

Oracle® Transportation Management

Kewill Flagship Parcel Rate Requests
Integration Guide

Release 6.3

Part No. E38429-04

April 2015

Part No. E38429-04

Copyright © 2010, 2015, Oracle and/or its affiliates. All rights reserved. This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Contents

CONTENTS	IV
SEND US YOUR COMMENTS	VI
PREFACE	VII
CHANGE HISTORY	VII
1. INSTALL FLAGSHIP	1-1
2. SETUP FLAGSHIP	2-1
LOCATIONS	2-1
CARRIERS/SERVICES	2-2
3. SETUP BASE ORACLE TRANSPORTATION MANAGEMENT	3-1
LOCATIONS	3-1
ORDER RELEASES	3-1
SERVICE PROVIDERS/CARRIERS	3-2
RATE SERVICE/CARRIER SERVICE LEVEL	3-4
DHL CANADA TO USA RATING	3-6
4. RATING	4-1
SETTING UP TO INVOKE FLAGSHIP FROM A RATE OFFERING	4-1
RATE OFFERING TYPE	4-1
RATE OFFERING	4-1
RATE RECORD	4-2
SAMPLE RATE INQUIRY	4-2
SETTING UP TO INVOKE FLAGSHIP FROM A RATE COST	4-4
RATE OFFERING TYPE	4-4
RATE OFFERING	4-5
RATE RECORD COST	4-5
UNDERSTANDING RATE RESPONSES	4-6
CALCULATING DISCOUNTS	4-6
5. ACCESSORIALS	5-1
FUEL SURCHARGE	5-3
ADDITIONAL HANDLING	5-3
DELIVERY CONFIRMATION	5-3
INSURANCE	5-3
OUT OF AREA DELIVERY	5-3
RESIDENTIAL DELIVERY	5-3
SATURDAY PICKUP	5-4
SATURDAY DELIVERY	5-4
DRY ICE CHARGES	5-4
CUSTOMS CLEARANCE CHARGES	5-4
EXTENDED AREA CHARGES	5-4

HARMONIZED SALES TAX CHARGES	5-5
AVIATION INSURANCE SURCHARGE.....	5-5
DIRECT TO CONSIGNEE CHARGES	5-5
DROP CHARGES	5-5
SURCHARGE FOR SHIPMENTS TRAVELLING THROUGH DHL AIR NETWORK	5-5
HAZMAT.....	5-5
OTHER CHARGES.....	5-20
6. DISCOUNTS	6-1
7. RATING ENGINE FATAL EXCEPTION	7-1
8. APPENDIX: SUPPORTED CARRIER SERVICE CODES	8-1
DHL U.S ORIGIN: CARRIER CODE "DHL"	8-1
FEDEx U.S. ORIGIN: CARRIER CODE "FDX"	8-2
GENERIC RATED OR NON-RATED – LTL: CARRIER CODE "GEN"	8-3
UPS U.S. ORIGIN: CARRIER CODE "UPS"	8-3
U.S. POSTAL SERVICE U.S. ORIGIN: CARRIER CODE "USPS".....	8-4
UPS SUPPLY CHAIN SOLUTIONS (SCS) US ORIGIN: CARRIER CODE "EMRY"	8-5
PUROLATOR (LEGACY) CA ORIGIN: CARRIER CODE "PURO"	8-6
FEDEx SMARTPOST US ORIGIN: CARRIER CODE "SPO"	8-6
CZAR - USING SMC3 RATEWARE SERVER: CARRIER CODE "CZAR"	8-6
DHL CANADA CA ORIGIN: CARRIER CODE "DHCA"	8-6
BAX GLOBAL US ORIGIN: CARRIER CODE "BAX"	8-7
UPS CANADA CA ORIGIN: CARRIER CODE "UPCA"	8-8
TNT UK: CARRIER CODE "TNTUK"	8-8
9. APPENDIX: CERTIFIED CARRIER LIST AND SUPPORT DETAIL	9-1

Send Us Your Comments

Oracle Transportation Management Kewill Flagship Parcel Rate Requests Integration Guide, Release 6.3

Part No. E38429-04

Oracle welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have any other suggestions for improvement, please indicate the title and part number of the documentation and the chapter, section, and page number (if available). You can send comments to us in the following ways:

- Electronic mail: otm-doc_us@oracle.com

If you would like a reply, please give your name, address, telephone number, and electronic mail address (optional).

If you have problems with the software, contact Support at <https://support.oracle.com> or find the Support phone number for your region at <http://www.oracle.com/support/contact.html>.

Preface

This guide provides instructions and simple examples that demonstrate how to set up rates and extract costs for parcel mode shipments via Oracle Transportation Management to Kewill Flagship external rating engine link.

Change History

Date	Document Revision	Summary of Changes
12/2012	-01	Initial release.
01/2014	-02	Added the following: Note: The TIMEDEFINITESERVICE should not be used in scenarios where applying stop times and re-driving of the shipment is required, since the re-drive logic does not support TIMEDEFINITESERVICE.
05/2014	-03	Corrected typos.
04/2015	-04	6.3.7 updates. Revised chapter 5: Accessorials.

1. Install Flagship

Follow the instructions provided by Kewill to install Flagship on a machine. This machine should be connected to the same network as the application server to minimize communications performance bottlenecks.

Once Flagship is installed, you will need to define the Oracle Transportation Management properties that specify the communication information. For example:

```
glog.RatingEngine.Kewill.URL=otm-kewill  
glog.RatingEngine.Kewill.port=1200
```


2. Setup Flagship

Locations

At least one shipper location should be created. This will correspond to the origin location of shipments created and rated within Oracle Transportation Management. You will assign a code to this location within Flagship, referred to as the **CUSTNUM** (customer number, but you can use letters). Ex: PHILAPA. In Flagship itself, this will be referred to as the **Shipper ID** when you add the customer.

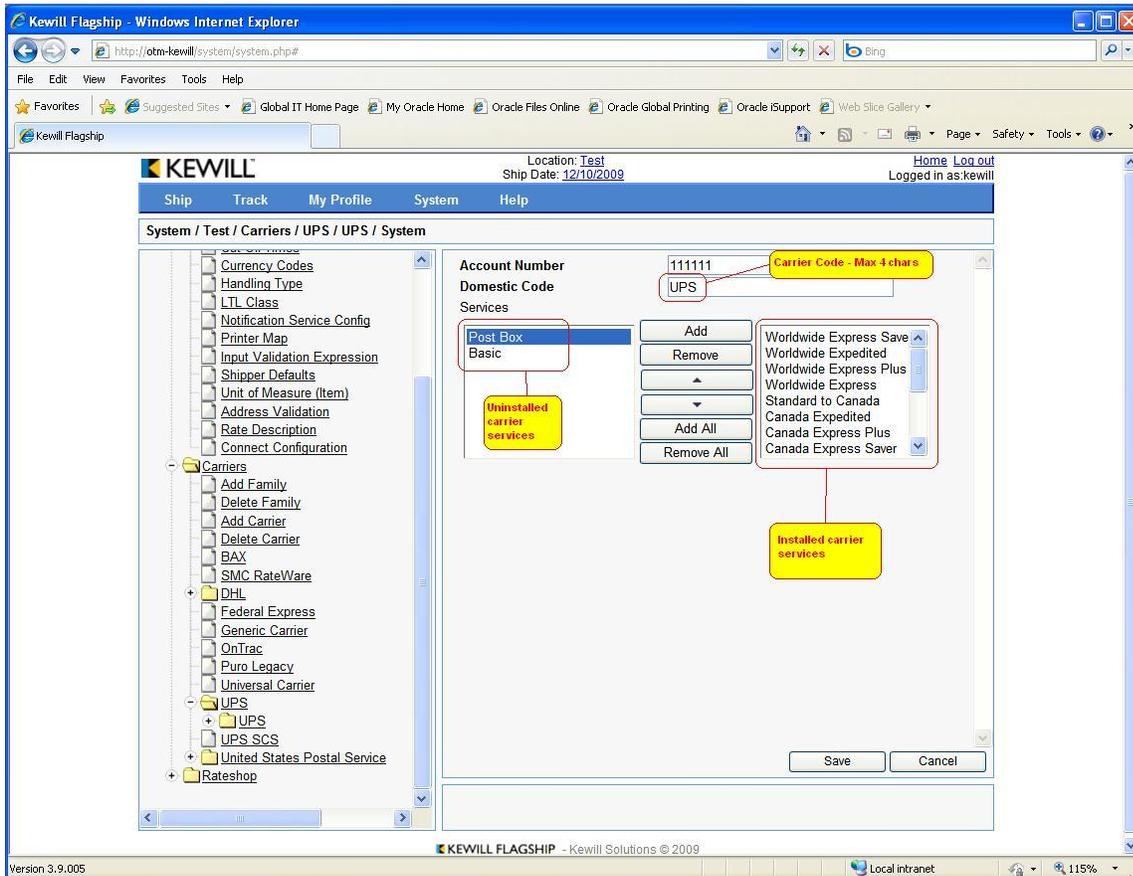
The screenshot shows the 'Kewill Flagship' web application in Internet Explorer. The browser address bar shows 'http://otm-kewill/system/system.php'. The page title is 'Kewill Flagship'. The navigation menu includes 'Ship', 'Track', 'My Profile', 'System', and 'Help'. The current page is 'System / Add Location'. The form contains the following fields:

Shipper ID	PHILAPA
Display Name	King of Prussia Office
Description	
Sender Attention	Me
Ship From Company	My Company
Address 1	1016 W. Ninth Ave.
Address 2	
Address 3	
City	King of Prussia
State/Province	Pennsylvania
Postal Code	19406
Country	United States
Phone	6104919881
Fax	
Email	
Time Zone	(GMT-05:00) Eastern Time (US & C
DC Cost Center	
Company ID	

A yellow callout box with the text 'Shipper ID = CUSTNUM' points to the 'Shipper ID' field. The 'Shipper ID' field is also highlighted with a red box.

Carriers/Services

Once a customer location has been created in Flagship, you must install one or more supported carriers and services. Each carrier you install for a particular location must be assigned a carrier code. This is a code that should be unique to the carrier for this location. When you install a carrier, you will be given the opportunity to select which services are supported.



3. Setup Base Oracle Transportation Management

Oracle Transportation Management and Flagship are orthogonal solutions to similar problems with vastly different implementations and points of view. Oracle Transportation Management is built to handle multi-modal transportation and generic costing solutions, and Flagship is designed to solve a customer-centric problem of consolidated parcel-mode shipping. This makes interfacing between the two products a little particular.

Locations

The first and most important thing to understand is that all shipments rated via the Oracle Transportation Management-Flagship combination must originate at a location that corresponds to a customer location setup in Flagship. This is done by identifying the Flagship CUSTNUM using a special location reference number. The reference number qualifier is user-definable and is specified by the global property: `glog.RatingEngine.Kewill.RefnumQual`. Using the example CUSTNUM seen in the Setup Flagship section, it would be:

```
glog.RatingEngine.kewill.RefnumQual= KEWILL_SFCUSTNUM
```

The screenshot shows the Oracle OTM Location Setup interface. The 'Reference Numbers' section is expanded, showing a table with the following data:

* Reference Number Qualifier ID	* Reference Number	Save
GLOG	PLAN.PHILADELPHIA-PA	[Edit] [Delete]
KEWILL_SFCUSTNUM	PHILAPA	[Edit] [Delete]

Two callout boxes provide additional information:

- Left Callout:** This location qualifier ID can be specified by the user. Use the property `glog.RatingEngine.kewill.RefnumQual` to indicate which qualifier ID to use during rating.
- Right Callout:** This is the Shipper ID or CUSTNUM as defined in Flagship when the customer location was initially created. Only OTM locations with a valid value for this refnum qualifier can be used as origin locations for orders to be rated by Flagship.

Order Releases

As of 6.1.4, it is possible to specify the SFCUSTNUM on the order release using the same reference number qualifier ID as was used on the location. If the SFCUSTNUM is specified here, it will automatically override the SFCUSTNUM (if any) found on the origin location. In addition, Oracle Transportation Management will now take advantage of Kewill's ability (post v4.0) to rate using origin address components that are not directly related to SFCUSTNUM.

If a shipment originates at a location without a CUSTNUM reference number and an override is not found on the order release, the rate request will fail and be flagged as infeasible.

The screenshot shows the 'Order Release' form with the following fields and values:

- Source Location ID: SEATTLE-WA
- Destination Location ID: TAMPA-FL
- Reference Numbers:
 - Reference Number Qualifier ID: GLOG
 - Reference Number: PLAN/MISC.TEST-KEWILL-ORCUST
 - Reference Number Qualifier ID: KEWILL_SFCUSTNUM
 - Reference Number: PHILAPA

Two yellow callout boxes provide instructions:

- Callout 1:** This Order Release refnum qualifier ID can be specified by the user. Use the property `glog.RatingEngine.Kewill Refnum Qual` to indicate which qualifier ID is used during rating.
- Callout 2:** This is the Shipper ID or SFCUSTNUM as defined in Flagship when the customer location was initially created.

Note: If an order is from DHL Canada to USA, then 'KEWILL_EXPORT_REASON' Refnum need to be added with one of the possible values (Permanent (p), Temporary (T), Re-Export(R)). This Refnum is added in Shipment Refnums as well as in Order Release Refnums.

The screenshot shows the 'Order Release' form with the following fields and values:

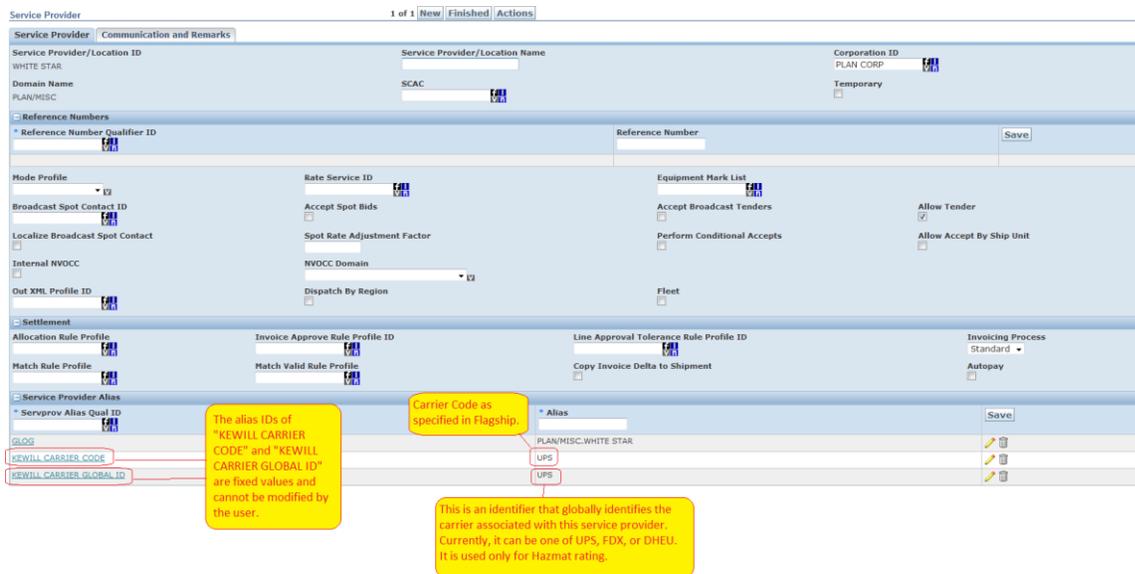
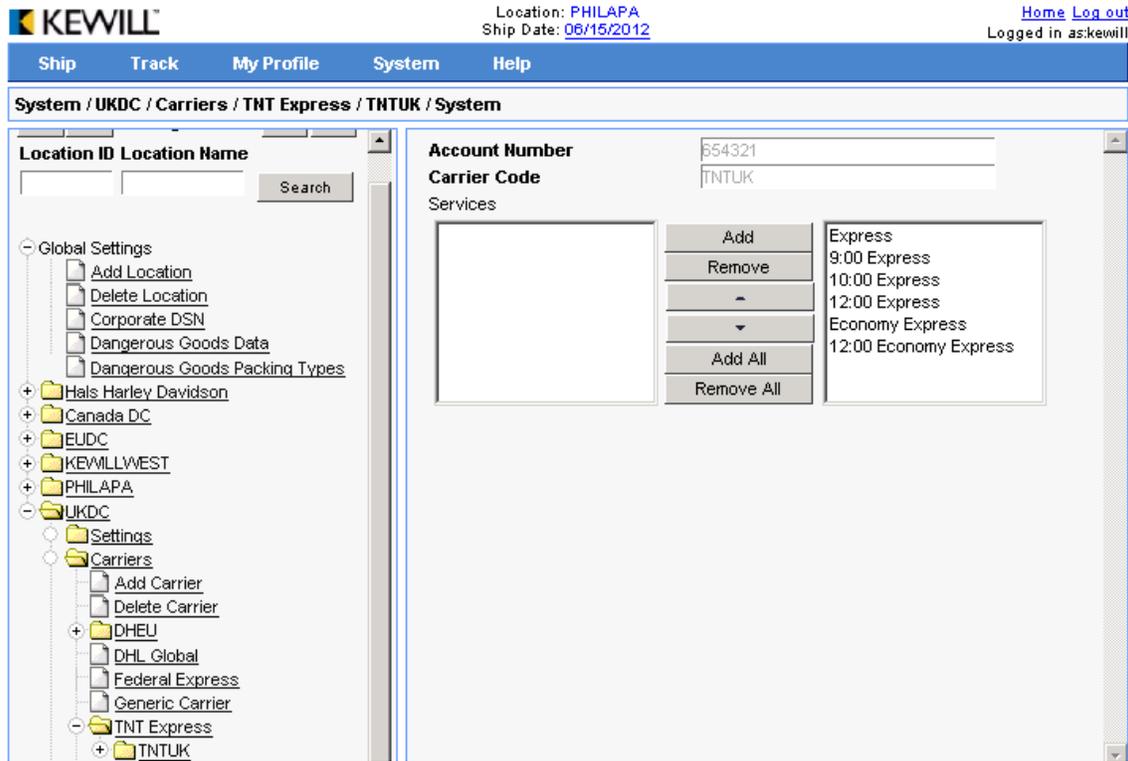
- Source Location ID: CAN-SRC
- Destination Location ID: USA-SRC
- Reference Numbers:
 - Reference Number Qualifier ID: GLOG
 - Reference Number: PRAVEEN.20120718-0001
 - Reference Number Qualifier ID: KEWILL_EXPORT_REASON
 - Reference Number: P

Service Providers/Carriers

The concept of a Carrier in Flagship is nearly equivalent to the Service Provider in Oracle Transportation Management. The difference is a matter of scope. A carrier is a specific subset of Oracle Transportation Management service providers. A service provider that can act as a carrier for Kewill-based rating must be explicitly identified as such. This is done by assigning carrier codes (see the Service Providers/Carriers section) to a service provider alias using the following alias IDs: "KEWILL GLOBAL CARRIER CODE" and 'KEWILL CARRIER CODE'. The 'KEWILL CARRIER GLOBAL ID'

records the actual name of the carrier as listed in the table below (ex:TNT,UPS,FDX) while 'KEWILL CARRIER CODE' records the value as configured in Kewill Flagship (please see below screen shot).

Example: If 'TNT' is the actual carrier associated with the carrier code 'TNTUK', then in the carrier data setup, the user will need to define 'TNT' as the 'KEWILL CARRIER GLOBAL ID' and 'TNTUK' as the 'KEWILL CARRIER CODE'.



Carrier Name	Kewill Carrier Code	Kewill Global Carrier Code
--------------	---------------------	----------------------------

DHL	DHL	DHEU
FexEx	FDX	FDX
UPS	UPS	UPS
U.S.Postal Service	USPS	USPS
BAX Global	BAX	BAX
DHL Canada	DHCA	DHCA
UPS Canada	UPSC	UPSC
TNT UK	TNTUK	TNT
UPS SCS	UPSSC	EMRY
Purolator	PURL	PURL

Rate Service/Carrier Service Level

Each carrier installed in Flagship can provide one or more parcel services. For example, UPS provides standard Ground delivery service, Next Day Air, Second Day, etc. In Oracle Transportation Management, carrier service levels correspond to rate services, which are user-configurable and can be assigned to a contract-level rate offering or a geographical rate record. Rate services in Oracle Transportation Management specify exactly how to calculate the amount of time it takes for a shipment to travel from its origin to its destination, with stops along the way. When defining a rate for Flagship, it is necessary to pass a code that specifies the requested service level for the shipment being rated. These codes are pre-defined by Kewill. The code for UPS Next Day Air, for example, is NDA. For UPS Ground, it is GND. For USPS Priority Mail, it is PRTY. (The full list of codes can be found at the end of this document).

There is a one-to-one relationship between Oracle Transportation Management Rate Services and Flagship Service Levels. There is no need to use a secondary attribute of rate service to associate with a Flagship service, so you can define these services directly in Oracle Transportation Management. The most important restriction is that the rate service ID absolutely must match the desired Flagship service level. This is illustrated in the screenshot below.

Rate Service Header | **Rate Service Details**

* Rate Service ID: NDA Rate Service ID MUST match the predefined Kewill Flagship service code.

Rate Service Name: FDX NEXT DAY AIR -

Driving Penalty: [] USD

* Rate Service Type: TIMEDEFINITESERVICE A rate service type of TIMEDEFINITESERVICE instructs OTM to use calculated pickup and delivery dates returned from the rating engine.

Calendar: []

Waiting Penalty: [] USD

Time Window Tolerance: [] D [] H [] M

Ignore Delivery Location Calendar:

Max Wait Time Per Stop: [] D [] H [] M

Max Longhaul Wait Time: [] D [] H [] M

Use Rush Hour:

In addition, Flagship has the ability to calculate and return to Oracle Transportation Management the expected pickup and delivery dates for certain carrier service levels, thus allowing Oracle Transportation Management to skip this calculation itself. To do this, you must specify a rate service type of TIMEDEFINITESERVICE.

Note: The TIMEDEFINITESERVICE should not be used in scenarios where applying stop times and re-driving of the shipment is required, since the re-drive logic does not support TIMEDEFINITESERVICE.

Some carriers do not provide expected pickup and delivery dates for all service levels. For these carrier/service level combinations, an alternate rate service type should be selected, such as SIMULATION or LOOKUP. Check with Flagship Support for an up-to-date listing of these carrier/service level combinations.

Carriers	Domestic Rate Service	International Rate Service
DHL	TIMEDEFINITESERVICE	LOOKUP
FDX	TIMEDEFINITESERVICE	LOOKUP
UPS	TIMEDEFINITESERVICE	TIMEDEFINITESERVICE
USPS	TIMEDEFINITESERVICE	TIMEDEFINITESERVICE
BAX	LOOKUP	TIMEDEFINITESERVICE
DHCA	TIMEDEFINITESERVICE	LOOKUP
UPCA	TIMEDEFINITESERVICE	TIMEDEFINITESERVICE
EMRY	LOOKUP	LOOKUP
TNT	Not Supported	LOOKUP

DHL Canada to USA Rating

For DHL Canada to USA rating, it is necessary to pass an Export Reason Code to the rating engine. This can be done by using the order release and setting the property `glog.RatingEngine.Kewill.ExportReasonRefnumQual` to `KEWILL_EXPORT_REASON`. Additionally, you need to configure the refnum (`KEWILL_EXPORT_REASON`) at Order Release level to one of the following values (P,T,R) ->(Permanent, Temporary, Re-Export). No support from Rate Inquiry.

4. Rating

This section will discuss how to set up basic rating information, using the previous section's locations, carriers, and rate services, to invoke and extract costs and time of service information from Flagship. In Oracle Transportation Management 6.1, there are different ways to invoke an external engine. In previous versions of Oracle Transportation Management, external engines could only be invoked as the major part of the contract-level rate offering structure. Only the SMC external rating engine was available for use at this level. It is now possible to invoke an external rating engine as part of the calculation of a standard rate cost, including the ability to impose shipment data-based conditions. A simple example of each will be provided below.

Setting Up to Invoke Flagship from a Rate Offering

This simplest way to invoke Flagship is from a rate offering. This is very similar to how Oracle Transportation Management invokes SMC Rateware, also done from a rate offering.

Rate Offering Type

All rating calculations are controlled by an entity called the rate offering type. A rate offering type is two sets of attributes that describe the characteristics and the main calculations performed by the rating engine. For example, a standard TL rate may require stop off charges, accessorial cost calculations, and standard costing. Rate offering types are not going to be discussed in detail here, beyond what is necessary to setup the invocation of Flagship. To invoke Flagship from a rate offering type, only one attribute is needed: EXTERNALRATINGENGINE. The attribute must be specified in the rate offering type's main attribute list, and in the costing sequence.

* Rate Offering Type ID PARCEL - EXTERNAL	* Rate Offering Type Name PARCEL - EXTERNAL	Geography Base Type Lane
* Rate Attribute ID EXTERNALRATINGENGINE	Only EXTERNALRATINGENGINE is required. Other attributes can be added if the rate requires it.	
* Sequence Number 1	* Rate Attribute ID EXTERNALRATINGENGINE	
* Rate Basis		

Rate Offering

When setting up the rate offering type, the correct service provider must be chosen, along with the correct rate service and rate offering type. On the Oracle Transportation Management rate offering Attributes page, the Kewill Flagship external rating engine is chosen.

Rate Header	Attributes	Accessorials	Special Services	Involved Parties	Comments
Offering ID TEST-EXTERNAL	Service Provider ID WHITE STAR	Rate Service ID NDA	Version FOREVER		
* Offering ID TEST-EXTERNAL	* Offering Type PARCEL - EXTERNAL	Service Provider ID WHITE STAR	* Transport Mode PARCEL		
* Rate Service ID NDA	Rate Group ID	Equipment Group Profile ID	Corporation Profile ID		
* Version FOREVER					

The service provider, WHITE STAR, as assigned a carrier code of UPS, corresponding to the code assigned in Flagship.

Rate Service ID of NDA corresponds to UPS Next Day Air service.

The Rate Offering Type, PARCEL - EXTERNAL, instructs the rating engine to request rates from an external source.

Note: In the above example, the carrier code of UPS is associated with the Service Provider ID of WHITE STAR. It would probably be easier to track if the service providers were also named UPS, but it is not necessary for the name of the service provider to match the carrier code.

On the Attributes page, select the Kewill external rating engine:

Rate Header	Attributes	Accessorials	Special Services	Involved Parties	Comments	Rules and Terms
Offering ID TEST-EXTERNAL	Service Provider ID WHITE STAR	Rate Service ID NDA	Version FOREVER			
Rate Classification	Package Weight Minimum	External Rating Engine ID	Package Count is determined by:	Generic External Engine Fieldset ID		
	LB	KEWILL	L - Ship Unit Lines			
Rail Intermodal Service Plan Code	Customer or Shipper Rate	COFC/TOFC				
Tariff Refnum Qualifier	Tariff Refnum	Tariff Publishing Authority	Tariff Agency Code			
Tariff Issuing Carrier	Tariff Refnum Suffix	Tariff Reg Agency Code	Tariff Supplement ID			

Choose the Kewill external rating engine, and whether to use Ship Units or Ship Unit Lines to represent packages on a shipment.

Package Count is determined by: L - Ship Unit Lines

On this page, choose the internal representation of a package on a shipment. You can choose to represent a package using either ship units or ship unit lines.

Rate Record

The rate record's geography must at least accommodate the location that is associated with the customer location defined in Flagship.

Sample Rate Inquiry

The following rate inquiry (RIQ) shows an example of how a rate can be retrieved from Flagship using the sample setup described in the previous sections. The origin location must be one of the supported locations created in Flagship and flagged with the appropriate location_refnum (KEWILL_SFCUSTNUM) in Oracle Transportation Management. The destination can be anywhere supported by the carrier.

Ask OTM About Rates

Request Type: ALL | Rate Group: ALL

*** Ship From**
 Location ID: PHILADELPHIA-PA

*** Ship To**
 Location ID: TAMPA-FL

Origin Location must be flagged with the CUSTNUM that matches the same location created in Flagship.

Three dimensions and weight must be specified for each package (defined by ship units in this example). A ship unit count greater than 1 indicates multiple packages represented by a single line. These packages will be rated on an individual basis.

In addition to package information, one can specify each package as hazmat using Is Hazardous, Package Item ID, and Hazmat Item ID attributes. The working of hazmat request depends on the parameter called 'Run Hazmat Qualification Process'.

Transport Handling Unit	Ship Unit Count	Hazardous	Packaged Item ID	Hazmat Item ID	Weight	Volume	Length
SUPER SACK	3	No	ETHYL ALCOHOL	ETHYL ALCOHOL	2 LB	31.25 CU FT	2 FT
SMALL BOX	1		COMPRESSED GAS	COMPRESSED GAS	2 LB	1.5 CU FT	2 FT

THU is not used by Flagship.

Ship Unit count > 1 indicates multiple packages.

Package weight is a required field. Flagship will not rate without a weight for each package.

Package dimensions are also required.

The results from running this query:

Legend: ⚡ Optimal Rate ⌚ Meets Service Time ⌛ Will not meet Service Time

TEST-EXTERNAL

Service Provider WHITE STAR	Rate Offering ID TEST-EXTERNAL	Rate Record TEST-EXTERNAL	Mode PARCEL
Cost 255.03 USD	Pickup Time 2009-11-09 17:34 EST	Delivery Time 2009-11-10 10:30 EST	Transit Time 16H 56M
Distance	Equipment Group	Chargeable Weight	Route Code
Rate Offering Domain Profile	Rate Record Domain Profile	Equipment Marks	

The Rate Inquiry Results are Based on the Following Inquiry Parameters:

Request Type AllOptions
Ship From Location ID=PHILADELPHIA-PA;
Ship To Location ID=TAMPA-FL;
Mode
Equipment Group Profile
Equipment Initial
Date Available By 2009-11-09 05:34 PM EST
Rate Service ID
Rate Record ID
Perspective Buy
Force Tiered Rating

Rate Group
Domain
Equipment Number
Date Deliver By
Commodity Description:
Offering ID TEST-EXTERNAL
Show Preferred Rates Only
Estimate Tiered Rate Using Tier #:

Total cost returned from Flagship

Pickup and Delivery times were calculated and retrieved from Flagship.

The details of the returned shipment costs:

Cost Detail

Cost Type	Cost	Accessorial Code	Special Service Code	Details
Base Cost	221.75 USD			Base shipping charge
KEWILL FUEL SURCHARGE (Accessorial)	33.28 USD	K-FUEL		Fuel surcharge
Total Cost	255.03 USD			

Each cost type is rolled up into the total for a shipment. Package costs cannot be viewed on an individual basis in OTM v6.0.

Fuel surcharges are calculated automatically by Flagship. Flagship-calculated accessorial codes can be assigned to accessorial codes via planning parameters.

In the above Cost Detail page, you see the base cost and an accessorial cost called "KEWILL FUEL SURCHARGE". Flagship has the ability to calculate many different accessorial costs that can then be returned and displayed separately from the base shipment cost. Oracle Transportation Management currently supports few of these accessorial codes. These are discussed in the Accessorial Codes section of this document.

Setting Up to Invoke Flagship from a Rate Cost

There are occasions when a rate will require calculations to be retrieved from an external source (such as Flagship), and then combined with additional calculations done within Oracle Transportation Management. When this is necessary, external engines can be invoked from a rate cost.

Rate Offering Type

The rate offering type must include the GRID rate attribute, the ACCESSORIALS rate attribute, or both. EXTERNALRATINGENGINE should NOT be included in this case, since you are not invoking the external engine from the rate offering.

This rate offering type instructs the Oracle Transportation Management rating engine to perform calculations using both rate costs and accessorial costs (if any). Rate costs are defined on the rate record.

Rate Offering

The only important difference in this example is that the Kewill external rating engine is not chosen on the attributes page.

Rate Record Cost

A cost must be created and added to the rate record that invokes the external rating engine. The engine is chosen in much the same way as seen earlier on the rate offering Attributes tab in the Rate Manager. First, you must select *External* from the Cost Type dropdown. Then, you select which external rating engine to invoke. In this case, the only option is Kewill.

Note: When invoking Flagship from a rate cost, it is not possible to retrieve the calculated pickup and delivery dates, so the Rate Service must not be defined using the TIMEDEFINITESERVICE rate service type.

Understanding Rate Responses

Because Oracle Transportation Management and Kewill Flagship capture costs differently, there is a specific mapping required between applications. Individual costs are identified by named keys in Flagship's response. These keys are mapped and combined within Oracle Transportation Management to present this data in a familiar format. Below is a summary of these named keys and their associated calculations:

- CALCFREIGHT represents the total shipment cost. This includes all costs and applicable discounts associated with the shipment.
- FREIGHT represents the Base Cost (B).
- Accessorial Costs are either anticipated or unanticipated.
- Anticipated accessorials are the named keys which are defined as part of a Kewill charge token set and are recognized in Oracle Transportation Management using the planning parameter KEWILL CHARGE TOKEN SET. These accessorials (A) are: CUSTOMS_CLEARANCE_CHRG, DRYICE_CHRG/DRY_ICE_CHRG/ DRYICECHRG, FUELCHG, SATPICKCHG, DECVALCHG, HAZCHG, SATDLVYCHG, CHG_ADD_HNDL, CHG_DLVY_AREA, CHG_DLVY_CONF, CODFEE, EXTAREA_CHG, HST_SURCHARGE, AVN_INS_CHARGE, DIRECT_CHG, DROP_CHG, NAV_CANADA_CHARGE and CHG_RESIDENTIAL. Any anticipated accessorials which have not been manually mapped in the Kewill charge token set to an accessorial code by the user will display in Oracle Transportation Management with a cost type of OTHER (O).
- Unanticipated accessorials are those which are not specifically requested by Oracle Transportation Management however they are returned by Flagship. These costs are calculated as remaining costs (uncategorized costs). These costs, if not mapped to an accessorial code, are captured as other costs with a cost type of OTHER (O).

The remaining (uncategorized) se costs are included in the CALCFREIGHT key and must be calculated out by Oracle Transportation Management's rating logic.

This relationship can be expressed as follows:

$$\text{Remaining(Uncategorized) Costs} = \text{CALCFREIGHT} - [\text{FREIGHT (B)} + \text{Anticipated Accessorial Costs (A)} + \text{Other Costs (O)}]$$

Calculating Discounts

All costs returned from Flagship reflect any applicable discounts. If you want to see a summary of calculated discounts in Oracle Transportation Management, set the following property to true:

```
glog.RatingEngine.Kewill.Costs.IncludeDiscount
```

With this property set to true, a shipment's freight cost will be adjusted upward to simulate a "pre-discounted" cost, then a separate discount cost line will appear with the discount amount, finally the shipment's total cost will match the CALCFREIGHT cost received from Kewill.

Presently, this feature is only available for the carrier FEDEX, as Flagship only returns a discount key for this carrier. For this carrier, the named key for discounts is called TOTDISCOUNT. Again, because all discounts are already reflected in the costs returned from Flagship, the TOTDISCOUNT key is only returned for reference. The calculation for remaining costs (including discounts) can be expressed as follows:

$$\text{Remaining (Uncategorized) Costs} = \text{CALCFREIGHT} - [\text{FREIGHT(B)} + \text{Anticipated Accessorial Charges (A)} + \text{Other Costs (O)} + \text{Discount (negative)}]$$

5. Accessorials

Flagship has the ability to calculate many different types of accessorial costs. Oracle Transportation Management can recognize and support some of those accessorial cost types. These are:

- Fuel Surcharges
- Simple Delivery Confirmation
- Additional Handling
- Delivery Insurance
- Saturday Delivery
- Saturday Pickup
- Residential Delivery
- Out of Area Charges
- Extended Area Charges
- Harmonized Sales Tax Charges
- Aviation Insurance Surcharge
- Direct to Consignee Charges
- Drop Charges
- Surcharge for Shipments travelling through DHL air network
- Hazardous Material charges

These accessorials are represented in Oracle Transportation Management as Kewill charge tokens. List of Kewill charge tokens supported by Oracle Transportation Management can be viewed on the user interface via Contract and Rate Management > Power Data > Rates and Codes > Kewill Charge Tokens.

The Kewill Charge Tokens supported by Flagship are of these types:

- **Default charge tokens:** OTM supports these Kewill charge tokens. For example, FUELCHG.
- **Requested charge tokens:** In order to request a charge, you must assign an accessorial code using the Kewill Change Token Set screen, and you must then assign that accessorial code to the order being planned. OTM supports the following four Kewill charge tokens such as DECVLCHG, SATDLVYCHG, CHG_ADD_HNDL, and CHG_DLVY_CONF.
- **Charge tokens which require additional information:** When you provide an accessorial code along with additional details the corresponding accessorials are calculated and returned as charge token cost. OTM supports the DRYICE_CHRG/DRY_ICE_CHG/DRYICECHG and HAZMAT Kewill charge tokens.

Anticipated accessorial codes can be viewed with a cost type of "Other" or "Accessorial" by defining the corresponding Kewill charge tokens in the Kewill charge token set.

Create a Kewill Charge Token Set via Contract and Rate Management > Power Data > Rates and Codes > Kewill Charge Token Set in which you can define all the Kewill charge tokens that are anticipated.

[Kewill Charge Token Set Finder](#) > Kewill Charge Token Set

Kewill Charge Token Set 1 of 1 [New](#) [Finished](#)

*** Kewill Charge Token Set ID**
TEST_KEWILL_SET

Description
KEWILL SET FOR CARRIER FOX

Uncategorized Accessorial Code
K-UNCATEGORIZED

Domain Name
KFC

Kewill Charge Tokens

* Kewill Charge Token	Accessorial Code	Save
FUELCHG		 
SATPICKCHG	K-SATPICK	 

[Top](#)

If there is an accessorial code mapped to Kewill charge token then the cost associated with the charge token is considered as Accessorial cost type. If we define the Kewill charge token and do not map the accessorial code then the cost associated with the charge token is considered as "other" cost type. If Kewill charge token is not defined in the set then cost associated with the charge token is considered as uncategorized cost.

Oracle Transportation Management performs rating using the Kewill charge token set, which is assigned to planning parameter KEWILL CHARGE TOKEN SET. Edit your Oracle Transportation Management parameter set via Shipment Management > Power Data > General > Parameter Sets. Then, you assign a Kewill charge token set to planning parameter KEWILL CHARGE TOKEN SET. Oracle Transportation Management is shipping DEFAULT_KCTSET as the default Kewill charge token set in the DEFAULT planning parameter set.

When reading the charges from Flagship response, the charges are identified using different keys as follows:

- Charge represented by the key CALCFREIGHT is the Shipment Total Cost.
- Charge represented by the key FREIGHT is the actual base charge with Cost Type Base (B).
- The below defined charges represented by the different keys are captured as accessorial charges with cost type Accessorial (A) when we configure an accessorial code in the Kewill charge token set and assign that set to planning parameter(KEWILL CHARGE TOKEN SET) for each of the charge. Otherwise they are captured as other charges with cost type Others (O).

Fuel Surcharge

This accessorial is automatically calculated and returned by Flagship. The key which represents this charge is FUELCHG. If no accessorial code is assigned to the Kewill charge token in the Kewill charge token set then, the cost will be returned with a cost type of OTHER.

Additional Handling

This accessorial may or may not be automatically calculated and returned by Flagship. The choice is made according to the parameters of the shipment being rated and is entirely up to the carrier. If the carrier does not automatically calculate this charge, but the shipper needs the charges to be calculated, it can be requested by assigning the accessorial code to the order release. The key which represents this charge is CHG_ADD_HNDL.

Delivery Confirmation

This accessorial must be requested by the shipment. In order to do this, it must have an assigned accessorial code, and that accessorial code must be assigned to the order being planned or included in the accessorial codes list of an RIQ query. The key which represents this charge is CHG_DLVE_CONF.

Insurance

This accessorial must be requested by the shipment. In order to do this, it must have an assigned accessorial code, and that accessorial code must be assigned to the order being planned or included in the accessorial codes list of an RIQ query. In addition, the individual ship units or ship unit lines specified on the order or the RIQ must also have assigned declared values. The declared values can be zero, of course. The key which represents this charge is DECVLCHG.

Out of Area Delivery

This accessorial must be requested by the shipment. In order to do this, it must have an assigned accessorial code, and that accessorial code must be assigned to the order being planned or included in the accessorial codes list of an RIQ query. The key which represents this charge is CHG_DLVE_AREA.

Residential Delivery

Residential delivery charges are often treated differently by different carriers. Some carriers will calculate and return it as an accessorial cost, while others will calculate a different base cost using a residential vs. commercial tariff. In all cases, the Oracle Transportation Management destination location determines whether the delivery address is residential or commercial. This is then passed into Flagship for appropriate treatment. It is not necessary to explicitly request the charge calculation. The key which represents this charge is CHG_RESIDENTIAL.

Saturday Pickup

This accessorial is automatically calculated if the pickup date is on a Saturday. The accessorial request cannot be combined with Saturday delivery. The requested service type must support Saturday pickup. The key which represents this charge is SATPICKCHG.

Saturday Delivery

This accessorial must be requested by the shipment. In order to do this, it must have an assigned accessorial code, and that accessorial code must be assigned to the order being planned or included in the accessorial codes list of an RIQ query. This cannot be combined with Saturday pickup. The requested service type must support Saturday delivery. The key which represents this charge is SATDLVYCHG.

Dry Ice Charges

This accessorial must be requested by the shipment. In order to do this, it must have an assigned accessorial code, and that accessorial code must be assigned to the order being planned or included in the accessorial codes list of an RIQ query. The key which represents this charge is DRYICE_CHRG or DRY_ICE_CHRG or DRYICECHRG.

When a dry ice charge is requested, additional information about the weight and packaging type of the dry ice is required by the carriers. This information is specified on the order release lines or ship units, depending on the package type specified on the rate offering. The additional information is passed to Kewill using order release line or ship unit remarks as follows:

- **DRYICEWT:** The weight in pounds (for US origin) or kilograms (for non-US origin). Do not include the UOM designation.
- **DRYICE_PKGTYPE:** This is a text description of the UN Hazmat package type for the dry ice. Ex: fireboard box

The dry ice charge will be calculated either as a discrete accessorial charge, or it will be included in the overall HAZMAT charge accessorial, depending on the carrier.

Customs Clearance Charges

This accessorial is automatically calculated if the appropriate carrier and service is specified. If no code is assigned, the cost will be returned with a cost type of OTHER. The key which represents this charge is CUSTOMS_CLEARANCE_CHRG.

Extended Area Charges

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is [EXTAREA_CHG](#).

Harmonized Sales Tax Charges

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is HST_SURCHARGE.

Aviation Insurance Surcharge

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is AVN_INS_CHARGE.

Direct to Consignee Charges

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is DIRECT_CHG.

Drop Charges

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is DROP_CHG.

Surcharge for Shipments travelling through DHL air network

This accessorial is automatically calculated if the appropriate carrier and service is specified. The key which represents this charge is NAV_CANADA_CHARGE.

Hazmat

It is not necessary to specify an accessorial code for Hazmat rating to occur. Hazmat rating is triggered by the presence of the Hazmat option on the order release line or the packaged item. If an accessorial code for Kewill Hazmat rating is specified, however, the cost will be flagged as an accessorial cost and assigned the proper code. Without the accessorial code, the cost will still be calculated and returned, but flagged as a cost of type OTHER. The key which represents this charge is HAZCHG.

Dangerous goods (or Hazmat) rating for certain carriers and geographies can involve quite a few additional pieces of information on each package being shipped. Most of these fields can be entered directly on the order release line or can be specified on a separately identified object called a Hazmat Item. Shipments and order releases can then reference the Hazmat Item by specifying the corresponding Hazmat Item ID. All Kewill Flagship API keys used by UPS, FedEx, and DHL-EU have corresponding Oracle Transportation Management fields in the order release, order release line, hazmat item, or hazmat generic tables. If an order release line specifies both a Hazmat Item and individual hazmat values, the value on the order release line will override the value stored in the Hazmat Item or Hazmat Generic record.

In order to get a Hazmat charge, it is required to have the Hazmat flag set on either the order release line or on the packaged item. Additional Hazmat data is required for certain parcel carriers. The list of additional required fields is identified in the tables below. In order to identify a specific parcel carrier it is necessary to add a Service Provider Alias (such as 'KEWILL GLOBAL CARRIER CODE') to the service provider. See Service Providers/Carriers in the Setup Base Oracle Transportation Management section for a more detailed explanation.

Note:

- 1) Hazmat rating is currently only supported for UPS, FedEx, and DHL-EU Additional carriers will be added and verified in upcoming updates.
- 2) There is a limit on the number of Hazmat Line Items that can be shipped in one package. This limit varies by carrier. Oracle Transportation Management will try to rollup/aggregate quantities and weight details of similar hazmat line items (items having same UN Number, Package Group and Proper Shipping Name) and create unique hazmat line items based on UN Number, Package Group and Proper Shipping Name before calling the Kewill Rating Engine.
- 3) The package-level information below is required for Kewill to rate Hazmat items. These details are always read from the first line item of a package (SU or SUL). For more details about each field please refer to the below table.
 - HAZMAT_PACKAGETYPE
 - HAZMAT_OVERPACK
 - HAZMAT_OUTER_PACKING_COUNT
 - HAZMAT_ALL_PACKED
 - HAZMAT_OUTER_PACKAGING_TYPE
 - HAZMAT_OUTER_PACKING_COUNT

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
---------	-----------------	---------	-------------	--	------------------

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release: Emergency Phone Number Shipment: Emergency Phone Number	EMERGENCYPHONENUMBER	Emergency phone number when shipping hazardous materials. The 24-hour contact for the shipment.	order_release.em_phon e_number, shipment.em_phone_nu mber	Y
FDX	Order Release Line: All Packed in One Hazmat Item: All Packed in One	HAZMAT_ALL_PACKED	Flag to indicate the pkg is 'All packed in one'	order_release_line, hazmat_item	N
FDX	Order Release Line: Authorization for Dangerous Goods Hazmat Item: Authorization for Dangerous Goods	HAZMAT_AUTHORIZATION	The authorization for the dangerous goods shipment. The authorization field is only required to state special governmental authorizations that are required because of the provisions or packing materials shipped with.	order_release_line.haz_ authorization, hazmat_item.authorizati on	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX, UPS	Order Release Line: Passenger Aircraft Forbidden Hazmat Item: Passenger Aircraft Forbidden	HAZMAT_CARGO_PLANE	Required if a cargo aircraft packing instruction from the IATA DG Regulations is used. Y – Shipment prepared for shipment via cargo aircraft only. N – Shipment prepared for shipment via passenger or cargo aircraft. See Table 4.2 column K of the IATA DG Regulations	order_release_line.haz_is_passenger_aircraft_forb, hazmat_item.is_passenger_aircraft_forbid	N
FDX	Order Release Line: Chemical Description Hazmat Item: Chemical Description	HAZMAT_CHEMICAL_FORMULA	The basic chemical description of the substance	order_release_line.haz_chemical_formula, hazmat_item.chemical_formula	N
FDX, UPS	Order Release Line: Hazardous Classification ID Hazmat Generic: Hazardous Classification ID	HAZMAT_CLASS_DIVISION_NUMBER	Hazmat class / division number	order_release_line.hazardous_classification_gid, hazmat_generic.hazardous_classification_gid	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
UPS	Order Release Line: Identification Number Hazmat Generic: Identification Number	HAZMAT_CODE	The unique hazmat code to identify hazardous material. Valid values are a numeric identifier; for example: 0012456. This information is retrieved and used by the Label Module. This value can be configured through Web Admin tool. Note that Hazmat quantity, ClassDivisionNumber, Units, IDGProperShippingN are required fields to ship Hazmat item. (Note: This references the UN DG ID. It is not a required field for UPS rating, but may be used by some other feature in the future.)	order_release_line.haz_identification_number, hazmat_generic.identification_number	N
DHEU	Order Release Line: Identification Number Hazmat Generic: Identification Number	HAZMAT_CODEIDENTITY_NUMBER	The unique hazmat code to identify hazardous material. Valid values are a numeric identifier; for example: 0012456. This information is retrieved and used by the Label Module. This value can be configured through Web Admin tool. Note that Hazmat quantity, ClassDivisionNumber, Units, IDGProperShippingN are required fields to ship Hazmat item. (Note: This is the UN DG ID for this item. It is apparently the same value as the API key: HAZMAT_UNDG_NUMBER. Both keys are required for DHEU hazmat rating)	order_release_line.haz_identification_number, hazmat_generic.identification_number	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Concentration Percent Hazmat Item: Concentration Percent	HAZMAT_CONCENTRATION_PERCENT	Required if the Dangerous Goods UN Number is 2031, 1796, 1826, or 1873. Enter the percentage of DG concentration if the above condition applies.	order_release_line.haz_concentration_percent, hazmat_item.concentration_percent	Y
FDX	Order Release Line: Critical Safety Index Hazmat Item: Critical Safety Index	HAZMAT_CRITICALITY_SAFETY_INDEX	A measurement for packages containing fissile material that is determined by dividing the number 50 by the smaller of the numbers determined using the rules in section 10.6.2.4.3 of the DG Regulation Guide	order_release_line.haz_crit_safety_index, hazmat_item.criticality_safety_index	N
FDX	Order Release Line: Approval Exemption (Hazmat Approval Exemption: Description) Hazmat Item: DOT Exemption (Hazmat Approval Exemption: Description)	HAZMAT_EXEMPTIONNUMBER	Exemption number and text (ground shipments only)	hazmat_approval_exemption.description	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
UPS	Order Release Line: Hazmat IDG Info Hazmat Item: Hazmat IDG Info	HAZMAT_IDG_ADDITIONAL_DESCINFO	Hazmat IDG additional description information	order_release_line.haz_idg_add_desc_info, hazmat_item.idg_additional_desc_info	Y
FDX, UPS	Order Release Line: Proper Shipping Name Hazmat Generic: Proper Shipping Name	HAZMAT_IDG_PROPER SHIPPING_NAME	Proper shipping name (Should conform to IATA proper shipping names)	order_release_line.haz_proper_shipping_name, hazmat_generic.proper_shipping_name	Y
FDX, UPS	Order Release Line: Identification Number Hazmat Generic: Identification Number	HAZMAT_IDGIDENTIFICATIONNUMBER	Hazmat IDG UN identification number	order_release_line.haz_identification_number, hazmat_generic.identification_number	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Limited Quantity Hazmat Item: Limited Quantity	HAZMAT_LIMITED_QUANTIT Y	Limited quantity flag	order_release_line.haz_is_limited_quantity, hazmat_item.is_limited_quantity	N
FDX	Order Release Line: Maximum Volume Hazmat Item: Maximum Volume	HAZMAT_MAX_QUANTITY	Maximum passenger volume or the maximum cargo volume for the item (Used in Q- Value calculation)	order_release_line.haz_max_quantity, hazmat_item.max_quantity	N
FDX	Order Release Line: Outer Packaging Type Hazmat Item: Outer Packaging Type	HAZMAT_OUTER_PACKAGIN G_TYPE	Outer packaging type if packing type = All packed in one	order_release_line.haz_outer_packaging_type, hazmat_item.outer_packaging_type	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Outer Packing Count Hazmat Item: Outer Packing Count	HAZMAT_OUTER_PACKING_COUNT	Outer packing count	order_release_line.haz_outer_packing_count, hazmat_item.outer_packing_count	N
FDX	Order Release Line: Overpack Hazmat Item: Overpack	HAZMAT_OVERPACK	Flag to indicate the package is an 'overpack'	order_release_line.haz_is_overpack, hazmat_item.is_overpack	N
DHLEU, FDX, UPS	Order Release Line: Hazmat Package Type Hazmat Item: Hazmat Package Type	HAZMAT_PACKAGE_TYPE	Hazmat package type of the Dangerous Goods shipment.	order_release_line.haz_package_type, hazmat_item.package_type	Y (FDX)

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX, UPS	Order Release Line: Packing Count Hazmat Item: Packing Count	HAZMAT_PACKING_COUNT	Packing count (number of packaged units)	order_release_line.haz_packing_count, hazmat_item.packing_count	N
FDX, UPS	Order Release Line: Packing Instructions Hazmat Item: Packing Instructions	HAZMAT_PACKINGINSTRUCTIONS	Required for dangerous goods shipments, unless the DG class is radioactive or Not Restricted. See Table 4.2 columns G, I, or K of the IATA DG Regulations.	order_release_line.haz_packaging_instr, hazmat_item.packaging_instr	Y
FDX	Order Release Line: Hazmat Physical Form Hazmat Item: Physical Form	HAZMAT_PHYSICAL_FORM	A description of the physical form of the radioactive substance : Special Solid Liquid Gas	order_release_line.haz_physical_form, hazmat_item.physical_form	N
FDX	Order Release Line: Q Value Ratio Hazmat Item: Q Value Ratio	HAZMAT_Q_VALUE	Ratio used to indicate that the combined quantities in 'all packed in one' package are within the maximum allowable limits.	order_release_line.haz_q_value, hazmat_item.q_value	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX, UPS	Order Release Line: Hazmat Item Quantity Hazmat Item: Hazmat Item Quantity	HAZMAT_QUANTITY	Hazmat item quantity	order_release_line.haz_quantity, hazmat_item.quantity	Y
FDX	Order Release Line: Type of Shipment Label Hazmat Item: Type of Shipment Label	HAZMAT_RADIOACTIVE_LABEL	The type of label on the shipment. W1 (White I) Y2 (Yellow II) Y3 (Yellow III)	order_release_line.haz_radioactive_label, hazmat_item.radioactive_label	N
FDX	Order Release Line: Packaging Type Hazmat Item: Packaging Type	HAZMAT_RADIOACTIVE_PACKAGING	A description of the type of packaging the substance is contained in. Acceptable package types are listed in section 10.5 of the DG Regulations Guide: Expected (Expected) Industrial ip1 (Industrial Type 1(IP-1)) Industrial ip2 (Industrial Type 2(IP-2)) Industrial ip3 (Industrial Type 3(IP-3)) Type a (Type A) Type b(m) (Type B(M)) Type b(u) (Type B(U)) Type c (Type C)	order_release_line.haz_radioactive_packaging, hazmat_item.radioactive_packaging	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Shipment Radioactivity Hazmat Item: Shipment Radioactivity	HAZMAT_RADIOACTIVITY	A measurement of the activity of the shipment. For fissile material, the weight of the material in grams or kilograms may be substituted for the activity measurement	order_release_line.haz_radioactivity, hazmat_item.radioactivity	N
FDX	Order Release Line: Radioactivity Units Hazmat Item: Radioactivity Units	HAZMAT_RADIOACTIVITY_UNITS	The units that the activity were measured in. This must be in becquerel units (or multiples thereof) : Bq (becquerel) kBq (kilobecquerel) MBq (megabecquerel) GBq (gigabecquerel) TBq (terabecquerel) PBq (petabecquerel)	order_release_line.haz_radioactivity_units, hazmat_item.radioactivity_units	N
FDX	Order Release Line: Radionuclide Hazmat Item: Radionuclide	HAZMAT_RADIONUCLIDE	The radionuclide assigned to the substance being shipped. A table of basic radionuclides is available in the DG Regulation Guide section 10.4.A. For example, aluminum (13) has a radionuclide Al-26	order_release_line.haz_radionuclide, hazmat_item.radionuclide	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX, UPS	Order Release Line: Reportable Quantity Hazmat Item: Reportable Quantity	HAZMAT_REPORTABLE_QUANTITY	Enter Y if the DG is a reportable quantity. For U.S. entry/exit only. Default: N	order_release_line.haz_is_reportable_quantity	Y
FDX	Order Release Line: Special Provisions Hazmat Generic: Special Provisions	HAZMAT_SPECIAL_PROVISIONS	Indicates Dangerous Goods (DG) are being shipped under one of the special provisions listed in the IATA Dangerous Goods Regulation Guide, section 4.4. There appear to be 146 different provisions, and multiple provisions may apply to a single item in some cases.	order_release_line.haz_special_provisions, hazmat_generic.special_provisions	N
FDX, UPS	Order Release Line: Subsidiary Hazard Hazmat Generic: Subsidiary Hazard	HAZMAT_SUBRISKCLASS	Hazmat subrisk class	order_release_line.haz_subsidiary_hazard, hazmat_generic.subsidiary_hazard	N

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
DHEU	Order Release Line: Substance Number Hazmat Item: Substance Number	HAZMAT_SUBSTANCE_NUMBER	Hazardous materials substance number.	order_release_line.substance_number, hazmat_item.substance_number	N
FDX	Order Release Line: Surface Reading Hazmat Item: Surface Reading	HAZMAT_SURFACE_READING	The surface reading of the radiation exposure for the package. This reading must be measured in mrem/h	order_release_line.haz_surface_reading, hazmat_item.surface_reading	N
FDX, UPS	Order Release Line: NOS Technical Name 1 Hazmat Item: NOS Technical Name 1	HAZMAT_TECHNICAL_NAME	Technical name: The technical name is used to expand upon certain hazmat items that do not have a descriptive enough proper shipping name, and end with "n.o.s." On the IATA DGN document, the technical name must follow the proper shipping name in parenthesis like this: "proper shipping name n.o.s. (technical name)". See section 4.1.2 of the IATA Dangerous Goods Regulation Guide if more clarification is required.	order_release_line.haz_nos_technical_name, hazmat_item.nos_technical_name_gid_1	Y

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Hazmat Transport Index Hazmat Item: Transport Index	HAZMAT_TRANSPORT_INDEX	A number based on the radiation exposure of a package. This is determined based on the maximum measurement of the radiation in mrem/h at a distance of 1 meter from the package surface	order_release_line.haz_transport_index, hazmat_item.transport_index	N
DHEU	Order Release Line: Identification Number Hazmat Generic: UN/NA ID Number	HAZMAT_UNDG_NUMBER	Hazardous Materials UN Dangerous Goods number.	order_release_line.haz_identification_number, hazmat_generic.identification_number	Y
FDX, UPS	Order Release Line: IATA Units Hazmat Item: IATA Units	HAZMAT_UNITS	IATA units for non UPS shipments (L=>Liters g=>Grams kg=>Kilograms kg G=>Kilograms Gross).	order_release_line.haz_units, hazmat_item.units	Y

Carrier	Screen and Name	API Key	Description	Oracle Transportation Management Field	Required to Rate
FDX	Order Release Line: Packaging Group Hazmat Generic: Packaging Group	PACKINGGROUPNUMBER_TY PE	Type of packaging for Dangerous Goods. Packing Group (I, II, III)	order_release_line.haz_packaginggroup, hazmat_generic.packaginggroup	Y

Other Charges

This accessorial is calculated when there are charges which are not specified by any of the above categories of charges returned from Flagship.

Charges represented by the Keys CODFEE, EXTAREA_CHG, HAZCHG are captured as other charges with cost type Others (O).

Kewill Flagship has still has some remaining (uncategorized) charges represented by different keys which are part of the total shipment cost (CALCFREIGHT). These charges are calculated using the following formula:

Remaining Other Charges (Uncategorized charges) = Total Shipment Cost (CALCFREIGHT) - (Base charge (FREIGHT) + Categorized Accessorial Charges + Other Charges).

Uncategorized charges can be mapped to an accessorial code using the Uncategorized Accessorial Code in the Kewill Charge Token Set. If no code is assigned, the sum of these costs will be returned with a cost type of OTHER.

6. Discounts

For some carriers, Flagship returns a discount charge using the key TOTDISCOUNT. In this case all of the charges returned by Flagship have already been discounted and only a total discount is returned for reference.

To see this total discount as part of the shipment costs you must set the following property to true.

```
glog.RatingEngine.Kewill.Costs.IncludeDiscount.
```

When this property is set to true, the total discount represented by the key TOTDISCOUNT will be captured as a discount charge with cost type Discount (D).

All the remaining charges, if present, will be adjusted to compensate for the displayed discount.

Remaining Other Charges = Total Shipment Cost (CALCFREIGHT) - (Base charge (FREIGHT) + Categorized Accessorial Charges + Other Charges + Discount (negative)).

When the property is set to false the charge represented by the key TOTDISCOUNT is ignored.

7. Rating Engine Fatal Exception

As of Oracle Transportation Management version 6.1.5, certain situations will trigger the rating subsystem to throw a fatal exception. A fatal rating exception is a situation considered severe enough to completely halt rating and the invoking planning process in progress. This is now set by the addition of a new planning parameter group called Exception Handling. Within this parameter group, the parameter FAIL ON FATAL RATING EXCEPTION has been added. To trigger the Fatal Exception, the value for this parameter must be set to true. Currently, only the following situations will cause this exception to be thrown:

- The Kewill Flagship engine fails to accept a socket connection during rating.
- The Federal Express fails to communicate with Kewill Flagship during a query for FDX rates.

In normal Oracle Transportation Management operations, a fatal exception will have no impact. If thrown, the rate will be marked as infeasible, and the rating engine will continue on to evaluate the next rate. When the FAIL ON FATAL RATING EXCEPTION planning parameter is **true**, a fatal exception will instruct the invoking planning process to immediately abort all operations. Bulk Plan, for example, will halt and no shipments will be created.

8. Appendix: Supported Carrier Service Codes

DHL U.S Origin: Carrier Code “DHL”

Domestic	Service Flagship Service Code
Next Day 10:30 AM Letter	NDEL
Next Day 10:30 AM	DNDE
Next Day 12:00 Letter	N12L
Next Day 12:00	DN12
Next Day 3:00 PM Letter	DN3L
Next Day 3:00 PM	DND3
2nd Day Letter	DSDL
2nd Day	DSD
Ground	GND
@Home Standard Delivery Confirmation Required (DCR)	DHST
@Home Deferred DCR	DHDF
Media Mail @Home STD DCR	DMHS
Media Mail @Home Def. DCR	DMHD
Bound Printed Matter @Home Standard DCR	DBHS
Bound Printed Matter @Home Deferred DCR	DBHD
@Home Standard	HST
@Home Deferred	HDF
Media Mail @Home Standard	MHS
Media Mail @Home Deferred	MHD
Bound Printed Matter @Home Standard	BHS
Bound Printed Matter @Home Deferred	BHD

International	Service Flagship Service Code
Global Mail Standard	GMS

International	Service Flagship Service Code
Global Mail Priority	GMP
International Document Letter	IDL
International Document	IDOC
Worldwide Priority Express	WPX

FedEx U.S. Origin: Carrier Code “FDX”

Domestic	Service Flagship Service Code
Ground	GND
Home Delivery	RES
Express Saver	SVR
Priority Overnight	PRI
2Day	2ND
Standard Overnight	STD
First Overnight	FST
1Day Freight	1FR
2Day Freight	2FR
3Day Freight	3FR
SmartPost Plus	SPP

International	Service Flagship Service Code
International Priority	IPRI
International Economy	IECO
International First	IFIR
International Priority Freight	IPFR
International Economy Freight	IEFR
International Ground	IGND
International Priority Distribution	IPD

Generic Rated or Non-Rated – LTL: Carrier Code “GEN”

Generic	Service Flagship Service Code
Generic	GEN

UPS U.S. Origin: Carrier Code “UPS”

Domestic	Service Flagship Service Code
Next Day Air	NDA
Next Day Air Early A.M.	NDAE
Next Day Air Saver	NDAS
2nd Day Air AM	SDAE
2nd Day Air	SDA
3 Day Select	TDS
Ground	GND
UPS Basic	BAS

International	Service Flagship Service Code
Worldwide Express	IEXP
Worldwide Express Plus	IEPL
Worldwide Expedited	IEXD
Worldwide Saver	EXPS

U.S. to Canada	Service Flagship Service Code
Canada Express	CEXP
Worldwide Express Plus Canada	CEPL
Worldwide Expedited Canada	CEXD
Standard Canada	CSTD
Worldwide Saver To Canada	CXPS

U.S. Postal Service U.S. Origin: Carrier Code “USPS”

As of May 14, 2007, the US Postal Service changed their rating methodology. The size of all U.S. Postal Service mail pieces will play a larger role in determining the amount of postage. New services codes have been added in Flagship to support this change. You no longer need to supply the packaging type.

Domestic	Service Flagship Service Code
First Class Parcel	FCLS
First Class Flat	FCF
First Class Letter	FCL
Priority Mail Parcel	PRTY
Priority Mail Flat-Rate Box	PMFB
Priority Mail Flat-Rate Envelope	PMFE
Express Mail Parcel	EXPR
Express Mail Flat-Rate Envelope	EMFE
Standard Mail Machinable Parcels	SMP
Standard Mail Irregular Parcels	SMPI
Parcel Post	PPST
Media Mail	MEDM
BPM Destination BMC Flats	BDBF
BPM Destination BMC Irregular Parcels	BDBI
BPM Destination BMC Machinable Parcels	BDBP
BPM Destination SCF Flats	BDSF
BPM Destination SCF Irregular Parcels	BDSI
BPM Destination SCF Machinable Parcels	BDSP
BPM Presorted Flats	BPF
BPM Presorted Irregular Parcels	BPI
BPM Presorted Parcels	BPP
BPM Nonpresort Flats	BSF
BPM Nonpresort Irregular Parcels	BSI

Domestic	Service Flagship Service Code
BPM Nonpresort Parcels	BSP

International	Service Flagship Service Code
First Class Mail International	FCI
First Class Mail International Cards	FCIC
Express Mail International	EMS
Express Mail Intl Flat-Rate Envelope	EMIE
Priority Mail International	PMI
Priority Mail Intl Flat-Rate Envelope	PMIE
Priority Mail Intl Flat-Rate Box	PMIB

UPS Supply Chain Solutions (SCS) US Origin: Carrier Code “EMRY”

Domestic	Service Flagship Service Code
UPS Next Day Air Freight - DOM	AM
UPS Next Day Air Freight NGS - DOM	AMNG
UPS 2 nd Day Air Freight - DOM	2M
UPS 2 nd Day Air Freight NGS- DOM	2MNG
UPS 3 Day Freight - DOM	DEFR
UPS 3 Day Freight NGS- DOM	DFNG
Saturday Delivery - DOM	SAT

Note: Use domestic services for U.S. shipments to Canada and Puerto Rico as well.

International	Service Flagship Service Code
Express Freight	CX
Air Freight Consolidated	EC
Air Freight Direct	CA

Purolator (legacy) CA Origin: Carrier Code “PURO”

Canada Domestic	Service Flagship Service Code
Air	AIR
Ground	GRD

Canada to U.S.	Service Flagship Service Code
U.S. Air (Overnight)	UNDA
U.S. Ground (Deferred)	UGND

Canada International	Service Flagship Service Code
International Air	INTL

FedEx SmartPost US Origin: Carrier Code “SPO”

Service	Service Flagship Service Code
Priority	SPRI
Standard A	SSTA
Standard B – BPM	SSBB
Standard B – Media	SSBM
Standard B – Parcel Post	SSBP

Czar - Using SMC3 RateWare Server: Carrier Code “CZAR”

Service	Service Flagship Service Code
Generic Czar Service	GEN

DHL Canada CA Origin: Carrier Code “DHCA”

Domestic	Service Flagship Service Code
-----------------	--------------------------------------

Domestic	Service Flagship Service Code
Express	DEXP
Ground	DGRD

International	Service Flagship Service Code
DHL Worldwide Priority	WPX
International Document	DOX
International Air Letter	IAL
U.S. Overnight Air Letter	UOA
DHL International (southbound) U.S. Ground	IGRD

BAX Global US Origin: Carrier Code “BAX”

Domestic	Service Flagship Service Code
BAX Global Overnight	1DAY
BAX Global Second Day	2DAY
BAX Global Saver	BSAV
BAX Global Deferred	BDEF

Note: Use domestic services for U.S. shipments to Canada.

International	Service Flagship Service Code
Door to Door - Standard Air Freight	DDAF
Door to Airport - Standard Air Freight	DAAF
Airport to Door - Standard Air Freight	ADAF
Airport to Airport - Standard Air Freight	AAAF
International BAX Saver (U.S. to Mexico only)	ISAV
Guaranteed Door to Airport - Standard	GDTA
Air Freight (U.S. to Mexico only)	

UPS Canada CA Origin: Carrier Code “UPCA”

Domestic	Service Flagship Service Code
UPS Express Early A.M.	CEAM
UPS Express	CEXP
UPS Express Saver	CEXS
UPS Expedited	CEXD
UPS Standard	CST

Canada to U.S.	Service Flagship Service Code
UPS Express Early A.M.	UEAM
UPS Express	UEXP
UPS Expedited	UEXD
UPS 3 Day Select	UTDS
UPS Standard to the U.S.	USTD

Canada to Mexico	Service Flagship Service Code
UPS Express	MEXP
UPS Expedited	MEXD

International	Service Flagship Service Code
UPS Worldwide Express Plus	WEPP
UPS Worldwide Express	WEXP
UPS Worldwide Expedited	WEXD

TNT UK: Carrier Code “TNTUK”

International	Service Flagship Service Code
TNT 9:00 Express	09

International	Service Flagship Service Code
TNT 10:00 Express	10
TNT 12:00 Express	12
TNT Express	15
TNT Economy Express	412
TNT 12:00 Economy Express	48N

Note: Domestic services are not supported.

9. Appendix: Certified Carrier List and Support Detail

The following is a list of carriers that have been certified with Oracle Transportation Management. Certification means that a representative number of carrier service levels have been installed and verified within Oracle Transportation Management's QA environment.

This list also details whether these carriers offer hazmat rating support and package-level cost detail support. Package-level cost detail means that shipment costs can be captured within Oracle Transportation Management at the individual package level. Carriers who do not support package-level cost details can still rate multiple packages within a shipment, however the cost lines for all packages will be rolled up to the shipment level.

Carrier/Geography	Hazmat Supported in Oracle Transportation Management	Package-Level Cost Detail Support
Geography: USA origin		
USPS	Not Offered	Yes
UPS	Yes	Yes
DHL		No
FDX	Yes	No
PURO		No
BAX		Yes
UPS SCS	Not Offered	No
Geography: UK origin		
TNT	Not Offered	No
Geography: EU origin		
DHLEU	Yes	No
UPSEU		Yes
Geography: CANADA origin		
UPS Canada		Yes
DHL Canada		No

