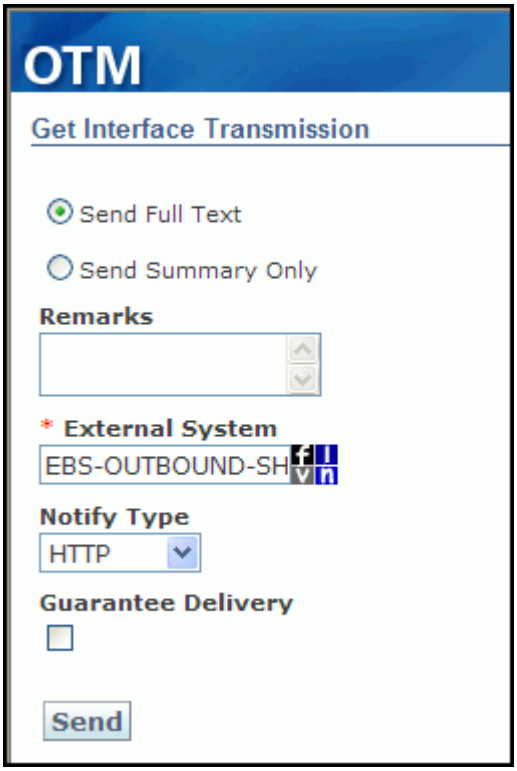
Shipment Manager page-Send Utilities



10. Select your interface transmission criteria in the Get Interface Transmission page.

    Use the interface page to send delivery information to external systems such as Oracle Warehouse Management. The stop sequence numbers are sent from Oracle Transportation Management to create the trip stops in Oracle Shipping Execution (this information is mapped to the Inbound Trip XML).

Get Interface Transmission page



11. Click Send to run the interface transmission.

After you run the interface transmission, you can complete related steps in the following Oracle applications. Refer to the application-specific documentation for additional details on completing each step:

1. View or change dock door appointments. (Oracle Warehouse Management)
2. Verify appointments and delivery load sequencing. (Oracle Shipping Execution)
3. Release the trip for pick release execution. (Oracle Shipping Execution)
4. Associate the staging lane to dock door. (Oracle Warehouse Management)
5. Stage the delivery. (Oracle Warehouse Management)

Related Topics

Setting Up Dock Door Synchronization with Oracle Transportation Management, page 6-2

7

Oracle Advanced Planning and Scheduling

Overview of Oracle Transportation Management Integration With Oracle Advanced Planning and Scheduling

Oracle Transportation Management tracks the current estimated arrival date of in-transit shipments when transportation plans are updated or when carriers provide updated information about shipments in-transit. Tracking unexpected changes, for example, orders being delivered later or earlier than expected from suppliers or changes to internal shipments between organizations, is important because these changes can affect the rest of the supply chain.

Oracle Transportation Management monitors business events such as order changes and then sends XML messages to update applications with the changes. An Oracle customer who has deployed both Oracle Transportation Management and Oracle Advanced Planning and Scheduling (APS) can configure a web service and BPEL process (provided by Oracle APS) to provide updates to planning when the arrival date of an order changes. (Updated dates collected from Oracle Transportation Management can be used for planning in advanced supply chain planning, distribution requirement planning, and collaborative planning in Oracle Collaborative Planning.) The system then notifies planners when changes to arrival or order dates occur. These updated dates are evaluated during planning, and exceptions are generated if dates are later or earlier than expected.

> **Important:** The integration process applies only to purchase orders (planned and in-transit) and internal transfer orders (planned and in-transit internal sales order and internal sales order) because planning does not manage arrival of outbound shipments after they have shipped.

Overview of Process Flow

The following steps outline the process flow of the integration with starting from when

a carrier updates or creates a new transportation schedule in Oracle Transportation Management.

Note: The following terms are used:

- OTM: Oracle Transportation Management
- ASCP: Oracle Advanced Supply Chain Planning
- APS: Oracle Advanced Planning and Scheduling
- DRP: Distribution Requirements Planning, a component of ASCP
- BPEL: Business Process Execution Language

Step 1: Oracle Transportation Management (OTM)

1. A new transportation schedule or an update from a carrier in Oracle Transportation Management updates the arrival dates for one or more orders.
2. Oracle Transportation Management sends an XML message with updates for BPEL processing.

Step 2: Business Process Execution Language (BPEL)

1. The XML message is processed and a BPEL flow is initiated to update the purchase orders and internal requisition and internal sales order in the APS workbench with the new date. A new record is stored in the `MSC_TRANSPORTATION_UPDATES` table for each updated record.
2. Sends a notification about the updates including a link to OTM from APS to view updates. To view notifications, the profile option *MSC: Generate Notifications for Transportation Updates* must be set to Yes.
3. Confirms if the order also exists in Oracle Collaborative Planning: if yes, updates Updated Arrival Date (new column). If not, the following step is completed.
4. Reviews the profile option *MSC: Production Plan for Transportation Updates*. If a plan exists, the next step is completed: if not, the BPEL flow ends and the user process starts.
5. Stores dates in new column `msc_supplies` and `msc_demands` as Updated Arrival Date in the planning data store for the plan specified in the profile option.
6. Generates new exceptions when Oracle Transportation Management date is not equal to the date from ERP for the order:
   - Where OTM date is greater than dock date: order will be delivered later than

scheduled.

- Where OTM date is less than dock date: order will be delivered earlier than scheduled.

Step 3: User

- Planner runs either an online or batch replanning process. ENGINE process: The online planner and batch replanning recognizes the updated records and includes them in the replanning, OR

- Planner runs a plan using dates collected from Oracle Transportation Management. ENGINE process: The transportation date is used where it exists, otherwise the current date is used.

Step 4: Engine Processing

1. The plan generates new exceptions when the Oracle Transportation Management date is not equal to the date collected from ERP for the order. These existing exceptions are generated whenever a purchase order or internal requisition will arrive later than required.

2. The plan generates and identifies new related exceptions as Late Replenishment exceptions, Early Replenishment exceptions, and Order at Risk exceptions.

Prerequisites

The following products and modules are required for fully integrating Oracle Transportation Management and Oracle Advanced Planning and Scheduling. These product and modules are required for getting the latest estimated arrival dates for internal requisitions (IR), internal sales orders (ISO), and purchase orders (PO), and for other technical requirements.

- Oracle Transportation Management 5.5 CU4

- Oracle Advanced Planning and Scheduling 12.1.CU1 Release

- Oracle Purchasing, Oracle Shipping Delivery Based, Oracle Order Entry (12.0.4 or 12.1)

- SOA 10.1.3.3

Transportation Management Exceptions Exception Group

This table shows the exceptions in this exception group and states whether the planning engine issues the exception for each plan type.

Exception Message	Available In Unconstrained Plans	Available In Constrained Plans with Enforce Demand Dates	Available In Constrained Plans with Enforce Capacity Constraints	Available In Optimized Plans	Available In Inventory Optimization
1: Order will be delivered later than scheduled	No	Yes	Yes	Yes	No
2: Order will be delivered earlier than scheduled	No	Yes	Yes	Yes	No

1: Order will be delivered later than scheduled

Explanation

The planning engine issues this exception when Updated Arrival Date is later than:

- For purchase requisitions and internal requisitions, Dock Date
- For internal sales orders, Scheduled Arrival Date

Information Displayed

The information displayed for this exception message is:

- Organization
- Item
- Order Number
- Current Date
- Updated Arrival Date
- Quantity
- Planner
- Product Family

- Item Category
- Supplier (for purchase order and internal requisition only)
- Supplier Site (for purchase order and internal requisition only)
- Source Organization (for internal sales order only)

Resolution Suggestion

Run either an online replan or a batch replan. The planning engine issues related exceptions when the new arrival time has an effect on demand satisfaction—late replenishment, early replenishment, order at risk

2: Order will be delivered earlier than scheduled

Explanation

The planning engine issues this exception when Updated Arrival Date is earlier than:

- For purchase requisitions and internal requisitions, Dock Date
- For internal sales orders, Scheduled Arrival Date

Information Displayed

The information displayed for this exception message is:

- Organization
- Item
- Order Number
- Current Date
- Updated Arrival Date
- Quantity
- Planner
- Product Family
- Item Category
- Supplier (for purchase order and internal requisition only)
- Supplier Site (for purchase order and internal requisition only)
- Source Organization (for internal sales order only)

Resolution Suggestion

Run either an online replan or a batch replan. The planning engine issues related exceptions when the new arrival time has an effect on demand satisfaction—late replenishment, early replenishment, order at risk

Understanding Arrival Time Updates

This section describes what actions occur when Oracle Transportation Management detects a change in an estimated arrival time:

Arrival Time Updates

If you use Oracle Transportation Management, you can update your production plans with the current status of estimated arrival times of purchase and transfer orders in transit. These changes occur either because of a change in the transportation plan or because of carries updates.

When Oracle Transportation Management detects a change in an estimated arrival time, it:

- Notes the estimated arrival time in your production plans for purchase requisitions, internal requisitions, and internal sales orders
- Compares its estimated arrival time to the corresponding plan dock date or scheduled arrival date
- Issues exception messages if the dates differ--Order will be delivered later than scheduled or Order will be delivered earlier than scheduled
- Sends a notification to the planner with a link to drill down to Oracle Transportation Management for details
- Updates the arrival date in Oracle Collaborative Planning
- Arranges for the Oracle Collaborative Planning exception process to evaluate the updates and issue exceptions as necessary

When the next production plan runs, it:

- Updates the dock date with the estimated arrival time
- Firms the order
- Issues exception messages as necessary when the new arrival time has an effect on demand satisfaction—late replenishment, early replenishment, order at risk

You can view transportation updates in form View Transportation Updates

Setting Up the BPEL Process

First, you must define the database connection for the BPEL process.

> **Note:** There are similar setups for Oracle Shipping Execution and Oracle Order Management.

To set up the BPEL process into the SOA (service-oriented architecture) server:

Complete the following steps to deploy the `MscReceiveUpdateFromOtm` BPEL process for a BPEL domain.

1. Verify that the domain(s) are created appropriately in the BPEL server.
2. Create a temporary directory on either the same server as BPEL or on a server accessible to the BPEL server.
3. Under the temporary directory, create the following directory structure: oracle/apps/msc/bpel/util.
4. Copy the following .jar files from the $MSC_TOP/patch/115/jar/bpel directory to the temporary directory: `msc_bpel_receiveUpdatefromOTM.jar`.
5. Copy the following .xml and Java class files from $JAVA_TOP/oracle/apps/msc/bpel/util directory to the temporary directory: `mscUpdateOTMBpel.class`, `MscJarOTMBuild.xml`.
6. Move `mscUpdateOTMBpel.class` under the /oracle/apps/msc/bpel/util directory structure.
7. Ensure the `CLASSPATH` and `PATH` are set correctly so that the ant-related .jar files are present in the path. The `obant` utility is typically present in /bpel/bin. Set the classpath inside `obant` (either `obant.bat` or `obant.sh`) so that the class `oracle.apps.msc.bpel.util.mscUpdateOTMBpel.class` is visible to the `obant` utility.
8. To run `obant` successfully, review the following parameters and identify relevant values for each E-Business Suite, BPEL domain, and Oracle Transportation Management instance that you are configuring:
   - BPEL HOME DIR

     The home/root directory of the BPEL server. This is a mandatory parameter.

   - DB CONNECTION NAME

JNDI Name for the EBS database connection name specified in the oc4j-ra.xml. This is an optional parameter and if not specified, the database connection name will be retained as eis/DB/OracleConnection. Ensure that whatever connection name you specify here is defined in oc4j-ra.xml.

- BPEL DOMAIN

  Name of the BPEL domain to which the processes will be deployed. This is an optional parameter. If you desire multi-domain support, you should have a unique name for each integration. If not specified, all of the processes will be deployed to the default domain and will overwrite the PO BPEL process.

9. Run the following command: `obant -buildfile MscJarOTMBuild.xml -DbpelHome=<BPEL_HOME_DIR> -DnewDbConnName=<DB_CONNECTION_NAME> -Ddeploy=<BPEL_DOMAIN>`

   Note: Note that when the `OBAnt` command is run, it creates a directory named `OtmModifiedBpelJarHYPERLINK "http://twiki.ca.oracle.com/bin/edit/Architect/OtmModifiedBpelJar?topicparent=Architect.ArchMscOtmSetup" ?` under the current directory; the new directory stores the modified BPEL jar files.

10. Verify that the processes were successfully deployed to the corresponding BPEL domain by viewing the processes from the BPEL console of the respective domain.

11. Restart the SOA server.

Setting Up External System and Web Service in Oracle Transportation Management

To set up external system and web service in Oracle Transportation Management:

1. In Oracle Transportation Management, click the Business Process Automation icon, select Communication Management, then select External Systems.

2. Click New.

3. Enter an External System ID: for example BPEL_FLOW.

4. On the Web Service field, click *n* to create a new web service.

5. On the Web Service page, click *n* to create a new WSDL (web services description

language) document.

6. Click Document Detail to display the Document page.
7. Enter a new ID (MSCRECEIVEUPDATES).
8. From the Storage field, select Text.
9. Click Upload to upload your WSDL file for the BPEL server.
10. Click Finished.

Setting Up an Automatic Agent in Oracle Transportation Management

The following steps describe how to set up an automatic agent in Oracle Transportation Management.

To set up an automatic agent in Oracle Transportation Management:

1. Create a new agent named as `OR_UPDATE_SEND_TO_APS`.
2. In Oracle Transportation Management, click the Business Process Automation icon, select Agents and Milestones, then select Automation Agent.
3. Click the New button to display the Agent Manager page.
4. On the Agent Manager page, complete the following entries:
   - Agent ID: OR_UPDATE_SEND_TO_APS
   - Agent Type: Order Release
5. On the Event field, click the *f* icon to display the Agent Events Finder page.
6. In the Agent Event ID field, enter ORDER - DATES MODIFIED then click Search.
7. After the search results appear, click Finish to display the agent event details in the Agent Manager page.
8. In the Restrictions field, select a restriction value such as INTEGRATION or INTERNAL or USER (click the Information icon on the Restrictions field to display the available parameters).
9. Click the Save button located to the right of the Restrictions field.
10. Click the View/Enter Actions button to go the next tab.

11. Click Add Action to display the Agent Action Selection page. Select the following values:
    - Action list: Send Integration.
    - Notify Method: SERVICE
    - External System: Click the *f* (Find) icon, and search for the service id you created in the prior steps.
12. Click Save. The parent window displays the newly added action.
13. Click Finish.

Setting Up Profile Options

During implementation, you set a value for each user profile option to specify how Oracle Advanced Supply Chain Planning controls access to and processes data for its integration with Oracle Transportation Management.

Profile Options

You must set a value for profile options followed by the word "required," no default is supplied. Ordinary users can see profile options followed by the word "exposed," only system administrators can see the rest. Further details follow the list, click an item to find them.

MSC: EBS source instance for OTM

MSC: Generate Exceptions in CP

MSC: Generate Notifications for Transportation Updates

MSC: OTM Punchout URl

MSC: OTM Responsibility

MSC: OTM User

MSC: Production Plan for Transportation Updates

MSC: EBS source instance for OTM

Oracle Advanced Planning and Scheduling (APS) can be run as a separate instance from Oracle E-Business Suite (EBS) source instances. Typically, APS can be integrated with multiple EBS source instances. In Oracle Transportation Management, you can set up multiple domains and each domain is mapped to a single EBS source instance.

However, when EBS, APS, and OTM are integrated, only a single EBS source instance (domain) for the APS-OTM integration is supported. Therefore, you need to enter an

instance code for the profile option *MSC: EBS source instance for OT* (for example, *TST*) to update the data in APS for the source instance that maps to the OTM domain that triggers the BPEL process.

The default value is Null.

MSC: Generate Exceptions in CP

Instructs the BPEL process whether the late or earlier exceptions should be generated in Oracle Collaborative Planning.

Values

- Yes:
- No:

The default value is No.

MSC: Generate Notifications for Transportation Updates

Specifies whether the process that passes estimated arrival time updates from Oracle Transportation Management should create workflow notifications.

Values

- Yes: Create workflow notifications. When set to Yes, the BPEL process uses the values for user and responsibility defined in the profile options *MSC: OTM User* and *MSC: OTM Responsibility* to run the workflow notification.
- No: Do not create workflow notifications.

The default value is Yes.

MSC: OTM Punchout URl

Identifies the URL (for example, http://otm.oracle.com/) of the Oracle Transportation Management instance that is providing the updates. Use this URL for drilling down in Oracle Transportation Management to find details about the order that has been rescheduled.

> **Note:** Enter a value for this profile option to ensure that the APS workbench and the link in the notification operate correctly.

The default value is Null (no default value).

MSC: OTM Responsibility

Define a default user and responsibility to enable the BPEL process to call the Oracle E-Business Suite workflow notification (in Oracle Transportation Management and Oracle Advanced Supply Chain Planning integration). For example, a default user and

responsibility could be *sjones* (user) and Advanced Supply Chain Planner (responsibility).

The default value is Null (no default value).

MSC: OTM User

Define a default user and responsibility to enable the BPEL process (business process execution language) to call the Oracle E-Business Suite workflow notification in Oracle Transportation Management and Oracle Advanced Supply Chain Planning integration. For example, a default user and responsibility could be *sjones* (user) and Advanced Supply Chain Planner (responsibility).

The default value is Null (no default value).

MSC: Production Plan for Transportation Updates

Specifies the production plans that receive estimated arrival time updates from Oracle Transportation Management.

Values

- Null: Do not pass updates to any plan.
- All Production Plans: Pass updates to all plans with Production flag selected.
- <specific plan name>: Pass updates only to the plan that is specified.

The default value is Null.

A

XML Mapping

Oracle Transportation Management to Oracle E-Business Suite XML Mapping

The following sections describe the XML mapping for Oracle Advanced Planning and Scheduling, Oracle Order Management, Oracle Payables, Oracle Purchasing, and Oracle Shipping Execution.

Oracle Advanced Planning and Scheduling XML Mapping

The following table shows the mapping of the referenced XML data between Oracle Advanced Planning and Scheduling and Oracle Transportation Management, whether the data is required or optional, and a brief description.

Purchase Order (PO) and PO Shipment

Optional/Required	OTM Element	EBS Table.Column	Description
R	N/A	MSC_TRANSPORTATION_UPDATES.ORDER_TYPE,	1 is for PO
R	TransOrderLineGid.Gid.Xid	MSC_TRANSPORTATION_UPDATES.PO_LINE_LOCATION_ID	xid = LINE-<PO_LINE_ID>-SCHED-<LINE_LOCATION_ID>

Optional/Required	OTM Element	EBS Table.Column	Description
R	TransOrderLineGid.Gid.Xid	MSC_TRANSPORTATION_UPDATES.PO_LINE_ID	xid = LINE-<PO_LINE_ID> -SCHED-<LINE_LOCATION_ID>
R	Release.ReleaseLine.LatestEstimatedArrivalDate	MSC_TRANSPORTATION_UPDATES.UPDATED_ARRIVAL_DATE	This is the latest estimated arrival date passed from Oracle Transportation Management.

IR/ISO and IR/ISO Shipment

Optional/Required	OTM Element	EBS Table.Column	Description
R	Release.ReleaseLine.ReleaseLineGid	MSC_TRANSPORTATION_UPDATES.WSH_DELIVERY_DETAIL_ID	ReleaseLineGid =delivery_detail_id
R	Release.ReleaseLine.LatestEstimatedArrivalDate	MSC_TRANSPORTATION_UPDATES.UPDATED_ARRIVAL_DATE	This is the latest estimated arrival date passed from Oracle Transportation Management.

Oracle Order Management XML Mapping

Oracle Order Management to Oracle Transportation Execution XML Mapping

The following table shows the mapping of the referenced XML carrier data between Oracle E-Business Suite and Oracle Transportation Management, whether the data is required or optional, and a brief description. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite)

Optional/Required	OTM Element	EBS Table.Column	Description
R	LocationGid.Xid	Ship_From/To location id from the PL/SQL FTE_PROCESS_REQUESTS.fte_source_line_tab In the following format: Use same domain name (Profile Option OTM: Domain Name) for all different locations. (customer/supplier/carrier/org).XID part of GID will be concatenation of three fields to generate a unique combination. For example, for customer site it could be CUS-201-101 where 201 is customer ID and 101 is location_id. For carrier site, it could be CAR-301-401 where 301 is carrier ID and 401 is carrier_site_id. For organization location, it could be ORG-501-601 where 501 is organization ID and 601 is location_id.	Order source location ID
O	SourceAddress.CorporationGid.Xid	ORG-201 (if 201 is the org ID)	Source address ID
O	DestAddress.CorporationGid.Xid	CUS-1091 (if 1091 is the customer ID)	Destination address ID
O	City	Is queried from the database using the location ID.WSH_LOCATIONS.CITY	City. DataType: A30

Optional/Required	OTM Element	EBS Table.Column	Description
O	ProvinceCode	Use the Region Location mapping to see if the state code exists. If not, and if the state length is two, then use that as the state code. If not, then no state code is passed.	A two-character province code. In the United States, ProviceCode corresponds to a two character state code such as PA. DataType: A2.
O	CountryCode3Gid	WSH_LOCATIONS.COUNTRY has the 2 letter ISO code. For the three letter codes FND_TERRITORIES.ISO_TERRITORY_CODE must be used. FND_TERRITORIES.TERRITORY_CODE maps to WSH_LOCATIONS.COUNTRY. For a given location ID, the three letter country code can be determined by:SELECT t.iso_territory_code from FND_TERRITORIES t, WSH_LOCATIONS l where l.location_id=X and l.country=t.territory_code. The domain is PUBLIC. Same as not specifying a domain.	The three character ISO country code global identifier. Validation: References COUNTRY_CODE table.
O	PostalCode	WSH_LOCATIONS.POSTAL_CODE	The postal code component of Address. For United States, this is a 3, 5 or 9 character zip code. DataType: A15

Optional/Required	OTM Element	EBS Table.Column	Description
O	EstimatedShipDate	Ship_date from PL/SQL records formatted into YYYYMMDDHHMMSS	Estimated ship date. Format: YYYYMMDDHHMMSS
O	EstimatedArrivalDate	Arrival_date from PL/SQL records formatted into YYYYMMDDHHMMSS	Estimated arrival date. Format: YYYYMMDDHHMMSS
O	TimeZoneGid	Obtained using FND_TIMEZONES.get_server_timezone_code. The domain is PUBLIC. Same as not specifying a domain.	The time zone global identifier. Validation: References TIME_ZONE table. This is the Java timezone code
O	ShipUnitCount	1	Hardcoded to 1
O	PackagedItemGid.Xid	Inventory_item_id from PL/SQL records, " inventory_organization_id" + "-" + " inventory_item_id" (example: 207-149).	Packaged item ID
O	WeightValue. VolumeValue	Weight/Volume from PL/SQL records	Weight and Volume values
O	WeightUOMGid.Xid, VolumeUOMGid.Xid	Check Attribute15 of descriptive flex field for the UOM in the PL/SQL Record. If there is a value, then use that; otherwise, use the uom_code. The domain for the UOM is PUBLIC. Same as not specifying a domain.	Weight and Volume UOM ID

Optional/Required	OTM Element	EBS Table.Column	Description
O	Length/Width/Height and UOMs	Queried using inventory_item_id. Check Attribute15 of descriptive flex field for the UOM in the PL/SQL Record. If there is a value, then use that; otherwise, use the uom_code. The domain for the UOM is PUBLIC. Same as not specifying a domain.	Length, width, height, and UOMs
O	PaymentMethodeCode	Freight_terms_code from PL/SQL records. The domain is PUBLIC. Same as not specifying a domain.	Payment method code.
O	TransportModeGid	Same as mode of transport code. Mode_of_transport from PL/SQL records.	Mode of transportation Global ID
O	ServiceProviderGid	Same as carrier ID. Carrier_id from PL/SQL records.	Service provider Global ID
O	RateServiceGid	Same as service_level_code. From service_level from PL/SQL records.	Service rate Global ID
O	RIQRequestType	For CHOOSE SHIP METHODS: All Options For GET FREIGHT RATES: LowestCost.	Delivery Request. Validation: (LowestCost, FastestTransit, AllOptions). Default: LowestCost.

Optional/Required	OTM Element	EBS Table.Column	Description
O	Perspective	For CHOOSE SHIP METHODS: B For GET FREIGHT RATES: B	Shipment Perspective. Used to ensure that the order and shipment data shown to the end user makes sense from that users perspective or point of reference. Possible values are B = Buy Side, and S = Sell Side. For the RIQQuery element, a value of 'A' can be used to query for both Buy Side and Sell Side.
O	UseRIQRoute	For CHOOSE SHIP METHODS: N For GET FREIGHT RATES: N	Y, N. Specifies whether to use the RIQ Route functionality, or use the RIQ Rate behavior. Default is N.
O	UserName, Password	From the profile options.	

Oracle Payables XML Mapping

APInvoice Interface XML Mapping

The following table shows the mapping of the required referenced data between Oracle E-Business Suite and Oracle Transportation Management and a brief description of each. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite)

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
exchangeRateType	In BPEL set to "CORPORATE."	Exchange rate type for foreign currency invoices. EXCHANGE_RATE_TYPE: Type of exchange rate used to calculate the exchange rate between theinvoice currency and your functional currency. If the value in the INVOICE_CURRENCY_COD E column is a foreign currency code, then enter a value in this column to indicate which exchange rate type you are using. You can enter a predefined or user–defined exchange rate type. If the invoice record has a foreign currency and you do not enter a value for EXCHANGE_RATE_TYPE, then during import the system uses the Exchange Rate Type selected in the Payables Options window. If the invoice currency and your functional currency are associated fixed–rate currencies, such as euro and another EMU currency, then enter EMU Fixed.Validation - Payables uses five types of exchange rates: User, Spot, Corporate, EMU Fixed, and user–defined. If you use Spot, Corporate, or any user–defined rate type, the value you enter here is validated against the GL Daily Rates table. If you use EMU Fixed, Payables provides the exchange rate during import. If you use User as the exchange rate type, You must either enter a value for EXCHANGE_RATE or, if the

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
		Payables OptionCalculate User Exchange Rate is enabled, you can enter a value for NO_XRATE_BASE_AMOUNT instead. Destination - AP_INVOICES_ALL.EXCHANGE_RATE_TYPE
invoiceAmount	Map from OTM Voucher AmountToPay	Invoice Amount INVOICE_AMOUNT: Amount of the invoice. Do not exceed the precision of the currency of the invoice. For example, if you are entering an amount in US dollars, then do not enter more than two numbers after the decimal point. Validation - This value must equal the sum of the AMOUNT values in the AP_INVOICE_LINES_INTERFACE table for lines with the same INVOICE_ID. The amount must correspond to the invoice type. For example, Standard invoices must have an amount of zero or greater. Destination - AP_INVOICES_ALL.INVOICE_AMOUNT

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
invoiceCurrencyCode	ISO standard OTM GlobalCurrencyCode	Currency of invoice. INVOICE_CURRENCY_CODE: Currency code for the invoice. If you do not enter a value, then the supplier site value defaults during import. Validation - If you enter a code in a foreign currency, then you must enter a valid, active currency code from Destination - FND_CURRENCIES.CURRENCY_CODE.AP_INVOICES_ALL.INVOICE_CURRENCY_CODE
invoiceDate	Map to InvoiceDate from voucher. Supplier's invoice date This date is used to drive Accounting Date/GL Date.	Invoice Date INVOICE_DATE: Date of the invoice. If you do not enter a value, then the system uses the date that you submit the Payables Open Interface Import as the invoice date. Validation - The value must be in valid date format. Destination - AP_INVOICES_ALL.INVOICE_DATE
invoiceId	Call AP to retrieve sequence, and then apply to header and lines.	Invoice ID Required, Primary key. This value is assigned in the Quick Invoices window by the AP_INVOICES_INTERFACE_S sequence. Unique identifier for this invoice within this batch. You assign the same value to the invoice's lines in the AP_INVOICE_LINES_INTERFACE table to identify the data as belonging to the same invoice.

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
invoiceNum	Concatenated field InvoiceNum plus VoucherGid AP Invoice Number <= 50 characters. Must be a unique number for the supplier. Carrier Invoice Num = "JBHT-1002322-1" Voucher Gid = "EBS.12345678." Invoice number will be a concatentated field of CarrierInvoiceNum plus VoucherGID = "JBHT-1002322-1|EBS.2345678 "	Vendors number/invoice number Required if there is more than one invoice for the supplier during import. INVOICE_NUM: Enter the invoice number that you want to assign to the invoice created in Payables from this record. The number must be unique for the supplier. If you do not enter a value, then during import, Payables uses the system date at the time of import as a default. If you enter more than one invoice for a supplier, then be sure to enter unique invoice numbers rather than using the default, or the invoices will have duplicate invoice numbers and will be rejected during import. Validation - Must be a unique number for the supplier. If you assign a duplicate number for the supplier, Payables Open Interface Import does not create an invoice from this record. Destination - AP_INVOICES_ALL.INVOICE_NUM

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
invoiceTypeLookupCode	BPEL transformation. Positive amount voucher = "STANDARD," Negative amounts on voucher = "CREDIT."	Type of Invoice (can be STANDARD or CREDIT) INVOICE_TYPE_LOOKUP_CODE: Type of invoice: Credit or Standard. If you do not enter a value, then the system assigns a value during Payables Open Interface Import based on the value of INVOICE_AMOUNT. If INVOICE_AMOUNT is less than zero, the invoice will be Credit. If INVOICE_AMOUNT is zero or greater, the invoice will be Standard. Validation - The value must be Credit or Standard. The invoice type must correspond to the invoice amount if it is Credit or Standard. For example, a Credit invoice must have an invoice amount that is less than zero. Destination - AP_INVOICES_ALL.INVOICE_TYPE_LOOKUP_CODE

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
source	Source = "TRANSPORTATION MANAGEMENT."	Source of the invoices. SOURCE: Source of the invoice data. Examples include Quick Invoices, EDI Gateway (e–Commerce Gateway), Credit Card, Oracle Assets, Oracle Property Manager, ERS (Evaluated Receipt Settlement), RTS (Return toSupplier), iSupplier Portal, XML Gateway, and user–defined. You define additional values for Source in the Oracle Payables Lookups window. If you have defined additional sources, you should use a source name for only one type of source. For example, do not use the same source name for invoices that you enter in Quick Invoices, and invoices you load with SQL*Loader. The Source name also determines which records will be selected for import or purge. You specify a Source name when you submit Payables Open Interface Import or Purge Payables Open Interface. Validation - If you do not use a predefined source you must enter the name exactly as you have defined the lookup value in the Oracle Payables Lookups window, or Payables Open Interface Import will not create an invoice from the record. The lookup value must have the Type SOURCE. See: Lookups in the *Oracles Payables User Guide*. Destination -

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
		AP_INVOICES_ALL.SOURCE
vendorNum	Map to ServiceProvider Alias Qualf ="VENDOR_NUM."	Supplier number VENDOR_NUM: Supplier number. You must identify the supplier by entering a value for one of the following columns in this table: VENDOR_ID,VENDOR_NUM, VENDOR_SITE_ID, VENDOR_SITE CODE, or PO_NUMBER. If you have not yet entered the supplier in the Suppliers window, then enter it before import. Validation - The number must be for an existing, valid supplier. You can obtain a list of valid values from PO_VENDORS.SEGMENT1. None. This value is used to enter Destination - AP_INVOICES_ALL.VENDOR_ID.

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
vendorSiteCode	Map from SeerviceProvider Alias Qualf = "VENDOR_SITE_CODE."	Supplier site code VENDOR_SITE_CODE: Supplier site name. If you do not provide a valid value to identify the pay site in VENDOR_SITE_CODE or VENDOR_SITE_ID, then import searches for a valid supplier pay site in the following order: Primary pay site for supplier Single existing pay site for supplier Derived from PO number matched at the header level Import rejects the invoice if it cannot identify a valid supplier site. Validation - This must be a valid, active supplier site for the supplier you specify (VENDOR_NUM or VENDOR_ID). You can obtain a list of valid values from PO_VENDORS.VENDOR_SITE_CODE. The site must also be a pay site. Destination - None. This value is used to enter AP_INVOICES_ALL.VENDOR_SITE_ID.
amount	Represents the amount for this invoice line. One line per invoice in delivered integration. "CREDIT" = negative "STANDARD" = positive.	Line amount
lineTypeLookupCode	BPEL set to "FREIGHT"	Type of invoice line (Item, Freight, Tax, Miscellaneous)

Target AP Invoices Interface	Source OTM / BPEL AP Integration Usage	Description
DistCodeConcatenated	BPEL conditional logic in mapped to location reference number qualifier " ACCOUNT_NUMBER" from the source location or if not available on the source location the value is taken from "ACCOUNT_NUMBER" on the service provider location.	Accounting flexfield for account associated with a distribution line

APInvoices Interface Sample XML

```
<PushToEBS_insert_InputVariable>
<part name="ApInvoicesInterfaceCollection" >
<ApInvoicesInterfaceCollection>
<ApInvoicesInterface>
<description>-002647*GUEST.02420*</description>
<exchangeRateType>CORPORATE</exchangeRateType>
<invoiceAmount>1300.0</invoiceAmount>
<invoiceCurrencyCode>USD</invoiceCurrencyCode>
<invoiceDate>2006-04-03T08:00:00</invoiceDate>
<invoiceId>46836</invoiceId>
<invoiceNum>ZIPPY-000004|GUEST.20060402-0001</invoiceNum>
<invoiceTypeLookupCode>STANDARD</invoiceTypeLookupCode>
<source>TRANSPORTATION MANAGEMENT</source>
<vendorSiteCode>ZIPPY</vendorSiteCode>
<apInvoiceLinesInterfaceCollection>
<ApInvoiceLinesInterface>
<amount>1300.0</amount>
<distCodeConcatenated>01-000-2210-0000-000</distCodeConcatenated>
<invoiceLineId>77910</invoiceLineId>
<lineTypeLookupCode>FREIGHT</lineTypeLookupCode>
</ApInvoiceLinesInterface>
</apInvoiceLinesInterfaceCollection>
</ApInvoicesInterface>
</ApInvoicesInterfaceCollection>
</part>
</PushToEBS_insert_InputVariable>
```

Oracle Purchasing XML Mapping

Purchasing Fields to Order Base XML Mapping

Warning: You must ensure that for each address in Oracle E-Business Suite, the Country Code is defined. An address passed to Oracle Transportation Management without a Country Code will fail.

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.TransOrderGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	
O	TransOrderHeader.TransOrderGid.Gid.Xid	Concatenation: In the case of a std PO:PO-<PO_HEADERS_ALL.po_header_id> In the case of a blanket release:PO-<PO_HEADERS_ALL.po_header_id>-REL-<PO_RELEASES_ALL.po_release_id>	Standard PO:PO-Blanket Release:PO-REL- SPO: PO-12341Release: PO-12345-REL-1
O	TransOrderHeader.OrderTypeGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME	OTM: Domain Name profile option
O	TransOrderHeader.OrderTypeGid.Gid.Xid	Constant: PURCHASE_ORDER	PURCHASE_ORDER
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: PO	Order refnum qualifiers and values are used to send reference information, such as the EBS document number, supplier, operating unit, and so on. PO
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	PO_HEADERS_ALL.segment1	PO Number

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: RELEASE_NUMBER	RELEASE_NUMBER
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	PO_RELEASES_ALL.release_num	PO Release Number
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: SELL_TOP	SELL_TO
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	HR_LOCATIONS_ALL.location_code	Operating Unit Name
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: SUPPLIER	SUPPLIER
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	PO_VENDORS.vendor_name	Supplier Name
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: SUPPLIER_SITE	
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	PO_VENDOR_SITES_ALL.vendor_site_code	Supplier Site
O	TransOrderHeader.OrderRefNum.OrderRefNumQualifierGid.Gid.Xid	Constant: BILL_TO	BILL_TO

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.OrderRefNum.OrderRefNumValue	HR_LOCATIONS_ALL.location_code	Bill To Site (Inventory Org)
O	TransOrderHeader.TransactionCode	Constant: IU	I or U (Insert or Update)
O	TransOrderHeader.CommercialTerms.PaymentMethodCode	If PO_HEADERS_ALL.shipping_control = 'BUYER':Constant: COLOtherwise:Constant: SUP	Transportation Arranged By COL . PPD (Codes correspond to Freight Collect or Freight Prepaid)
O	TransOrderHeader.InvolvedParty.InvolvedPartyQualifierGid.Gid.Xid	Constant: SUPPLIER	SUPPLIER
O	TransOrderHeader.InvolvedParty.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderHeader.InvolvedParty.LocationRef.LocationGid.Gid.Xid	Concatenation:SUP-<PO_HEADERS_ALL.vendor_id> <PO_HEADERS_ALL.vendor_site_id>	SUP <SupplierID>-<Site ID>
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.Xid	In order of preference: 1. PO_VENDOR_CONTACTS.email_address 2. Concatenation: PO_VENDOR_CONTACTS.area_code PO_VENDOR_CONTACTS.phone_number 3. Concatenatino: PO_VENDOR_CONTACTS.first_name PO_VENDOR_CONTACTS.last_name	Supplier contact ID (mapped to the email address, phone number or name in that order)
O	Location.Corporation.CorporationName	Concatenation: SUP-<PO_HEADERS_AL.vendor_id>	SUP-<Vendor ID>
O	Location.LocationName	PO_VENDOR_SITES_ALL.vendor_site_code	Supplier Site Name SAN JOSE-ERS
O	Location.LocatioRefNum.Qualifier	Constant: EBS_NAME	EBS_NAME
O	Location.LocatioRefNum.Value	PO_VENDOR_SITES_ALL.vendor_site_code	Supplier Site Name
O	LocationGid.Gid.Xid	Concatenation: SUP-<PO_HEADERS_AL.vendor_id>-<PO_HEADERS_ALL.vendor_site_id>	SUP <Supplier ID>-<Site ID>
O	Location.LocationRole	Constant: SHIPFROM-SHIPTO	SHIPFROM >SHIPTO

Required/Optional	OTM Element	EBS Table.Column	Description
O	Location.Address.AddressLine1 to AddressLine3	Concatenation: PO_VENDOR_SITES_ALL.address_line1 PO_VENDOR_SITES_ALL.address_line2 PO_VENDOR_SITES_ALL.address_line3	Supplier Site Address Lines
O	Location.Address.City	PO_VENDOR_SITES_ALL.city	Supplier Site Address City
O	Location.Address.CountryCode3	PO_VENDOR_SITES_ALL.country	Supplier Site Address Country
O	Location.Address.PostalCode	PO_VENDOR_SITE,S_ALL.zip	Supplier Site Address Postal Code
O	Location.Address.Province	In order of preference: 1. PO_VENDOR_SITES_ALL.state 2. PO_VENDOR_SITES_ALL.province 3. PO_VENDOR_SITES_ALL.county	Supplier Site Address Province
O	Location.Address.ProvinceCode	In order of preference: 1. PO_VENDOR_SITES_ALL.state 2. PO_VENDOR_SITES_ALL.provincePO_VENDOR_SITES_ALL.county	Supplier Site Address Province Code

Required/Optional	OTM Element	EBS Table.Column	Description
O	Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	Contact.ContactGid.Gid.Xid	In order of preference: 1. PO_VENDOR_CONTACTS.email_address 2. Concatenation: PO_VENDOR_CONTACTS.area_code PO_VENDOR_CONTACTS.phone_number 3. Concatenatino: PO_VENDOR_CONTACTS.first_name PO_VENDOR_CONTACTS.last_name	Supplier contact ID (mapped to the email address, phone number or name in that order)
O	Contact.FirstName	PO_VENDOR_CONTACTS.first_name	Supplier Contact First Name
O	Contact.LastName	PO_VENDOR_CONTACTS.last_name	Supplier Contact Last Name
O	Contact.Phone1	Concatenation: PO_VENDOR_CONTACTS.area_code PO_VENDOR_CONTACTS.phone_number	Supplier Contact Phone Number
O	Contact.EmailAddress	PO_VENDOR_CONTACTS.email_address	Supplier Contact Email ID
O	Contact.Fax	Concatenation: PO_VENDOR_CONTACTS.fax_area_code PO_VENDOR_CONTACTS.fax	Supplier contact fax number

Required/Optional	OTM Element	EBS Table.Column	Description
O	Contact.CommunicationMethod	Constant. In order of preference: 1. EMAIL 2. FAX 3. MANUAL	Email/Fax/Manual (Phone)
O	TransOrderHeader.InvolvedParty.InvolvedPartyQualifierGid.Gid.Xid	Constant: SELL_TO	This involved party is the purchasing operating unit SELL_TO
O	TransOrderHeader.InvolvedParty.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderHeader.InvolvedParty.LocationRef.LocationGid.Gid.Xid	Concatenation: ORG-<PO_HEADERS_ALL.org_id>-<HR_LOCATIONS_ALL.location_id>	ORG-<Org ID>-<Location ID>
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Buyer contact ID (mapped to the email address, phone number or name in that order)
O	Location.CorporationXID	Concatenation: ORG-<PO_HEADERS_ALL.org_id>	ORG-<Operating Unit ID> ORG-204
O	Location.LocatioRefNum.Qualifier	Constant: EBS_NAME	EBS_NAME
O	Location.LocatioRefNum.Value	HR_LOCATIONS_ALL.location_code	Operating Unit Default Location Name
O	Location.LocationGid.Gid.Xid	Concatenation: ORG-<PO_HEADERS_ALL.org_id>-<HR_LOCATIONS_ALL.location_id>	ORG-<Org ID>-<Location ID> ORG-204-4848
O	Location.LocationRole	Constant: SHIPFROM-SHIPTO	SHIPFROM->SHIPTO

Required/Optional	OTM Element	EBS Table.Column	Description
O	Location.Address.AddressLine1 to AddressLine3	Concatenation: HR_LOCATIONS_ALL.address_line_1 HR_LOCATIONS_ALL.address_line_2 HR_LOCATIONS_ALL.address_line_3	OU Default Location Address Lines
O	Location.Address.City	HR_LOCATIONS_ALL.town_or_city	OU Default Location Address City
O	Location.Address.CountryCode3	FND_TERRITORIES.iso_territory_code	OU Default Location Address Country
O	Location.Address.PostalCode	HR_LOCATIONS_ALL.postal_code	OU Default Location Address Postal code
O	TransOrderHeader.InvolvedParty.LocationRef.Location.Address.Province	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	OU Default Location Address Province
O	Location.Address.ProvinceCode	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	OU Default Location Address Province Code
O	Contact.ContactGid.Gid.DomainName	OTM: Domain Name profile option	OTM: Domain Name profile option

Required/Optional	OTM Element	EBS Table.Column	Description
O	Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Supplier contact ID (mapped to the email address, phone number or name in that order)
O	Contact.FirstName	PER_ALL_PEOPLE_F.first_name	Buyer Contact First Name
O	Contact.LastName	PER_ALL_PEOPLE_F.last_name	Buyer Contact Last Name
O	Contact.Phone1	PER_PHONES.phone_number	Buyer Contact Phone Number
O	Contact.EmailAddress	PER_ALL_PEOPLE_F.email_address	Buyer Contact Email ID
O	Contact.Fax	PER_PHONES.phone_number	Buyer Contact Fax Number
O	Contact.CommunicationMethod	Constant. In order of preference: 1. EMAIL 2. FAX 3. MANUAL	Email/Fax/Manual (Phone)
O	TransOrderHeader.InvolvedParty.InvolvedPartyQualifierGid.Gid.Xid	Constant: BILL-TO	BILL-TO

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.InvolvedParty.InvolvedPartyLocationRef.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderHeader.InvolvedParty.InvolvedPartyLocationRef.LocationRef.LocationGid.Gid.Xid	Concatenation:ORG-<PO_HEADERS_ALL.org_id>-<PO_HEADERS_ALL.bill_to_location_id>	ORG-<Org ID>-<Bill to Location ID>
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Buyer contact ID (mapped to the email address, phone number or name in that order)
O	Location.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	Location.LocationGid.Gid.Xid	Concatenation: ORG-<PO_HEADERS_ALL.org_id>-<PO_HEADERS_ALL.bill_to_location_id>	ORG-<Org ID>-<Bill to Location ID>

Required/Optional	OTM Element	EBS Table.Column	Description
O	Location.CorperationXID	Concatenation:ORG-<PO_HEADERS_ALL.org_id>	ORG-<Org ID>
O	Location.LocatioRefNum.Qualifier	Constant: EBS_NAME	EBS_NAME
O	Location.LocatioRefNum.Value	HR_LOCATIONS_ALL.location_code	Bill To Location Name
O	Location.Address.AddressLine1 to AddressLine3	Concatenation: HR_LOCATIONS_ALL.address_line_1 HR_LOCATIONS_ALL.address_line_2 HR_LOCATIONS_ALL.address_line_3	Bill To Location Address Lines
O	Location.Address.City	HR_LOCATIONS_ALL.town_or_city	Bill To Location Address City
O	Location.Address.CountryCode3	FND_TERRITORIES.iso_territory_code	Bill To Location Address Country
O	Location.Address.PostalCode	HR_LOCATIONS_ALL.postal_code	Bill To Location Address Postal Code
O	Location.Address.Province	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	Bill To Location Address Province

Required/Optional	OTM Element	EBS Table.Column	Description
O	Location.Address.ProvinceCode	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	Bill To Location Address Province Code
O	Location.Contact.ContactGid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	
O	Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option

Required/Optional	OTM Element	EBS Table.Column	Description
O	Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Buyer contact ID (mapped to the email address, phone number or name in that order)
O	Contact.FirstName	PER_ALL_PEOPLE_F.first_name	Buyer Contact First Name
O	Contact.LastName	PER_ALL_PEOPLE_F.last_name	Buyer Contact Last Name
O	Contact.Phone1	PER_PHONES.phone_number	Buyer Contact Phone Number
O	Contact.EmailAddress	PER_ALL_PEOPLE_F.email_address	Buyer Contact Email ID
O	Contact.Fax	PER_PHONES.phone_number	Buyer Contact Fax Number
O	Contact.CommunicationMethod	Constant. In order of preference: 1. EMAIL 2. FAX 3. MANUAL	Email/Fax/Manual (Phone)
O	TransOrderLineDetail.TransactionCode	Constant: IU	IU (Insert/Update)

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail.TransOrderLineGid.Gid.Xid	Concatenation:LINE-<PO_LINES_ALL.po_line_id>-SCHED-<PO_LINE_LOCATIONS_ALL.line_location_id>	LINE-<Line ID>-SCHED-<Schedule ID>
O	TransOrderLineDetail.TransOrderLineGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderLineDetail.ItemQuantity.ItemTag1	Concatenation: LINE/SCHEDUL: <PO_LINES_ALL.line_num>/<PO_LINE_LOCATIONS_ALL.shipment_num>	LINE->SCHEDULE: <Line Number>-<Schedule Number> These tags are displayed in the Ready to Ship screen in OTM.
O	TransOrderLineDetail.ItemQuantity.ItemTag2	Concatenation: SUPPLIER ITEM: <PO_LINES_ALL.vendor_product_num>	SUPPLIER ITEM: <Supplier Item>
O	TransOrderLineDetail.ItemQuantity.ItemTag3	Concatenation: REV: <PO_LINES_ALL.item_revision>	REV: <Item Revision>
O	TransOrderLineDetail.ItemQuantity.PackagedItemCount	PO_LINE_LOCATIONS_ALL.quantity	Shipment or Schedule Quantity Quantity changes in Purchasing will not affect released or shipped quantities in OTM – only the order base line quantity.

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail .PackagedItemRef.PackagedItemGid.XID	Concatenation: If UOM code is same in EBS and OTM:<MTL_SYSTEM_ITEMS_KFV.concatenated_segments>_<MTL_UNITS_OF_MEASURE.uom_code> Otherwise:<MTL_SYSTEM_ITEMS_KFV.concatenated_segments>_<MTL_UNITS_OF_MEASURE.attribute15 >	<EBS Item ID>_<UOM> For one time items:<Item Description>_<UOM>
O	TransOrderLineDetail .PackagedItemRef.ItemGid.XID	Concatenation: If UOM code is same in EBS and OTM:<MTL_SYSTEM_ITEMS_KFV.concatenated_segments>_<MTL_UNITS_OF_MEASURE.uom_code> Otherwise:<MTL_SYSTEM_ITEMS_KFV.concatenated_segments>_<MTL_UNITS_OF_MEASURE.attribute15 >	<EBS Item ID>_<UOM> For one time items:<Item Description>_<UOM>
O	TransOrderLineDetail .ItemQuantity.DeclaredValue.MonetaryAmount	Calculated field:PO_LINE_LOCATIONS_ALL.price_override * CIEL(PO_LINE_LOCATIONS_ALL.quantity)	Line Amount Does not include tax
O	TransOrderLineDetail .DeclaredValue.FinancialAmount.GlobalCurrencyCode	PO_HEADERS_ALL.currency_code	PO Currency

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option Item Feature Qualifiers are used to display additional item information.
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.Xid	Constant: DESCRIPTION	DESCRIPTION
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureValue	PO_LINES_ALL.item_description	PO Line Description
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.Xid	Constant: REVISION	REVISION
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureValue	PO_LINES_ALL.item_revision	Item Revision
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.Xid	Constant: SUPPLIER_ITEM	SUPPLIER_ITEM

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureValue	PO_LINES_ALL.vendor_product_num	Supplier Item
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureQualGid.Gid.Xid	Constant: SUPPLIER_CONFIG_ID	SUPPLIER_CONFIG_ID
O	TransOrderLineDetail.TransOrderLine.ItemAttributes.ItemFeatureValue	PO_LINES_ALL.supplier_ref_number	Supplier Config ID This is the configuration ID got from the supplier. For example, a user configured desktop purchased from Dell Web site via punch-out.
O	TransOrderLineDetail.TransOrderLine.TimeWindow.LateDeliveryDate	Calculated field. In order of preference: 1. PO_LINE_LOCATIONS_ALL.promised_date + PO_LINE_LOCATIONS_ALL.days_late_receipt_allowed 2. PO_LINE_LOCATIONS_ALL.need_by_date + PO_LINE_LOCATIONS_ALL.days_late_receipt_allowed	Promised or Need-by Date + Days late receiving tolerance on PO Promised Date if it exists, else Need-By Date

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail.TransOrderLine.TimeWindow.EarlyDeliveryDate	Calculated field. In order of preference: 1. PO_LINE_LOCATIONS_ALL.promised_date - PO_LINE_LOCATIONS_ALL.days_early_receipt_allowed 2. PO_LINE_LOCATIONS_ALL.need_by_date - PO_LINE_LOCATIONS_ALL.days_early_receipt_allowed	Promised or Need-by Date - Days early receiving tolerance on PO Promised Date if it exists, or else the Need-By Date
O	TransOrderlineDetail.TransOrderLine.InvolvedParty.InvolvedPartyQualifierGid.Gid.Xid	Constant: SHIP TO	SHIP TO
O	TransOrderHeader.InvolvedParty.InvolvedPartyLocationRef.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderHeader.InvolvedParty.InvolvedPartyLocationRef.LocationRef.LocationGid.Gid.Xid	Concatenation: ORG-<PO_HEADERS_ALL.org_id>-<PO_HEADERS_ALL.bill_to_location_id>	ORG-<Org ID>-<Bill to Location ID>
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderHeader.InvolvedParty.Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Requestor contact ID – This is mapped to the email address, phone number or name in that order Requestor, if it exists, or else the buyer
O	Location.LocationGid.Gid.Xid	Concatenation. If internal location:ORG-<PO_LINE_LOCATIONS_ALL.ship_to_organization_id>-<PO_LINE_LOCATIONS_ALL.ship_to_location_id> If drop-ship:CUS-000-<PO_LINE_LOCATIONS_ALL.ship_to_location_id>	ORG-<Org ID>-<Ship-To Location ID> or CUS-000-<Ship-To Location ID>
O	Location.LocationRole	Constant: SHIPFROM-SHIPTO	SHIPFROM-SHIPTO
O	Location.CorperationXID	Concatenation. If internal location:ORG-<PO_LINE_LOCATIONS_ALL.ship_to_organization_id> If drop-ship:CUS-000	ORG-<Org ID> or CUS-000 Use 'CUS-000' for drop ship orders.
O	Location.LocatioRefNum.Qualifier	Constant: EBS_NAME	EBS_NAME

Required/Optional	OTM Element	EBS Table.Column	Description
O	Location.LocatioRefNum.Value	HR_LOCATIONS_ALL.location_code	Ship-to Location Name
O	Location.Address.AddressLine1 to AddressLine3	Concatenation: HR_LOCATIONS_ALL.address_line_1 HR_LOCATIONS_ALL.address_line_2 HR_LOCATIONS_ALL.address_line_3	Ship-to Location Address Lines
O	Location.Address.City	HR_LOCATIONS_ALL.town_or_city	Ship-to Location Address City
O	Location.Address.CountryCode3	FND_TERRITORIES.iso_territory_code	Ship-to Location Address Country
O	Location.Address.PostalCode	HR_LOCATIONS_ALL.postal_code	Ship-to Location Address Postal Code
O	Location.Address.Province	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	Ship-to Location Address Province
O	Location.Address.ProvinceCode	Either HR_LOCATIONS_ALL.region_1 or HR_LOCATIONS_ALL.region_2, depending on address style.	Ship-to Location Address Province Code

Required/Optional	OTM Element	EBS Table.Column	Description
O	Contact.ContactGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	Contact.ContactGid.Gid.Xid	In order of preference: 1. PER_ALL_PEOPLE_F.email_address 2. PER_PHONES.phone_number 3. Concatenation: PER_ALL_PEOPLE_F.first_name PER_ALL_PEOPLE_F.last_name	Supplier contact ID (mapped to the email address, phone number or name in that order)
O	Contact.FirstName	PER_ALL_PEOPLE_F.first_name	Requestor Contact First Name
O	Contact.LastName	PER_ALL_PEOPLE_F.last_name	Requestor Contact Last Name
O	Contact.Phone1	PER_PHONES.phone_number	Requestor Contact Phone Number
O	Contact.EmailAddress	PER_ALL_PEOPLE_F.email_address	Requestor Contact Email ID
O	Contact.Fax	PER_PHONES.phone_number	Requestor Contact Fax Number
O	Contact.CommunicationMethod	Constant. In order of preference: 1. EMAIL 2. FAX 3. MANUAL	Email/Fax/Manual (Phone)

Required/Optional	OTM Element	EBS Table.Column	Description
O	TransOrderLineDetail.TransOrderLine.ShipFromLocationRef.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name profile option
O	TransOrderLineDetail.TransOrderLine.ShipFromLocationRef.LocationRef.LocationGid.Gid.Xid	Concatenation:SUP-<PO_HEADERS_ALL.vendor_id>-<PO_HEADERS_ALL.vendor_site_id>	SUP-<Supplier ID>_<Site ID> Note: Although the supplier site need not be the ship-from location, this is a required attribute in OTM and therefore is mapped to supplier site. This can however be updated with the true ship-from location downstream in OTM. EBS PO does not currently carry the ship-from location.
O	TransOrderLineDetail.TransOrderLine.ShipToLocationRef.LocationRef.LocationGid.Gid.DomainName	Profile Option: OTM_DOMAIN_NAME (OTM: Domain Name)	OTM: Domain Name
O	TransOrderLineDetail.TransOrderLine.ShipToLocationRef.LocationRef.LocationGid.Gid.Xid	Concatenation. If internal location:ORG-<PO_LINE_LOCATIONS_ALL.ship_to_organization_id>-<PO_LINE_LOCATIONS_ALL.ship_to_location_id> If drop-ship:CUS-000-<PO_LINE_LOCATIONS_ALL.ship_to_location_id>	ORG-<Ship-To Org ID>_<Ship-To Location ID> or CUS-000-<Location ID>

Oracle Shipping Execution XML Mapping

Location XML Transaction - Carrier

See Concurrent Programs, page 3-30 for details, including XML mapping, of the Location XML transaction for carriers.

Release XML Transaction - Deliveries

The following table shows the XML mapping for the Release XML transaction. Elements that are not mapped are not shown. Item, Customer, Customer Site, and Organization reference data is sent using the Order Release Message. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Required/Optional	OTM Attribute	EBS Table.Column	Description
R	ReleaseGid	WSH_NEW_DELIVERIES.DELIVERY_ID	Release Global ID
R	TransactionCode	"I" for creation, RC for update, and D for delete.	Internally sent to OTM as 'RC' for both Update/Create
O	ReleaseHeader.ReleaseName	WSH_NEW_DELIVERIES.NAME	Release name
O	ReleaseHeader.ReleaseMethodGid	PREPACK	EBS dictates the contents of the Shipunits
O	ReleaseHeader.CommercialTerms		Commercial terms
O	ReleaseHeader.CommercialTerms.PaymentMethodCodeGid	WSH_NEW_DELIVERIES.FREIGHT_TERMS_CODE	Payment method code global ID
O	ReleaseHeader.CommercialTerms.IncoTermGid	WSH_NEW_DELIVERIES.FOB_CODE	FOB code
O	ReleaseHeader.TimeWindowEmphasisGid	BOTH	Time window emphasis specification

Required/Optional	OTM Attribute	EBS Table.Column	Description
O	ReleaseHeader.RateServiceGid	WSH_NEW_DELIVERIES.SERVICE_LEVEL	Rate service global ID
O	ReleaseHeader.A.ServiceProviderGid	WSH_NEW_DELIVERIES.CARRIER_ID	Service provider global ID
O	ReleaseHeader.B.TransportModeGid	WSH_NEW_DELIVERIES.MODE_OF_TRANSPORT	Transportation mode global ID
R	ShipFromLocationRef.LocationGid	DELIVERY SHIP FROM LOCATION GID as per reference data GID	Location global ID
O	ShipToLocationRef		
R	ShipToLocationRef.LocationGid	DELIVERY SHIP TO/ULTIMATE DROP-OFF LOCATION GID	Location ID. If the location is mapped to an internal location (e.g., Internal Sales Order) then the internal location ID will be sent.
O	TimeWindow.EarlyPickupDate	WSH_NEW_DELIVERIES.EARLIEST_PICKUP_DATE	Early pickup date
O	TimeWindow.LatePickupDate	WSH_NEW_DELIVERIES.LATEST_PICKUP_DATE	Late pickup date
O	TimeWindow.EarlyDeliveryDate	WSH_NEW_DELIVERIES.EARLIEST_DROPOFF_DATE	Early delivery date
O	TimeWindow.LateDeliveryDate	WSH_NEW_DELIVERIES.LATEST_DROPOFF_DATE	Late delivery date

Required/Optional	OTM Attribute	EBS Table.Column	Description
R	TotalWeightVolume.Weight	WSH_NEW_DELIVERIES.GROSS_WEIGHT WSH_NEW_DELIVERIES.WEIGHT_UOM_CODE	Total gross weight and UOM
R	TotalWeightVolume.Volume	WSH_NEW_DELIVERIES.VOLUMEWSH_NEW_DELIVERIES.VOLUME_UOM_CODE	Total gross volume and UOM
R	TotalNetWeightVolume.Weight	WSH_NEW_DELIVERIES.NET_WEIGHTWSH_NEW_DELIVERIES.WEIGHT_UOM_CODE	Total net weight and UOM
O	TotalPackagedItemCount		Total quantities of Item regardless of the UOM. A sum of quantities of the item.
O	ReleaseRefnum	WSH_NEW_DELIVERIES.TMS_VERSION_NUMBER[BL]	Delivery revision number Qualifier: REVNUM
O	Remarks	WSH_NEW_DELIVERIES.REASON_OF_TRANSPORTWSH_NEW_DELIVERIES.DESCRIPTIONWSH_NEW_DELIVERIES.ADDITIONAL_SHIPMENT_INFOWSH_NEW_DELIVERIES.ROUTING_INSTRUCTIONS	Qualifiers: TRSP_REASON DEL_DESCRIPTION ADD_INFOS ROUTING_INSTR ACTUALS_RECEIVED ACTUALS_RECEIVED is a qualified value used when sending the release transaction in the actual shipment context. (Value =Y)

Release XML Transaction - Delivery Lines (Release.ReleaseLine)

The following table shows the XML mapping for the Release XML transaction for delivery lines. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	ReleaseLineGid	WSH_DELIVERY_DETAILS.DELIVERY_DETAIL_ID	Release line global ID
R	PackagedItemGid	DELIVERY DETAIL ITEM GID as per reference data GID	Item GID as per reference data.
O	ItemQuantity.ItemTag1	WSH_DELIVERY_DETAILS.LOT_NUMBER	Item lot number
O	ItemQuantity.ItemTag2	WSH_DELIVERY_DETAILS.SERIAL_NUMBER	Item serial number
O	ItemQuantity.ItemTag3	WSH_DELIVERY_DETAILS.TO_SERIAL_NUMBER	Item to serial number
O	ItemQuantity.IsSplitAllowed	N	
R	ItemQuantity.WeightVolume.Weight	WSH_DELIVERY_DETAILS.GROSS_WEIGHTWSH_DELIVERY_DETAILS.WEIGHT_UOM_CODE	Note: UOM codes are PUBLIC data in Oracle Transportation Management. Domain is not mapped in this case.
R	ItemQuantity.WeightVolume.Volume	WSH_DELIVERY_DETAILS.VOLUMEWSH_DELIVERY_DETAILS.VOLUME_UOM_CODE	Adjusted to the QUANTITY_SHIPPED when ship confirmation occurs.

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	ItemQuantity.PackagedItemCount	Delivery not ship confirmed WSH_DELIVERY_DETAILS.REQUESTED_QUANTITY. Delivery ship confirmed WSH_DELIVERY_DETAILS.SHIPPED_QUANTITY	Packaged item count
O	Refnum	WSH_DELIVERY_DETAILS.CUST_PO_NUMBER WSH_DELIVERY_DETAILS.SOURCE_HEADER_NUMBER	Qualifiers: CUST_PO SO_NUM

Release XML Transaction - Ship Unit (Release.ShipUnit)

The following table shows the XML mapping for the Release XML transaction for ship units. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

> **Note:** Item, customer, customer site, and organization reference data is sent using the Order Release Message.

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	ShipUnitGid	**Unpacked:** WSH_DELIVERY_DETAILS.DELIVERY_DETAIL_ID**Packed:** WSH_DELIVERY_DETAILS.DELIVERY_DETAIL_ID of the outer most LPN	Unpacked content: One ship unit per delivery detail is generated, thus ship unit and or line use the same ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	TransactionCode	I when creating a release RC when updating	Transaction code
O	ShipUnit.ShipUnitSpecGid	**Unpacked:** Not mapped **Packed:** Type of the LPN container item (example STANDARD PALLET)	
O	WeightVolume	**Unpacked:**Delivery detail content gross weight and volumes. **Packed:** LPN gross Weights and volume.	UOM codes are PUBLIC data in Oracle Transportation Management. Domain is not mapped in this case.
O	UnitNetWeightVolume	**Packed:** LPN net weights and volume. **Unpacked:** Delivery detail weights and volumes.	
O	LengthWidthHeight		LPN container item dimensions
O	ShipUnitSeal	WSH_DELIVERY_DETAILS.SEAL_CODE	Seal code for the ship unit
O	ShipUnitContent.LineNumber	Incremental value	Incremental value per content line : 1,2, 3, etc.
O	ShipUnitContent.ReleaseGid	WSH_NEW_DELIVERIES.DELIVERY_ID	ReleaseGID of the DD contained in the ship unit
O	ShipUnitContent.ReleaseLineGid	WSH_DELIVERY_DETAILS.DELIVERY_DETAIL_ID	ReleaselineGID of the DD contained in the ship unit

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	ShipUnitCount	1	Ship unit count

Release XML Transaction - Packaged Item (Release.ReleaseLine.PackagedItemRef)

The following table shows the XML mapping for the Release XML transaction for packaged items. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	PackagedItemGid	DELIVERY_DETAIL_ITEM_GID	Item comes from reference data as a result only.

PlannedShipment XML Transaction - Trip

The following table shows the XML mapping for the PlannedShipment XML transaction for trips. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Shipment.ShipmentHeader.ServiceProviderGid.Gid.Xid	WSH_TRIPS.CARRIER_ID	Carrier ID
O	Shipment.ShipmentHeader. RateServiceGid.Gid.Xid	WSH_TRIPS.SERVICE_LEVEL	Rate service ID
O	Shipment.ShipmentHeader.TransportModeGid.Xid	WSH_TRIPS.MODE_OF_TRANSPORT	Transportation mode ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	Shipment.ShipmentHeader.CommercialTerms.PaymentMethodCodeGid	WSH_TRIPS.FREIGHT_TERMS_CODE	Payment method global ID
O	Shipment.Sequipment.EquipmentGroupGid	WSH_TRIPS.VEHICLE_ITEM_ID	Equipment type global ID
O	Shipment.Sequipment.EquipmentInitial	WSH_TRIPS.VEHICLE_NUMBER_PREFIX	Equipment prefix
R	Shipment.Sequipment.EquipmentNumber	WSH_TRIPS.VEHICLE_NUMBER	Equipment number
O	Shipment.ShipmentHeader.ShipmentGid.Gid.Xid	WSH_TRIPS.TP_PLAN_NAME	Shipment header global ID
O	Shipment.Release.ReleaseAllocationInfo.ReleaseAllocByType.ReleaseAllocShipment.TotalAllocCost (XSL Mapping chooses the Cost for ReleaseAllocByType = 'PLANNING')	WSH_FREIGHT_COSTS.TOTAL_AMOUNT	Freight cost allocated at the release level.

Planned Shipment XML Transaction - Trip Stop

The following table shows the XML mapping for the PlannedShipment XML transaction for trip stops. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Shipment.ShipmentStop.LocationRef	WSH_TRIP_STOPS.STOP_LOCATION_ID	Trip stop ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	Shipment.ShipmentStop.StopSequence	WSH_TRIP_STOPS.STOP_SEQUENCE_NUMBER	Trip stop sequence number
O	Shipment.ShipmentStop.ArrivalTime.EventTime.PlannedTime	WSH_TRIP_STOPS.PLANNED_ARRIVAL_DATE	Trip stop planned arrival date
O	Shipment.ShipmentStop.DepartureTime.EventTime.PlannedTime	WSH_TRIP_STOPS.PLANNED_DEPARTURE_DATE	Trip stop planned departure date
O	Shipment.Location.Address.TimezoneGid	WSH_TRIP_STOPS.TIMEZONE_XID	Trip stop time zone

PlannedShipment XML Transaction - Delivery Leg

The following table shows the XML mapping for the PlannedShipment XML transaction for delivery leg. Elements that are not mapped are not shown. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	ShipUnit.ShipFromLocationRef	WSH_TRIP_STOPS.STOP_LOCATION_ID corresponding to WSH_DELIVERY_LEGS.PICK_UP_STOP_ID	Delivery leg pick up stop ID
O	ShipUnit.ShipToLocationRef	WSH_TRIP_STOPS.STOP_LOCATION_ID corresponding to WSH_DELIVERY_LEGS.DROP_OFF_STOP_ID	Delivery leg drop off stop ID

ActualShipment XML Transaction

The following table shows the XML mapping for the ActualShipment XML transaction. Elements that are not mapped are not shown. (OTM = Oracle Transportation

Management. EBS = Oracle E-Business Suite.)

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	ShipmentHeader.ShipmentGid	Include for planning WSH_TRIPS.TP_PLAN_NAME Ignore for planning prefix WSH - WSH_TRIPS.TRIP_ID (GID example EBS.WSH-12345)	Shipment global ID
O	ShipmentHeader.ShipmentName	WSH_TRIPS.NAME	Shipment name
O	ShipmentHeader.ShipmentRefnum	WSH_TRIPS.TRIP_ID WSH_TRIPS.MASTER_BOL_NUMBER WSH_TRIPS.PLANNED_FLAG Total manually entered Freight Costs. Manually entered freight cost currency WSH_TRIPS.OPERATOR	Shipment reference number Qualifiers: TRIP_ID MBOL_NUMBER PLANNED_TRIP MANUAL_FREIGHT_COSTS MAN_FREIGHT_COST_CUR OPERATOR
R	ShipmentHeader.TransactionCode	IU: Ignore for planning.	Transaction code
O	ShipmentHeader.ServiceProviderGid	GID of WSH_TRIPS.CARRIER_ID	Service provider global ID
O	ShipmentHeader.IsServiceProviderFixed	Y: Ignore for planning	Whether or not service provider is fixed.
O	ShipmentHeader.TransportModeGid	WSH_TRIPS.MODE_OF_TRANSPORT	Mode of transportation global ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	ShipmentHeader.TotalWeightVolume.Weight	Sum of TRIP_STOPS. Departure gross weights. NOTE : Rules for trip's Weights and Volumes UOM Get UOM Class defined in Shipping Parameters (Org-specific) Base UOM defined for this UOM Class in Inventory > Units Of Measure > In the Outbound Concurrent Request, we would have to check that for each trip that gets picked-up, the base UOM exists for the first stop location's organization's UOM Class. And for each trip, it's base UOM would be used to calculate total weight/volume at the trip level for Actuals. > End-Users will have to ensure that both forms are defined at set-up time and that OTM has defined this UOM (or UOMs if it's different across Orgs). Note UOM domain: because UOMs are in the PUBLIC domain in OTM we do not map a DOMAIN for UOM GIDs	Total gross weight
O	ShipmentHeader.TotalWeightVolume.Volume	Sum of TRIP_STOPS departure volumes	Total gross volume of the trip

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	TotalNetWeight.Volume		Total net volume of the trip
O	ShipmentHeader.TotalNetWeightVolume.Weight	Sum of TRIP_STOPS departure net weights	Total net weight
O	ShipmentHeader.TotalShipUnitCount	Count of Ship_units = count of outermost LPNs + 1 unpacked content	Ship unit count.
O	ShipmentHeader.TotalPackagedItemCount	Total quantity of items regardless of UOM.	Packaged item count for the trip
O	CommercialTerms.PaymentMethodCode	WSH_TRIPS.FREIGHT_TERMS_CODE	Payment method code
O	ShipmentHeader.Remark	WSH_TRIPS.ROUTING_INSTRUCTIONS	Miscellaneous remarks
O	ShipmentHeader.StopCount		Number of stops within the trip.
O	ShipmentHeader2.ShipmentAsWork	N= Include for Planning Y= for Ignore for Planning	
O	SEquipment.IntSavedQuery.IntSavedQueryGID	Include for Planning trips only. S_EQUIPEMENT_1	Saved query global ID
O	SEquipment.IntSavedQuery.IntSavedQueryArg.ArgName	Include for Planning trips only. SHIPMENT_GID	
O	SEquipment.IntSavedQuery.IntSavedQueryArg.Value	Include for Planning trips only SHIPMENT_GID = DOMAIN.WSH_TRIPS.TP_PLAN_NAME	Saved query value

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	SEquipmentGid	Ignore for Planning trips only. SHIPMENT_GID = DOMAIN.WSH-WSH_TRIP.TRIP_ID (for example EBS.WSH-12345).	Equipment Global ID If Ignore, then populate SEquipmentGid.DomainName and SEquipmentGid.Value If Include, then populate IntSavedQueryGid, IntSavedQueryArgValue, IntSavedQueryArgName
O	SEquipment.EquipmentInitial	WSH_TRIP.VEHICLE_NUMBER_PREFIX	Equipment prefix
O	SEquipment.EquipmentNumber	WSH_TRIP.VEHICLE_NUMBER	Equipment number
O	SEquipment.EquipmentGroupGid	Item name of item WSH_TRIP.VEHICLE_ITEM_ID (for example 40ft trailer)	Equipment group global ID
O	SEquipment.SEquipmentSeal	WSH_TRIP.SEAL_CODE	Equipment seal code
O	SEquipment.SEquipmentSeal.SequenceNumber	Incremental number, 1 because there is one seal number for the trip.	Equipment sequence number.
R	ShipmentStop.StopSequence	WSH_TRIP.STOP_SEQUENCE_NUMBER	Stop sequence number
O	ShipmentStop.TransactionCode	I: Ignore for planning trips IU: Include for planning	Transaction code

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	ShipmentStop.StopDuration	Pick up stop only Difference between start of loading end of loading	Stop duration
	ShipmentStop.LocationRef.locationGid	GID of WSH_TRIP_STOPS.LOCATION_ID	Location global ID
O	ShipmentStop.ArrivalTime.EventTime.ActualTime.GLogDate	Ignore for planning - pick up stop WSH_TRIP_STOPS.ACTUAL_ARRIVAL_DATE Ignore for Planning - drop stop WSH_TRIP_STOPS.PLANNED_ARRIVAL_DATE Include for Planning - Pick up stop WSH_TRIP_STOPS.ACTUAL_ARRIVAL_DATE	Arrival time
O	ShipmentStop.DepartureTime..EventTime.ActualTime.GLogDate	Ignore for planning - Pick up stop WSH_TRIP_STOPS.ACTUAL_DEPARTURE_DATE Ignore for Planning - Drop stop WSH_TRIP_STOPS.PLANNED_DEPARTURE_DATE Include for Planning - Pick up stop WSH_TRIP_STOPS.ACTUAL_DEPARTURE_DATE	Actual arrival time
R	ShipmentStop.ShipmentStopDetail.Activity	P if the ship unit is to be picked up D if the ship unit is to be dropped off.	Activity information

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	ShipmentStop.ShipmentStopDetail.ShipUnitGid	Release's ShipUnit Gid picked up or dropped off.	Ship unit Global ID
O	ShipmentStop.ShipmentStopDetail.Refnum	WSH_TRIP_STOPS.DEPARTURE_SEAL_CODE	Reference number

Shipping-Transportation Carrier Synchronization XML Mapping

Carrier XML Mapping

The following table shows the mapping of the referenced XML carrier data between Oracle E-Business Suite and Oracle Transportation Management, whether the data is required or optional, and a brief description. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite)

Note: All null fields must contain a tilde (~) and must not be left blank.

Carrier XML Mapping

Optional/Required	OTM Element	EBS Table.Column	Description
	Corporation		Structure containing corporate information specific to a corporation headquarters.
O	CorporationName	AR.HZ_PARTIES.PARTY_NAME (via CARRIER_ID)	Corporation name

Optional/Required	OTM Element	EBS Table.Column	Description
	Location		Structure containing place where transportation related activities occur, for example, a loading and unloading freight location. In addition, a location might represent a corporation, and/or a service provider.
R	Location.TransactionCode	CONSTANT =IU	Specifies how the XML transaction should be processed." I" adds new data. "U" updates existing data. "IU" updates if present, insert otherwise. "D" to delete."RC" to replace children.
R	Location.LocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = CAR "-" WSH.WSH_CARRIERS.CARRIER_ID	A global ID that uniquely identifies a location.
O	Location.LocationName	AR.HZ_PARTIES.PARTY_NAME (via CARRIER_ID)	Location name. Truncated to 30 characters because of size limitations in OTM.

Optional/Required	OTM Element	EBS Table.Column	Description
R	Location.Address.CountryCode3Gid	DomainName = PUBLIC XID = Profile Option "WSH: OTM Corporation Country Code value	The three character ISO country code global identifier.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORIGIN	Location reference number global ID.
R	Location.LocationRefnum.LocationRefnumValue	CONSTANT = CARRIER	Location reference number is used to provide smart EBS values. For example, when Qualifier = ORIGIN, Value is the origin EBS data such as Customer, Carrier, or Organization.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORIGIN	Location reference number qualifier global ID.
R	Location.LocationRefnum.LocationRefnumValue	WSH.WSH_CARRIERS.CARRIER_ID	Location reference number is used to provide smart EBS values. For example, when Qualifier = CARID, Value is the origin EBS data is the EBS carrier ID known by EBS users.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = CARNM	Location reference number qualifier Global ID.

Optional/Required	OTM Element	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	WSH: AR.WSH_CARRIERS.SCAC_CODE	Location reference number is used to provide smart EBS values. For example, when Qualifier = CARNM, Value is the EBS carrier short name known by EBS users.
O	Location.LocationRoleGid	DomainName = PUBLIC XID = CARRIER	A structure specifying a location role.
O	Location.Corporation.CorporationName	AR.HZ_PARTIES.PARTY_NAME (via CARRIER_ID)	Corporation name. Truncated to 30 characters because of size limitations in OTM.
	ServiceProvider		An optional structure containing a location represents a service provider.
R	ServiceProvider Alias.ServiceProviderAliasQualifierGid	DomainName = PUBLIC XID = SUPPLIER_ID	Indicates the type of value in the ServiceProviderAlias Value element.
R	ServiceProvider Alias.ServiceProviderAliasValue	DomainName = Profile Option OTM: Domain Name value XID = SUP "-" WSH.WSH_CARRIERS.SUPPLIER_ID	Service provider alias is used to provide EBS information. For example, when Qualifier = SUPPLIER_ID, Value is the EBS link between carrier and supplier.

Carrier Site XML Mapping

The following table shows the mapping of the referenced XML carrier site data between Oracle E-Business Suite and Oracle Transportation Management, whether the data is

required or optional, and a brief description. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite)

Note: All null fields must contain a tilde (~) and must not be left blank.

Carrier Site XML Mapping

Optional/Required	OTM Element	EBS Table.Column	Description
R	Location		Structure containing a place where transportation related activities occur, such as loading and unloading freight.
R	Location.TransactionCode	CONSTANT =IU	TransactionCode specifies how the XML transaction should be processed. "I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children
R	Location.LocationGid	DomainName = Profile Option "OTM: Domain Name" value XID= CAR "-" WSH.WSH_CARRIERS.CARRIER_ID "-" AR.HZ_PARTY_SITES.LOCATION_ID	Global ID that uniquely identifies a location.

Optional/Required	OTM Element	EBS Table.Column	Description
O	Location.LocationName	AR.HZ_PARTIES.PARTY_NAME (via CARRIER_ID) "," AR.HZ_LOCATIONS.CITY "," AR.HZ_LOCATIONS.STATE "," AR.HZ_LOCATION.COUNTRY	The total length for Location.LocationName should be 30 characters. Therefore, 10 charcaters from ten character from NAME + "," + ten characters from CITY + "," + four characters from STATE + "," + three characters from COUNTRY.
O	Location.Address.AddressLines	AR.HZ_LOCATIONS.ADDRESS1AR.HZ_LOCATIONS.ADDRESS2AR.HZ_LOCATIONS.ADDRESS3AR.HZ_LOCATIONS.ADDRESS4	Contains the sequence number and address lines.
O	Location.Address.City	AR.HZ_LOCATIONS.CITY	City
O	Location.Address.Province	AR.HZ_LOCATIONS.STATE Only if length is not 2 letters or AR.HZ_LOCATIONS.PROVINCE Only if length is not 2 letters or AR.HZ_LOCATIONS_ALL.REGION_2 Only if length is not 2 letters or AR.HZ_LOCATIONS_ALL.REGION_1 Only if length is not 2 letters.	Province is a long description corresponding to ProvinceCode.

Optional/Required	OTM Element	EBS Table.Column	Description
O	Location.Address.ProvinceCode	AR.WSH_REGIONS.STATE Only if length is 2 letters; if not, then nothing or AR.HZ_LOCATIONS.STATE Only if length is 2 letters; if not, then nothing or AR.HZ_LOCATIONS.PROVINCE Only if length is 2 letters; if not, then nothing or AR.HZ_LOCATIONS_ALL.REGION_2 Only if length is 2 letters; if not, then nothing or AR.HZ_LOCATIONS_ALL.REGION_1 Only if length is 2 letters; if not, then nothing.	ProvinceCode is a two character province code. In the United States, ProviceCode corresponds to a two character state code such as PA.
O	Location.Address.PostalCode	AR.HZ_LOCATIONS.POSTAL_CODE	PostalCode is the postal code component of Address. For United States, this is a 3, 5 or 9 character zip code.
R	Location.Address.CountryCode3Gid	DomainName = PUBLIC XID = FND_TERRITORIES.ISO_TERRITORY_CODEAR	CountryCode3Gid is the three-character ISO country code global identifier.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID =ORIGIN	LocationRefnumQualifierGid is a location reference number qualifier global identifier.(For example: Gid.Xid = DUNS)

Optional/Required	OTM Element	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	CONSTANT = CARRIER	Used to provide smart EBS values. For example, when Qualifier = ORIGIN, Value is the origin EBS data such as Customer, Carrier, or Organization
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = CARID	Location reference number qualifier global ID.
R	Location.LocationRefnum.LocationRefnumValue	WSH.WSH_CARRIERS.CARRIER_ID	Used to provide smart EBS values. For example, when Qualifier = CARID, Value is the EBS carrier ID known by EBS user.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = LOCID	Location reference number qualifier global ID.
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_PARTY_SITES.PARTY_SITE_NUMBER	Used to provide smart EBS values. For example, when Qualifier = CARNM, Value is the EBS carrier short name known by EBS user.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = LOCID	Location reference number qualifier global ID.

Optional/Required	OTM Element	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_PARTY_SITES.PARTY_SITE_NUMBER	Used to provide smart EBS values. For example, when Qualifier = LOCID, Value is the EBS carrier location ID known by EBS user.
O	Location.LocationRoleGid	DomainName = PUBLIC XID = DISPATCH LOCATION	LocationRole is a structure specifying a location role. Locations may play multiple roles. Examples of location roles include warehouse, crossdock, loading dock, etc. A calendar may be associated with a location role, to limit the times when a part
R	Location.ParentLocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = CAR "-" WSH.WSH_CARRIERS.CARRIER_ID	Within the Location element, the ParentLocationGid specifies the parent corporation for this location. Within the OprationalLocation element, ParentLocationGid specifies the main location to which the operational location belongs.

Shipping-Transportation Outbound Interface XML Mapping

The following table shows the mapping of the referenced data between Oracle E-Business Suite and Oracle Transportation Management, whether the data is required or optional, and a brief description of each. (OTM = Oracle Transportation Management. EBS = Oracle E-Business Suite)

Item XML Mapping

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Item.TransactionCode	CONSTANT =IU	TransactionCode specifies how the XML transaction should be processed. "I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children.
R	Item.ItemGid	DomainName = Profile Option "OTM: Domain Name" value XID = MTL_SYSTEM_ITEMS_B.ORGANIZATION_ID "-" MTL_SYSTEM_ITEMS_B.INVENTORY_ITEM_ID	Item global ID
O	Item.ItemName	MTL_SYSTEM_ITEMS_B.segment1..segment15	Item name Truncated to 30 characters because of size limitations in OTM.
O	Item.Description	MTL_SYSTEM_ITEMS_TL.DESCRIPTION	Item description Truncated to 120 characters because of size limitations in OTM

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Packaging.PackagedItemGid	DomainName = Profile Option "OTM: Domain Name" value XID = MTL_SYSTEM_ITEMS_B.ORGANIZATION_ID "-" MTL_SYSTEM_ITEMS_B.INVENTORY_ITEM_ID	Packaged item global ID
O	Packaging.Description	MTL_SYSTEM_ITEMS_TL.DESCRIPTION	Packaging description Truncated to 120 characters because of size limitations in OTM.

Customer XML Mapping

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	CorporationName	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID)	Corporation name
R	Location.TransactionCode	CONSTANT =IU	TransactionCode specifies how the XML transaction should be processed. "I" adds new data. "U " updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children.

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.LocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = CUS "-" AR.HZ_CUST_ACCOUNTS.CUST_ACCOUNT_ID	Location global ID
O	Location.LocationName	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID)	Location name Truncated to 30 characters because of size limitations in OTM.
R	Location.Address.CountryCode3Gid	DomainName = PUBLIC XID = Profile Option "OTM: Corporation Country Code" value	The three character ISO country code global identifier
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORIGIN	Reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	CONSTANT = CUSTOMER	Used to provide smart EBS values. For example, when Qualifier = ORIGIN, Value is the origin EBS data such as Customer, Carrier, or Organization.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = CUSID	Reference number qualifier global ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_CUST_ACCOUNTS.ACCOUNT_NUMBER	Location reference number is used to provide smart EBS values. For example, when Qualifier = CUSID, Value is the origin EBS data is the EBS customer ID known by EBS users.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = CUSNM	Location reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID)	Location reference number is used to provide smart EBS values. For example, when Qualifier = CUSNM, Value is the EBS customer name known by EBS users.
R	Location.LocationRole.LocationRoleGid	DomainName = PUBLIC XID = CUSTOMER	Location role global ID
O	Location.Corporation.CorporationName	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID)	Corporation name

Customer Site XML Mapping

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.TransactionCode	CONSTANT =IU	TransactionCode specifies how the XML transaction should be processed. " I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children
R	Location.LocationGid		Location global ID
O	Location.LocationName	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID) "," AR.HZ_LOCATIONS.CITY "," AR.HZ_LOCATIONS.STATE "," AR.HZ_LOCATION.COUNTRY	The total length for Location.LocationName should be 30 characters; therefore, ten character from NAME + "," + ten characters from CITY + "," + four characters from STATE + "," + three characters from COUNTRY
O	Location.Address.AddressLines	AR.HZ_LOCATIONS.ADDRESS1AR.HZ_LOCATIONS.ADDRESS2AR.HZ_LOCATIONS.ADDRESS3AR.HZ_LOCATIONS.ADDRESS4	Contains the sequence number and address lines.
O	Location.Address.City	AR.HZ_LOCATIONS.CITY	City

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	Location.Address.Province	AR.HZ_LOCATIONS.STATE Only if length is not 2 letters, or AR.HZ_LOCATIONS.PROVINCE Only if length is not 2 letters, or AR.HZ_LOCATIONS_ALL.REGION_2 Only if length is not 2 letters, or AR.HZ_LOCATIONS_ALL.REGION_1 Only if length is not 2 letters	Province is a long description corresponding to ProvinceCode.
O	Location.Address.ProvinceCode	AR.WSH_REGIONS.STATE Only if length is 2 letters; if not, then nothing, or AR.HZ_LOCATIONS.STATE Only if length is 2 letters; if not, then nothing, or AR.HZ_LOCATIONS.PROVINCE Only if length is 2 letters; if not, then nothing, or AR.HZ_LOCATIONS_ALL.REGION_2 Only if length is 2 letters; if not, then nothing, or AR.HZ_LOCATIONS_ALL.REGION_1 Only if length is 2 letters; if not, then nothing	A two character province code. In the United States, ProvinceCode corresponds to a two character state code such as PA.
O	Location.Address.PostalCode	AR.HZ_LOCATIONS.POSTAL_CODE	Postal code

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.Address.CountryCode3Gid	DomainName = PUBLIC XID = FND_TERRITORIES.ISO_TERRITORY_CODEAR	Three character ISO country code global identifier.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID =ORIGIN	Location reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	CONSTANT = CUSTOMER	Used to provide smart EBS values. For example, when Qualifier = ORIGIN, Value is the origin EBS data such as Customer, Carrier, or Organization
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID =CUSID	Location reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_CUST_ACCOUNTS.ACCOUNT_NUMBER	Used to provide smart EBS values. For example, when Qualifier = CUSID, Value is the EBS customer ID known by EBS user
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID =CUSNM	Location reference number qualifier global ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	AR.HZ_PARTIES.PARTY_NAME (via CUST_ACCOUNT_ID)	Location reference number is used to provide smart EBS values. For example, when Qualifier = CUSNM, Value is the EBS customer name known by EBS users.
R	Location.Contact.ContactGid	DomainName = Profile Option "OTM: Domain Name" value XID = AR.RA_CONTACTS.CONTACT_ID	Contact global ID
O	Location.Contact.TransactionCode	CONSTANT = IU	) TransactionCode specifies how the XML transaction should be processed. " I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children
O	Location.Contact.EmailAddress	AR.HZ_CONTACT_POINTS.EMAIL_ADDRESS	Contact Email address
O	Location.Contact.FirstName	AR.HZ.PARTIES.PERSON_FIRST_NAME	Contact first name
O	Location.Contact.LastName	AR.HZ.PARTIES.PERSON_LAST_NAME	Contact last name
O	Location.Contact.JobTitle	AR.HZ_ORG_CONTACTS.JOB_TITLE	Contact job title

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	Location.Contact.Phone1	AR.HZ_CONTACT_POINTS.PHONE_COUNTRY_CODEAR.HZ_CONTACT_POINTS.PHONE_AREA_CODEAR.HZ_CONTACT_POINTS.PHONE	Contact phone number
R	Location.LocationRole.LocationRoleGid	DomainName = Profile Option "OTM: Domain Name" value XID = SHIPFROM / SHIPTO	Location role global ID
R	Location.ParentLocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = CUS "-" AR.HZ_CUST_ACCOUNTS.CUST_ACCOUNT_ID	Parent location global ID
R	Location.SubstituteLocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = CUS "-" AR.HZ_CUST_ACCOUNTS.CUST_ACCOUNT_ID "-" AR.HZ_LOCATIONS.LOCATION_ID	Substitute location global ID

Organization XML Mapping

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	CorporationName	HR.HR_ALL_ORGANIZATION_UNITS.NAME	Corporation name
R	Location.TransactionCode	CONSTANT =IU	TransactionCode specifies how the XML transaction should be processed. " I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children.
R	Location.LocationGid	DomainName = Profile Option "OTM: Domain Name" value XID = ORG "-" HR.HR_ALL_ORGANIZATION_UNITS.ORGANIZATION_ID "-" HR.HR_LOCATIONS_ALL.LOCATION_ID	Location global ID
O	Location.LocationName	HR.HR_ALL_ORGANIZATION_UNITS.NAME	Location name Truncated to 30 characters because of size limitations in OTM.

Optional/Required	OTM Attribute	EBS Table.Column	Description
O	Location.Address.AddressLines	HR.HR_LOCATIONS_ALL.ADDRESS_LINE_1HR.HR_LOCATIONS_ALL.ADDRESS_LINE_2HR.HR_LOCATIONS_ALL.ADDRESS_LINE_3	Contains the sequence number and address lines.
O	Location.Address.City	HR.HR_LOCATIONS_ALL.TOWN_OR_CITY	City
O	Location.Address.Province	HR.HR_LOCATIONS_ALL.REGION_1	Province is a long description corresponding to ProvinceCode
O	Location.Address.ProvinceCode	HR.HR_LOCATIONS_ALL.REGION_2 Only if length is 2 letters; if not, then nothing.	ProvinceCode is a two character province code. In the United States, ProvinceCode corresponds to a two character state code such as PA.
O	Location.Address.PostalCode	HR.HR_LOCATIONS_ALL.POSTAL_CODE	Postal code
R	Location.Address.CountryCode3Gid	DomainName = PUBLIC XID= HR.HR_LOCATIONS_ALL.COUNTRY	CountryCode3Gid is the three character ISO country code global identifier
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORIGIN	Location reference number qualifier global ID

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.LocationRefnum.LocationRefnumValue	CONSTANT = ORGANIZATION	Used to provide smart EBS values. For example, when Qualifier = ORIGIN, Value is the origin EBS data such as Customer, Carrier, or Organization.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORGID	Location reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	MTL_PARAMETERS.ORGANIZATION_CODE	Location reference number is used to provide smart EBS values. For example, when Qualifier = ORGID, Value is the EBS organization ID known by EBS users.
R	Location.LocationRefnum.LocationRefnumQualifierGid	DomainName = PUBLIC XID = ORGNM	Location reference number qualifier global ID
R	Location.LocationRefnum.LocationRefnumValue	HR.HR_ALL_ORGANIZATION_UNITS.NAME	Location reference number is used to provide smart EBS values. For example, when Qualifier = ORGNM, Value is the EBS organization name known by EBS users.

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.Contact.ContactGid	DomainName = Profile Option "OTM: Domain Name" value XID = ORG "-" HR.HR_ALL_ORGANIZATION_UNITS.ORGANIZATION_ID "-" HR.HR_LOCATIONS_ALL.LOCATION_ID	Contact global ID
O	Location.Contact.TransactionCode	CONSTANT = IU	) TransactionCode specifies how the XML transaction should be processed. " I" adds new data. "U" updates existing data. "IU" updates if present, inserts otherwise. "D" to delete. "RC" to replace children.
O	Location.Contact.Phone1	HR.HR_LOCATIONS_ALL.TELEPHONE_NUMBER_1	Contact phone number
O	Location.Contact.Phone2	HR.HR_LOCATIONS_ALL.TELEPHONE_NUMBER_2	Contact phone number
O	Location.Contact.Fax	HR.HR_LOCATIONS_ALL.TELEPHONE_NUMBER_3	Contact fax number

Optional/Required	OTM Attribute	EBS Table.Column	Description
R	Location.LocationRole.LocationRoleGid	DomainName = Profile Option "OTM: Domain Name" value XID = SHIPFROM / SHIPTO	Location role global ID
O	Location.Corporation.CorporationName	HR.HR_ALL_ORGANIZATION_UNITS.NAME	Corporation name
R	Location.Corporation.VatRegistration.CountryCode3Gid	DomainName = PUBLIC XID = HR.HR_LOCATIONS_ALL.COUNTRY	Country code
O	Location.IsShipperKnown	CONSTANT = Y	

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